

ANNUAL PROGRESS REPORT
(January-2019 to December-2019)

&

ACTION PLAN
(January-2020 to December-2020)

TO BE PRESENTED AT
ANNUAL ZONAL WORKSHOP FOR KVK OF ZONE-VIII
(Gujarat, Goa & Maharashtra)

ORGANIZED BY
DIRECTOR, ATARI ZONE-VIII, ICAR, PUNE

ONLINE WORKSHOP
HELD
During JULY 10-12, 2020

PREPARED/COMPILED By
Dr. K. P. Baraiya, Senior Scientist & Head
Smt. A. K. Baraiya, Scientist
Shri S. H. Lakhani, Scientist
Dr. J. N. Thaker, Scientist



KRISHI VIGYAN KENDRA
JUNAGADH AGRICULTURAL UNIVERSITY
JAMNAGAR - 361 006
GUJARAT



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ANNUAL PROGRESS REPORT - 2019(1stJanuary 2019 to 31stDecember 2019)**KRISHI VIGYAN KENDRA
JUNAGADH AGRICULTURAL UNIVERSITY, JAMNAGAR****DETAIL REPORT OF APR-2019****1. GENERAL INFORMATION ABOUT THE KVK****1.1. Name and address of KVK with phone, fax and e-mail**

Address	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra Millet Research Station, JAU Air force Road, Opp. Digjam Mill Jamnagar- 361 006	(0288) 2710165	(0288) 2710165	kvkjamnagar@gmail.com kvkjamnagar@jau.in	www.jau.in 11347096

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, Junagadh – 362 001 (Gujarat)	PBX 2672080-90	(0285) 2672653	dee@jau.in	www.jau.in

1.3. Name of the Senior Scientist & Head with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
Dr. K. P. Baraiya	Senior Scientist & Head Krishi Vigyan Kendra Junagadh Agricultural University, Air force Road, Opp. Digjam Mill Jamnagar- 361 006	9427980032	kvkjamnagar@gmail.com kvkjamnagar@jau.in

1.4. Year of sanction : ZARS (KVK) 2001, Letter No. F.No. 18(4)/99-NATP Dated October 31st, 2001
ICAR (KVK) 2004, Letter No. F.No. 8(1)/2002-AE-II(Pt.) Dated February 5th, 2004

1.5. Staff Position (as on December 31, 2019)

Sl. No.	Sanctioned post	Name of the incumbent	Discipline	If Permanent, Please indicate		Date of joining	If Temporary, pl. indicate the consolidated amount paid (Rs./month)
				Current Pay Band	Grade pay		
1	Senior Scientist & Head	Dr. K.P. Baraiya	Plant Protection	131400-217100		24.03.2015	
2	Scientist	Shri S. H. Lakhani	Crop Production	57700-182400		30.03.2015	
3	Scientist	Vacant	Plant Protection	57700-182400			
4	Scientist	Vacant	Horti./ Ag. Engg	57700-182400			
5	Scientist	Vacant	Extension Education	57700-182400			
6	Scientist	Dr. J. N. Thaker	Fisheries	79800-211500		31.08.2006	
7	Scientist	Smt. A. K.	Home Science	68900-205500		17.08.2006	

		Baraiya					
8	Farm Manager	Shri H. S. Godhani	Agril. Ent.	39900-126600	-	19.09.2015	38090/-
9	Programme Assistant	Shri N. D. Ambaliya	Agril.	39900-126600	-	01.02.2020	38090/-
10	Computer Programmer	Shri C. P. Padhiyar	Computer Operator	39900-126600	-	29.12.2008	
11	Assistant	Vacant	Adm.	39900-126600	-		
12	Stenographer	Vacant	Adm.	19900-63200	-	-	
13	Driver	Vacant	Supt.	19900-63200	-	-	
14	Driver	Shri. D.M. Chauhan	Supt. (Fix)	19900-63200	-	9.10.2007	
15	Supporting staff	Shri B. V. Bamaniya	Supt.	14800-47100	-	01.11.2014	
16	Supporting staff	Shri P. S. Damor	Supt.	14800-47100	-	1.09.2006	

1.6. Total land with KVK (in ha) : 20.44 ha

Sl. No.	Item	Area in hectare(s)*
1	Under Building and Road	2.00
2	Under Demonstration units	0.70
3	Under crops	15.90
4	Agro-forestry	0.24
5	Others (Farm Pond & Channels)	2.00
	Total	20.84

1.7. Infrastructural Development:

A) Buildings

Sl. 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	KVK	15-8-11	550	5500000			
2.	Farmers Hostel	KVK	15-8-11	305	3000000			
3.	Staff Quarters (6)	KVK	15-8-11	400	4000000			
4.	Demonstration Units of vegetable	KVK + ATMA	31-3-07	-	-	-	-	-
5	Poly House	RKVY	31-3-09	320	281602	-	-	-
6	Net House	RKVY	31-3-09	150	64498	-	-	-
7	Training Hall	RKVY	20-2-10	190.99	1395800	-	-	-
8	Process Plant	RKVY	20-2-10	197.31	1536400	-	-	-
9	Implement shed	RKVY	11-2-10	77.33	297800	-	-	-
10	Rain Water harvesting system	KVK	31-3-2007	26m×26m (2 Ponds) 60m×60m (1 Pond)	999000	-	-	-
11	Fencing	-	Not	Available	-	-	-	-
12	Threshing floor	-	Not	Available	-	-	-	-
13	Farm godown	-	Not	Available	-	-	-	-
14	ICT lab	-	Not	Available	-	-	-	-
15	Other	-	Not	Available	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Toyota Qualis (GJ-10G 433)	2004-05	490200	484901	Working (it is required to be right off)
Hero Honda splendor(bike)GJ-10 BB-1634	2010-11	46475	21670	Working
Mahindra Scorpio (GJ-10 GA-0535)	2019	1032156	1500	Working (New)
Tractor Mahindra B-275 DI TU (Bhoomiputra) (GJ-10GA 0885)	2019	432205	-	Working (New)

C) Equipments & AV aids

Name of the equipment	Year of purchase	Cost (Rs.)	Presentstatus
Captain Mini Tractor	2001-02	166125	Under process for rightoff
Telephoneline	2001-02	19850	Working
Multi tool carrier complete set	2001-02	6500	Working
Photocopier	2001-02	125000	Working
Over headprojector	2001-02	17600	Working
Computer	2002-03	29500	Working
HP Laser printer	2002-03	20390	Working
U.P.S. (3 KVA)	2002-03	38000	Working
Spectrophotometer	2005-06	89160	Working
Flame photometer	2005-06		Working
Physicalbalance	2005-06	10640	Working
Chemicalbalance	2005-06	100000	Working
Water distillation still	2005-06	96118	Working
Kieldahi digestion and distillation	2005-06	49644	Working
Shaker	2005-06	80080	Working
Grinder	2005-06		Working
Refrigerator	2005-06	16772	Working
Oven	2005-06	30550	Working
Hot plate	2005-06		Working
Aspee tractor mounted sprayer	2006-07	32000	Working
Air assisted blower type sprayer	2009	98750	Working
Laptop computer (HCL)	2009	47500	Working
Digital camera (Nikon)P-90 12.1	2009	24300	Working
Cotton stalk shredder	2008-09	121000	Working
Groundnut digger-tractor operated	2009	78500	Working
Cultivator cum rotavator	2009	90000	Working
Groundnut decorticator	2009	95850	Working
Multi crop thresher	2009	114000	Working
Processing Unit	2009	1685000	Working
Plantar-tractor operator	2009	44000	Working
EPBX System	2012	44000	Working
Vertical Autoclave	2012	78190	Working
Laminar Airflow	2012	127440	Working
Electronic Balance (200 gm)	2012	12600	Working
EC/ Conductivity meter	2012	6300	Working
Portable pH Meter	2012	6300	Working
Compound microscope	2012	4410	Working
Trinocular microscope	2012	112000	Working

Digital temperature & humidity indicator cum controller	2012	34750	Working
Digital TDS meter	2012	3985	Working
Research centrifuse with accesaries	2012	42480	Working
Stabilizer	2012	10440	Working
Hot air oven	2012	41580	Working
BOD incubator	2012	46305	Working
Digital camera SLR (Canon)	2012	44750	Working
AC 1.5 tonn	2012	45990	Working

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

Sl.No.	Date	Number of Participants	Salient Recommendations	Action taken
1.	01-10-2005	21	-	-
2.	07-10-2006	30	-	-
3.	02-11-2007	31	-	-
4.	17-10-2008	30	-	-
5.	14-09-2009	33	-	-
6.	29-4-2010	35	-	-
7.	07.04.2011	37	-	-
8.	10.04.2012	32	-	-
9.	02.04.2013	37	-	-
10.	27.12.2013	26	-	-
11.	21.02.2015	25	-	-
12.	29.01.2016	22	-	-
13.	25.10.2016	27	-	-
14.	12.04.2018	30	-	-
15.	25.03.2019	35	-	-
16.	07.03.2020	35	As below	As below

The Sixteenth Scientific Advisory Committee meeting of Krishi Vigyan Kendra, JAU, Jamnagar was held at Training Hall, Krishi Vigyan Kendra, JAU, Jamnagar on 7th March, 2020.

Committee made the following recommendation after active interaction.

Sl. No.	Name and Designation of Participants	Salient Recommendations	Action taken
1	Dr. V. P. Chovatiya, Hon'ble Vice Chancellor, JAU, Junagadh	<ul style="list-style-type: none"> ➤ Periodically send information through by mass SMS for contingency plant and weather effect to farmers. ➤ Arrange FLD on latest variety of pearl millet ➤ Arrange training on pink bollworm awareness during second quarter. ➤ Analyze maximum soil and water sample at KVK Soil Testing Laboratory 	Suggestion accepted and incorporated in action plan
2	Dr. B. K. Sagarka, Director of Extension Education, JAU, Junagadh	<ul style="list-style-type: none"> ➤ Write down the record of success stories of different farmers success and highlight them 	Suggestion accepted and incorporated in action plan
3	Dr. K. D. Mungara, Associate Research Scientist, Pearl	<ul style="list-style-type: none"> ➤ Arrange training on bakery products. 	Suggestion accepted and incorporated in action plan

	Millet Research Station, JAU, Jamnagar`		
4	Shri Vitthalbhai Sanghani and Jentibhai Parsana progressive farmers of Jamnagar	➤ Increase organic farming and advice about dangerousness effect of chemical on human being.	Suggestion accepted and incorporated in action plan. Maximum emphasis on organic farming in every programme.

❖ 16th SAC proceeding along with list of participants in Annexure -1.

2. DETAILS OF DISTRICT

The district of Jamnagar is lies in North Saurashtra Agro Climatic Zone(VI) with an area of 35.02 lakh hectare land. The total geographical area of entire district (21.8 – 22 ON, 69.0 – 70.7 E) occupies 14125 km² i.e. 14.125 lakh ha area in the west of Gujarat state. The climate is arid (80%) and semi arid (20%) with a meanmoistureindex of 67.5. About 95 to 98% of annual rainfall comes during the monsoon month of June to October, July and August being the rainiest months. The co-efficient of variation ranges between 50 and 82%. The annual potentialevapo-transpiration ranges between 1500 and 1650mm, three times the precipitation, resulting in no flow in the ephemeral channels for the most of the year. The district is a water scarcity area droughts are common in this region draughts of moderate to severeintensity occur once in 2 to 3 years. Although the integrateddrainagesystemfrom the story/rocky/gravelly surfaces and torrential nature of precipitation generate 40 to 60% of rainfall as runoff, steeper slopes and absence of checks allow the water to quickly flow to the sea. Being is hard rock terrain, the groundwater potential is very low, is already over exploited and mined, resulting in either the saline water ingress in the costal aquifers, or drying up of the ground water up to a depth of 100m. Consequently a need for holistic approach to water resourcedevelopmentin the district. Wind velocity prevailing in the district is higher order (14.1 km) ha on an annual averagebasisdue to sea coast area.

According to physiographically, majorportion of the area in the district have an altitude ranging between 25 to 150 meters, which consists ten taluka having gentle slope to moderate slope. The district is marked by radicalrainage pattern. Deccantrap basalt occupies a major part of the district. The Quaternary formations includemilliolite, limestone, alluvium and Geolian sediments. The dominantland forms are colluvial plains and rocky uplands. Low hills occur in the southern part of district and are dissected by numerous large and small seasonal streams, most of which drain towards north and form potential drainage basins. The district is characterized by shallow, black soil and coastal alluvial soils with large variations in depth, texture, structure salinity, and water erosion. Nearly two third area of the district is under cultivation. The major factors of land degradationareaccelerated water erosion and Salinization.

Basic information of operational district, Jamnagar and Devbhumi Dwarka:

Sr. No.	Details	JAMNAGAR	DEVBHUMI DWARKA
1	Total geographical area	6.075 lakh ha.	4.07509 lakh ha.
2	Totalcultivablearea	4.32 lakh ha.	2.52 lakh ha.
3	Netcultivatedarea	3.53 lakh ha.	2.38 lakh ha
4	Totalareaunder forest	0.43 lakh ha.	0.1736 lakh ha
5	Totalirrigatedarea	0.939 lakh ha.	0.23092 lakh ha.
6	Number of holdings	1.44 lakh	1.17 lakh
7	Averageannual rainfall	550 mm.	550 mm.
8	Soiltype	Medium black	Medium black
9	Totalnumber of villages	419 (8 city)	280 (8 city)
10	Totalpopulation	13.89 lakh (2011)	7.48 lakh (2011)
	(a) Male	7.18lakh .	3.84lakh .

	(b) Female	6.71 lakh		3.64lakh .	
11	Literacy percentage	Rural	Urban	Rural	Urban
	a. Male	86.95	79.55	76.14	80.74
	b. Female	76.22	62.18	55.41	61.36
12	Number of talukas	6 (Six),		4 (Four)	
		Jamnagar		Jamkhabhalia	
		Dhrol		Jamkalyanpur	
		Jodiya		OkhaMandal (Dwarka)	
		Kalavad		Bhanvad	
		Lalpur			
		Jamjodhpur			

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

S. No	Farming system/enterprise		
1	Crops	Cereals	: Pearl millet, Sorghum, Wheat, Maize
		Pulses	: Greengram, Blackgram, Chickpea, pigeonpea
		Oilseeds	: Groundnut, Sesamum, Castor, Mustard,
		Cash crops	: Cotton,
		Spices and condiments	: Cumin, Fennel, Coriander, ajwan, Ishabgul
		Vegetables	: Onion, garlic, potato, chilli, binjal, tomato, cauliflower, Cowpea, cabbage, okra, peach, cucurbits etc
		Horticulture	: Chiku, pomegranate, lemon (Citrus), Jamun, Aonla, guava, custard apple, papaya, coconut, ber, Almond, Banana, Dragon fruit, Drum stick
		Floriculture	: Rose, merry gold, vevanti, etc
		Other Crops	: Chikori, Fenugreek, Mulberi neem
2	Live stock	Bullocks and cows	
		Buffaloes	
		Sheep	
		Goats	
		Horse and camel	
		Poultry	
		Others animals	
3.	Fishery	340 km coastal belt	4832 tonnes fish production

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

a) Soil type

S. No	Agro-climatic Zone	Characteristics
Zone-VI	North Saurashtra	<p>The influence area of North Saurashtra Agroclimatic Zone is spread among five districts viz., Amreli (7 taluukas out of 10), Bhavnagar (7 talukas out of 14), Jamnagar (all the 10 talukas), Rajkot (9 talukas of 13) and Surendranagar (6 talukas out of 9) covering 39 talukas in all. The influence area of the zone lies between 21°-02' to 23°-16' North Latitude and 68°-56' to 72°-12' East Longitude. It is founded in the north by the Gulf of Kutch and parts of Rajkot as well as Surendranagar districts, in the East by the Ahmedabad district and ncoastal 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.</p> <p>The North Saurashtra region which comprises the peninsular part of Gujarat has low to</p>

	medium rainfall and shallow to medium black soils and also coastal saline alluvial soils. In this Agro-climatic zone, cotton (Bt), groundnut, pearl millet, wheat are the major crops which contribute considerably to the economy of the state. In Saurashtra, among this zone taking in to consideration the rainfall pattern, the topography, soil characteristics, the climate and the cropping pattern have been identified in Gujarat. The North Saurashtra zone have five main / sub station cum testing centre of University like Dry Farming Research Station with KVK, Targhadia (Rajkot District), Main Millet Research Station with KVK, Jamnagar, Oilseeds Research Station (Sesamum, Mustard, Sunflower) with KVK, Amreli, Dry Farming Research Station, Nanakandhasar, (Surendranagar District) and Dry Farming Research Station, Jamkhabhalia (Jamnagar District).
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b) Topography

Agro – Ecological situation in the District

The advent of southwest monsoon greatly influences seasonal patterns of rainfall distribution in the district. Thus, mean annual rainfall provides useful comparison of agricultural potential of a given situation in the district. The mean rainfall in the district 539.17mm

The physiography of entire region of district is more or less flat. However, the region is undulating with slopes having little hilly areas from 25 to 150 meters. Physical features of the area vary from flat land to 150 meters above mean sea level. Most of the area falls in the range of 25m to 150m above mean sea level.

Based on the soil survey information of the zone, the soils of the district hence been broadly classified in to fine categories. Available information about the properties of these soils and their textures has been considered. The types of soils categories are as under: -

- Shallow black soils
- Medium black soils
- Saline alkali soils
- Coastal alluvial soils
- Hilly soils

While delineating the zone into district agro ecological situations, there major factors including various soil types, altitude and the rainfall patterns have primarily been considered. The district can be delineated into five agro ecological situations.

Although, each of the situations has rainfed and irrigated condition, but irrigation has not been considered in identification of the agro ecological situations. While deciding the major crops, cropping patterns and constraints in production, mention has been made of both these conditions one or the other agro ecological situation occurs in the influence area of the district. The fact that this does not preclude the existence of more than one agro ecological situations within the same area.

Sl. No.	Agro Ecological Situation	Soil texture	Altitude	Principal crops	Special features	Approximate area (000ha)	Taluka included	Characteristics
AES-1	Shallow Black soils with 500-600 mm Rainfall	Sandy clay loam to clayey	75 – 150	Groundnut, wheat, sorghum, pearl millet	Well drained soils with rapid permeability	124	Kalawad, Jamjodhpur, Bhanvad, Okha	Moisture stress, temperature stress

AES-2	Shallow Black soils with 600-700 mm Rainfall	Clayey	75 – 150	Groundnut, wheat, sorghum, pearl millet	Slightly well drained soils with rapid permeability	180	Part of Kalyanpur, Jamnagar, Jamkhabhalia, Lalpur, Dhrol, Jodia	Moisture stress, temperature stress
AES-3	Coastal Alluvial soils with 300-400 mm Rainfall	Clayey loam to clayey	50	Groundnut, pearl millet, sorghum, chickpea	Low nitrogen and phosphorus	181	Jodia, part of Okha, Jamkhabhalia, Kalyanpur & Jamnagar	Salt affected salinity
AES-4	Coastal Alluvial soils with 500-700 mm Rainfall	Silt clay	25-50	Groundnut, pearl millet, sorghum, chickpea	Low nitrogen and phosphorus	299	Kalyanpur, Jodia & Jamnagar, Khambhadia, Lalpur, Dwarka	Salt affected salinity
AES-5	Coastal Alluvial shallow black soils with 300-400 mm Rainfall	Sandy loam to clay loam	0-25	Sorghum, Pearl millet, Groundnut, Sesamum	Arid climate	31	Okha	Known salinity for genus ephedra sea coast very rich in Algal flora and fanner of economic importance.

2.3 Soil type

As the geographical formation of Saurashtra is to volcanic origin, the soils are generally derived from basaltic rock known as Deccan trap. This is the commonest rock in India and due to its extensive occurrence in south is called "Deccan Traps". In many parts, they have flat top features and hence, are also known as plateau basalt. The trap rocks, which occupy a large part of western coast of India, is also covering North Saurashtra zone. The most common colour of the trap rock in the region is dark grey. On weathering, trap rock form a ferruginous gravelly material known as murrum, which under lie-soil formed in situ. Soils, thus derived are either brown red in colour or regular, the black soil. In district black or brown colour is predominant. The soils are shallow to moderately deep. The detailed soil survey information for the soils of Jamnagar district are as under.

S. No	Soil type	Characteristics	Area in ha
1	Shallow black soils	<p>These soils have developed from basaltic trap especially from granite and gneiss parent materials. They light grey in colour. Taxonomically, they are classified as <i>Ustorthents</i> and <i>Ustochrepts</i>. Soils depth varies for cm to 45 cm. They are gravelly but mainly they are sandy clay loam to clayey in texture. The clay on top in surface soil varies from 20% to 77.49% and calcium carbonate content varies from 3.76 to 26.71 per cent. The soil structure is weak, mainly sub angular blocky and occasionally crumb. Since these soils lack distinct profile layering and are shallow, capacity to retain moisture is not sufficient.</p> <p>The soils are neutral to alkaline in reaction p^H ranges from 7.3 – 8.4) and from fertility point of view, these are medium in available nitrogen, low to medium in available phosphorus and adequate in availability of potash.</p>	124000 ha (Kalawad, Jamjodhpur, Bhanvad, Okha)

2.	Medium black soils	<p>The major portion of Jamnagar (Some part of Kalyanpur, KHambhaliya& Jamnagar, major part of Lalpur, Dhrol, Jodiataluka is covered under medium black soils. These residual soils have basaltic trap parent materials. These soils vary in depth from 30 to 60 cm or more at few places. They are calcareous in nature. A layer of murrum (Unconsolidated material of decomposed trap and limestone) is generally found in sub soil layer. The drainage does not pose any problem, because of porous sub soil layer.</p> <p>Morphologically, the profile of these soils has A-C horizon characteristics, having moderate sub angular blocky structure. They are plastic and sticky and hard in consistency on drying. The colour of these soils varies from very dark brown to light grey. Taxonomically, these soils are classified as <i>Ustochrepts</i> in <i>Inceptisol</i> order. The soils are dominated by smectite group of clay minerals which give to mild cracking in dry season, due to which these are further classified as <i>Vertic – Ustochrepts</i> at sub group level.</p> <p>The soils are clay loam to clayey in texture. The souls are highly retentive of moisture because higher percentage of clay content. The percentage of clay content in the surface varies from 31.79 to 73.27 per cent, while no definite trend of clay content in different horizon of the profile is observed.</p> <p>The chemical composition of these soils is neutral to alkaline reaction (p^H7.4 to 8.9). Calcium is the dominant exchangeable cation followed by magnesium. The soils are generally low to medium in available nitrogen, phosphorus and adequately supplied with potassium. The calcium carbonate contents various from 5.26 to 20.36 per cent in these soils.</p>	180000 ha (Part of Kalyanpur, Jamnagar, Jamkhambhalia, Lalpur, Dhrol, Jodia)
3.	Saline alkali soils	<p>Saline alkali souls are extensively distributed on the coastal are3a as well as inlands. These soils are located in the districts of Jamnagar (Jodia, part of Okhamandal, Kalyanpur, Jamkhambhalia and jamnagartalukas). These soils are originated as a result of higher water table, low rainfall and high evaporation losses during summer months resulting into upward movement of salts, poor drainage, use of saline ground water and ingress of sea water (in coastal areas). The souls are classified as <i>Fluvaquents</i>, <i>Halaquents</i>, and <i>Haplaquents</i> (Entisol): <i>Haplaquents</i> and <i>Haptaquepts</i> in order – <i>Inceptisol</i>. Texturally these soils vary from sandy loam to clay. The degree of salinity and alkalinity is also highly variable.</p> <p>In Jamnagar district, the saline and alkaly soils are widely distributed mainly termed as coastal soil. The soils are sandy loam to clay loam in texture. The EC varies from 1.54 to 38.6 m.mhos/cm and ESP ranges from 9.2 to 74.64% in surface soil. The p^H varies from 7.6 to 9.00 in surface soils and normally calcareous in nature. Most of these soils are low to medium in available nitrogen and phosphorus and high in available potash.</p>	181000 ha (Jodia, part of Okha, Jamkhambhalia, Kalyanpur& Jamnagar)
4.	Costal alluvials oils	<p>these soils are located in the district of Jamnagar consisting Kalyanpur, Jodia and Jamnagar, Jamkhambhadia, Lalpur, Dwarka (OkhaMandal) and Dhrol, talukas. These soils are sandy clay loam to clay in texture. These soils are also affected with salts and are saline sodic in nature. The surface soil varies from 1.54 to 38.6 m.mhos/cm in Electrical conductivity, and from 9.2 to 74.64 in Exchangeable sodium percentage. The soil reaction varies with situation ranging from moderately alkaline or highly alkaline (p^H 7.6 to 9.0). The souls</p>	299000 ha (Kalyanpur, Jodia& Jamnagar, Khambhadia, Lalpur, Dwarka)

		are normally medium in fertility. Taxonomically, these soils are classified as <i>Halaquents</i> and <i>Haplaquents</i> – Entisol and <i>Helaquepts</i> and <i>Hapdaquents</i> in Inceptisol order.	
5.	Hilly soils	These soils occur in some parts Bhanvad and Jamjodhpurtalukas of Jamnagar district. Because of the steep slope and erosion, the profile is not developed. These soils are developed because of weathering of parent materials existing basaltic trap limestone and sand stone. These soils are shallow to moderately deep and are coarse to find in their texture. The texture varies from loamy sand to clay loam to clay. They have under composed rock fragments and are low in fertility status. These soils are placed in to <i>Ustorthents</i> and those near foothills and valley are comparatively deeper can be placed under <i>Ustochrepts</i> and can be classified under <i>entisol</i> and <i>Inceptisol</i> orders respectively.	31000 ha (Some part of Bhanvad and Jamjodhpur)

2.4. Area, Production and Productivity of major crops cultivated in the district

S. No	Crop	Jamnagar			Devbhumi Dwarka		
		Area (ha)	Production (Qtl)	Productivity (Qtl/ha)	Area (ha)	Production (Qtl)	Productivity (Qtl/ha)
	Oilseeds						
1	Groundnut	132795	5168380	38.92	245540	9821600	40.00
2	Sesamum	4822	23660	4.91	1458	6124	4.20
3	Castor	7095	243950	34.38	280	9800	35.00
4	Soybean	1793	12855	7.17	16	112	7.00
	Total Oilseeds	214358	0	0.00	177640	0	0.00
	Cash Crops						
5	Cotton	173236	5112160	29.51	7204	194508	27.00
6	sugarcane	82	4101	50.00	68	3399	50.00
	Total Cash Crops	98753	0	0.00	81837	0	0.00
	Food Grain						
7	Wheat	7030	265030	37.70	51570	1753380	34.00
8	Pearlmillet	242	6490	26.82	3278	91784	28.00
9	Sorghum	4429	46508	10.50	3671	40377	11.00
10	Maize	1558	11221	7.20	1292	9041	7.00
	Total Food Grains	39957	0	0.00	33113	0	0.00
	Pulse Crops						
11	Greengram	2346	17100	7.29	1839	13793	7.50
12	Blackgram	2645	19176	7.25	265	1935	7.30
13	Cowpea	156	586	3.76	129	409	3.17
14	Pigeon pea	3729	77190	20.70	500	10055	20.11
15	Moothbean	197	827	4.20	163	589	3.61
16	Chickpea	10222	158030	15.46	21078	313425	14.87
17	Cluster bean	41	769	18.75	34	617	18.16
18	Other pulses	8	0	0.00	7		
	Total Pulses	21493	0	0.00	17812		
	SPICES AND CONDIMENTS						
19	Cumin	2351	19987	8.50	1949	15413	7.91
20	Fenugreek	49	771	15.67	41	615	15.08
21	Coriander	1258	18237	14.50	1042	14498	13.91
22	Ajwan	2742	23312	8.50	2273	17978	7.91
24	Chilli	848	16104	19.00	702	12931	18.41
25	Garlic	328	26084	79.50	272	21456	78.91
	Total spices	7576	104495	13.79	6279	82891	13.20
	VEGETABLE						
27	Onion	109	22311	204.00	91	18436	203.41

28	Potato	55	8011	146.50	45	6612	145.91
29	Brinjal	960	177547	185.00	795	146664	184.41
30	Tomato	1288	383764	298.00	1067	317397	297.41
31	Cauliflower	53	7792	146.91	44	6432	146.32
32	Cowpea	431	32230	74.80	357	26499	74.21
33	Cabbage	443	74681	168.40	368	61672	167.81
34	Okra	1526	109848	72.00	1264	90286	71.41
37	Cucurbits	790	129113	163.40	655	106610	162.81
38	Cluster bean	2474	238732	96.50	2050	196628	95.91
39	Other vegetable	87	9668	110.50	73	7969	109.91
	Total Vegetable	8216	1193698	145.29	6809	985205	144.70
	FRUIT CROPS						
40	Chiku	136	15754	115.70	113	12989	115.11
41	Pomegranate	309	27500	89.01	256	22639	88.42
42	Citrus	141	10412	74.09	116	8560	73.50
44	Aonla	19	1148	60.00	16	942	59.41
45	Guava	7	284	43.33	5	232	42.74
46	Custard apple	36	2685	75.54	29	2208	74.95
47	Papaya	264	165079	625.01	219	136672	624.42
48	Coconut	276	23224	84.10	229	19111	83.51
49	Ber	192	18193	94.79	159	14983	94.20
50	Kharek/Dates	50	2488	50.00	41	2038	49.41
51	Banana	24	10587	440.00	20	8762	439.41
52	Mango	257	15678	61.00	213	12867	60.41
53	Cashew nut	2	22	10.00	2	17	9.41
54	Other fruits	97	7596	78.47	80	6247	77.88
55	Total Fruits	1809	300650	166.20	1499	248265	165.61
56	FLOWERS						
57	Rose	36	3363	93.18	30	2769	92.59
58	Merry gold	77	6261	81.79	63	5151	81.20
60	Jasmine	2	142	86.67	1	117	86.08
62	Lilly	1	93	85.00	1	77	84.41
63	Other flowers	90	8011	88.79	75	6595	88.20
	Total flowers	206	17871	86.91	170	14709	86.32
	OTHER CORPS						
64	Chikori	27	2365	86.50	23	1947	85.91
65	Palma Rosa	24	2939	125.00	19	2424	124.41
	Total Other crops	51	0	0.00	42	0	
	Fodder crops						
67	Lucern	604	72510	120.00	501	59794	119.41
68	Sorghum	9110	1366542	150.00	7550	1128004	149.41
69	Maize	1591	0	0.00	1319	0	
	Total Fodder crops	11306	0	0.00	9369	0	

* Source : DAO, & Dy. Dir. Hort., Jamnagar

2.5. Weather data (January-2019 to December-2019)

Weekly mean Weather data-at JAU, Jamnagar during-2019									
Week No	Temp. °c		R.H.%		WS	BSS	Eo	Rain	Rainy
	Max	Min	I	II	(kmph)	(hrs)	(mm)	(mm)	Days
1-J	27.3	10.7	70	36	4.4	9.1	3.7		
2	26.1	12.5	71	38	5.4	8.2	4.0		
3	28.7	12.8	78	33	4.8	8.9	4.5		
4	24.6	11.5	56	28	7.8	9.0	4.2		
5	25.4	11.6	65	35	8.5	9.5	4.3		
6-F	25.7	11.7	63	27	7.7	9.1	4.6		
7	28.8	13.7	72	30	5.7	9.9	4.8		
8	28.6	16.4	85	37	6.4	9.4	4.6		

9	30.0	17.9	76	31	7.6	8.7	5.3		
10-M	29.8	17.8	77	32	6.9	9.3	5.6		
11	30.6	17.6	57	19	8.1	10.0	6.0		
12	33.8	19.6	77	29	8.1	9.8	6.8		
13	36.1	21.5	76	29	9.4	10.0	7.5		
14-A	37.3	22.2	85	30	10.4	10.2	8.0		
15	36.6	23.7	82	38	11.0	10.3	8.3		
16	34.8	23.1	76	37	10.2	10.1	8.2		
17	38.1	24.1	83	37	11.4	11.1	9.4		
18	36.3	24.8	79	47	13.0	10.7	9.6		
19-M	36.2	25.1	79	47	12.9	11.0	9.7		
20	36.3	26.2	83	52	14.2	10.7	9.8		
21	36.5	26.4	84	52	13.9	9.5	9.7		
22	38.2	27.4	88	49	15.1	10.0	10.6		
23-J	37.3	27.7	87	55	15.8	8.9	9.9		
24	34.7	27.2	85	67	11.4	2.2	8.0	48.5	2
25	35.3	27.1	86	61	12.6	7.7	7.2	7.5	1
26	35.9	28.5	79	56	13.8	6.9	8.9		
27-J	36.1	28.4	77	58	15.1	6.6	9.7		
28	36.4	28.6	74	52	18.0	6.9	9.8		
29	36.3	27.9	79	54	12.9	5.2	8.8	3.0	1
30	34.5	27.1	84	67	15.3	4.2	7.3	38.0	4
31	29.8	26.2	91	82	15.5	0.0	3.0	207.0	3
32-A	31.2	26.0	89	76	15.6	1.3	4.3	267.2	2
33	31.2	25.5	89	79	8.2	3.6	4.1	12.8	3
34	33.2	25.0	85	61	8.1	9.5	5.3	1.5	
35	32.9	26.2	91	73	7.8	5.2	4.5	197.0	3
36-S	31.8	25.6	95	84	5.0	2.7	3.2	233.0	6
37	31.3	26.2	92	83	7.8	1.0	3.7	75.00	2
38	33.5	26.1	86	65	6.3	6.1	5.2	1.5	
39	32.3	25.4	90	77	5.7	4.7	4.4	167.0	4
40-O	32.7	24.6	89	65	5.5	7.2	5.0		
41	34.7	23.6	74	44	3.2	9.6	5.9		
42	34.8	23.6	77	47	4.2	8.8	5.8		
43	32.8	22.9	75	46	5.8	8.2	5.3		
44	31.1	22.9	91	56	6.6	5.7	4.4	47.0	3
45-N	30.7	22.9	86	58	5.7	7.4	4.1		
46	31.3	21.8	82	53	5.7	7.9	4.2	5.00	1
47	29.8	19.1	77	49	4.1	7.7	4.0		
48	27.9	19.1	66	51	7.6	7.5	3.7		
49-D	28.2	18.8	67	49	7.4	5.3	3.8		
50	27.4	15.6	74	41	5.4	8.6	3.7		
51	26.4	13.9	67	34	7.5	9.1	3.7		
52	25.6	13.0	62	35	6.4	7.7	3.6		
Mean	32.2	21.8	79	49	9.1	7.6	6.0	1311.0	35
Highest	38.2	28.6	95	84	18.0	11.1	10.6		
Lowest	24.6	10.7	56	19	3.2	0.0	3.0		

* Source: Meteorological observatory, Millet Research Station, JAU, Jamnagar

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

Category	Population	Production	Productivity
Cattle	349229	2475.2 qtl. total milk	
<i>Crossbred</i>			8.585 lit/day
<i>Indigenous</i>			3.375 lit/day
Buffalo	209616		4.451 lit/ha
Sheep	232530	295.16 lakh kg wool	
<i>Crossbred</i>			
<i>Indigenous</i>			
Goats	173022		0.274 lit/ha

Pigs		290097.9 Qtl meat	
<i>Crossbred</i>			
<i>Indigenous</i>			
Poultry	38041	12.77 lakh eggs	
Hens			
<i>Desi</i>			
<i>Improved</i>			
Horse &	410		
Camels	2260		
Donkey	2577		
Total Milk			
Total egg			
Total wool			

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

Source: Assistant Directorate of Fishries, Jamnagar

2.7 Details of Operational area/ Villages (2018-19 to 2020-21)

Sl No	Taluka	Name of the village	Major crops & enterprises	Major problem identified	Identified thrust area
1	Jamnagar	Chandragadh, Khojaberaja, Lothiya, NaniBanugar, Suryapara	Cotton, groundnut, sesame, castor, greengram, wheat, Gram, cumin, mustard, Vegetable, Soyabean, flowers, live stock, fisheries	Heavy infestation of sucking pest in cotton, stem rot disease & white grub in Groundnut, Root rot in castor, Less area under horticulture crops, Blight in cumin, salinity, pink bollworm in cotton	<ul style="list-style-type: none"> - ICM in major crops of the district - Organic crop production - Introduction of new crop - Recycling of farm waste - Popularization of MIS - Motivation of fisheries cultivation - Soil Reclamation - Farm women empowerment - Farm mechanization
2	Kalyanpur	Gadhka, Patelka, Haripar, Juvanpur, Jampar			

2.8 Priority thrust areas

Sl. No	Crop/ Enterprise	Thrust area
1.	Cotton, groundnut, castor, cumin, coriander, wheat, vegetables, fruits, etc.	<ul style="list-style-type: none"> ➤ Integrated Crop Management in major crops ➤ IPM & IDM in major field crops ➤ White grub management in Groundnut ➤ Wireworm management in garlic & Onion ➤ Micronutrient management in wheat
2.	Organic farming	Enhancement of organic farming through improved technologies
3.	Farm waste/ organic matter	Recycling of farm waste through composting, vermicompost, green manuring, etc.

4.	Micro irrigation	Efficient use of water by micro irrigation system, water harvesting structure, and water conservation techniques
5.	Soil	Reclamation of saline & alkaline soils
6.	Farm Women	Farm women empowerment by training in value addition, handi crafts, and small scale enterprises
7.	Fisheries	Fish Farming
8.	Improved Implements	Popularization of the mechanized technological know how
9.	Plant protection	Pinkboll worm in cotton and white grub in groundnut,
10	Horticultural area	Enhancement of pomegranate, datepalm, draganfruit,
11.	Storage facility	Requirement of storage techniques and value addition in farm produce
12.	Water conservation & use of Micro irrigation	Efficient use of water by micro irrigation system, water harvesting structure, and water conservation techniques

3. TECHNICAL ACHIEVEMENTS

3.A. Details of target and achievements of mandatory activities by KVK during 2018-19

OFT				FLD			
1				2			
Number of OFTs		Total no. of Trials		Area in ha		Number of Farmers	
Target s	Achievemen t	Target s	Achievemen t	Target s	Achievemen t	Target s	Achievemen t
6	6	25	25	150	152.5	425	435

Training				Extension Programme			
3				4			
Number of Courses		Number of Participants		Number of activities		Number of participants	
Target s	Achievemen t	Target s	Achievemen t	Target s	Achievemen t	Target s	Achievemen t
46	58	1200	3638	424	1360	39632	35614

Seed Production (Qtl.)		Planting material (Nos.)	
5		6	
Target	Achievement	Target	Achievement
125.5	134.0	0	0

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-	10000	23617

3.1. B. Operational areas details during 2019

S.No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Extent of area (Ha/No.) affected by the problem in the district	Names of Cluster Villages identified for intervention	Proposed Intervention (OFT, FLD, Training, extension activity etc.)*
1	Groundnut	Lower yield, replacement of old variety	300000 ha.	Chandragadh, Khojaberaja, Lothiya, Nani Banugar, Suryapara, Gadhka, Patelka, Haripar, Juvanpur, Jampar	OFT, FLD and Training
2	Chilli	Thrips, Curling of leaves, nutritional deficiency	1500 ha	- " -	Training
3	Garlic	Purple blotch, wireworm, yellowing, tip burning	600 ha	- " -	Training
4	Sesame	Leaf webber, mite, blight, stem rot, root rot, yellowing, replacement of old variety	12000 ha.	- " -	OFT, FLD and Training
5	Wheat	Fall army worm, Stem borer, Termite, nutritional deficiency,	58000 ha	- " -	FLD and Training
6	Vegetable mittens (Okra, Brinjal)	Drudgery reduction, cut & wounds, skin hardness, blisters and abrasions,	2790 ha	- " -	FLD and Training
7	Animal Husbandry	Due to inadequate nutrients in the daily ration, the % fat in milk and productivity of the animal decreased hence, financial loss.	Majority farmers (350000)	- " -	FLD and Training
8	Fisheries	Direct stocking of Spawn, Mortality rate is higher during spawn to fingerling stage rearing and uncertain in production	In Majority reservoir	Nana Khadba NaviPipar NaviVeraval	OFT
9	Fisheries	Assessment of technique of rearing the ruhu (<i>Labio rohita</i>) seed from spawn to fry stage in "Hapa" system	In Majority reservoir	Nana Khadba NaviPipar NaviVeraval	OFT
10	Cotton	Pink bollworm, redding & yellowing of leaves, sucking pests, weevil,	180440		FLD and Training
11	Chicory	ICM	50		FLD and Training
12	Cumin	IPM, IDM, INM, variety	4300		FLD and Training
13	Ajwain	IDM, Variety	5015		FLD and Training
14	Coriander	IDM, IPM, Variety	2300		FLD and Training
15	Pearl millet	Variety, IPM, IDM	3520		FLD and Training
16	Chick pea	IPM, Variety	31300		FLD and Training
17	Kitchen gardening	Nutritional security	Majority farmers		FLD and Training
18	Fisheries	Inadequate use of natural resources	-	Rasulnagar	FLD and Training

* Support with problem-cause and interventions diagram

3.2. TECHNOLOGY ASSESSMENT AND REFINEMENT

A. Abstract on technologies Assessed and Refined

A1. Abstract on the number of technologies assessed in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation		1								1
Integrated Pest Management		1								1
Integrated Crop Management										
Integrated Disease Management										
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction					1					1
Storage Technique										
Mushroom cultivation										
Total		2			1					3

A2. Abstract on the number of technologies refined in respect of crops

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation										
Integrated Pest Management					1					1
Integrated Crop Management										
Integrated Disease Management					1					1
Small Scale Income Generation Enterprises										
Weed										

Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total					2					2

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

Thematic areas	Cattle	Poultry	Sheep	Goat	Piggery	Vermi culture	Fisheries	TOTAL
Evaluation of Breeds								
Nutrition Management								
Disease of Management								
Value Addition								
Production and Management							1	1
Feed and Fodder								
Small Scale income generating enterprises								
TOTAL							1	1

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

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

B. Achievements on technologies Assessed and Refined

B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Groundnut	Assessment of suitable high yielding groundnut variety in kharif season for Jamnagar district	3	3	1.8
Integrated Pest Management	Sesame	Management of sesame leaf webber	3	3	1.8
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	Okra	Assessment of mittens for vegetable harvesting	10	10	1.8
Storage Technique					
Others (Pl. specify)					
TOTAL			16	16	

B.2. Technologies Refined under various Crops

Thematic areas	Crop	Name of the technology refined	No. of trials	No. of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest	Chilli	Management of thrips in chilli	3	3	1.8

Management					
Integrated Crop Management					
Integrated Disease Management	Garlic	Management of purple blotch of garlic	3	3	1.8
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Others (Pl. specify)					
Total			6	6	

B.3. Technologies assessed under Livestock and other enterprises

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	Fisheries	Stocking of Freshwater prawn (<i>Macrobrachium rosenbergii</i>) with IMC fingerlings in village pond/ Reservoir	3	3
Others (Pl. specify)				
Total			3	3

B.4. Technologies Refined under Livestock and other enterprises

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				

C. Details of each On Farm Trial (OFT) for assessment to be furnished in the following format separately as per the following details

OFT-1 Sesame (Assessment) (Plant Protection) Kharif 2019

Title: Management of sesame leaf webber

1) Objective: To manage the leaf webber infestation in sesame

2) Problem definition: attack of leaf webber is increase

- Heavy infestation of leaf webber was found
- Improper cultivation practices
- Lack of knowledge about pest outbreaks and its management

Problem diagram :-

Improper cultivation practices	Management of sesame leaf webber	Irregular irrigation
Mono-cropping system		Lack irrigation facilities
No adoption of recommended practices		Lack of knowledge about pest outbreaks and its management
Crop failure due to water logging condition in rainy season		In judicious use of chemical pesticide
Farmer follows instruction given by the local pesticides retailer		Heavy incidence of pest and disease attack

3) Details of technologies selected for assessment/refinement

Category	Source of technology	Technology detail		
Technology option 1	Farmer	T ₁	Farmer practices	Injudicious use of insecticides. [use of chlorpyrifos, quinalphos, flubendiamide, imidacloprid, cypermethrin, lamdacyhalothrin after infestation of leaf webber at weekly interval without follow ETL]
Technology option 2	SAU	T ₂	Reco. Practices 1	Application of the insecticide will be start at pest infestation occurred. Cartap hydrochloride 50% S.P.@10g/10 Litre of water at the time of infestation.
Technology option 2	SAU	T ₃	Reco. Practices 2	Spray of <i>Beauveria bassiana</i> @ 5 g/lit of water at 15 days interval at pest initiation.

4) Source of Technology: - Junagadh Agricultural University

5) Production System and thematic area: Crop grown as Integrated Crop Management system and all agronomical practices adopted commonly.

6) Thematic area: Integrated Pest Management

7) Performance of the Technology assessed / refined with performance indicators:

Sr. No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed / refined [Yield (q/ha), No. of leaf webber per 1 meter row length from each plot]					
			T ₁		T ₂		T ₃	
			No. of leaf webber	Yield	No. of leaf webber	Yield	No. of leaf webber	Yield
1	Mungara Kalubhai Ramjibhai	Sumari (Dhutarpur)	9	5.3	4	7	3	7.2
2	Faldu Vijaybhai Jadavbhai	Kalavad	8	5.6	3	7.2	5	6.4
3	Vinubhai Keshavbhai	Balambhadi	12	4.7	4	8	4	6.8
Average			9.67	5.20	3.67	7.40	4.00	6.80

8) Final recommendation for micro level situation: Application of the insecticide will be start at pest infestation occurred. Cartap hydrochloride 50% S.P.@10g/10 Litre of water at the time of infestation having minimum pest population and highest yield with farmers practices. The farmers who have done

organic farming they have to use of *Beauveria bassiana* @ 5 g/lit of water at 15 days interval at pest initiation.

9) Constraints identified and feedback for research:

- It start within early stage of crops and till remain till the pod formation
- It cannot come in direct contact of pesticide due to webbing of leaves.
- Yield increase as compare to farmers' practices.

10) Process of farmer's participation and their reaction: Farmers have good response and they have support for OFT. Recommended practices having found lower incidence of leaf webber and highest yield.

11) Results of On Farm Trial

Crop/enterprise	Farm-ing situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter Q/ha	
1	2	3	4	5	6	7	8	
Sesame	Rainfed	IPM	Management of sesame leaf webber	3	Cartap hydrochloride 50% S.P.@10g/10 Litre of water at the time of infestation	Yield (q/ha), No. of leaf webber per 1 meter row length from each plot	T ₁	5.20
							T ₂	4.70
							T ₃	6.80

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	9	10	11	12
Sesame	Application of the insecticide will be start at pest infestation occurred. Cartap hydrochloride 50% S.P.@10g/10 Litre of water at the time of infestation having minimum pest population and highest yield with farmers practices. The farmers who have done organic farming they have to use of <i>Beauveria bassiana</i> @ 5 g/lit of water at 15 days interval at pest initiation.	Farmers have good response and they have support for OFT. Recommended practices having found lower incidence of leaf webber and highest yield.	Nil	It is necessary against outbreak of pest and heavy infestation. Also resistance developed against conventional insecticide.

Crop/enterprise	Technology Assessed / Refined	Production kg/ha	Input Cost Rs./ha	Gross return Rs./ha (Rate 105.00/kg)	Net Return (Profit) in Rs. / ha	BC Ratio
1	13	14	15	16	17	18
Groundnut	T ₁ Injudicious use of insecticides. [use of chlorpyrifos, quinalphos, flubendiamide, Imidacloprid, cypermethrin, lambdacyhalothrin after infestation of leaf webber at weekly interval without follow ETL]	520	26500	56160	29660	2.12
	T ₂ Application of the insecticide will be start at pest infestation occurred. Cartap hydrochloride 50% S.P.@10g/10 Litre of water at the time of infestation.	740	24000	79920	55920	3.33
	T ₃ Spray of <i>Beauveria bassiana</i> @ 5 g/lit of water at 15 days interval at pest initiation.	680	22500	73440	50940	3.26

OFT :- 2 GROUNDNUT (Kharif 2019)

1) Title:-Assessment of suitable high yielding groundnut variety in kharif season for Jamnagar district

2) Problem definition:

Groundnut is cultivated predominantly in Jamnagar district. The productivity of groundnut, in Jamnagar is low due to low yield in existing variety, Irregular rainfall, Heavy incidence of pest and disease attack.. Hence, an OFT was carried out with the objectives to find out suitable high yielding groundnut variety for kharif season for Jamnagar district to enhance the groundnut productivity.

3) Details of technologies selected for assessment/ refinement

Category	Source of technology	Technology detail	
Technology option 1	Farmer	T ₁	GG-20 (Farmer's practice)
Technology option 2	JAU	T ₂	GJG-22

4) Source of Technology: - Junagadh Agricultural University

5) Production system:

- Crop grown as Integrated Crop Management system and all other agronomical practices adopted commonly.

6) Thematic area: To enhance the groundnut productivity.

7) Performance of the Technology assessed with performance indicators:

Sr. No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed [Yield (q/ha), from each plot]			
			T ₁		T ₂	
			Haulm yield (q/ha)	Pod Yield (q/ha)	Haulm yield (q/ha)	Pod Yield (q/ha)
1	Rabadiya Mahesh Mohanbhai	Pipartoda	40	25	47.44	28.75
2	Rabadiya Milan Ramjibhai	Pipartoda	42	26.25	52.5	35
3	Chavda Tapubha Togaji	Chavda	38	23.75	43.31	26.25
Average			40.00	25.00	47.75	30.00

8) Final recommendation for micro level situation:

The results of the study revealed that the sowing of groundnut variety GJG-22 produced higher pod yield (30.0 q/ha), haulm yield (47.75 q/ha), net return (Rs. 123800/ha) and BCR (3.58) than GG-20.

9) Constraints identified and feedback for research:

- Lack of knowledge about new high yielding variety
- Non availability of seed of new high yielding variety
- Irregular rainfall

10) Process of farmer's participation and their reaction: Satisfactory, Less incidence of collar rot

11) Results of On Farm Trials:

Crop/ enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter Q/ha		
1	2	3	4	5	6	7	8		
Groundnut	Irrigated	Low yield in existing variety	Assessment of suitable high yielding Groundnut Variety in kharif season for Jamnagar District	3	suitable high yielding groundnut variety for kharif season	Haulm yield (q/ha), Pod yield (q/ha),		Haulm yield (q/ha)	Pod yield (q/ha)
							T ₁	40.00	25.00
							T ₂	47.75	30.00

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	9	10	11	12
Groundnut	Sowing of groundnut variety GJG-22 produced higher pod yield (30.0 q/ha), haulm yield (47.75 q/ha), net return (Rs. 123800/ha) and BCR (3.58) than GG-20.	Farmers have good response and they have support for OFT. GJG-22 produced higher yield	-	-

Crop/enterprise	Technology Assessed / Refined	Production kg/ha		Gross return Rs./ha	Cost of cultivation Rs./ha	Net Return (Profit) in Rs. / ha	BC Ratio
		Haulm yield (Kg/ha)	Pod Yield (Kg/ha)				
1	13	14	15	16	17	18	19
Groundnut	T ₁ GG-20 (Farmer's practices)	4000	2500	143250	49600	93650	2.89
	T ₂ GJG-22	4775	3000	171800	48000	123800	3.58

Selling Rate: Groundnut pod: 50.9 Rs per kg, Groundnut haulm: 4 Rs per kg

OFT-3 : Home Science (Summer 2019)

1) Title :-Assessment of Mittens for vegetable harvesting

2) Problem definition :

1. Injury due to thorns of okra
2. Drudgery to rural women
3. Muscular skeletal problem of workers

3) Details of technologies for assessment/ refinement

Category	Source of technology	Technology details		
Technology option 1	Farmer	T ₁	Farmer practices 1	No use any protective wear
Technology option 2	Farmer	T ₂	Farmers practices 2	Use of hand care household rubber/surgical gloves
Technology option 3	SAU (MKV-Parbhani)	T ₃	Reco. practices	Use of mittens (gloves made from denim, cotton and plastic material) for Okra harvesting

4) Source of Technology:- SAUs (MKV-Parbhani, Maharashtra)

5) Production system :

Farm women suffers different health hazards viz. cuts and wounds in hands, hardness of skin, blisters and abrasions, irritation etc. during okra fruit picking. In the present study, for reduction of the drudgery and pain, Farm women usually not used any protective wears; some farmers use rubber gloves; however the vegetable mittens is recommended practice for reduction of drudgery. Thus, farm women use the mittens in both hand during picking of okra.

6) Thematic area : Drudgery reduction

7) Raw data about the Performance of the Technology assessed / refined with performance indicators

Sr. No.	Name of the farm women	Name of the Village	Data on Performance indicator of the technology assessed/ refined					
			Efficiency of picking (kg/hour)			Efficiency Increase (%)		
			T ₁	T ₂	T ₃	T ₁	T ₂	T ₃
1	Rinkuben Kailashbhai	Memana	7.5	8.3	8.5		10.67	13.33

2	Niraben Rupsang	Memana	7.3	8	8.2		9.59	12.33
3	Nilavben Kailashbhai	Memana	8	8.3	8.5		3.75	6.25
4	Bhartiben Dipakbhai Nakum	Harshadpur	8.2	8.7	9		6.10	9.76
5	Vijiben Keshubhai Nakum	Harshadpur	7.5	8.2	8.4		9.33	12.00
6	Hemaliben Rameshbhai Nakum	Harshadpur	8	8.4	8.6		5.00	7.50
7	Mitaben Anilbhai Ddabhi	Harshadpur	7.6	8	8.3		5.26	9.21
8	Savitaben Parshotambhai Chopada	Harshadpur	7.9	8.6	9		8.86	13.92
9	Rekhaben Prashantbhai Chopada	Harshadpur	8	8.8	9		10.00	12.50
10	Jiviben Narsang Dabhi	Harshadpur	7	7.7	8		10.00	14.29
Average			7.70	8.30	8.55		7.86	11.11

Conti...

Sr. No.	Name of the farm women	Name of the Village	Data on Performance indicator of the technology assessed/ refined											
			Effect on skin											
			Irritation			cuts and wounds in hands			hardness of skin			blisters and abrasions		
			T ₁	T ₂	T ₃	T ₁	T ₂	T ₃	T ₁	T ₂	T ₃	T ₁	T ₂	T ₃
1	Rinkuben Kailashbhai	Memana	2	1	0	3	1	0	2	1	0	2	2	0
2	Niraben Rupsang	Memana	2	2	0	2	1	0	2	1	0	3	3	0
3	Nilavben Kailashbhai	Memana	3	2	1	3	2	0	3	1	0	3	2	0
4	Bhartiben Dipakbhai	Harshadpur	2	1	0	3	1	0	2	1	0	3	3	0
5	Vijiben Keshubhai	Harshadpur	3	2	0	2	1	0	3	1	0	2	2	0
6	Hemaliben Rameshbhai	Harshadpur	2	1	0	3	1	0	3	1	0	3	1	0
7	Mitaben Anilbhai	Harshadpur	3	2	1	3	2	1	3	2	0	3	3	1
8	Savitaben Parshotam	Harshadpur	2	1	0	2	1	0	2	1	0	2	2	0
9	Rekhaben Prashantbhai	Harshadpur	2	2	0	3	1	0	3	1	0	3	3	0
10	Jiviben Narsang Dabhi	Harshadpur	3	2	1	3	2	1	3	1	1	3	2	0
Average			2.4	1.6	0.3	2.7	1.3	0.2	2.6	1.1	0.1	2.7	2.3	0.1

*Effect on skin for different hazardous effect according to grade (0= no, 1= slightly, 2= moderate, 3=heavy)

8) Final recommendation for micro level situation:

It was observed that the treatment 3 vegetable mittens technology is helpful for Effect on skin, Drudgery perceived, Efficiency of picking per hour. It was observed that helpful in reduction of physiological cost of work and body discomfort ratings and health hazards while harvesting manually. It increasing work output (11.11%) and reduction of drudgery involved in harvesting activity of okra.

9) Constraints identified and feedback for research :

- Long sleeves of mittens give protection to the skin of arms
- Provision of Sticking belt makes possible to adjust the mitten to any size of hand and arm
- Mittens are simple in design and easy for stitching. It made out of locally available material by local tailor. Mittens are useful for increasing speed of work. It reduces the musculo-skeletal problems of workers

10) Process of farmers participation and their reaction:

Farm women appreciate with this technology for future use. It is very useful for empowering the rural women and cost effective on large scale adoption.

11) Results of On Farm Trials

Crop/enter-price	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Okra	Irrigated	Injury due to thorns of okra	Assessment of Mittens for vegetable harvesting	10	Use of mittens (gloves made from denim, cotton and plastic material) for Okra harvesting	1. Effect on skin 2. Efficiency of picking per hour	94 % protection 11.11% increasing

***OFT – 4 Fish (2018-19)**

1) Title:- Pen cultures of Indian Major Carp (IMC) (*Catlacatla*) from fry stage to fingerling stage before stocking in village Pond/Dam.

2) Problem definition: Due to mortality rate is higher, decrease and uncertain final production

3) Details of technologies selected for assessment/ refinement

Category	Source of technology	Technology detail	
Technology option 1	Farmer	T ₁ Farmer practices	Direct stocking of spawn into village ponds/reservoir.
Technology option 2	CIFRI, ICAR Institutes	T ₂ Reco. practices	First rare the fish seeds of Fry stage up to fingerlings stage in a pen system (Closer and controllable water logged area adjoining to pond/dams) and then release in to the main water bodies,

4) Source of Technology: - Central Inland Fisheries Research Institutes, Barrakpore, Calcutta.

5) Production system and thematic area:

- Fish were grown in natural water bodies without any additional treatments.

6) Thematic area: To increase the final production.

7) Performance of the Technology assessed / refined with performance indicators:

Sr. No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed / refined [Yield (Tone/ha), Growth (Avg. Body weight)] at time of harvesting.					
			T ₁		T ₂		T ₂ compare to T ₁	
			Growth (Avg. Body weight) (Kg.)	Total Yield (Tone/ha)	Growth (Avg. Body weight) (Kg.)	Total Yield (Tone/ha)	Growth (Avg. Body weight)	Total Yield (Tone/ha)
1	Siraj Umar Safiya	Luharsar (Gajansa Dam)	0.500	3.600	-	-	-	-
2	Al UnusMatsyaSahkari Group	NaviVeraval	0.480	3.264	-	-	-	-
3	SikandarSidikbhaiAadmani	KhadDhoraji	0.470	3.008	-	-	-	-
4	Mahammad Husain HabibmiyaSaiyad	Nana Khadba (Village pond)	-	-	0.580	4.582	-	-
5	SahedbhaiHasambhaiNakani	Nikava (Village pond)	-	-	0.670	5.561	-	-
6	AsarfmiyaHabibmiyaSaiyad	Sapada Dem	-	-	0.620	4.960	-	-
		Average	0.478	3.291	0.638	5.034	0.16	1.743

8) Final recommendation for micro level situation: The inland fish farmers should rear the fish seeds from spawn/fry to fingerling stage in pen system before stocking into the pond/reservoir instead of direct stocking.

9) Constraints identified and feedback for research: Natural or ideal location for construction of pen is not available at every place (near the reservoir/Dam or Stocking site) hence sometime cost of preparing of Pen become costly.

10) Process of farmer's participation and their reaction: Educated and progressive farmers were selected for conducting the OFT at their pond/reservoir (On lease). Seeds and technical knowledge were provided to them at the site as well as by phone/media. After getting the result they are really happy and applied this technology in future and also give promise to spread this technique among the other fish farmers.

11) Results of On Farm Trials (Average of Three Years):

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
FISH	Inland	Low Production	Pen cultures of Indian Major Carp (IMC) (<i>Catla catla</i>) from fry stage to fingerling stage before stocking in village Pond/Dam.	3	First rear the fish seeds from fry stage to fingerlings stage in a pen system (Closer and controllable water logged area adjoining to pond/dams) and then release in to the main water bodies.	Growth (Avg. Body weight in Kg.) Total Yield (Tone/ha) at the time of harvesting	T ₁ : 0.509 T ₂ : 0.570 T ₁ : 3.330 T ₂ : 4.483

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	9	10	11	12
FISH	In the assessed technology the seeds (fry stage) of <i>Catla catla</i> were reared up to fingerling stage in Pen Culture system and then release into the ponds/Dams. In such situation the mortality rate is decreased and more number of seeds can be stocked in ponds/Dams hence, increase up to 12% in growth (body weight) and 34.6 % in total yield, obtained higher net return (42.86% increase) and B:C ratio (1.32) as compared to farmers practices.	Fish farmers are accept the technology. that this technology is benefited for fish farmers and ready to implement this technology in future. They also realize that care at the initial stage for only 2-3 month in pen system, farmers can earn more money per hector. At initial stage of growth, due to proper feed and care , healthy seeds become available for final stocking in the pond and hence fast growth achieved.	No	NA

Crop/enterprise	Technology Assessed /Refined	Production (Tone/ha)	Gross Return (Rs./ha)	Cost of cultivation Rs./ha	Net Return (Profit) in Rs./ha	B:C Ratio
1	13	14	15	16	17	18
FISH	T1 (Farmer's Practices)	3.330	133219	61632	71587	2.16
	T2 (Reco. Practices)	4.483	179256	76990	102267	2.32

OFT –5 :- Fish (Rabi 2019)

- Title:-** Stocking of Freshwater prawn (*Macrobrachium rosenbergii*) with IMC fingerlings in village pond/ Reservoir
- Problem definition:** Natural resources cannot be fully utilized due to single spp. of fish was stocked in pond/reservoir by farmers hence, lower the production and finally financial loss.
- Details of technologies selected for assessment/ refinement**

Category	Source of technology	Technology detail		
Technology option 1	Farmer	T ₁	Farmer practices	stocking a single species IMC into ponds
Technology option 2	CIFRI, ICAR Institutes	T ₂	Reco. practices	stocking of <i>M. rosenbergii</i> with IMC fingerlings into ponds/reservoir

7) Performance of the Technology assessed / refined with performance indicators:****RESULT AWAITED*******OFT –6 Animal Husbandry (2018-19)**

- Title:-** Role of Bypass fat in rations of dairy animals.
- Problem definition:** Due to inadequate nutrients in the daily ration, the % fat in milk and productivity of the animal decreased hence, financial loss.
- Details of technologies selected for assessment/ refinement**

Category	Source of technology	Technology detail		
Technology option 1	Farmer	T ₁	Farmer practices	Normal dietary pattern ie. Green Fodder, Dry Fodder and concentrate
Technology option 2	ANRS, AAU, Anand	T ₂	Reco. practices	Add 100g bypass fat as supplement with normal rations.

4) Source of Technology: - Animal Nutrition Research Station, AAU, Anand.**5) Production system:**

- Animals are treated with extra supplements having bypass fat

6) Thematic area: Increase in % fat as well as total production of milk and total income.**7) Performance of the Technology assessed with performance indicators:**

Sr. No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed / refined [% Fat, Total Yield, and Net Income] of initial 5 Months (153 days) of milking period.					
			T ₁			T ₂		
			% Fat	Total Yield (Liter)	Net Income (Rs.)	% Fat	Total Yield	Net Income (Rs.)
1	Jaysukhbhai Harjibhai Rathod	Singach	5.00	845.60	9480	5.70	985.6	14185
2	Hirenbai Damjibhai Rathod	Singach	5.11	827.40	9170	5.94	931.40	12075
3	Jaysukhbhai Savjibhai Rathod	Singach	5.14	877.80	11390	5.98	1002.40	15325
		Average	5.08	850.27	10013	5.87	973.13	13862

8) Final recommendation for micro level situation: OFT is interrupted and concluded.**9) Constraints identified and feedback for research:** OFT is interrupted and concluded.

10) Process of farmer's participation and their reaction: This product is quite good and may help to increase % fat of milk and productivity of animals.

11) Results of On Farm Trials

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter
1	2	3	4	5	6	7	8
Animal Husbandry	Lactating	Low Fat Percentage in milking animals.	Role of Bypass fat in rations of dairy animals.	3	Add 100 g bypass fat as supplements in normal ration of the animals.	% Fat increased in milk.	0.79%
						Increase in total milk Yield in animals	122.87 Liter
						Increase in Total Income generated	Rs. 3848

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	9	10	11	12
Animal Husbandry	As compare to control data, treated animals with Bypass fat (100 g/Day with daily ration), the percentage of fat is slight increase (0.79%) as well as the total production of milk is also increase around 14% hence 38% increase in total net profit for farmers.	This product is quite good and may help to increase % fat of milk and productivity of animals.	NA	NA

Crop/enterprise	Technology Assessed /Refined	Total Yield (Liter/5 Month)	Gross Return (Rs. /5 Month)	Cost of cultivation (Rs. /5 Month)	Net Return (Rs. /5 Month)	B:C Ratio
1	13	14	15	16	17	18
Animal Husbandry	T1 (Farmer's Practices)	850.27	42513	32500	10013	1.31
	T2 (Reco. Practices)	973.13	48657	34795	13862	1.40

D Details of On Farm Trial (OFT) for Refinement during 2019

OFT – 7:- Chilli (Plant Protection)(Kharif 2019)

1) Title:- Management of Thrips in Chilli.

Objective: To minimize the thrips incidence in chilli. To reduce injudicious use of chemical pesticide. To minimize residual effect of chemical

2) Problem definition: Incidence of Thrips is increase

- Heavy infestation of Thrips was found
- Lack of seed treatment and improper cultivation practices
- Lack of knowledge about pest outbreaks and its management
- In judicious use of chemical fertilizer

Problem diagram:-

Resurgence of thrips	Management of thrips in chilli	Multi season cropping system
Mono-cropping system		Lack of knowledge about pest outbreaks and its management
Lack of seed treatment		Lack of improper cultivation practices
In judicious use of pesticide		In judicious use of chemical fertilizer
Irregular irrigation		Improper use of FYM (without decomposition)

3) Details of technologies for assessment/refinement:

Category	Source of technology	Technology details		
Technology option 1	Farmer	T ₁	Farmer practices	Injudicious use of insecticides. [use of chlorpyrifos, quinalphos, flubendiamide, imidacloprid, Fipronil, Thiamethoxam, cypermethrin, lamdacyhalothrin after infestation of thrips at weekly interval without follow ETL]
Technology option 2	Main vegetable research station, AAU, Anand	T ₂	Reco. practices	Seed treatment with imidacloprid 70 WS (7.5 g/kg seed) and dipping of seedling before transplanting for two hours in solution of imidacloprid 17.8 SL (10 ml/10 litre water) or Thiamethoxam 25 WG (10 g/10 litre water). Spraying of spinosad 45 SC (3 ml/10 litre water)
Technology option 3		T ₃	Refined practices 1	Spray of <i>Beauveria bassiana</i> @ 5 g/lit of water at 15 days interval

4) Source of Technology: Junagadh Agricultural University

5) Production system: Irrigated, *Kharif* crop and all agronomical practices adopted commonly.

6) Thematic area: Management of thrips in chilli

7) Performance of the Technology assessed/refined with performance indicators:

Sr. No.	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed / refined [Yield (q/ha), No. of Thrips/3 Twig]					
			T ₁		T ₂		T ₃	
			No. of Thrips	Yield	No. of Thrips	Yield	No. of Thrips	Yield
1	Bhensdadiya Chandulal Dharamshibhai	Moti Banugar	36	75	22	99	25	96
2	Jadeja Jagdishsinh Bapubha	Memana	34	68	18	91	23	92
3	Sudani Vallabhbbhai Ladhabhai	Dodhiya	38	70	20	92	21	88
Average			36	71	20	94	23	92

8) Final recommendation for micro level situation: Application of seed treatment with imidacloprid 70 WS (7.5 g/kg seed) and dipping of seedling before transplanting for two hours in solution of imidacloprid 17.8 SL (10 ml/10 litre water) or Thiamethoxam 25 WG (10 g/10 litre water). Spraying of spinosad 45 SC (3 ml/10 litre water) having minimum pest population and highest yield with farmers practices. The farmers who have done organic farming they have to use of *Beauveria bassiana* @ 5 g/lit of water at 15 days interval as initiation of pest incidence having minimize the pest and good yield with decrease in input cost without hazardous effect.

9) Constraints identified and feedback for research:

- Time of application cannot identified for spraying
- High population of sucking pests, incidence of leaf curl

- Yield increase as compare to farmers' practices.
- Reduce the thrips as well as leaf curl incidence.

10) Process of farmer's participation and their reaction: Farmers have good response and they have support for OFT. Recommended practices having found incidence of thrips where it is repeated use. However, refinement 1 is very effective treatment for the management of thrips and highest yield.

11) Results of On Farm Trial

Crop/enterprise	Farm-ing situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter Q/ha
1	2	3	4	5	6	7	8
Chilli	Irrigated	IPM	Management of Thrips in Chilli	3	Use of balance fertilizers	No of thrips/3 twig and yield (q/ha)	T ₁ 71.00 T ₂ 94.00 T ₃ 92.00

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	9	10	11	12
Chilli	Application of seed treatment with imidacloprid 70 WS (7.5 g/kg seed) and dipping of seedling before transplanting for two hours in solution of imidacloprid 17.8 SL (10 ml/10 litre water) or Thiamethoxam 25 WG (10 g/10 litre water). Spraying of spinosad 45 SC (3 ml/10 litre water) having minimum pest population and highest yield with farmers practices. The farmers who have done organic farming they have to use of <i>Beauveria bassiana</i> @ 5 g/lit of water at 15 days interval as initiation of pest incidence having minimize the pest and good yield with decrease in input cost without hazardous effect.	Farmers have good response and they have support for OFT. Recommended practices having found incidence of thrips where it is repeated use. However, refinement 1 is very effective treatment for the management of thrips and highest yield.	Application of <i>Beauveria bassiana</i> @ 5 g/lit of water at 15 days intervals initiation of pest incidence.	It is necessary against outbreak of pest and heavy infestation. Also resistance developed against conventional insecticide.

Crop/enterprise	Technology Assessed / Refined	Production kg/ha	Input costRs./ha	Gross returnRs./ha (Rate 80.00/kg)	Net Return (Profit) in Rs. / ha	BC Ratio
1	13	14	15	16	17	18
Chilli	T ₁ Injudicious use of insecticides. [use of chlorpyrifos, quinalphos, flubendiamide, imidacloprid, Fipronil, Thiamethoxam, cypermethrin, lambda-cyhalothrin after infestation of thrips at weekly interval without follow ETL]	7100	150000	568000	418000	3.79
	T ₂ Seed treatment with imidacloprid 70 WS (7.5 g/kg seed) and dipping of	9400	135000	752000	617000	5.57

		seedling before transplanting for two hours in solution of imidacloprid 17.8 SL (10 ml/10 litre water) or thiamethoxam 25 WG (10 g/10 litre water). Spraying of spinosad 45 SC (3 ml/10 litre water)					
	T ₃	Spray of <i>Bearuveria bassiana</i> @ 5 g/lit of water at 15 days interval	9200	130000	736000	606000	5.66

*OFT – 8 :- Garlic (Refinement) (Plant Protection)[Rabi 2018-19]

1) Title:- Management of purple blotch of garlic

Objective: To minimize the infestation of purple blotch of garlic. To increase production. To reduce yield loss of garlic

2) Problem definition: Incidence of Thrips is increase

1. Heavy infestation of Thrips and purple blotch was found
2. Lack of seed treatment and improper cultivation practices
3. Lack of knowledge about pest, diseases outbreaks and its management
4. Injudicious use of nitrogenous fertilizer
5. Lack of fungicides use as preventive measure

Problem diagram :-

Improper cultivation practices	Management of purple blotch of garlic	Multi season cropping system
Mono-cropping system		Heavy infestation of purple blotch was found
Lack of seed treatment		Lack of knowledge about diseases outbreaks and its management
In judicious use of pesticide/fungicide		In judicious use of chemical fertilizer
Irregular irrigation		Improper use of FYM (without decomposition)

3) Details of technologies for assessment/refinement:

Category	Source of technology	Technology details		
Technology option 1	Farmer	T ₁	Farmer practices	Injudicious use of fungicide (Spray insecticides at weekly interval), spray fungicide after initiation/heavy infestation of diseases.
Technology option 2	Director of Onion & Garlic Research Station, ICAR	T ₂	Reco. practices	Foliar sprays of Mancozeb @0.25%, Tricyclazole @ 0.1% and Hexaconazole @0.01% at 30, 45 and 60 days respectively after transplanting helps in checking disease incidence.
Technology option 3		T ₃	Refined practices 1	Application of <i>Trichoderma</i> @ 5 kg/ha along with FYM @ 1 tonne/ha by broadcasting method + Foliar sprays of Hexaconazole @ 0.01% and Tebuconazole @0.05% at 40 and 60 days respectively after transplanting helps in checking disease incidence.

4) Source of Technology: JAU, Junagadh and Director of Onion & Garlic Research Station, ICAR

5) **Production system:** Irrigated, *Rabi* crop and all agronomical practices adopted commonly.

6) **Thematic area:** Integrated disease management

7) **Performance of the Technology assessed/refined with performance indicators:**

Sr. No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed / refined [Yield (q/ha), No. of infected plant/ 1 meter row length]					
			T ₁		T ₂		T ₃	
			No. of infected plant	Yield	No. of infected plant	Yield	No. of infected plant	Yield
1	SudaniHasmukhbhai Samjibhai	Dodhiya	23	41	12	54	10	57
2	SabhayaJentibhaiPopatbhai	KhojaBeraja	19	43	14	52	10	64
3	SabhayaDharmeshBhanjibhai	KhojaBeraja	24	39	16	53	13	59
Average			22.00	41.00	14.00	53.00	11.00	60.00

8) **Final recommendation for micro level situation:** Application of *Trichoderma* @ 5 kg/ha along with FYM @ 1 tonne/ha by broadcasting method + Foliar sprays of Hexaconazole @ 0.01% and Tebuconazole @ 0.05% at 40 and 60 days respectively after transplanting helps in checking disease incidence and having minimum infestation of disease and highest yield with farmers practices.

9) **Constraints identified and feedback for research:**

- Time of application cannot identify for spraying
- Yield increase as compare to farmers' practices.
- Reduce the infestation of purple blotch disease.

10) **Process of farmer's participation and their reaction:** Farmers have good response and they have support for conducting OFT. Recommended practices having found less infestation of purple blotch disease where it is repeated use. However, refinement 1 is very effective treatment for the management of purple blotch and highest yield.

11) **Results of On Farm Trials**

Crop/enterprise	Farm-ing situation	ProblemDiag-nosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter Q/ha	
1	2	3	4	5	6	7	8	
Garlic	Irri-gated	IDM	Management of purple blotch of garlic	3	Use of fungicides	No. of infected plant/ 1 meter row length and yield (q/ha)	T ₁	41.00
							T ₂	53.00
							T ₃	60.00

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justificationforrefinement
1	9	10	11	12
Garlic	Application of <i>Trichoderma</i> @ 5 kg/ha along with FYM @ 1 tonne/ha by broadcasting method + Foliar sprays of	Farmers have good response and they have support for OFT. Recommended practices having found less infestation of purple	Application of <i>Trichoderma</i> @ 5 kg/ha along with FYM @ 1 tonne/ha by broadcasting method + Foliar	It is necessary against heavy incidence of diseases. Also resistance developed against conventional fungicide.

	Hexaconazole @ 0.01% and Tebuconazole @0.05% at 40 and 60 days respectively after transplanting helps in checking disease incidence.	blotch where it is repeated use. However, refinement 1 is very effective treatment for the management of purple blotch and highest yield.	sprays of Hexaconazole @ 0.01% and Tebuconazole @0.05% at 40 and 60 days respectively after transplanting.	
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Crop/enterprise	Technology Assessed / Refined	Production kg/ha	Input CostRs./ha	Gross return Rs./ha (Rate 25.00/kg)	Net Return (Profit) in Rs. / ha	BC Ratio
1	13	14	15	16	17	18
Garlic	T ₁ Injudicious use of fungicide (Spray insecticides at weekly interval), spray fungicide after initiation/heavy infestation of diseases.	4100	86000	102500	16500	1.19
	T ₂ Foliar sprays of Mancozeb @0.25%, Tricyclazole @ 0.1% and Hexaconazole @0.01% at 30, 45 and 60 days respectively after transplanting helps in checking disease incidence.	5300	78000	132500	54500	1.70
	T ₃ Application of <i>Trichoderma</i> @ 5 kg/ha along with FYM @ 1 tonne/ha by broadcasting method + Foliar sprays of Hexaconazole @ 0.01% and Tebuconazole @0.05% at 40 and 60 days respectively after transplanting helps in checking disease incidence.	6000	68000	150000	82000	2.21

*OFT:9 NUTRIENT MANAGEMENT(Wheat)(Rabi 2018-19)

1) Title:-Response of Bio fertilizers to wheat yield

2) Problem definition:

Lower productivity and profitability in wheat cultivation due to imbalance application of nutrients. For sustained wheat production the modern farming demand integrated use of organic and inorganic fertilizers along with bio-fertilizers. Hence, an OFT was carried out to find out the suitable low cost input bio-fertilizer to enhance the wheat productivity.

3) Details of technologies selected for assessment/ refinement

Category	Source of technology	Technology detail		
Technology option 1	Farmer	T ₁	Farmer practices	Application of only DAP & Urea in Different Doses (109 N – 57.5 P ₂ O ₅) kg/ha
Technology option 2	JAU	T ₂	Reco. practices	Recommended dose of fertilizer (120N-60 P ₂ O ₅ -60K ₂ O)kg/ha
Technology option 3		T ₃	Refined practices 1	75% RDF + seed treatment of Azotobacter, PSB, PMB (Potash Mobilizing Bacteria) culture each at 25-30 ml/kg seed

4) **Source of Technology:** - Junagadh Agricultural University

5) **Production system and thematic area:** Crop grown as Integrated Crop Management system and all other agronomical practices adopted commonly.

6) **Thematic area:** To enhance the wheat productivity.

7) **Performance of the Technology assessed / refined with performance indicators:**

Sr. No	Name of the farmer	Name of the Village	Data on the performance indicators of the technology assessed / refined [Yield (q/ha), from each plot]					
			T ₁		T ₂		T ₃	
			Grain yield (q/ha)	Straw Yield (q/ha)	Grain yield (q/ha)	Straw Yield (q/ha)	Grain yield (q/ha)	Straw Yield (q/ha)
1	Dudhagara Riteshkumar Babubhai	Bajarangpur	46.25	66.25	50	70.63	51.25	72.5
2	Limbasiya Bharatkumar Dharamshibhai	Mota Garediya	44.38	65	46.88	67.5	47.5	68.75
3	Limbasiya Dhanshyambhai Raghavajibhai	Mota Garediya	47.5	68.75	49.38	71.25	50	70
Average			46.04	66.67	48.75	69.79	49.58	70.42

8) **Final recommendation for micro level situation:**

The results of the study revealed that the application of 75% RDF + seed treatment of Azotobacter, PSB, PMB (Potash Mobilizing Bacteria) culture each at 25-30 ml/kg seed (T₃) produced higher grain yield (49.58 q/ha), straw yield (70.42 q/ha), net return (Rs. 60920/ha) and BCR (2.49) than other treatments. T₃ reduced use of chemical fertilizers and increases the use of low cost input bio-fertilizer to enhance the long term wheat productivity.

9) **Constraints identified and feedback for research:**

- Lack of knowledge about bio-fertilizers & use of bio-fertilizers
- Lack of knowledge about fertilizers
- Use of higher dose of fertilizers

10) **Process of farmer's participation and their reaction:** Satisfactory, Farmers have good response and they have support for OFT. T₃ produced higher yield and it is very effective for longer period

11) **Results of On Farm Trials:**

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter Q/ha		
							8		
1	2	3	4	5	6	7	8		
Wheat	Irrigated	INM	Response of Bio fertilizers to wheat yield	3	Use of balance fertilizers	Grain yield (q/ha) and Straw yield (q/ha)		Grain yield (q/ha)	Straw yield (q/ha)
							T ₁	46.04	66.67
							T ₂	48.75	69.79
							T ₃	49.58	70.42

Crop/enterprise	Results of assessment	Feedback from the farmer	Any refinement done	Justification for refinement
1	9	10	11	12
Wheat	Higher yield was produced by treatment T ₃ [application of 75% RDF + seed treatment of Azotobacter, PSB, PMB (Potash Mobilizing Bacteria) culture each at 25-30 ml/kg seed].It also reduced use of chemical fertilizers and increases the use of low cost input bio-fertilizer to enhance the wheat productivity.	Farmers have good response and they have support for OFT. T ₃ produced higher yield and it is very effective for longer period.	Use of bio fertilizer	It is necessary for reduced use of chemical fertilizers and increases the use of low cost input bio-fertilizer to enhance the wheat productivity.

Crop/ enterprise	Technology Assessed / Refined		Production kg/ha		Gross return Rs./ha	Cost of cultivation Rs./ha	Net return (Profit) in Rs. / ha	BC Ratio
			Grain yield (Kg/ha)	Straw Yield (Kg/ha)				
1	13		14	15	16	17	18	19
Wheat	T ₁	Farmer practices	4604	6667	94720	40108	54612	2.36
	T ₂	Reco. practices	4875	6979	100175	41980	58195	2.39
	T ₃	Refined practices 1	4958	7042	101796	40876	60920	2.49

Sale price: Wheat Grain: 18.4 Rs per kg, Wheat straw: 1.5 Rs per kg

***OFT conducted during Rabi 2018-19 and result prepared during 2019**

3.3 FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2018-19 and recommended for large scale adoption in the district

Sr. No	Crop	Themati c area	Technology Demonstrated	Season and year	Details of popularization methods suggested to the Extension system	Horizontal spread of technology			
						No. of villages	No. of farmer	Area in ha.	
Oilseeds									
1	Groundnut	ICM	Seed (GJG-22), <i>Metarhiziumanisopliae</i> , <i>Trichoderma</i> , <i>Rhizobium</i> , PSB	Kharif-18-19	Field days, Field visit, Radio talk, On/Off Campus Training and TV Program, Exhibition and demonstration	124	1432	8700	
2	Sesame	ICM	Seed (Guj.Till-4), <i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB	Kharif-18-19		35	76	454	
3	Groundnut (ATIC)	ICM	<i>Trichoderma</i> , PSB, <i>Azotobacter</i> , <i>Beauveria</i>	Kharif-18-19		124	1432	8700	
Pulses									
4	Pigeon pea	ICM	<i>Beauveria</i> , <i>Trichoderma</i> , <i>Rhizobium</i> , PSB	Kharif-18-19		5	42	150	
5	Chickpea	IPM, Varietal	Seed GG-5, <i>Beauveria</i> , <i>Trichoderma</i> , <i>Rhizobium</i> , PSB	Rabi-18-19		65	950	7000	
Horticultural									
6	Brinjal	IPM, Varietal	GJLB-4, <i>Azotobacter</i> , PSM, <i>Trichoderma</i> , <i>Azadirachtin</i> , Profenophos	Kharif-18-19		5	23	70	
7	Chilli	IPM	<i>Azotobacter</i> , PSM, <i>Trichoderma</i> , <i>Azadirachtin</i> , Profenophos	Kharif-18-19		7	43	256	
8	Okra	IPM, Varietal	Seed-GJO-3, <i>Azotobacter</i> , PSM, <i>Trichoderma</i> , <i>Azadirachtin</i> , Profenophos	Kharif-18-19	14	46	125		
Spices Crops									
9	Cumin	IDM	<i>Trichoderma</i>	Rabi-18-19	70	980	1360		

10	Coriander (ATIC)	ICM	Trichoderma, PSB, <i>Azotobacter</i> , <i>Beauveria</i>	Rabi-18-19		5	25	65
11	Cumin (ATIC)	ICM	Trichoderma, PSB, <i>Azotobacter</i> , <i>Beauveria</i>	Rabi-18-19		70	980	1360
	Cereals							
12	Pearl Millet	Variety	Seed (GHB-732)	Sum-18-19		8	26	15
	Others crops							
13	Cotton	IPM/INM	<i>Azotobacter</i> , PSM, <i>Trichoderma</i> , Azadirachtin, Profenophos	Kharif-18-19		56	380	580
14	Cotton (ATIC)	ICM	SNPV, PSB, <i>Azotobacter</i> , MDP, <i>Beauveria</i>	Kharif-18-19		56	380	580
15	Kitchen gardening		Vegetable Seed	Kharif-18-19		5	23	5
16	Solar cooker (ATIC)	Solar energy	Solar cooker	2018-19		2	5	0
17	Seaweed	Seaweed	Raft + sea weed material	2018-19		10	25	15
18	Plastic mulching		Plastic mulching	Sum-18-19		5	15	10

B. Details of FLDs implemented during 2019 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)

Sr. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration		
					Proposed	Actual	SC/ST	Others	Total
			Oilseeds						
1	Groundnut (NMOOP)	ICM	Seed (GJG-22)	Kharif-19	30	30	0	75	75
2	Groundnut (ATIC)	ICM	<i>Trichoderma</i> , PSB, <i>Rhizobium</i> , <i>Beauveria</i>	Kharif-19	20	20	3	47	50
			Pulses						
3	Chickpea (NFSM)	IPM, Varietal	Seed GG-5, <i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB	Rabi-19	20	20	0	50	50
4	Chickpea (NFSM) *	IPM, Varietal	Seed GG-5, <i>Beauveria</i> , <i>Trichoderma</i> , <i>Rhizobium</i> , PSB	Rabi-18	20	20	0	50	50
			Spices Crops						
5	Cumin	ICM	<i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB,	Rabi-19	04	04	0	10	10
6	Ajwain	ICM	<i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB	Rabi-19	04	04	0	10	10
7	Coriander	ICM	<i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB,	Rabi-19	8	8	0	20	20
8	Cumin (ATIC)	ICM	<i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB,	Rabi-19	10	10	0	25	25
9	Coriander (ATIC)	ICM	<i>Beauveria</i> , <i>Trichoderma</i> , <i>Azotobacter</i> , PSB,	Rabi-19	10	10	0	25	25

10	Cumin *	IDM	<i>Trichoderma</i>	Rabi-18	04	04	0	10	10
11	Coriander (ATIC) *	ICM	<i>Trichoderma, PSB, Azotobacter, Beauveria</i>	Rabi-18	10	10	0	25	25
12	Cumin (ATIC) *	ICM	<i>Trichoderma, PSB, Azotobacter, Beauveria</i>	Rabi-18	20	20	0	50	50
			Cereals						
13	Wheat	Varietal	Variety –GW 463	Rabi-19	4	4	0	10	10
14	Pearl Millet	Variety	Seed (GHB-732)	Sum-18-19	04	04	0	10	10
			Others crops						
15	Cotton	IPM/IDM	<i>SNPV, Azadirachtin, Profenophos, MDP, Beauveria</i>	Kharif-19	10	10	1	24	25
16	Chicory	IPM	<i>Beauveria, Azotobacter, PSB,</i>	Kharif-19	2	2	0	5	5
17	Cotton (ATIC)	ICM	<i>Beauveria, SNPV, MDP, Azotobacter, PSB,</i>	Kharif-19	20	20	0	50	50
18	Seaweed*	Seaweed	Raft + Sea weed material	2018-19	-	-	0	5	5
19	Cotton	Drudgery reduction	Cotton picking Apron	Kharif-19	2	2	0	5	5
20	Plastic mulching		Plastic mulching	Sum-19	2.5	2.5	0	10	10
21	Kitchen Gardening	Nutritional Security	Vegetable seed	Kharif-19	2	2	5	45	50
22	Solar Cooker	Solar energy	Solar cooker	2019	0	0	0	5	5

* FLD conducted during Rabi 2018-19

Details of farming situation

Sr. No.	Crop	Season and year	Farming Situation (Irrigated / rainfed)	Soil Type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
					N	P	K					
	Oilseeds											
1	Groundnut (NMOOP)	Kharif-19	Rainfed	MB	L	M	H	Cotton, Chickpea, Wheat	1 to 4 August	15 to 30 Nov.	1311	35
2	Groundnut (ATIC)	Kharif-19	Rainfed	MB	L	M	H	Cotton, Chickpea, Wheat	1 to 4 August	15 to 30 Nov.	1311	35
	Pulses											
3	Chickpea (NFSM)	Rabi-19	Irrigated	MB	L	M	H	G'nut	25-30 Nov.	15-30 Mar.	1311	35
4	Chickpea (NFSM) *	Rabi-18	Irrigated	MB	L	M	H	G'nut	25-30 Nov.	15-30 Mar.	1311	35
	Spice											
5	Cumin	Rabi-19	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35

6	Ajwain	Rabi-19	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
7	Coriander	Rabi-19	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
8	Cumin (ATIC)	Rabi-19	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
9	Coriander (ATIC)	Rabi-19	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
10	Cumin *	Rabi-18	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
11	Coriander (ATIC) *	Rabi-18	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
12	Cumin (ATIC) *	Rabi-18	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
	Cereals											
13	Wheat	Rabi-19	Irrigated	MB	L	M	H	G'nut, Sesame	25-30 Nov.	15-30 Mar.	1311	35
14	Pearl Millet	Sum-18-19	Irrigated	MB	L	M	H	Wheat, Coriander	15-30 Feb	10-20 May	370	15
	Other											
15	Cotton	Kharif-19	Irrigated	MB	L	M	H	Cotton, Wheat	1 to 4 August	15 Jan to 25Feb.	1311	35
16	Chicory	Kharif-19	Irrigated	MB	L	M	H	Cotton, Wheat	1 to 4 August	15 Jan to 25Feb.	1311	35
17	Cotton (ATIC)	Kharif-19	Rainfed	MB	L	M	H	Cotton, Wheat	1 to 4 August	15 Jan to 25Feb.	1311	35
18	Seaweed*	2018-19										
19	Cotton	Kharif-19	Irrigated	MB	L	M	H	Cotton, Wheat	1 to 4 August	15 Jan to 25Feb.	1311	35
20	Plastic mulching	Sum-19	Irrigated	MB	L	M	H	Cotton, Wheat	1 to 4 August	15 Jan to 25Feb.	1311	35

Technical Feedback on the demonstrated technologies

Sl. No.	Crop	Technology Demo.	feedback
	Oilseeds		
1	NMOOP-Groundnut Kharif	Varietal	<ul style="list-style-type: none"> ➤ GJG-22 is high yielding variety ➤ Less incidence of <i>Sclerotium</i>
2	Groundnut (ATIC)	ICM	<ul style="list-style-type: none"> ➤ Effective control White grub with <i>Metariazhum</i> ➤ Effective control of <i>Sclerotium</i> with <i>Trichoderma</i> ➤ Also reduce the damage of pod borer ➤ Easy to apply
	Pluses		
3	Chickpea	IPM, Varietal	<ul style="list-style-type: none"> ➤ GJG-5 high yielding variety ➤ GG-5 is resistance to virus and wilt ➤ More no. of branches per plant ➤ Bio pesticide and bio fertilizer are very effective and Easy to use ➤ Easley available and eco friendly ➤ It also reduce use of chemical pesticide/fertilizer in the era of organic farming

	Spices crop		
4	Cumin		<ul style="list-style-type: none"> ➤ Use of <i>Azotobacter</i> and PSB had reduced the quantity of chemical fertilizers ➤ Beauveria helped in control of thrips and also other pests ➤ Due to Trichoderma the incidence of wilt were minimized ➤ Cost of cultivation was reduced ➤ The products were easy to use
5	Coriander (ATIC)		<ul style="list-style-type: none"> ➤ Use of <i>Azotobacter</i> and PSB had reduced the quantity of chemical fertilizers ➤ Beauveria helped in control of thrips and also other pests ➤ Due to Trichoderma the incidence of wilt were minimized ➤ Cost of cultivation was reduced ➤ The products were easy to use
6	Cumin (ATIC)		<ul style="list-style-type: none"> ➤ Use of <i>Azotobacter</i> and PSB had reduced the quantity of chemical fertilizers ➤ Beauveria helped in control of thrips and also other pests ➤ Due to Trichoderma the incidence of wilt were minimized ➤ Cost of cultivation was reduced ➤ The products were easy to use
	Cereals		
7	Pearl Millet	Variety	<ul style="list-style-type: none"> ➤ Higher yield of grain and fodder ➤ Quality of fodder is good ➤ Good against drought spell ➤ Sweet taste of rotla
	Others		
8	Cotton	Bt.Cotton IPM/INM	<ul style="list-style-type: none"> ➤ Advance management for pest control is benefitted for less damage in plants for higher yield ➤ MDP Technology is very effectively but sum what laboring also. ➤ Beauveria is very effective against sucking and chewing pest ➤ Low cost chemical control for longer time
9	Cotton (ATIC)	Bt.Cotton IPM/INM	<ul style="list-style-type: none"> ➤ Advance management for pest control is benefitted for less damage in plants for higher yield ➤ MDP Technology is very effectively but sum what laboring also. ➤ Beauveria is very effective against sucking and chewing pest ➤ Low cost chemical control for longer time
10	Solar cooker		<ul style="list-style-type: none"> ➤ Light weight & Easy to mobile ➤ Use less fuel ➤ Reduce fuel collection time ➤ Reduce cooking time ➤ Completely smoke less ➤ Conserve trees ➤ Allow more dung to be used as fertilizer instead of fuel ➤ Provide work for local chulha makers
11	Kitchen gardening	Vegetables	<ul style="list-style-type: none"> ➤ Fresh vegetable available at doorstep and at a time with minimum cost ➤ Regulatory daily nutritious diet. ➤ They produce organic vegetables because farm women are not applying any pesticides or agrochemicals in their backyard. ➤ Utilized maximum backyard space and waste water. ➤ Income generated by selling extra vegetables grown in kitchen garden.
12	Drudgery	Cotton Picking	<ul style="list-style-type: none"> ➤ Useful for manual cotton picking and also vegetable harvesting

	reduction	Apron	<ul style="list-style-type: none"> ➤ Use of apron makes the women comfortable while picking cotton ➤ Prevents scratching of the skin
13	Sea weed	Raft + sea weed material	<ul style="list-style-type: none"> ➤ Very good technology ➤ less investment with good profit ➤ by means of use of use of natural resources ➤ major components are rough sea, security and market
14	Plastic mulching	Plastic mulching	<ul style="list-style-type: none"> ➤ water conservative technique prevent the growth of unwanted plants so minimize competition for nutrients ➤ no expenses for herbicides ➤ fruit (water Millan) quality increase due to no direct contact with the soil ➤ major constraints are pig and blue bull

Farmers' reactions on specific technologies

Sl. No.	Crop	Technology Demo.	feedback
	Oilseeds		
1	NMOOP-Groundnut Kharif	Varietal	<ul style="list-style-type: none"> ➤ GJG-22 is high yielding, bold seeded variety ➤ Less incidence of <i>Sclerotium</i> ➤ It replace GG-20
2	Groundnut (ATIC)	ICM	<ul style="list-style-type: none"> ➤ Effective control White grub with <i>Metarizhum</i> ➤ Effective control of <i>Sclerotium</i> with <i>Trichoderma</i> ➤ Also reduce the damage of pod borer ➤ Easy to apply
	Pluses		
3	Chickpea	IPM, Varietal	<ul style="list-style-type: none"> ➤ GJG-5 high yielding variety ➤ GG-5 is resistance to virus and wilt ➤ Economic and cost effective control through Bio pesticide and bio fertilizer. It was very effective and Easy to use ➤ Easley available and eco friendly
	Spices crop		
4	Cumin		<ul style="list-style-type: none"> ➤ Bio-fertilizers reduce chemical fertilizers eco-friendly ➤ Beauveria helped in control of thrips and also other pests ➤ Due to Trichoderma the incidence of wilt were minimized ➤ Eco friendly and cost effective
5	Coriander (ATIC)		<ul style="list-style-type: none"> ➤ Bio-fertilizers reduce chemical fertilizers eco-friendly ➤ Beauveria helped in control of thrips and also other pests ➤ Due to Trichoderma the incidence of wilt were minimized ➤ Eco friendly and cost effective
6	Cumin (ATIC)		<ul style="list-style-type: none"> ➤ Bio-fertilizers reduce chemical fertilizers eco-friendly ➤ Beauveria helped in control of thrips and also other pests ➤ Due to Trichoderma the incidence of wilt were minimized ➤ Eco friendly and cost effective
	Cereals		
7	Pearl Millet	Variety	<ul style="list-style-type: none"> ➤ Higher yield of grain and fodder ➤ Quality of fodder is good ➤ Good against drought spell ➤ Sweet taste of rotla
	Others		
8	Cotton	Bt.Cotton	<ul style="list-style-type: none"> ➤ Advance management for pest control is benefitted for less damage

		IPM/INM	<p>in plants for higher yield</p> <ul style="list-style-type: none"> ➤ MDP Technology is very effectively but sum what laboring also. ➤ Beauveria is very effective against sucking and chewing pest ➤ Low cost chemical control for longer time
9	Cotton (ATIC)	Bt.Cotton IPM/INM	<ul style="list-style-type: none"> ➤ Advance management for pest control is benefitted for less damage in plants for higher yield ➤ MDP Technology is very effectively but sum what laboring also. ➤ Beauveria is very effective against sucking and chewing pest ➤ Low cost chemical control for longer time
10	Solar cooker		<ul style="list-style-type: none"> ➤ Light weight & Easy to mobile ➤ Use less fuel ➤ Reduce fuel collection time ➤ Reduce cooking time ➤ Completely smoke less ➤ Conserve trees ➤ Allow more dung to be used as fertilizer instead of fuel ➤ Provide work for local chulha makers
11	Kitchen gardening	Vegetables	<ul style="list-style-type: none"> ➤ Fresh vegetable available at doorstep and at a time with minimum cost ➤ Regulatory daily nutritious diet. ➤ They produce organic vegetables because farm women are not applying any pesticides or agrochemicals in their backyard. ➤ Utilized maximum backyard space and waste water. ➤ Income generated by selling extra vegetables grown in kitchen garden.
12	Drudgery reduction	Cotton Picking Apron	<ul style="list-style-type: none"> ➤ Useful for manual cotton picking and also vegetable harvesting ➤ Use of apron makes the women comfortable while picking cotton ➤ Prevents scratching of the skin
13	Sea weed	Raft + sea weed material	<ul style="list-style-type: none"> ➤ Very good technology ➤ less investment with good profit ➤ by means of use of use of natural resources ➤ major components are rough sea, security and market
14	Plastic mulching	Plastic mulching	<ul style="list-style-type: none"> ➤ Water conservative technique prevent the growth of unwanted plants so minimize competition for nutrients ➤ no expenses for herbicides ➤ fruit (water Millan) quality increase due to no direct contact with the soil ➤ major constraints are pig and blue bull

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	1	11.02.19	11	
		1	5.03.19	28	
		1	1.05.19	8	
		1	31.05.19	5	
		1	8.08.19	17	
		1	28.08.19	14	
		1	7.09.19	25	
		1	21.10.19	7	
		1	11.10.19	28	
		1	28.11.19	29	
		1	25.12.19	13	
2	Farmers training	1	16.2.19	21	
		1	11.06.19	44	

		1	5.07.19	34	
		1	29.07.19	20	
		1	7.08.19	30	
		1	12.09.19	30	
		1	2.10.19	48	
		1	13.11.19	25	
		1	31.12.19	38	
3	Media coverage	2			
4	Training for extension functionaries	1	10.06.19	30	
		1	11.06.19	45	
		1	6.09.19	46	

C. PERFORMANCE OF FRONTLINE DEMONSTRATIONS

Front line 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 (ATIC)	ICM	Trichoderma, PSB, Rhizobium, Beauveria	5G-20	50	20	37.50	8.75	23.78	20.90	13.78	23720	130763	07043	5.51	24860	109725	584865	4.41

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Cereals																			
Pearl Millet (Sum-18)	Varietal	Variety GHB-732	10	4	47.50	40.63	43.75	41.75	4.79			31527	76563	41754	2.43	32347	67844	35497	2.10
Spices & condiments																			
Cumin	IDM	Trichoderma	10	04	12.50	10.63	11.14	10.51	5.99			50700	171563	120863	3.38	51590	152431	100841	2.95
Coriander (ATIC)	ICM	Trichoderma, PSB, Azotobacter, Beauveria	25	10	14.25	9.5	16.60	14.84	11.86			35400	112050	76650	3.16	36800	96444	59644	2.62
Cumin (ATIC)	ICM	Trichoderma, PSB, Azotobacter, Beauveria	50	20	12.20	8.4	11.67	10.28	13.52			42000	163345	121345	3.89	43900	141281	97381	3.22
Commercial Crops																			
Cotton	IPM/IDM	Beauveria, MDP, SNPV, Azadirachtin, Profenophos	25	10	18.75	7.5	13.37	11.09	0.56			23348	63505	40157	2.72	24652	52663	28011	2.14
Cotton (ATIC)	ICM	Beauveria, SNPV, MDP, Azotobacter, PSB	50	20	28.75	11.25	16.80	14.30	17.48			23360	79800	56440	3.42	24540	67925	43385	2.77

FLD on Fisheries

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)/Unit		% change in yield	Other parameters		Economics of demonstration (Rs./unit)				Economics of check (Rs./unit)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Fisheries	Sea weed	Raft + sea weed material	5	5	118	-	-	-	-	1000	5910	4941	5.91	-	-	-	-

FLD on Other Enterprise

Category and Crop	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Q/ha)		% change in yield	Other parameters		Economics of demonstration (Rs./unit)				Economics of check (Rs./unit)			
				Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Water melon	Plastic Mulching	10	10	86.75	71.19	21.86			21000	86750	65750	4.13	16200	56950	40750	3.52

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Solar cooker	Solar cooker	5	Fuel consumption (per year)	Solar energy + 55 kg LPG	88 kg LPG
			Time saving	50 to 54%	0
Drudgery reduction	Cotton picking apron	5	Seed cotton picked (kg/hr)	3.66	3.48
			Cotton picking efficiency (%)	5.17%	-

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)/unit		% change in yield	Other parameters		Economics of demonstration (Rs./unit)				Economics of check (Rs./unit)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Kitchen gardening	Nutritional security	Vegetable seed	50	50	564	424	33.08	-	-	4808	11280	6472	2.35	4310	8476	4166	1.97

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

D. PERFORMANCE OF CLUSTER FRONTLINE DEMONSTRATIONS (CFLD)**Front line 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	Variety	Seed (GJG-22)	GJG-22	75	30	31	25	28	23.15	20.95	46300	162680	16380	3.51	48500	134634	486134	2.78

Front line demonstrations on Pulses 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										
Chickpea*	IPM, Varietal	Seed GG-5, <i>Beauveria</i> , <i>Trichoderma</i> , <i>Rhizobium</i> , PSB	GG-5	50	20	31.25	22.5	26	21	23.81	41100	120120	79020	2.92	42600	97020	54420	2.28

3.4 TRAINING PROGRAMME

Farmers' Training including sponsored training programmes (on campus)

Thematic Area	No. of courses	No. of participant						Grand Total
		others			SC/ST			
		Male	Female	Total	Male	Female	Total	
(A) Farmers & Farm Women								
I Crop Production								
Weed Management				0			0	0
Resource Conservation Technologies				0			0	0
Cropping Systems	1	25	0	25	0	0	0	25
Crop Diversification				0			0	0
Integrated Farming				0			0	0
Water management				0			0	0
Seed production	1	41	3	44	0	0	0	44
Nursery management				0			0	0
Integrated Crop Management	2	56	0	56	4	0	4	60
Fodder production				0			0	0
Production of organic inputs	1	83	0	83	7	0	7	90
Total	5	205	3	208	11	0	11	219
II Horticulture				0			0	0
a) Vegetable Crops				0			0	0
Production of low volume and high value crops				0			0	0
Off-season vegetables				0			0	0
Nursery raising				0			0	0
Exotic vegetables like Broccoli				0			0	0
Export potential vegetables				0			0	0
Grading and standardization				0			0	0
Protective cultivation (Green Houses, Shade Net etc.)				0			0	0
b) Fruits				0			0	0
Training and Pruning				0			0	0
Layout and Management of Orchards				0			0	0
Cultivation of Fruit				0			0	0
Management of young plants/orchards				0			0	0
Rejuvenation of old orchards				0			0	0
Export potential fruits				0			0	0
Micro irrigation systems of orchards				0			0	0
Plant propagation techniques				0			0	0
c) Ornamental Plants				0			0	0
Nursery Management				0			0	0
Management of potted plants				0			0	0
Export potential of ornamental plants				0			0	0
Propagation techniques of Ornamental Plants				0			0	0
d) Plantation crops				0			0	0
Production and Management technology				0			0	0
Processing and value addition				0			0	0

e) Tuber crops				0			0	0
Production and Management technology				0			0	0
Processing and value addition				0			0	0
f) Spices				0			0	0
Production and Management technology	1	0	0	0	35	35	70	70
Processing and value addition				0			0	0
g) Medicinal and Aromatic Plants				0			0	0
Nursery management				0			0	0
Production and management technology				0			0	0
Post harvest technology and value addition				0			0	0
Total	1	0	0	0	35	35	70	70
III Soil Health and Fertility Management				0			0	0
Soil fertility management				0			0	0
Soil and Water Conservation				0			0	0
Integrated Nutrient Management	1	42	22	64	4	0	4	68
Production and use of organic inputs				0			0	0
Management of Problematic soils				0			0	0
Micro nutrient deficiency in crops				0			0	0
Nutrient Use Efficiency				0			0	0
Soil and Water Testing				0			0	0
Total	1	42	22	64	4	0	4	68
IV Livestock Production and Management				0			0	0
Dairy Management	1	28	0	28	0	0	0	28
Poultry Management				0			0	0
Piggery Management				0			0	0
Rabbit Management/goat				0			0	0
Disease Management				0			0	0
Feed management	1	21	0	21	3	1	4	25
Production of quality animal products				0			0	0
Total	2	49	0	49	3	1	4	53
V Home Science/Women empowerment				0			0	0
Household food security by kitchen gardening and nutrition gardening				0			0	0
Design and development of low/minimum cost diet				0			0	0
Designing and development for high nutrient efficiency diet				0			0	0
Minimization of nutrient loss in processing				0			0	0
Gender mainstreaming through SHGs				0			0	0
Storage loss minimization techniques				0			0	0
Value addition	1	0	45	45	0	5	5	50

Income generation activities for empowerment of rural Women	1	0	30	30	0	0	0	30
Location specific drudgery reduction technologies	1	0	44	44	0	7	7	51
Rural Crafts				0			0	0
Women and child care				0			0	0
Total	3	0	119	119	0	12	12	131
VI Agril. Engineering				0			0	0
Installation and maintenance of micro irrigation systems				0			0	0
Use of Plastics in farming practices				0			0	0
Production of small tools and implements				0			0	0
Repair and maintenance of farm machinery and implements				0			0	0
Small scale processing and value addition				0			0	0
Post Harvest Technology				0			0	0
Total	0	0	0	0	0	0	0	0
VII Plant Protection				0			0	0
Integrated Pest Management	1	30	0	30	0	0	0	30
Integrated Disease Management	1	40	8	48	2	0	2	50
Bio-control of pests and diseases	1	76	0	76	4	0	4	80
Production of bio control agents and bio pesticides				0			0	0
Total	3	146	8	154	6	0	6	160
VIII Fisheries				0			0	0
Integrated fish farming				0			0	0
Carp breeding and hatchery management				0			0	0
Carp fry and fingerling rearing				0			0	0
Composite fish culture				0			0	0
Hatchery management and culture of freshwater prawn				0			0	0
Breeding and culture of ornamental fishes				0			0	0
Portable plastic carp hatchery				0			0	0
Pen culture of fish and prawn				0			0	0
Shrimp farming				0			0	0
Edible oyster farming				0			0	0
Pearl culture				0			0	0
Fish processing and value addition	1	15	0	15	0	0	0	15
Total	1	15	0	15	0	0	0	15
IX Production of Inputs at site				0			0	0
Seed Production				0			0	0
Planting material production				0			0	0
Bio-agents production				0			0	0
Bio-pesticides production				0			0	0
Bio-fertilizer production				0			0	0
Vermi-compost production				0			0	0

Organic manures production				0			0	0
Production of fry and fingerlings				0			0	0
Production of Bee-colonies and wax sheets				0			0	0
Small tools and implements				0			0	0
Production of livestock feed and fodder				0			0	0
Production of Fish feed				0			0	0
Total	0	0	0	0	0	0	0	0
X Capacity Building and Group Dynamics				0			0	0
Leadership development				0			0	0
Group dynamics				0			0	0
Formation and Management of SHGs				0			0	0
Mobilization of social capital				0			0	0
Entrepreneurial development of farmers/youths				0			0	0
WTO and IPR issues				0			0	0
Total	0	0	0	0	0	0	0	0
XI Agro-forestry				0			0	0
Production technologies				0			0	0
Nursery management				0			0	0
Integrated Farming Systems				0			0	0
Total	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)				0			0	0
TOTAL	16	457	152	609	59	48	107	716

Farmers' Training including sponsored training programmes (off campus)

Thematic Area	No. of courses	No. of participant						Grand Total
		others			SC/ST			
		Male	Female	Total	Male	Female	Total	
(A) Farmers & Farm Women								
I Crop Production								
Weed Management	1	34	14	48	0	0	0	48
Resource Conservation Technologies				0			0	0
Cropping Systems				0			0	0
Crop Diversification				0			0	0
Integrated Farming				0			0	0
Water management				0			0	0
Seed production				0			0	0
Nursery management				0			0	0
Integrated Crop Management	1	28	0	28	0	0	0	28
Fodder production				0			0	0
Production of organic inputs				0			0	0
Total	2	62	14	76	0	0	0	76
II Horticulture				0			0	0
a) Vegetable Crops				0			0	0
Production of low volume and high value crops				0			0	0
Off-season vegetables				0			0	0

Nursery raising				0			0	0
Exotic vegetables like Broccoli				0			0	0
Export potential vegetables				0			0	0
Grading and standardization				0			0	0
Protective cultivation (Green Houses, Shade Net etc.)				0			0	0
b) Fruits				0			0	0
Training and Pruning				0			0	0
Layout and Management of Orchards				0			0	0
Cultivation of Fruit				0			0	0
Management of young plants/orchards				0			0	0
Rejuvenation of old orchards				0			0	0
Export potential fruits				0			0	0
Micro irrigation systems of orchards				0			0	0
Plant propagation techniques				0			0	0
c) Ornamental Plants				0			0	0
Nursery Management				0			0	0
Management of potted plants				0			0	0
Export potential of ornamental plants	1	188	0	188	12	0	12	200
Propagation techniques of Ornamental Plants				0			0	0
d) Plantation crops				0			0	0
Production and Management technology				0			0	0
Processing and value addition				0			0	0
e) Tuber crops				0			0	0
Production and Management technology				0			0	0
Processing and value addition				0			0	0
f) Spices				0			0	0
Production and Management technology				0			0	0
Processing and value addition	1	0	63	63	0	0	0	63
g) Medicinal and Aromatic Plants				0			0	0
Nursery management				0			0	0
Production and management technology				0			0	0
Post harvest technology and value addition				0			0	0
Total	2	188	63	251	12	0	12	263
III Soil Health and Fertility Management				0			0	0
Soil fertility management	1	54	0	54	0	0	0	54
Soil and Water Conservation				0			0	0
Integrated Nutrient Management	2	60	0	60	2	0	2	62
Production and use of organic inputs				0			0	0
Management of Problematic soils				0			0	0
Micro nutrient deficiency in crops				0			0	0
Nutrient Use Efficiency	1	83	0	83	0	0	0	83

Soil and Water Testing				0			0	0
Total	4	197	0	197	2	0	2	199
IV Livestock Production and Management				0			0	0
Dairy Management	1	15	111	126	0	0	0	126
Poultry Management				0			0	0
Piggery Management				0			0	0
Rabbit Management/goat				0			0	0
Disease Management	1	25	0	25	0	0	0	25
Feed management	1	0	47	47	0	0	0	47
Production of quality animal products				0			0	0
Total	3	40	158	198	0	0	0	198
V Home Science/Women empowerment				0			0	0
Household food security by kitchen gardening and nutrition gardening	1	0	34	34	0	0	0	34
Design and development of low/minimum cost diet				0			0	0
Designing and development for high nutrient efficiency diet				0			0	0
Minimization of nutrient loss in processing				0			0	0
Gender mainstreaming through SHGs	1	0	83	83	0	9	9	92
Storage loss minimization techniques				0			0	0
Value addition				0			0	0
Income generation activities for empowerment of rural Women	2	0	48	48	0	2	2	50
Location specific drudgery reduction technologies	1	0	56	56	0	0	0	56
Rural Crafts				0			0	0
Women and child care				0			0	0
Total	5	0	221	221	0	11	11	232
VI Agril. Engineering				0			0	0
Installation and maintenance of micro irrigation systems	1	146	0	146	5	0	5	151
Use of Plastics in farming practices				0			0	0
Production of small tools and implements				0			0	0
Repair and maintenance of farm machinery and implements				0			0	0
Small scale processing and value addition				0			0	0
Post Harvest Technology				0			0	0
Total	1	146	0	146	5	0	5	151
VII Plant Protection				0			0	0
Integrated Pest Management	3	208	35	243	27	0	27	270
Integrated Disease Management	3	158	3	161	14	0	14	175
Bio-control of pests and diseases	2	87	0	87	23	0	23	110
Production of bio control agents and bio pesticides	1	59	14	73	6	2	8	81

Total	9	512	52	564	70	2	72	636
VIII Fisheries				0			0	0
Integrated fish farming	1	0	0	0	0	37	37	37
Carp breeding and hatchery management				0			0	0
Carp fry and fingerling rearing				0			0	0
Composite fish culture	1	0	0	0	0	35	35	35
Hatchery management and culture of freshwater prawn				0			0	0
Breeding & culture of ornamental fishes				0			0	0
Portable plastic carp hatchery				0			0	0
Pen culture of fish and prawn				0			0	0
Shrimp farming				0			0	0
Edible oyster farming				0			0	0
Pearl culture				0			0	0
Fish processing and value addition				0			0	0
Total	2	0	0	0	0	72	72	72
IX Production of Inputs at site				0			0	0
Seed Production				0			0	0
Planting material production				0			0	0
Bio-agents production				0			0	0
Bio-pesticides production	1	20	0	20	1	0	1	21
Bio-fertilizer production				0			0	0
Vermi-compost production				0			0	0
Organic manures production				0			0	0
Production of fry and fingerlings				0			0	0
Production of Bee-colonies & wax sheets				0			0	0
Small tools and implements				0			0	0
Production of livestock feed and fodder				0			0	0
Production of Fish feed				0			0	0
Total	1	20	0	20	1	0	1	21
X Capacity Building and Group Dynamics				0			0	0
Leadership development				0			0	0
Group dynamics				0			0	0
Formation and Management of SHGs				0			0	0
Mobilization of social capital				0			0	0
Entrepreneurial development of farmers/youths				0			0	0
WTO and IPR issues				0			0	0
Total	0	0	0	0	0	0	0	0
XI Agro-forestry				0			0	0
Production technologies				0			0	0
Nursery management				0			0	0
Integrated Farming Systems				0			0	0
Total	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)				0			0	0
TOTAL	29	1165	508	1673	90	85	175	1848

Farmers' Training including sponsored training programmes – CONSOLIDATED (On + Off campus)

Thematic Area	No. of courses	No. of participant						Grand Total
		others			SC/ST			
		Male	Female	Total	Male	Female	Total	
(A) Farmers & Farm Women								
I Crop Production								
Weed Management	1	34	14	48	0	0	0	48
Resource Conservation Technologies	0	0	0	0	0	0	0	0
Cropping Systems	1	25	0	25	0	0	0	25
Crop Diversification	0	0	0	0	0	0	0	0
Integrated Farming	0	0	0	0	0	0	0	0
Water management	0	0	0	0	0	0	0	0
Seed production	1	41	3	44	0	0	0	44
Nursery management	0	0	0	0	0	0	0	0
Integrated Crop Management	3	84	0	84	4	0	4	88
Fodder production	0	0	0	0	0	0	0	0
Production of organic inputs	1	83	0	83	7	0	7	90
Total	7	267	17	284	11	0	11	295
II Horticulture				0			0	0
a) Vegetable Crops				0			0	0
Production of low volume and high value crops	0	0	0	0	0	0	0	0
Off-season vegetables	0	0	0	0	0	0	0	0
Nursery raising	0	0	0	0	0	0	0	0
Exotic vegetables like Broccoli	0	0	0	0	0	0	0	0
Export potential vegetables	0	0	0	0	0	0	0	0
Grading and standardization	0	0	0	0	0	0	0	0
Protective cultivation (Green Houses, Shade Net etc.)	0	0	0	0	0	0	0	0
b) Fruits	0	0	0	0	0	0	0	0
Training and Pruning	0	0	0	0	0	0	0	0
Layout and Management of Orchards	0	0	0	0	0	0	0	0
Cultivation of Fruit	0	0	0	0	0	0	0	0
Management of young plants/orchards	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0
Export potential fruits	0	0	0	0	0	0	0	0
Micro irrigation systems of orchards	0	0	0	0	0	0	0	0
Plant propagation techniques	0	0	0	0	0	0	0	0
c) Ornamental Plants	0	0	0	0	0	0	0	0
Nursery Management	0	0	0	0	0	0	0	0
Management of potted plants	0	0	0	0	0	0	0	0
Export potential of ornamental plants	1	188	0	188	12	0	12	200
Propagation techniques of Ornamental Plants	0	0	0	0	0	0	0	0
d) Plantation crops	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0

Processing and value addition	0	0	0	0	0	0	0	0
e) Tuber crops	0	0	0	0	0	0	0	0
Production and Management technology	0	0	0	0	0	0	0	0
Processing and value addition	0	0	0	0	0	0	0	0
f) Spices	0	0	0	0	0	0	0	0
Production and Management technology	1	0	0	0	35	35	70	70
Processing and value addition	1	0	63	63	0	0	0	63
g) Medicinal and Aromatic Plants	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0
Production and management technology	0	0	0	0	0	0	0	0
Post harvest technology and value addition	0	0	0	0	0	0	0	0
Total	3	188	63	251	47	35	82	333
III Soil Health and Fertility Management				0			0	0
Soil fertility management	1	54	0	54	0	0	0	54
Soil and Water Conservation	0	0	0	0	0	0	0	0
Integrated Nutrient Management	3	102	22	124	6	0	6	130
Production and use of organic inputs	0	0	0	0	0	0	0	0
Management of Problematic soils	0	0	0	0	0	0	0	0
Micro nutrient deficiency in crops	0	0	0	0	0	0	0	0
Nutrient Use Efficiency	1	83	0	83	0	0	0	83
Soil and Water Testing	0	0	0	0	0	0	0	0
Total	5	239	22	261	6	0	6	267
IV Livestock Production and Management				0			0	0
Dairy Management	2	43	111	154	0	0	0	154
Poultry Management	0	0	0	0	0	0	0	0
Piggery Management	0	0	0	0	0	0	0	0
Rabbit Management/goat	0	0	0	0	0	0	0	0
Disease Management	1	25	0	25	0	0	0	25
Feed management	2	21	47	68	3	1	4	72
Production of quality animal products	0	0	0	0	0	0	0	0
Total	5	89	158	247	3	1	4	251
V Home Science/Women empowerment				0			0	0
Household food security by kitchen gardening and nutrition gardening	1	0	34	34	0	0	0	34
Design and development of low/minimum cost diet	0	0	0	0	0	0	0	0
Designing and development for high nutrient efficiency diet	0	0	0	0	0	0	0	0
Minimization of nutrient loss in processing	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	1	0	83	83	0	9	9	92
Storage loss minimization techniques	0	0	0	0	0	0	0	0

Value addition	1	0	45	45	0	5	5	50
Income generation activities for empowerment of rural Women	3	0	78	78	0	2	2	80
Location specific drudgery reduction technologies	2	0	100	100	0	7	7	107
Rural Crafts	0	0	0	0	0	0	0	0
Women and child care	0	0	0	0	0	0	0	0
Total	8	0	340	340	0	23	23	363
VI Agril. Engineering				0			0	0
Installation and maintenance of micro irrigation systems	1	146	0	146	5	0	5	151
Use of Plastics in farming practices	0	0	0	0	0	0	0	0
Production of small tools and implements	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0
Small scale processing and value addition	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0
Total	1	146	0	146	5	0	5	151
VII Plant Protection				0			0	0
Integrated Pest Management	4	238	35	273	27	0	27	300
Integrated Disease Management	4	198	11	209	16	0	16	225
Bio-control of pests and diseases	3	163	0	163	27	0	27	190
Production of bio control agents and bio pesticides	1	59	14	73	6	2	8	81
Total	12	658	60	718	76	2	78	796
VIII Fisheries				0			0	0
Integrated fish farming	1	0	0	0	0	37	37	37
Carp breeding and hatchery management	0	0	0	0	0	0	0	0
Carp fry and fingerling rearing	0	0	0	0	0	0	0	0
Composite fish culture	1	0	0	0	0	35	35	35
Hatchery management and culture of freshwater prawn	0	0	0	0	0	0	0	0
Breeding and culture of ornamental fishes	0	0	0	0	0	0	0	0
Portable plastic carp hatchery	0	0	0	0	0	0	0	0
Pen culture of fish and prawn	0	0	0	0	0	0	0	0
Shrimp farming	0	0	0	0	0	0	0	0
Edible oyster farming	0	0	0	0	0	0	0	0
Pearl culture	0	0	0	0	0	0	0	0
Fish processing and value addition	1	15	0	15	0	0	0	15
Total	3	15	0	15	0	72	72	87
IX Production of Inputs at site				0			0	0
Seed Production	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0
Bio-agents production	0	0	0	0	0	0	0	0
Bio-pesticides production	1	20	0	20	1	0	1	21
Bio-fertilizer production	0	0	0	0	0	0	0	0
Vermi-compost production	0	0	0	0	0	0	0	0

Organic manures production	0	0	0	0	0	0	0	0
Production of fry and fingerlings	0	0	0	0	0	0	0	0
Production of Bee-colonies and wax sheets	0	0	0	0	0	0	0	0
Small tools and implements	0	0	0	0	0	0	0	0
Production of livestock feed and fodder	0	0	0	0	0	0	0	0
Production of Fish feed	0	0	0	0	0	0	0	0
Total	1	20	0	20	1	0	1	21
X Capacity Building and Group Dynamics				0			0	0
Leadership development	0	0	0	0	0	0	0	0
Group dynamics	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0
Mobilization of social capital	0	0	0	0	0	0	0	0
Entrepreneurial development of farmers/youths	0	0	0	0	0	0	0	0
WTO and IPR issues	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
XI Agro-forestry				0			0	0
Production technologies	0	0	0	0	0	0	0	0
Nursery management	0	0	0	0	0	0	0	0
Integrated Farming Systems	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)				0			0	0
TOTAL	45	1622	660	2282	149	133	282	2564

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

(B) RURAL YOUTH				0			0	0
Mushroom Production				0			0	0
Bee-keeping				0			0	0
Integrated farming				0			0	0
Seed production				0			0	0
Production of organic inputs				0			0	0
Integrated Farming (Medicinal)				0			0	0
Planting material production				0			0	0
Vermi-culture				0			0	0
Sericulture				0			0	0
Protected cultivation of vegetable crops				0			0	0
Commercial fruit production				0			0	0
Repair and maintenance of farm machinery and implements				0			0	0
Nursery Management of Horticulture crops				0			0	0
Training and pruning of orchards				0			0	0
Value addition				0			0	0
Production of quality animal products				0			0	0
Dairying				0			0	0
Sheep and goat rearing				0			0	0
Quail farming				0			0	0
Piggery				0			0	0

Rabbit farming				0			0	0
Poultry production				0			0	0
Ornamental fisheries				0			0	0
Para vets				0			0	0
Para extension workers				0			0	0
Composite fish culture				0			0	0
Freshwater prawn culture				0			0	0
Shrimp farming	1	32	0	32	0	0	0	32
Pearl culture				0			0	0
Cold water fisheries				0			0	0
Fish harvest and processing technology				0			0	0
Fry and fingerling rearing				0			0	0
Small scale processing				0			0	0
Post Harvest Technology				0			0	0
Tailoring and Stitching				0			0	0
Rural Crafts				0			0	0
TOTAL	1	32	0	32	0	0	0	32

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

(B) RURAL YOUTH				0			0	0
Mushroom Production				0			0	0
Bee-keeping				0			0	0
Integrated farming				0			0	0
Seed production				0			0	0
Production of organic inputs				0			0	0
Integrated Farming (Medicinal)				0			0	0
Planting material production				0			0	0
Vermi-culture				0			0	0
Sericulture				0			0	0
Protected cultivation of vegetable crops				0			0	0
Commercial fruit production				0			0	0
Repair and maintenance of farm machinery and implements				0			0	0
Nursery Management of Horticulture crops				0			0	0
Training and pruning of orchards				0			0	0
Value addition	1	0	32	32	0	0	0	32
Production of quality animal products				0			0	0
Dairying				0			0	0
Sheep and goat rearing				0			0	0
Quail farming				0			0	0
Piggery				0			0	0
Rabbit farming				0			0	0
Poultry production				0			0	0
Ornamental fisheries				0			0	0
Para vets				0			0	0
Para extension workers				0			0	0
Composite fish culture				0			0	0
Freshwater prawn culture				0			0	0
Shrimp farming				0			0	0

Pearl culture				0			0	0
Cold water fisheries				0			0	0
Fish harvest and processing technology				0			0	0
Fry and fingerling rearing				0			0	0
Small scale processing				0			0	0
Post Harvest Technology				0			0	0
Tailoring and Stitching				0			0	0
Rural Crafts				0			0	0
TOTAL	1	0	32	32	0	0	0	32

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

(B) RURAL YOUTH				0			0	0
Mushroom Production	0	0	0	0	0	0	0	0
Bee-keeping	0	0	0	0	0	0	0	0
Integrated farming	0	0	0	0	0	0	0	0
Seed production	0	0	0	0	0	0	0	0
Production of organic inputs	0	0	0	0	0	0	0	0
Integrated Farming (Medicinal)	0	0	0	0	0	0	0	0
Planting material production	0	0	0	0	0	0	0	0
Vermi-culture	0	0	0	0	0	0	0	0
Sericulture	0	0	0	0	0	0	0	0
Protected cultivation of vegetable crops	0	0	0	0	0	0	0	0
Commercial fruit production	0	0	0	0	0	0	0	0
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0
Nursery Management of Horticulture crops	0	0	0	0	0	0	0	0
Training and pruning of orchards	0	0	0	0	0	0	0	0
Value addition	1	0	32	32	0	0	0	32
Production of quality animal products	0	0	0	0	0	0	0	0
Dairying	0	0	0	0	0	0	0	0
Sheep and goat rearing	0	0	0	0	0	0	0	0
Quail farming	0	0	0	0	0	0	0	0
Piggery	0	0	0	0	0	0	0	0
Rabbit farming	0	0	0	0	0	0	0	0
Poultry production	0	0	0	0	0	0	0	0
Ornamental fisheries	0	0	0	0	0	0	0	0
Para vets	0	0	0	0	0	0	0	0
Para extension workers	0	0	0	0	0	0	0	0
Composite fish culture	0	0	0	0	0	0	0	0
Freshwater prawn culture	0	0	0	0	0	0	0	0
Shrimp farming	1	32	0	32	0	0	0	32
Pearl culture	0	0	0	0	0	0	0	0
Cold water fisheries	0	0	0	0	0	0	0	0
Fish harvest and processing technology	0	0	0	0	0	0	0	0
Fry and fingerling rearing	0	0	0	0	0	0	0	0
Small scale processing	0	0	0	0	0	0	0	0
Post Harvest Technology	0	0	0	0	0	0	0	0
Tailoring and Stitching	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0
TOTAL	2	32	32	64	0	0	0	64

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

(C) Extension Personnel				0			0	0
Productivity enhancement in field crops				0			0	0
Integrated Pest Management	3	92	5	97	14	0	14	111
Integrated Nutrient management	1	47	2	49	5	0	5	54
Rejuvenation of old orchards				0			0	0
Protected cultivation technology				0			0	0
Formation and Management of SHGs				0			0	0
Group Dynamics and farmers organization				0			0	0
Information networking among farmers				0			0	0
Capacity building for ICT application				0			0	0
Care and maintenance of farm machinery and implements				0			0	0
WTO and IPR issues				0			0	0
Management in farm animals				0			0	0
Livestock feed and fodder production				0			0	0
Household food security				0			0	0
Women and Child care				0			0	0
Low cost and nutrient efficient diet designing				0			0	0
Production and use of organic inputs	1	19	1	20	0	0	0	20
Gender mainstreaming through SHGs				0			0	0
Any other (Pl. Specify)				0			0	0
TOTAL	5	158	8	166	19	0	19	185

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

(C) Extension Personnel				0			0	0
Productivity enhancement in field crops				0			0	0
Integrated Pest Management	6	817	0	817	8	0	8	825
Integrated Nutrient management				0			0	0
Rejuvenation of old orchards				0			0	0
Protected cultivation technology				0			0	0
Formation and Management of SHGs				0			0	0
Group Dynamics and farmers organization				0			0	0
Information networking among farmers				0			0	0
Capacity building for ICT application				0			0	0
Care and maintenance of farm machinery and implements				0			0	0
WTO and IPR issues				0			0	0
Management in farm animals				0			0	0
Livestock feed and fodder production				0			0	0
Household food security				0			0	0
Women and Child care				0			0	0
Low cost and nutrient efficient diet designing				0			0	0
Production and use of organic inputs				0			0	0
Gender mainstreaming through SHGs				0			0	0
Any other (Pl. Specify)				0			0	0
TOTAL	6	817	0	817	8	0	8	825

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

(C) Extension Personnel				0			0	0
Productivity enhancement in field crops	0	0	0	0	0	0	0	0
Integrated Pest Management	9	909	5	914	22	0	22	936
Integrated Nutrient management	1	47	2	49	5	0	5	54
Rejuvenation of old orchards	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0
WTO and IPR issues	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0
Production and use of organic inputs	1	19	1	20	0	0	0	20
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0
Any other (Pl. Specify)	0	0	0	0	0	0	0	0
TOTAL	11	975	8	983	27	0	27	1010

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	4	173	14	187	11	0	11	184	14	198
Increasing production and productivity of crops	10	1081	53	1134	53	2	55	1134	55	1189
Commercial production of vegetables										
Production and value addition										
Fruit Plants	1	188	0	188	12	0	12	200	0	200
Ornamental plants										
Spices crops										
Soil health and fertility management	5	192	25	217	9	0	9	201	25	226
Production of Inputs at site										
Methods of protective cultivation										
Others (pl. specify)										
Total	20	1634	92	1726	85	2	87	1719	94	1813
Post-harvest technology and value addition	3	141	1	142	13	0	13	154	1	155
Processing and value addition										
Others (pl. specify)										
Total	3	141	1	142	13	0	13	154	1	155
Farm machinery	1	1	146	0	146	5	0	5	151	0
Farm machinery, tools and implements										
Others (pl. specify)										
Total	1	1	146	0	146	5	0	5	151	0

Livestock and fisheries	4	47	0	47	0	72	72	47	72	119
Livestock production and management	1	0	30	30	0	0	0	0	30	30
Animal Nutrition Management	1	28	0	28	0	0	0	28	0	28
Animal Disease Management	1	0	47	47	0	0	0	0	47	47
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
Total	7	75	77	152	0	72	72	75	149	224
Home Science										
Household nutritional security	1	0	30	30	0	0	0	0	30	30
Economic empowerment of women	1	0	28	28	0	2	2	0	30	30
Drudgery reduction of women	1	0	83	83	0	9	9	0	92	92
Others (pl. specify)										
Total	3	0	141	141	0	11	11	0	152	152
Agricultural Extension										
Capacity Building and Group Dynamics										
Others (pl. specify)										
Total	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	34	1851	457	2161	244	90	183	1953	547	2344

Name of sponsoring agencies involved: ATMA, DAO, FTC, Agakhan trust, NGO, GGRC, ICDS, TCSR, ANARDE foundation

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										
Commercial fruit production										
Commercial vegetable production										
Integrated crop management										
Organic farming										
Others (pl. specify)										
Total										
Post harvest technology and value addition										
Value addition	1	0	32	32	0	0	0	0	32	32
Others (pl. specify)										
Total	1	0	32	32	0	0	0	0	32	32
Livestock and fisheries										
Dairy farming										
Composite fish culture	1	32	0	32	0	0	0	32	0	32
Sheep and goat rearing										
Piggery										
Poultry farming										
Others (pl. specify)										
Total	1	32	0	32	0	0	0	32	0	32
Income generation activities										
Vermi composting										
Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
Repair and maintenance of farm machinery										

and implements										
Rural Crafts										
Seed production										
Sericulture										
Mushroom cultivation										
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dying etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total										
Agricultural Extension										
Capacity building and group dynamics										
Others (pl. specify)										
Total										
Grand Total	2	32	32	64	0	0	0	32	32	64

Agriculture Skill Development Training

Jobe Role	No. of courses	Duration	Participants								
			Others			SC/ST			Grand Total		
			M	F	Total	M	F	Total	M	F	Total
Organic Grower	1	200 hours (21.02.20 to 25.03.2020)	20	0	20	0	0	0	20	0	20
Quality Seed Grower	1	200 hours (21.02.20 to 25.03.2020)	20	0	20	0	0	0	20	0	20
		Total	40	0	40	0	0	0	40	0	40

Summary of Training Programmes

ON Campus

(A) Farmers & Farm Women	No. of courses		No. of participant						Grand Total
			others			SC/ST			
	T	A	Male	Female	Total	Male	Female	Total	
I Crop Production	3	5	205	3	208	11	0	11	219
II Horticulture	0	1	0	0	0	35	35	70	70
III Soil Health and Fertility Management	1	1	42	22	64	4	0	4	68
IV Livestock Production and Management	2	2	49	0	49	3	1	4	53
V Home Science/Women empowerment	3	3	0	119	119	0	12	12	131
VI Agril. Engineering	1	0	0	0	0	0	0	0	0
VII Plant Protection	3	3	146	8	154	6	0	6	160
VIII Fisheries	2	1	15	0	15	0	0	0	15
IX Production of Inputs at site	1	0	0	0	0	0	0	0	0
X Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0	0
XI Agro-forestry	0	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)	0	0	0	0	0	0	0	0	0
Total (A)	16	16	457	152	609	59	48	107	716
(B) RURAL YOUTH	2	1	32	0	32	0	0	0	32
(C) Extension Personnel	2	5	158	8	166	19	0	19	185
Grand Total (A+B+C)	20	22	647	160	807	78	48	126	933

OFF Campus

(A) Farmers & Farm Women	No. of courses		No. of participant						Grand Total
			others			SC/ST			
	T	A	Male	Female	Total	Male	Female	Total	
I Crop Production	3	2	62	14	76	0	0	0	76
II Horticulture	1	2	188	63	251	12	0	12	263
III Soil Health and Fertility Management	4	4	197	0	197	2	0	2	199
IV Livestock Production and Management	3	3	40	158	198	0	0	0	198
V Home Science/Women empowerment	5	5	0	221	221	0	11	11	232
VI Agril. Engineering	0	1	146	0	146	5	0	5	151
VII Plant Protection	6	9	512	52	564	70	2	72	636
VIII Fisheries	3	2	0	0	0	0	72	72	72
IX Production of Inputs at site	1	1	20	0	20	1	0	1	21
X Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0	0
XI Agro-forestry	0	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)	0	0	0	0	0	0	0	0	0
Total (A)	26	29	1165	508	1673	90	85	175	1848
(B) RURAL YOUTH	1	1	0	32	32	0	0	0	32
(C) Extension Personnel	0	6	817	0	817	8	0	8	825
Grand Total (A+B+C)	27	36	1982	540	2522	98	85	183	2705

ON + OFF Campus (Consolidated)

(A) Farmers & Farm Women	No. of courses		No. of participant						Grand Total
			others			SC/ST			
	T	A	Male	Female	Total	Male	Femal	Total	
I Crop Production	6	7	267	17	284	11	0	11	295
II Horticulture	1	3	188	63	251	47	35	82	333
III Soil Health and Fertility Management	5	5	239	22	261	6	0	6	267
IV Livestock Production and Management	5	5	89	158	247	3	1	4	251
V Home Science/Women empowerment	8	8	0	340	340	0	23	23	363
VI Agril. Engineering	1	1	146	0	146	5	0	5	151
VII Plant Protection	9	12	658	60	718	76	2	78	796
VIII Fisheries	5	3	15	0	15	0	72	72	87
IX Production of Inputs at site	2	1	20	0	20	1	0	1	21
X Capacity Building & Group Dynamics	0	0	0	0	0	0	0	0	0
XI Agro-forestry	0	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)	0	0	0	0	0	0	0	0	0
Total (A)	42	45	1622	660	2282	149	133	282	2564
(B) RURAL YOUTH	2	2	32	32	64	0	0	0	64
(C) Extension Personnel	3	11	975	8	983	27	0	27	1010
Grand Total (A+B+C)	47	58	2629	700	3329	176	133	309	3638

3.5 Extension Programmes (including activities of FLD programmes)

Activities	No. of Programme	No. of farmers	No. of Extension Personnel	Total
Advisory Services	787	2586	22	2608
Diagnostic visits	35	127	9	136
Field Day	9	186	7	193
Group discussions	20	845	58	903
Kisan Ghosthi	14	1216	45	1261
Film Show	63	3996	238	4234
Self -help groups	8	112	5	117
Kisan Mela	3	3446	52	3498
Exhibition	2	1515	44	1559
Scientists' visit to farmers field	59	329	73	402
Ex-trainees Sammelan	2	236	16	252
Farmers' seminar/workshop	2	406	29	435
Method Demonstrations	23	449	11	460
Celebration of important days	3	286	18	304
Special day celebration	10	1483	90	1573
Exposure visits	6	360	20	380
Lecture delivered	151	12138	582	12720
Implement/Crop Demonstration	41	1019	134	1153
Farmer shibir/Crop shibir	2	114	7	121
Collobrative training	5	195	6	201
Others (pl. specify in Remarks column)	93	864	129	993
Total	1338	31908	1595	33503

3.3.6 Other Extension Activity

Sr. No.	Scientist Activity (give Number)	No. of Activity
1	Electronic Media (CD./DVD)	
2	Extension Literature	6263
3	Newspaper coverage	9
4	Popular articles	
5	Radio Talks	
6	TV Talks	3
7	Animal health camps (Number of animals treated)	
8	Advisory through Mobile	6121
9	Publications	3
	Total	12397

3.6 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)	Expected Value(Rs)	Expected Number of farmers
Oilseeds	Groundnut	GJG-9		63.70	828100	128
	Groundnut	GJG-32		69.14	898820	130
	Sesame	G.Til.-3		0.40	6000	40
	Sesame	G.Til.-4		0.35	6300	30
Pulses	Green Gram	GM-4		0.41	3800	20
Others						
Total				134	1743020	348

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						
Total						

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity		Value (Rs.)	No. of Farmers
		No.	kg		
Bio Fertilizers	<i>Azotobactor</i>	240		24480	47
	<i>Rhizobium</i>	246		16800	47
	<i>PSB</i>	408		36240	68
Bio-pesticide	<i>Beauveria Bassiana</i>		5382	807450	606
	<i>Metarizium</i>		150	23250	22
Bio-fungicide	<i>Trichoderma</i>		18085	1265950	864
Bio Agents					
Others	Pheromone trap				
	Lure				
Total		894	23617	2174170	1654

N.B. *Product was produced by JAU University and selling by KVK the amount is only given for revenue generation

Table: Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers s				
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				

4. Literature Developed/Published (with full title, author & reference)

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

Date of start : January -2016

Periodicity : Quarterly

1. Jan to Mar, 2019
2. April to June, 2019
3. July to Sept., 2019
4. Oct. to Dec. 2019

Number of copies distributed : e-news letter

B. Literature developed/published

Item	Title	Authors name	Number of copies
Research papers	A study on knowledge level of rural women regarding weaning mix food for infant in Jamnagar district. <i>International Journal of Home Science</i> 2019;5(2):490-493	Baraiya AK, Baraiya KP, Lakhani SH, Gorfad PS	
Research papers	Residual Toxicity of Insecticides against Thrips, <i>Scirtothrips dorsalis</i> Infesting Chilli under Laboratory Condition. Research Journal of Agricultural Sciences 2019;10(1):151-154	BP Godhani, KP Baraiya and T Anandmurthy	
Research papers	Population Dynamics of Thrips, <i>S. Dorsalis</i> On Chilli Grown With Different Mulching Methods Research Journal of Agricultural Sciences 2019;10(3):486-489	BP Godhani, KP Baraiya and T Anandmurthy	
Technical reports	Annual Progress Report	Smt. A. K. Baraiya, Dr. K. P. Baraiya	7
	16 th AGRESCO Report	Smt. A. K. Baraiya, Dr. K. P. Baraiya	49
	31 st ZREAC Report	Smt. A. K. Baraiya, Dr. K. P. Baraiya	54
	32 nd ZREAC Report	Smt. A. K. Baraiya, Dr. K. P. Baraiya	54
	16 th SAC Report	Smt. A. K. Baraiya, Dr. K. P. Baraiya	35


	Annual Report of ATIC(2019-20)	Dr. J. N. Thakar, Dr. K. P. Baraiya	1
	NMOOP& NFSM FLD result report	Dr. S. H. Lakhani, Dr. K. P. Baraiya	1
	Monthly Report	Smt. A. K. Baraiya, Dr. K. P. Baraiya	1
	Quarterly Reports	Smt. A. K. Baraiya, Dr. K. P. Baraiya	1
Popular articles	Pak Sanrakshan na sadhnoma kothasuj dvara shodh. Krushi Vigyan,44(12):27-18(2019)	Gadhiya VC, Baraiya KP	

C. Details of Electronic Media Produced

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

D. Success Story/CASE STUDIES

5.1 Case study/ Success story

Personal Profile		High-tech Vegetable Cultivation in Poly House
	PROFILE OF FARM INNOVATORS Thematic Area: High-tech Farming “High-tech Vegetable Cultivation in Poly House” <i>Dr. K. P. Baraiya, Smt. A. K. Baraiya</i>	
Name of farmer	: Sumaniya Karabha Sajanbha	Shri Sumaniya Karabha Sajanbha is enthusiastic farmers of village Varvada of Dwarka block of Devbhumi Dwarka district. Varvada village in on road between Dwarka and Mlthapur. It is also very less rainfall area having hardly 250 to 300 mm rainfalls. It is on the sea sore hence, groundwater quality is brackish with high salty and poor water quality in this area. Karabha and his family completely dependent on farming. He has no any side income from any business. He engaged with farming by birth. They grow some common farming practices viz., Groundnut, sorghum, pearl millet, brinjal, tomato and other fodder crops. From starting he used more pesticide and Chemical fertilizer due to that increase cost of cultivation and reduce net profit.
Contact No.	: 9275700340	
Address	: At.- Varvada, Ta.- Dwarka, Dist.- Devbhumi Dwarka	
Age	: 56 Years	
Education	: Uneducated	
Land holding	: 3 ha	Practical Utility of the Innovation/ Mode etc.
Crops grown	: Vegetable, Palak, Amranthus, Coriander, Sapota, Coconut	Shri Sumaniya Karabha Sajanbha is innovative farmer. During 2007 he comes in contact scientist of Agriculture University by the means of Krishi Mahotshav and Tata Chemical, Mithapur. He encourages for vegetable farming cultivation. Tata Chemical support him for vegetable cultivation in Net-Poly house and market also product directly to the colony of this factory.
Livestock	: 4 - Gir Cow	
Business	: Farming	
Special recognition	: Innovative and Progressive farmer	He comes in contact with scientists of KVK, JAU, Jamnagar, then after he regularly visit KVK and attends trainings, farmer and scientist interface, exposure visit, and other programme organized by KVK. In 2007 Karabha linkage with KVK, JAU, Jamnagar through TCSR. He was interested in organic farming, vegetable cultivation and started under

guidance of KVK.

TCSR demonstrated Poly house of 500 sq.m before 13 years. He cultivated palak, coriander, amaranths, fenugreek etc. without protected method, then he harvest these green leafy vegetable crops with 20-25 days. In poly house same crops can be ready within 18 days during the rainy days it is very difficult to cultivate and maintain the green leafy vegetable, more chances to failure of the crops, it also ready minimum 30 days and can be harvest up to 40-60 days. In case of poly house the crop can be started harvesting within 18 days and can be harvest up to 80 days. There is also more protection from direct rain having minimize the crop failure.

Earlier Karabha sold palak at average Rs. 10 to 20 per kg in open market, but after net house technology, the quality of palak, became very good and through the year he can supply palak to consumer. He started these vegetable selling in the staff quarter of Tata Chemical Company, mithapur daily basis. He got price of palak Rs. 30 to 60 per kg round the year. Thus, karabha earned in open field cultivation Rs.15000 from 500 sq.m, instead of same area net house gave Rs. 80000 with single crop cycle (within 75 days) and annually it became about Rs. 300000.

He encouraged from the net house cultivation and established another 1000 sq.m polyhouse without any support. By cultivation the coriander, fenugreek, palak etc round the year. He practiced by minimum use of pesticides and he fill the moram every six month and 7 to 8 tonn per annum FYM.


He adopt micro irrigation system for whole farm since last 10 years. He has also started **Mandap Paddhati** for vegetable (viz., Bottle gourd, ridge gourd, sponge gourd, bitter gourd) cultivation. Whole production marketing himself from his farm or supply to TCSR staff quarter and sales through on telephonic contact of end users. Environmental benefits like He does not use any type of chemical for protection as well as crop production. Finally he become sound in economic condition

Many farmers of Devbhumi dwarka districts and surround districts were visited Karabha's farm and take information about the net house and vegetable cultivation and they started on their own farm.

Action Photographs

	
<p>Net House and open field crop</p>	<p>New crops sown in net house</p>
	
<p>Newly emerged crops during rainy season</p>	<p>Open field during rabi season</p>

5.2 Case study/ Success story

		PROFILE OF FARM INNOVATORS Thematic Area: Value Addition “Value addition in Agriculture Produce”
		<i>Smt. A. K. Baraiya & Dr. K. P. Baraiya</i>
Personal Profile		
Name of Group	: Radhe Gruh Udyog	“RadheGruhUdyog” , Arablush Group, formatted in collaboration with Krishi Vigyan Kendra Junagadh Agricultural University, Jamnagar and ATMA Project Jamnagar. This team contains 8 active members, working as farmwomen at Arablus village of Lalpur Taluka, district Jamnagar. This village is 25 kilometre away from the Jamnagar. Arablus is small and interior village having less facility of transportation. This village having very erratic and insufficient rainfall, also less irrigation facility. Although these women are enthusiastic, hard worker, and very energetic group. The family of these women are completely dependent on farming; having no any side income. They engaged farming since their childhood.
Name of Group Leader	: Payalben Mansukhbhai Kantariya	
Contact No.	: 9512657159	
Address	: At.- Arablush, Ta.-Lalpur, Dist.- Jamnagar	
No. Of member	: 8	
Practical Utility of the Innovation/ Mode etc.		
<p>Arablush village having very poor farming situation. They have very problematic for handling their own lifestyle and education of their children’s education. Before 6 years they have come in contact with the scientist of Krishi Vigyan Kendra during the Krishi Mahotshav. Scientist’s of Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar have gave full support for farming in low rainfall and poor soil condition. They were toughed for organic farming with minimum input cost with maximize output. This village women were engaged visited KVK, Jamnagar and they were joined ATMA project, Jamnagar for maximize the benefits of different training programme conducted in district and out district as well as out of state.</p> <p>Once, under these programme, women group of Arablush were call for training at Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar. They were toughed about value addition of the agricultural products. Since, this training all the supports were given by KVK for developing different technology for value addition of different agricultural produces. These group were very interested in this programme they established a self help group named “RadheGruhUdyog”, Arablush. Member of this group are enthusiastic, hard worker, and very energetic group. They are trained repeatedly by Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar on different topics about value addition, new crop introduction, packaging, marketing concept, organic farming, input preparation etc.</p> <p>The group active is cultivation of wheat, ragi, kasava, coriander, fenugreek, vegetables and different crops at their own field. They do not sold their product in the APMC, but they sold their product by addition of value of them and directly marketing to the consumer as per the requirement. They prepare papad from wheat, ragi, rice, mix pulses, masala papad, wheat + ragi, wheat + rice, mix pulses + ragi etc from their group outlet. They also value added in different vegetables and prepare pickles viz., mango, kachcha mango, murabba, khatti mango, gunda, chickpea + fenugreek, carrot, sweet chilli pickle etc.</p> <p>Diversified technology provide by Scientist of KVK, Jamnagar and also provide seeds of Kasava, ragi</p>		

			chemical fertilizers
7	Crop husbandry	Panchgavya	For management of pests and diseases of crops
8	Crop husbandry	Sheep and goat grazing	For pinkboll worm management
9	Harvesting	Harvest pulse crop in the morning hours	To reduce shattering
10	Organic farming	Jivamrut, Panchgavya, Cow based farming	Reduce the cost of cultivation as well as without chemical organic farming.

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

Practicing Farmers

- a) Group discussion with the farmers
- b) Field visits
- c) Group meeting
- d) Identifying general trends in the area
- e) PRA survey

Rural Youth

- a) Filling up research based questionnaires
- b) Identification of leader and role of rural youth in agriculture (Socio-metric method)
- c) Field visit for practical experience
- d) General discussion about district agriculture issues

In-service personnel

- a) Knowledgetest (Interview schedule)
- b) Interaction with the personnel
- c) Functional areas of personnel

5.2 Indicate the methodology for identifying OFTs/FLDs

For OFT :

- PRA
- Problem identified from Matrix
- Field level observations
- Farmer group discussions
- Assessment of technology
- Others if any

For FLD :

1. New variety/technology
2. Poor yield at farmers level
3. Existing cropping system :- Coriander
4. Technology – adoption gap
5. Others if any

5.3 Field activities

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

5.4 . No. and Name of villages adopted for Doubling Farmers Income. Indicate whether benchmark survey of the villages are done or not.

Name of KVK/ District	Name of Villages Adopted
JAMNGAR	Lothiya

	Khoja Beraja
	Chandragadh
	Nani Banugar
	Gadhka

6. LINKAGES

A. Functional linkage with different organizations

Sr.	Name of organization	Nature of linkage
A	State corporation and state deptt.	
1	District Agricultural Officer, Deptt. of Agriculture, District Panchayat, Jamnagar& Devbhumi Dwarka	<ul style="list-style-type: none"> ➤ Joint diagnostic team visit at farmers field ➤ For collaborative training and demonstration Programme ➤ Collaborative On/Off campus training programme ➤ For providing hostel facilities to participants and organizing collaborative Krishi Mela ➤ Organize all government programmes collectively
2	District Rural Development Agency, Jamnagar& Devbhumi Dwarka	
3	Deputy Director of Veterinary, Department of veterinary &Animal Husbandry, Jamnagar& Devbhumi Dwarka	
4	Deputy Director of Horticulture, Jamnagar	
5	Deputy Director of Agriculture (Training), Farmer Training Centre, Jamnagar& Devbhumi Dwarka	
6	Deputy Director of Agriculture (Extension), Jamnagar& Devbhumi Dwarka	
7	Asstt. Director of Fisheries, Jamnagar& Devbhumi Dwarka	
8	Range Forest Officer, Jamnagar& Devbhumi Dwarka	
9	Asstt. Director of GLDC, Jamnagar& Devbhumi Dwarka	
10	Estate Engineer, Department of Irrigation, Jamnagar& Devbhumi Dwarka	
11	All Taluka Development Officers, and their team at Taluka level	
12	Rajkot-Jamnagar Gramin Bank, Jamnagar& Devbhumi Dwarka	
13	Project Director, ATMA, Jamnagar& Devbhumi Dwarka	
14	Project Director, DWDU, Jamnagar & Devbhumi Dwarka	
15	NABARD Bank	
B	Private Corporation	
1	Territory Manager, GSFC, Jamnagar & Devbhumi Dwarka	<ul style="list-style-type: none"> ➤ Impart training on Agril. aspects ➤ Collaborative on/off campus training programme ➤ Sponsor training programme
2	Territory Manager, GNFC, Jamnagar & Devbhumi Dwarka	
3	Territory Manager, IFFCO, Jamnagar & Devbhumi Dwarka	
4	Reliance Industries, Dept. of Green Belt, Jamnagar	
5	Syngenta Company	
6	GGRC	
C	NGOs	
1	Murlidhar Trust, Opp. Trajitpara Branch School, Bhanvad	<ul style="list-style-type: none"> ➤ Impart training on Agril. aspects ➤ Collaborative on/off campus training programme
2	V.D.R.F. Trust, Momai Xerox, B.P. Road, Bhanvad	
3	Late J.V. Nariya Educational and Charitable Trust, 49, Modern Market, First Floor, Nr. Amber Cinema	
4	Jay Ashapura Charitable Society, Madhav Nivas, Karmachari Society, Trikonban, Dhrol (Dist.-Jamnagar)	
5	Shekhat Jalstrav Vikas Mandal, At.-Shekhat, Post-Aliyabada, Ta.&Dist.- Jamnagar	

6	Lakhtar Jal strav Gram Vikas Trust, 55, Shiv Complex, At.- Bhadra (Patiya), Ta.-Jodia, Dist.- Jamnagar	
7	Umiya Mataji Mandir Trust, At.- Sidsar, Ta.-Jamjodhpur, Dist.- Jamnagar	
8	Shardapith Education Trust, 104-Shrusti complex, Nr. Gurudwara, Jamnagar	
9	Chachara Education &Charitable Trust, 104- Shrusti complex, Nr. Gurudwara, Jamnagar	
10	Tata Chemical Society for Rural Development Foundation, At. Mithapur, Ta.-Dwarka, Dist.-Jamnagar	
11	Agakhan Rural Development Trust	
12	ANARDE foundation trust	
13	Mahindra Tractor, Jamnagar	
14	BAIF Singach	

B. List special programmes undertaken by the KVK and operational now, which have been financed by State Govt./Other Agencies

Establishment of Agricultural Technology Information Centre (ATIC) (B. H.:- 12572-03)	2019-20	State Govt.	1235000/-
Cluster Frontline demonstration of pulses under NSFM (B.H.:- 2704-50)	2019-20	ICAR	340160/-
Cluster Frontline demonstration of Oilseeds under NMOOP (B.H.:- 2704-51)	2019-20	ICAR	170000/-
Skill Training programme (B.H. 2704-56)	2019-20	Central Government	360000/-
District Agromet Units (DAMUs) (B.H.2704-59)	2019-20	II	805000/-
PMKVY (B.H.-2704-62)	2019-20	II	330000/-
Fertilizer Application Awareness Campaign (B.H.-2704-64)	2019-20	II	50000/-
Swachhta Action Plan (B.H.-2704-65)	2019-20	II	22700/-
Tree plantation campaign on for planting 1000 plants and organize krishak gosthies (B.H.-2704-66)	2019-20	II	10000/-

C. Details of linkage with ATMA

a) Is ATMA implemented in your district (Yes/No) :- Yes

S. No.	Programme	Nature of linkage	Remarks
1	District Level Training	Impart Training on Agricultural Aspects	Celebrate Technology week Arrangement of Krishi Mela
2.	Block level training	Lecture delivered	
3.	Village level training		

If yes, role of KVK in preparation of SREP of the district? :- Yes

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	AGB, AMC and other meeting	22	7	
02	Research projects	-	-	-	-
03	Training programmes	On/ Off Campus training programme	12	25	
04	Demonstrations	Method Demonstration	12	17	
05	Extension Programmes				
	Kisan Mela		3	0	
	Technology Week		0	1	
	Exposure visit		6	0	
	Exhibition		2	0	
	Soil health camps		0	0	
	Animal Health Campaigns		1	0	
	Others (Pl. specify)	Day Celebration	2	1	
		Lecture Dilivered	45	11	
06	Publications				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	Other Activities (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				

D. Give details of programmes implemented under National Horticultural Mission

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Constraints if any
	Meeting	Meeting	-	-	-

E. Nature of linkage with National Fisheries Development Board

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
	Training	Collaborative training	-	-	-

F. Details of linkage with RKVY

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
	Training				

7. Convergence with other agencies and departments:

Period	Activity details	Place of activity	Officers present
25.02.2019	AGB meeting ATMA Jamnagar	DDO office, Jamnagar	18
25.02.2019	Central Sponsored Soil Helth Card Yojana	DDO Office, Jamnagar	7
20.03.2019	15 th Joint AGRESCO Meeting	JAU, Junagadh	136
25.03.2019	SAC meeting with line Department	KVK, Jamnagar	35
30.04.2019	AGB meeting ATMA Jamnagar	DDO chamber, Jamnagar	23
21.05.2019	AMC meeting ATMA Jamnagar	ATMA Office, Jamnagar	12
10.06.2019	PMFBY Meeting Jamnagar	Collector office , Jamnagar	18
10.06.2019	PMFBY Meeting, Devbhum Dwarka	Collector office, Devbhumi dwarka	12
10.06.2019	Krishi Mahotsav meeting, Devbhum Dwarka	Collector office, Devbhumi dwarka	24
10.07.2019	PMFBY DLMS, Jamnagar	Collector office, Jamnagar	14
05.07.2019	NFSM Meeting	DAO office, Jamnagar	6
19.08.2019	NMSA Meeting	DDO office, Jamnagar	9
19.08.2019	PMFBY DLMS, Jamnagar	Collector office, Jamnagar	16
19.08.2019	PMFBY DLMS, Devbhumi Dwarka	Collector office, Devbhumi Dwarka	14
20.08.2019	PMFBY DLMS, Devbhumi Dwarka	Collector office, Devbhumi Dwarka	11
09.09.2019	National Animal disease programme from FMD and Brucellosis & Nationla Artificial insemination programme	DDO office, Jamnagar	13
23.10.2019	Saredar Patel Krushi Sanshodhan Purashkar meeting	ATMA office, Jamnagar	4
24.10.2019	NFSM-NMOOP Field visit with Dr. L. R. Duldak, Joint Director, ICAR, Jaipur	KVK, Jamnagar	6
15.10.2019	Verification of Sardar Patel Sanashodhan Purashkar of different farmers with Joint Director, Rajkot	ATMA office, Jamnagar and Respective farmer village	7
26.12.2019	Attained video conference meeting on Jr. Cleark examination	Collector office, Jamnagar	5
16.12.2019	PMFBY MC, Jamnagar	Collector office, Jamnagar	17
16.12.2019	PMFBY DLMS, Jamnagar	Collector office, Jamnagar	15

7B. Details of collaborative activities conducted

Name of the sponsoring agency	Type of activity	Role of KVK	No. of farmers benefited	Financial support if any (Rs)
Dy. Dir. Agri. (Ext.)	Training (4)	Lecture delivered	415	
ATMA, Jamnagar	Training (7), Shibir, day	Lecture delivered,	5865	

& Devbhumi Dwarka	celebration, kishan mela, exhibition, goshti etc.	demonstration,		
Centre for Environment education (NGO)	Training (1), FLD	Lecture delivered, FLD	30	
DAO	Extension Functionaries Training, Field visit,	Lecture delivered training, Dezaster training of locust	121	
DAO	Farmers Training, goshti, discussion	Lecture, programme organized	257	
Pesticide Dealers Association	Training, group discussion	Lecture delivered, discussion,	380	
Fisheries department	Training (3)	Lecture delivered, discussion, training arrangement	104	
FTC Jamnagar	Training (8)	Lecture delivered, demonstration, museum visit	312	
GGRC	Training (2)	Lecture delivered, field visit,	205	
Dy.Dir.Hort.	Shibir, seminar	Lecture delivered, group discussion, field visit,	615	
NMSA	Training, Method demo.	Lecture delivered, method demo, field visit	20	
Dy.Dir.Ani.Husb.	National Launching of NADCP & NAIP	Lecture delivered, organized programe	136	

8. Innovator Farmer's Meet

Sl.No.	Particulars	Details
	Have you conducted Farm Innovators meet in your district?	Yes/ No
	Brief report in this regard	

9. Farmers Field School (FFS)

S. No	Thematic area	Title of the FFS	Budget proposed in Rs.	Brief report

10.1. Technical Feedback of the farmers about the technologies demonstrated and assessed:

- Demonstrated new variety
- Introduction of newer crop by KVK through different FLD as well as OFT
- Information of any crop diversification get from KVK
- Frequently visit to farmers
- Telephonic information is available 24 hours through scientist mobile
- Farmers reduce cost of production by using *Beauveria bassiana* and other bio-products
- Farmers understood the use of sulphur in oilseed crops specially in mustard through front line demonstrations in different villages
- Farmers understand the need of soil and water conservation and its future consequences in the area.

- Positive response coming from farmers about use of *Trichoderma* as seed treatment and soil application in cumin and groundnut
- Farmers are realizing the need of micronutrients and their deficiency in the different soils of the area
- Farmers are realizing the importance of seed treatment for pest and disease management
- Positive feedback coming from farmers side about the use of *Pseudomonas* in coriander for disease management
- Farmers getting satisfactory results from seed treatment for pest and disease control in different crops

10.2. Technical Feedback from the KVK Scientists (Subject wise) to the research institutions/universities:

Director (ATARI), DEE, Comptroller of University :

- Grant for the contingency for handling different programmes is insufficient
- Limit of food provision during training and other cost should be increased along with stipend and transportation facility (Approximately Rs. 500 to 1000 per head per training required)
- Timely release of grant for successful and perfect conducting of FLD and OFT
- Required new vehicle for field visit and other extension programme. It is also required minimum two vehicle in KVK due to work load and it is among farmers field
- Contingency grant is insufficient (It should be minimum 30 lakhs per KVK)
- Provide grant for farm protection wall and other infrastructure facilities

Soil & Water Conservation:

- Farmers are facing the problem of malfunctioning of micro irrigation systems with poor quality irrigation water.
- Problem of soil salinity/ alkalinity is increasing day by day due to inherent salinity of soils and application of poor quality water.
- More research is required for magnetic water softener and effects of softened water on soil after continuous use.

Horticulture:

- Need to be developed nematode & wilt resistant root-stock in pomegranate
- Fertigation schedule should be developed in Datepalm
- Need to be developed value addition methods for Datepalm

Plant Protection:

- Need to be developed more insect and disease resistant varieties under different crops
- Farmers need freshly prepared bio-agents like *Beauveria*, *Metarhizium*, *Trichoderma*, *Pseudomonas*, *Paecilomyces* etc.
- Need to be effective control measures for mealybug control in cotton.
- More emphasis should be given on fruit fly management in different orchards
- Research scientists should focus on discovering best management techniques for mealybug
- Also focus on para-wilt management practices in cotton
- Need to be discover new molecules of nematicides for nematode management
- Should be focus on insecticide resistance management
- Ease availability of bio-pesticides to farmers

Agronomy:

- Need to be developed salinity resistant varieties of crops like groundnut and castor
- Need to be developed high yielding/ salinity tolerant varieties of pulse crops
- Need to be farming with cow based agriculture development for doubling the farmers income

11. Technology Week celebration during 2019 - YES

Period of observing Technology Week: From October 14th to 19th, 2019

Total number of farmers visited : 811

Total number of agencies involved : 3

Number of demonstrations visited by the farmers within KVK campus: 12

Other Details

Technology week was celebrated at Krishi Vigyan Kendra, JAU, Jamnagar during October 14th to 19th, 2019. The programme was chaired by Dr. V. P. Chovatiya, Hon'ble Vice Chancellor, JAU, Junagadh and Co-chaired by Dr. V. V. Rajani, Director of Extension Education, JAU, Junagadh.

Dr. D. L. Kadvani, Research Scientist (Pearl Millet), Pearl Millet Research Station, Junagadh Agricultural University, Jamnagar, was presented in this programme and welcomed house. He guided about general scenario of farming, and gave lecture on Technology for High-tech Agriculture.

Dr. K. P. Baraiya, Senior Scientist & Head, Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar advice to farmers for more and more participate in the different training programmes for gain in knowledge. He also gave special emphasis on use new technology for doubling the farmer's income up to 2022 with follow up seven step strategies. He has advice to farmers for minimize the inputs and optimize the yield of crops. He welcome to farmers for continuous visit of KVK for proper development of their agriculture. Shri N. A. Kalavadia, Project Director (ATMA), and Dy.Dir.Agri(Training), remain present and other line department officers were also remained present and informed house for maximum usages of ATMA schemes of their development. They also advice to develop strategies for maximize the farm production. Shri C. O. Lashkari, Dy. Dir. Horticulture were encourage for kitchen gardening and vegetable as well fruit crop cultivation. He also advice for Value addition in fruit and vegetables.

After inaugural function, different scientists of KVK have given talk on different subjects and information from the Krishi Vigyan Kendra. The day to day theme was kept on different aspects for maximize overcome the problems of the farmers at different block level.

Date wise Theme for Technology week

Date	Theme of Technology transfer	Concern Scientist	Farmers of the block & Place
14.10.19	IPM for Kharif crop with special emphasis on white grub and mealy bug, Importance of MIS	Dr. K. P. Baraiya	Kalavad
15.10.19	IPM for Kharif crop with special emphasis on pink bollworm	Dr. K. P. Baraiya	Jamjodhpur
16.10.19	Concept of Organic farming & Integrated nutrient management	Shri S. H. Lakhani	Dhrol
17.10.19	Kitchen gardening & Value addition	Smt. A. K. Baraiya	Jamnagar
18.10.19	Improvement of breeds and milk production in domestic animal	Dr. J. N. Thaker	Lalpur
19.10.19	Concept of Organic/Natural Farming for minimization cost of cultivation and doubling the farmers income	Dr. K. P. Baraiya	Jodia

The day-to-day activities are as under. In which 811 Farmers/farm women from different blocks were participated.

Number of Technology weeks celebrated	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
1	Gosthies	6	811	<ul style="list-style-type: none"> • 1st day: Management of white grub and mealy bug • 2nd day : Management of pink bollworm and MIS • 3rdday : Organic farming and INM • 4th day: Value addition • 5th day : Ideal animal husbandry • 6thday : Technique for Doubling the farmers income

Lectures organized	24	811	<ol style="list-style-type: none"> 1. IPM & IDM in Groundnut 2. ICT importance in Agriculture 3. More milk produce in scientific way 4. Value addition in farm products 5. IPM in Cotton 6. Importance of Organic farming 7. Reduce rate of crop cultivation in through Integrated Pest and disease control. 8. Importance of micro irrigation system 9. Diesis management in Animal 10. Importance of Kitchen gardening 11. Pink bollworm management in Cotton 12. Importance of micronutrients in agriculture 13. Integrated Pest and disease of major crops 14. Emphasizes on adverse effect of climate change in agriculture 15. Importance of soil and water analysis 16. Mechanization in modern Agriculture 17. Irrigation management in agricultural crop
Exhibition	1	155	Farm implements were put for exhibition cum demonstration purpose
Film show	9	438	Film Show of different technologies were presented
Fair	-	-	
Farm Visit/Demonstration unit visit/Museum visit	1	155	<ol style="list-style-type: none"> 1. NADAP Composting unit 2. Solar submersible pump (Renewable energy) 3. Vermi compost unit 4. Fisheries unit 5. Orchard of chiku and custard apple 6. Drip and sprinkler system in farm 7. Crop cafeteria of major crop of the district 8. Seed production unit 9. Organic plot 10. Nursery Unit 11. Composting pit 12. Improved Implements viz. Laser land leveler, Tractor operated sprayer, tractor operated spray gun, rotavator, groundnut digger, tractor operated reaper for sorghum, groundnut exposure, mini-tractor, Mould plough, automatic seed cum fertilizer drill, etc.
Diagnostic Practices	37	68	
Distribution of Literature (No.)	13	2050	Different subject literature distributed
Total number of farmers visited the technology week		811	

12. Interventions on drought mitigation (if the KVK included in this special programme)**A. Introduction of alternate crops/varieties**

State	Crops/cultivars	Area (ha)	Number of beneficiaries
Gujarat	-	-	-

* Note :- It was normal distribution of rainfall therefore, there was no any issues

B. Major area coverage under alternate crops/varieties

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

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
Total			

D. Animal health camps organized

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

E. Seed distribution in drought hit states

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

F. Large scale adoption of resource conservation technologies

State	Crops/cultivars and gist of resource conservation technologies introduced	Area (ha)	Number of farmers
Total			

G. Awareness campaign

State	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
Total												

13. IMPACT

IMPACT OF KRISHI VIGYAN KENDRA, JAU, JAMNAGAR IN OPERATIONAL VILLAGES 2015-16 TO 2017-18

Krishi Vigyan Kendra has been proved to be one of the best option for improvement of knowledge, attitude and skill level in farming community of rural India through Trainings, On Farm Trials (OFT), Front Line Demonstrations (FLD), other extension activities and on mass campaign. Krishi Vigyan Kendra is the innovative scientific training institutes which have been established throughout the country with the mandates to impart need based and skill oriented trainings to practicing farmers, in-service field level extension workers and to those who wish to go for self-employment. The basic objective of Krishi Vigyan Kendra is focused on demonstrating the recent technology at the farmer's field and imparting skill oriented vocational trainings to the farmers. The Krishi Vigyan Kendra at Jamnagar was established in 2003-04, the main aim of establishing the Krishi Vigyan Kendra was to bring about improvement in production and economy of the farmers. In order to achieve this objective, the Krishi Vigyan Kendra Jamnagar carries out a number of training programmes and various other activities on crop production and allied fields. The specific objective of the present paper was to assess the impact of KVK activities in Jamnagar districts.

METHODOLOGY

The present investigation was undertaken in operational villages of Jamnagar & Devbhumi Dwarka districts of Gujarat state. Both districts consists of total 10 blocks, out of which Kalavad, Lalpur and Bhanvad were selected for different extension activities carried out by Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar. Three irrigated and three rain fed villages selected from each block. Thus, total eighteen villages were adopted as operational area of Krishi Vigyan Kendra for the period of 2015 -16 to 2017-18. These eighteen villages were considered as the study sample for this investigation. For selection of respondents, 10 respondents were selected randomly from each adopted village. Thus, total number of respondents was 180. For the collection of data a simple structured schedule developed by Chandra (1991) was used with some modifications. The data collected from each respondent by personal interview method.

Table: 1. Village-wise numbers of respondents selected for the study and farming situation

Sr. No.	Village	Taluka	Farmingsituation	Totalno. of selected farmers
1	Mulila	Kalavad	Irrigated	10
2	Chhatar	Kalavad	Irrigated	10
3	Chelabedi	Kalavad	Irrigated	10
4	Sanosara	Kalavad	Rainfed	10
5	Golaniya	Kalavad	Rainfed	10
6	Laxmipur (Dudhala)	Kalavad	Irrigated	10
7	Bhangor	Lalpur	Irrigated	10
8	Memana	Lalpur	Irrigated	10
9	Dharampur	Lalpur	Irrigated	10
10	Govana	Lalpur	Rainfed	10
11	Pipartoda	Lalpur	Rainfed	10
12	Babarjar	Lalpur	Rainfed	10
13	Morjar	Bhanvad	Irrigated	10
14	Sahidevaliya	Bhanvad	Irrigated	10
15	Dudhala	Bhanvad	Irrigated	10
16	Rojivada	Bhanvad	Rainfed	10
17	Vanavad	Bhanvad	Rainfed	10
18	Fatepur	Bhanvad	Rainfed	10
Total				180

With a view to measure the overall limpact of Krishi Vigyan Kendra in eighteen adopted villages, questionnaires were prepared in local language in two parts – (1) Extension intervention indicator and (2) Technological intervention indicator. Basic information of selected villages and respondents are given in Table No. 1. It was considered worthwhile to study entitled “Impact of KVK on selected villages” with following objective.

1. To study the socio-economic profile of selected respondents
2. To assess the impact of extension indicator
3. To study the technological impact of KVK activities.

Socio economic profile of the respondents

Considering the objectives of the study, socio-economic profile of the respondents viz, age, education, size of family, size of land holding, social participation, extension contact and farm mechanization index were worked out. Selected characteristics are depicted in Table no. 2.

Table: 2. Distribution of the respondents according to their characteristics

Sr No	Socio-economic characteristics	Selected respondents (n=180)	
		Frequency	Per cent
1	2	3	4
1	Age		
	Young age group (up to 35 year)	28	15.56
	Middle age group (36 to 50 year)	84	46.67
	Old age group (above 50 year)	68	37.78
2	Education		
	Illiterate	8	4.44
	Primary education (1 to 7 standard)	62	34.44
	Middle education (8 to 10 standard)	72	40.00
	Secondary education (11 to 12 standard)	21	11.67
	College and above	17	9.44
3	Size of family		
	Nuclear family (> 5 member)	98	54.44
	Join tfamily (< 5 member)	82	45.56
4	Social Participation		
	Social participation	96	53.33
	No Social participation	84	46.67
5	Extension Contact		
	Low extension participation (> 2.8 score)	13	7.22
	Medium extension participation (2.8 to 7.5 score)	112	62.22
	High extension participation (<7.5 score)	55	30.56
6	Size of land holding		
	Small holding (up to2 ha score)	44	24.44
	Medium holding (>2 to4 ha score)	74	41.11
	Large holding (above 4 ha score)	62	34.44
7	Farm mechanization index		
	Low FMI (Mean – S.D.)	39	21.67
	Medium FMI (Mean ± S.D.)	95	52.78
	High FMI (Mean + S.D.)	46	25.56

The data presented in table 2 showed that maximum numbers of the respondents (84) were of middle age group (36 to 50 years) i.e. 46.67 per cent followed by old age group 37.78 and young age group 15.56 per cent respectively. In case of education, equal number of respondents was educated up to primary and middle education (40.00 percent) followed by illiterate, secondary education and college and its above level education with 4.44, 11.67 and 9.44 percent respectively. From the table, it is also observed that majority (54.44 per cent) of the respondents were belonged to nuclear family and 45.56 percent of joint family.

The data depicted in table revealed that more than half (53.33 per cent) of the respondents had social participation while 46.67 percent had no in social participation. In case of extension participation, 62.22 per cent of the respondents had medium extension participation, whereas 30.56 per cent and 7.22 per cent of them had high and low extension participation respectively.

It is quite clear from the table that 41.11 per cent respondents were medium land holder (2 to 4 ha) while 34.44 and 24.44 percent farmers were large and small land holders having more than 4 ha and up to 2 ha of land holding respectively. In case of farm mechanization, 52.78 per cent of the farmers had medium farm mechanization index followed by 25.56 and 21.67 per cent respondents had low and high farm mechanization index.

Impact of extension indicator

In a view to ascertain impact of different extension activities in adopted villages, questionnaire was prepared to measure the different extension indicators. It was structured to know the experience of farmers before and after three years' experience. The percentage worked out and percent increase should be the growth of the farmers after the KVK activities in adopted villages. The data are presented in table:-3.

Table: 3 Distribution of the respondents according to its extension intervention (N = 180)

Sr. No.	Extension indicator	Impact of Krishi Vigyan Kendra				Difference	Rank
		Before		After			
		Frequency	Percent	Frequency	Percent		
1	Knowledge about technology and package of practices	101	56.11	160	88.89	32.78	IV
2	Extent of awareness	81	45.00	172	95.56	50.56	III
3	Change in attitude	60	33.33	161	89.44	56.11	II
4	Improvement in workperformance / skill	74	41.11	127	70.56	29.44	V
5	Extent of spread of technology	58	32.22	169	93.89	61.67	I
6	Increase in SHGs / FIGs	69	38.33	110	61.11	22.78	VI
7	Formation / establishment of cooperative	65	36.11	78	43.33	7.22	VII

The perusal of data presented in table 3 revealed that more than 50.00 per cent difference was noticed in case of spread of technology (61.67 %) which was followed by change in attitude (56.11 %) and extent of awareness (50.56 %) respectively.

In case of other extension indicators, the difference observed was less than 50.00 per cent are gain in knowledge about technology and package of practices, improvement in workperformance/skill and increase in SHGs /CIGs with 32.78, 29.99 and 22.78 per cent respectively. The least difference was observed in case of formation and establishment of cooperative (7.22 %).

From above discussion, it could be concluded that the spread of technology (ranked first), change in attitude (ranked second), extent of awareness (ranked third), gain in knowledge (ranked fourth) and improvement in workperformance/skill (ranked fifth).

Impact of technological indicator

To find out the technological impact, the following 13 technologies were tested, amongst three i.e. introduction of new varieties, increase in yield /production and increase in area were tested in four major crops of our district which is cotton, groundnut, castor and wheat.

Table: -4. Distribution of farmers according to his technological indicator

Sr. No.	Technological indicator	Impact of Krishi Vigyan Kendra				Difference	Rank
		Before		After			
		Frequency	Percent	Frequency	Percent		
1	Introduction of new varieties	89.18	49.55	138.18	76.77	27.22	II
1	Cotton	120	66.67	162	90.00	23.33	
2	Groundnut	115	63.89	155	86.11	22.22	
3	Castor	137	76.11	165	91.67	15.56	
4	Wheat	145	80.56	172	95.56	15.00	
5	Cumin	110	61.11	162	90.00	28.89	
6	Gram	107	59.44	168	93.33	33.89	
7	Til	108	60.00	148	82.22	22.22	
8	Coriander	12	6.67	133	73.89	67.22	
9	Pearl Millet	80	44.44	128	71.11	26.67	
10	Onion	30	16.67	65	36.11	19.44	
11	Garlic	17	9.44	62	34.44	25.00	
2	Increase in yield / productivity	102.36	56.87	127.00	70.56	13.69	VIII
1	Cotton	154	85.56	98	54.44	-31.11	
2	Groundnut	142	78.89	177	98.33	19.44	
3	Castor	136	75.56	142	78.89	3.33	
4	Wheat	133	73.89	159	88.33	14.44	
5	Cumin	135	75.00	161	89.44	14.44	
6	Gram	114	63.33	152	84.44	21.11	
7	Til	100	55.56	132	73.33	17.78	
8	Coriander	51	28.33	102	56.67	28.33	
9	Pearl Millet	112	62.22	140	77.78	15.56	
10	Onion	30	16.67	80	44.44	27.78	
11	Garlic	19	10.56	54	30.00	19.44	
3	Increase in area	92.18	51.21	144.00	80.00	28.79	I
1	Cotton	158	87.78	130	72.22	-15.56	
2	Groundnut	95	52.78	165	91.67	38.89	
3	Castor	98	54.44	143	79.44	25.00	
4	Wheat	111	61.67	167	92.78	31.11	
5	Cumin	102	56.67	157	87.22	30.56	
6	Gram	113	62.78	163	90.56	27.78	
7	Til	90	50.00	145	80.56	30.56	

8	Coriander	43	23.89	172	95.56	71.67	
9	Pearl Millet	102	56.67	128	71.11	14.44	
10	Onion	46	25.56	102	56.67	31.11	
11	Garlic	56	31.11	112	62.22	31.11	
4	Increase in production	105.55	58.64	138.18	76.77	18.13	IV
1	Cotton	160	88.89	130	72.22	-16.67	
2	Groundnut	130	72.22	172	95.56	23.33	
3	Castor	120	66.67	166	92.22	25.56	
4	Wheat	133	73.89	160	88.89	15.00	
5	Cumin	121	67.22	158	87.78	20.56	
6	Gram	98	54.44	135	75.00	20.56	
7	Til	100	55.56	130	72.22	16.67	
8	Coriander	95	52.78	135	75.00	22.22	
9	Pearl Millet	103	57.22	128	71.11	13.89	
10	Onion	56	31.11	100	55.56	24.44	
11	Garlic	45	25.00	106	58.89	33.89	
5	Extent of adoption	107	59.44	151	83.89	24.44	III
6	Increase in income	130	72.22	159	88.33	16.11	VII
7	Generation of employment	122	67.78	139	77.22	9.44	IX
8	Expansion of an enterprise	89	49.44	96	53.33	3.89	X
9	Introduction of new enterprise	75	41.67	79	43.89	2.22	XI
10	Improvement in market facility of farm produce	75	41.67	78	43.33	1.67	XII
11	Creation of infrastructure	103	57.22	134	74.44	17.22	V
12	Opening of farm school	78	43.33	81	45.00	1.67	XIII
13	Decrease in yield gaps	91	50.56	120	66.67	16.11	VI

It is concluded from above table: 4 that the highest difference (28.79 %) was observed in increase in area followed by introduction of new varieties (27.22 %), adoption rate (24.44 %), increase in yield (18.13 %), creation of infrastructure (17.22 %), decrease in yield gap (16.11 per cent), increase in income (16.11 per cent) and increase in yield/productivity (13.69 %) respectively.

Least difference observed in case of Improvement in market facility of farm produce and Opening of farm school (1.67 per cent of each) and Introduction of new enterprise (2.22 per cent).

From above discussion it can be concluded that increase in area (ranked first), introduction of new varieties (ranked second), adoption rate (ranked third), increase in production (ranked fourth) and creation of infrastructure (ranked fifth) and decrease in gap (ranked sixth).

The reason for increase in production and introduction of new varieties is due to constant and concrete efforts of KVK scientists to the farmers and vice versa. Farmers could solve their problems of plant protection and crop production by direct contact of the specialist of KVK either by phone or person. Introduction of new varieties ranked second position because of Front Line Demonstrations conducted by KVK at farmer's fields and trainings.

Table: 5. Impact of farm mechanization, IPM and INM (Year :-2015-16 to 2017-18)

Sr.No.	Practices	Before	After	Per cent increase
		Year 2015-16	Year 2017-18	
a)	Farm mechanization			
1	Tractor (No.)	35	110	214.29
2	Rotavator	4	18	350.00

3	Thresher (No.)	35	55	57.14
4	Electric Motor (No.)	154	200	29.87
5	Oil Engine (No.)	89	60	-32.58
6	Sprayer (No.)	180	235	30.56
7	Drip irrigation set	5	35	600.00
8	Sprinkler irrigation set	3	18	500.00
b)	Integrated nutrient management			
1	Use of FYM	145	170	17.24
2	Judicious use of Urea	101	130	28.71
3	Judicious use of DAP	76	107	40.79
4	Judicious use of SSP	59	78	32.20
5	Judicious use of Potash	48	68	41.67
6	Use of Mineral mixer	26	63	142.31
8	Gypsum / Sulphur (t)	10	20	100.00
c)	IPM			
1	Use of Trichoderma	42	196	366.67
2	Pheromone Trap (no)	32	85	165.63
3	NPV (no)	21	30	42.86
4	Neem oil (no)	69	114	65.22
5	<i>Beauveria</i>	49	148	202.04

It can be concluded from above Table:5 that in case of farm mechanization, the highest per cent increase was in Drip irrigation set (600 %) followed by Sprinkler irrigation system (500%), rotavator (350%), and tractor (214.29%). While least percent increase was observed in thresher, electric motor and spray pump with 57.14, 29.87 and 30.56 per cent respectively. But, this trend was reverse in case of oil engine (-32.58%) which was due to replacement of oil engine with electric motor. Use of drip and sprinkler increased because of scarcity of irrigation water, proper guidance from KVK scientist, and help from GGRC and Government.

Farmers of adopted villages were aware about importance of integrated nutrient management (INM) through on and off campus trainings, FLDs, field days and mobile phones. In integrated nutrient management the highest percent rise was observed in use of mineral mixer (142.31%) followed by use of judicious use of Gypsum (100%), potash (41.67%) and judicious use of DAP (40.79%) respectively. While least percent increase was observed in use of FYM (17.24 per cent), use of urea (28.71 per cent) and use of SSP (32.20 per cent) respectively.

Now a day's IPM is the most important factor from production technology point of view. Due to continuous efforts of KVK scientists, regular visit of farmer's field and guidance through mobile phone, the use of bio control agents were remarkably enhanced. In adopted villages the highest percent increase was observed in use of *Trichoderma* (366.67%) followed by use of *Beauveria* (202.04%), pheromone trap (165.63%), neem oil (65.22 per cent) and NPV (42.86%).

Table: 6. Increase and decrease of productivity of major crops KVK villages in last three year (year 2015-16 to 2017-18)

Sr. No.	Crop	Productivity Difference	Rank
1	Cotton	-31.11	XI
2	Groundnut	19.44	IV
3	Castor	3.33	X
4	Wheat	14.44	VIII
5	Cumin	14.44	IX
6	Gram	21.11	III

7	Til	17.78	VI
8	Coriander	28.33	I
9	Pearl Millet	15.56	VII
10	Onion	27.78	II
11	Garlic	19.44	V

From above table, it is clear that highest increase was observed in production of coriander with first rank. Before adoption time the farmers were sowing local variety of coriander. After adoption of these villages by KVK, Jamnagar the FLDs of coriander variety GC-2 was conducted, during training and field days the farmers were awaked about recommended variety of coriander i.e. Gujarat Coriander – 2. Therefore the productivity of coriander was increased. This was followed by groundnut and chickpea with second and third rank respectively. It is due to adoption of recommended varieties, good crop management practices and regular guidance of KVK experts to farmers.

At the same time productivity of cotton crop was declined up to –31.11 per cent. The reason behind this as per farmers' feedback was mono cropping system (every year sowing of cotton on same land), attack of pink bollworm and remarkable infestation of sucking pests.

From above table it is concluded that Coriander (ranked first), Onion (ranked second), chickpea (ranked third), groundnut (ranked fourth), garlic (ranked fifth), sesame (sixth), pearl millet (seventh), wheat (ranked eighth), cumin (ranked ninth) and castor (ranked tenth). While cotton ranked at eleventh position with decrease in yield.

Conclusion:-

Krishi Vigyan Kendra has been playing pivotal role for the allover improvement of farming community. To concentrate its efforts 18 villages were adopted for different activities for the period of 2015-16 to 2017-18. Due to constant and concrete efforts of KVK scientists, like organizing On and Off campus trainings, Front Line demonstrations (FLDs), field days, sharing of technology through cell phones, distribution of literature, celebration of technology weeks, soil health day, agricultural fairs, exposure visits, etc. had provided scientific know-how to farmers which led them to adopt new technology and finally to a better life.

After completion of three years in adopted villages the major outcomes are :
The yield of coriander and onion was increased by 28.33 and 27.78 percent. A remarkable change was noticed in use of drip and sprinkler irrigation system. Use of overdose of DAP and urea was minimized and farmers started to use more bio agents especially *Trichoderma* and *Beauveria* to control pest and diseases which resulted in decrease of cost of cultivation with conservation of environment. The efforts of KVK scientists succeeded in arousing awareness, change in attitude, introduction of new varieties, extent of adoption which increased the crop production and finally the income of the farmer.

B. Cases of large scale adoption (Please furnish detailed information for each case)

Sr.	Significant Achievements	Details of achievements
1	Promotion of organic farming	: Farmers were aware about organic farming, skill training conducted skill development of organic growers. Horizontal spread in more then 550 farmers have been started organic farming in the KVK jurisdiction. About 15% farmers have been started organic inputs for their pest, diseases and nutrition management, through which they reduce the cost of cultivation.
2	Employment generation through seed	: Skill training on quality seed grower were conducted and horionatl spread

	production		
3	Popularization of New varieties of Groundnut	:	GG-20 variety share more than 80% share of total groundnut cultivation. It was replaced by GJG-22 variety, GJG-9 and GJG-32 by availability of seed on about 35%
4	Spread Beauveria	of :	Aware farmers about use of Beauveria bassiana for the management of pink bollworm in cotton and white grub in groundnut. It also successful for the control the all type of pest infesting crops.
5	Spread Trichoderma	of :	Most successful biological fungicide used in groundnut cultivation for the management of stem rot (Sclerotium rolfsii) of groundnut, wild of cumin. More than 90 % farmers used.
6	Popularization of different varieties	:	Sesame : G.Til.-3, 4; Pearl Millet- GHB-558, 538, 732 Chickpea :- GG-5, GJG-3
7	New crop introduction	:	Coriander for replacement of cumin and wheat.

C. Details of impact analysis of KVK activities carried out during the reporting period

Most successful technologies

Most Successful Technology	Source of Technology with Year of Released/ Developed	Parameters/Indicators/Determinants for Large Scale Adoption or Most Successful						
		Variety	Area covered (ha)	No/ of Villages covered	Approx No. of farmers adopted	Highest yield Q/ha	Net return Rs/ha	More demand in market
Pearl millet GHB-732	JAU, Junagadh Year of release: 2010-11		363	32	186	43.75	32901	
Coriander GC-2			563	38	241	23.75	72973	
Green Gram GM-4	GAU		732	36	286	11.25	29863	
Chickpea GJG-3	JAU		575	27	272	25.41	79057	
Chickpea GG-5	JAU, Junagadh Year of release: 2013-14							
IDM								
Trichoderma in Groundnut	JAU, Junagadh		3437	80	456	28.75	40600	

14. Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
January 2019			
February			
March			
April			
May			
June			
July	2	155460	
August	3	233190	
September			
October			
November	4	296690	
December 2019	1	46	
Total	10	685386	

15. PERFORMANCE OF INFRASTRUCTURE IN KVK

A. Performance of demonstration units (other than instructional farm)

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Horticulture Unit	2012-13	0.5 Ha	Sapota	Fruit	-		-	
				Custard apple	Fruit	1.06		2650	

B. Performance of instructional farm (Crops) including seed production

Name Of the crop	Date of sowing	Area (ha)	Details of production			Amount (Rs.)		Remarks
			Variety	Type of Produce	Qty. kg	Cost of inputs	Gross income	
Groundnut	29.07.19	4	GJG-9	Seed(Breeder) Haulm	6370 11000	293000	828100 44000	
Groundnut	2.08.19	5.5	GJG-32	Seed(Breeder) Haulm	6914 17205	360000	898820 68820	
Sesame	5.08.19	2.5	G.Til.-3	Seed	40	2000	6000	
Sesame	4.08.19	0.5	G.Til.-4	Seed(Breeder)	35	2000	6300	
Green Gram	4.08.19	0.5	GM-4	seed	41	1500	3800	
Sorghum	06.08.19	0.3	Local	Dry fodder	5000	8000	15000	
Maize	13.03.19	0.15		Green fodder	3670	6000	13000	

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

Sl. No.	Bio Products	Name of the bio-product	Quantity		Amount (Rs.)		No. of Farmers	Remarks
			No.	kg	Cost of inputs	Gross income		
1	Bio Fertilizers	<i>Azotobactor</i>	240		*	24480	47	
2		<i>Rhizobium</i>	246		*	16800	47	
3		<i>PSB</i>	408		*	36240	68	
4	Bio-pesticide	<i>Beauveria Bassiana</i>		5382	*	807450	606	
5		<i>Metarizium</i>		150	*	23250	22	
6	Bio-fungicide	<i>Trichoderma</i>		18085	*	1265950	864	
7	Bio Agents							
8	Others	Pheromone trap						
9		Lure						
	Total		894	23617		2174170	1654	

N.B. *Product was produced by JAU University and selling by KVK the amount is only given for revenue generation

D. Performance of instructional farm (livestock and fisheries production)

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Cow	Gir	Milk	lit	-		
			FYM	10 ton			

E. Utilization of hostel facilities

Accommodation available (No. of beds): 25

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January 2019	31	1	0
February 2019	152	16	0
March 2019	51	2	0
April 2019	5	8	0
May 2019	2	3	0
June 2019	2	1	0
July 2019	14	1	0
August 2019	29	10	0
September 2019	39	7	0
October 2019	0	0	0
November 2019	11	1	0
December 2019	4	14	0
Total	340	64	

F. Database management

S. No	Database target	Database created

G. Details on Rain Water Harvesting Structure and micro-irrigation system

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstrations	No. of plant materials produced	Visit by farmers (No.)	Visit by officials (No.)		

16. FINANCIAL PERFORMANCE**A. Details of KVK Bank accounts**

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India						
With KVK	State Bank of India	Khodiyar Colony, Jamnagar	SBIN0012211	Training Organizer	10319002389	361002098	12211

B. Utilization of KVK funds during the year 2019-20 (Rs. in lakh)

S. No.	Head	R.E 2019-20	Opening Balance as on 01.04.2019	Refund During 2019-20, if any	Fund received during 2019-20	Expenditure during 2019-20	Closing Balance (04-05+06-07)
1	2	3	4	5	6	7	8
	Grants for creation of Capital Assets (CAPITAL)						

1	Works	0	0	0	0	0	0
	A. Land	0	0	0	0	0	0
	B. Building	0	0	0	0	0	0
	i. Office building	0	0	0	0	0	0
	ii. Residential building	0	0	0	0	0	0
	iii. Minor works	0	0	0	0	0	0
2	Equipments	0	0	0	0	0	0
3	Information Technology	0	0	0	0	0	0
4	Library Books and Journals	0	0	0	0	0	0
5	Vehicles & Vessels	1450000	0	0	1450000	1440389	9611
6	Livestock	0	0	0	0	0	0
7	Furniture & Fixtures	0	0	0	0	0	0
8	Others	0	0	0	0	0	0
	Total-CAPITAL (1+2+3+4+5+6+7+8)	1450000	0	0	1450000	1440389	9611
Grants in Aid - Salaries (REVENUE)							
9	Establishment Expenses						
	A. Salaries	8650000	1743787	0	8650000	8339842	2053945
	Total-SALARIES (9)	8650000	1743787	0	8650000	8339842	2053945
Grants in Aid - General (REVENUE)							
10	Pension & Other Retirement Benefits	0	0	0	0	0	0
11	Travelling Allowance	100000	0	0	100000	106592	-6592
12	Research & Operational Exp.						0
	A. Research Expenses	500000	20000	0	500000	519994	6
	B. Operational Expenses	300000	9342	0	300000	308854	488
	Total - Res. & Operational Exp.	900000	29342	0	900000	93 5440	-6098
13	Administrative Expenses						0
	A. Infrastructure		0	0			0
	B. Communication	10000	0	0	10000	164	9836
	C. Repairs & Maintenance						0
	i. Equipments, Vehicles & Others	80000	0	0	80000	79346	654
	ii. Office building	0	0	0	0		0
	iii. Residential building		0	0			0
	iv. Minor Works	0	0	0	0		0
	D. Other	10000	0	0	10000	9000	1000
	Total - Administrative Expenses	100000	0	0	100000	88510	11490
14	Miscellaneous Expenses						0
	A. HRD					0	0
	Total Grants in Aid – General (10+11+12+13+14)	1000000	29342	0	1000000	1023950	5392
	Grand Total (Capital + Salaries+ General)	11100000	1773129	0	11100000	10804181	2068948

C. Status of revolving fund (Rs. in lakh) for the three years

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
1 st April 2017 to 31 st March, 2018	4861580	4171833	3457716	5557697
1 st April 2018 to 31 st March, 2019	5557697	4549175	4143409	5963463
1 st April 2019 to 31 st December, 2019	5963463	3526089	1893470	7596082

17. Details of HRD activities attended by KVK staff during year

Sr. No.	Period	Name of Officer	Title	Venue or Place	Sponsoring Agency	Duration (days)
1	18.02.19	Dr. K. P. Baraiya	State level seminar on "Gau Aadharit Sajeev Kheti"	Gujarat Vidyapeeth, Ahmedabad	GAAS	1
2	18.02.19	Mr. S. H. Lakhani	State level seminar on "Gau Aadharit Sajeev Kheti"	Gujarat Vidyapeeth, Ahmedabad	GAAS	1
3	18.02.19	Smt. A. K. Baraiya	State level seminar on "Gau Aadharit Sajeev Kheti"	Gujarat Vidyapeeth, Ahmedabad	GAAS	1
4	1-2.03.18	Dr. K. P. Baraiya	Annual Action Plan Workshop of KVKs of Gujarat	NAU, Navsari	ICAR-ATARI, Zone-VIII, Pune	2
5	14-16.06.19	Dr.K.P.Baraiya	Annual Zonal Workshop	CCRI,ICAR,Goa	ICAR-ATARI, Zone-VIII, Pune	3
6	15-19.07.19	Smt.A. K. Baraiya	Training programme on Food and Nutritional Security of the Rural House holds	MANAGE, Hyderabad	MANAGE, Hyderabad	5
7	16-25.09.19	Smt.A.K.Baraiya	Training programme on Integrated Approaches Towards Addressing Hidden Hunger Challenge	MPUAT, Udaipur	ICAR	10
8	04.09.19	Dr.K.P.Baraiya	Workshop on Natural farming	Mahatma Mandir, Gandhinagar	State Dept.	1
9	04.09.19	Mr. S. H. Lakhani	Workshop on Natural farming	Mahatma Mandir, Gandhinagar	State Dept.	1
10	08.11.2019	Dr.K.P.Baraiya	attend PPAG Seminar on "Krushi ane Bagayati Pakoma Pravartman Pak Saraxan na Prashno ane Nirakaran"	Plant protection association of Gujarat	PPAG & AAU, Anand	1
11	7 to 9.01.2020	Dr.K.P.Baraiya	To attend training programme on "Recent Extension Approaches for Effective Transfer of Technology"	DEE, office JAU, Junagadh	EI, Anand	3
12	7 to 9.01.2020	Mr. S. H. Lakhani	To attend training programme on "Recent Extension Approaches for Effective Transfer of Technology"	DEE, office JAU, Junagadh	EI, Anand	3
13	7 to 9.01.2020	Dr. J. N. Thaker	To attend training programme on "Recent Extension	DEE, office JAU, Junagadh	EI, Anand	3

			Approaches for Effective Transfer of Technology"			
14	18-19.02.2020	Mr. S. H. Lakhani	To Participate as a experts/ specialist for identification, conservation and assessment of indigenous knowledge and update my knowledge and skill for above context	A.P. Shinde Hall, NASC, New Delhi	ATARI, Pune	2
15	13-14.02.2020	Dr. K. P. Baraiya	To attend the State Level Annual Action Plan Workshop of KVKs (Gujarat)	Gujarat Vidyapith, Ahmedabad	Director, ATARI, Zone-VIII, Pune	2
16	28.02.20 to 01.03.2020	Dr. K. P. Baraiya	To attend National Conference on KVKs of India	New Auditorium, Convention Centre, NASC Complex, New Delhi	DDG, Extension, ICAR, New Delhi	3

18. Please include any other important and relevant information which has not been reflected above (write in detail).

18.1 ESTABLISHMENT OF AGRICULTURAL TECHNOLOGY INFORMATION CENTRE (ATIC) (YEAR-2018-19).

1.	Name of the Scheme	:	Establishment of Agricultural Technology Information Centre (ATIC) B.H. 12572-03
2.	Location of the scheme	:	Krishi Vigyan Kendra, JAU, Jamnagar
3.	Officer-in charge of the scheme	:	Senior Scientist & Head, KVK, JAU, Jamnagar
4.	Objectives	:	<ul style="list-style-type: none"> ➤ Single window system for technology dissemination. ➤ Formulation of FIGs as a process of innovativeness in technology dissemination. ➤ Feedback from users to the research centre
5.	Justification of the scheme	:	<ul style="list-style-type: none"> ➤ The JAU has generated a large number of technologies in different disciplines of agriculture and all allied subjects. ➤ Location specific technology and assessment technologies and demonstration of the technological models is planned.

A. Details of ATIC:

Sr. No.	Name of ATIC	Name of host institute	Name of ATIC manager	Telephone No.			E-mail address
				Office	Fax	Mobile	
1.	KVK, Jamnagar	Junagadh Agricultural University, Junagadh	Senior Scientist & Head	(0288) 2710165	(0288) 2710165	+919427980032	kvkjamnagar@gmail.com

B. Details of farmers visit:

Sr. No.	Name of ATIC	Purpose of visit	No. of farmers visited
1.	KVK, Jamnagar	For agricultural information	732
2.	KVK, Jamnagar	Technology Products	3256

C. Facilities in ATIC (Operational):

Sr. No.	Particulars	No. of ATIC
1.	Reception counter	No
2.	Exhibition/technology measures	Yes
3.	Touch screen kiosk	Nil
4.	Cafeteria	Yes
5.	Sales counter	Yes
6.	Farmers feedback register	Yes
7.	Others	Nil

A. Technologies Information Provided**A. 1. Details technology information, category of information:**

Name of ATIC	Information Category	No. of farmers benefitted	Variety	Pest Management	Disease management	Agro tech.	SWT	PHT	AH	HS
KVK, Jamnagar	1. Kisan call centre SMS	978364	149106	231000	299106	299106	0	0	0	46
	Phone calls	1558	343	366	363	18	96	0	242	140
	2. Video shows	940	209	118	66	284	0	0	0	123
	3. Letters received	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	4. Letter replied	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	5. Training to famers/ technocrats/ students	823	168	252	155	15	102	20	25	86
6. Others	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	

A. 2. Publication (Print & Electronic media):

Sr. No.	Name of ATIC	Particular	No. sold/distributed	Revenue generate	No. of farmers benefitted
1.	KVK, JAU, Jamnagar	Books/Booklet	Nil	Nil	Nil
2.		Tech. bulletin	Nil	Nil	Nil
3.		Tech. inventory	Nil	Nil	Nil
4.		CDs	Nil	Nil	Nil
5.		DVDs	Nil	Nil	Nil
6.		Leaflet	1270	Nil	1270
7.		Folders	1239	Nil	1239
8.		Video films	Nil	Nil	Nil
9.		Audio CDs	Nil	Nil	Nil
10.		Others (Poster)	Nil	Nil	Nil

B. Technology products provided:

Sr. No.	Particular	Quantity	Unit of quantity	Value in Rs.	No. of farmers benefitted
1.	Seeds				
(i)	Green Gram (GM-4)	15.81	Quintal	136620	174
(ii)	Sesame (G.Til-4)	13.39	Quintal	200850	279
(iii)	Groundnut (GJG-9) (Breeder)	58.25	Quintal	709084	81
(iv)	Sesame (G.Til-4) Breeder	7.02	Quintal	163566	406
2.	Planting materials		-		
3.	Live stock		-		

4.	Poultry birds	-	-	-	-
5.	Bio Product		Quintal	-	-
	1. <i>Beauveria bassiana</i>	58.65	Quintal	865596	829
	2. <i>Trichoderma</i>	181.36	Quintal	1269620	1178
	3. PSB	392	No.	36480	91
	4. <i>Rhizobium</i>	232	No.	15960	58
	5. <i>Azotobactor</i>	245	No.	24780	83
	6. <i>Metarhizium</i>	1.03	Quintal	15450	18

C. Technology services provided:

Name of ATIC	Particulars	No. of farmers benefitted
KVK, Jamnagar	Soil and Water testing	152
	Plant diagnosis	28
	Services to line department	75
	Others (Group Meeting, Field Visit, Field Day)	288

D. FLD conducted:

Sr. No.	Month	Crop/Inputs	Season	Variety	No. of Farmers/ Demonstration		
					Others	SC/ST	Total
1.	January to December 2019	Cumin PSB, <i>Azotobacter</i> , <i>Beauveria</i> , <i>Trichoderma</i>	<i>Rabi</i>	GC-4	35	0	35
2.		Coriander PSB, <i>Azotobacter</i> , <i>Beauveria</i> , <i>Trichoderma</i>	<i>Rabi</i>	GC-2	10	0	10
3.		Groundnut <i>Trichoderma</i> , <i>Rhizobium</i> , PSM, <i>Beauveria</i>	<i>Kharif</i>	G-20	47	3	50
4.		Cotton <i>Beauveria</i> , PSM, <i>Azotobacter</i> , SNPV, MDP	<i>Kharif</i>	BT	25	0	25
5.		Kitchen gardening	<i>Kharif</i>	-	50	0	50
6.		Cotton picking apron	<i>Kharif</i>	-	5	0	5
Total					167	8	175

E. Short term training courses:

Sr. No.	Month	Title of the Training	No. of Beneficiaries			No. of SC/ST Beneficiaries		
			M	F	Total	M	F	Total
1.	January to December 2019	Income generation activity for rural women	0	28	28	0	2	2
2.		Use and Importance of Bio fertilizer, Bio pesticides and Bio fungicides in agriculture	21	0	21	0	0	0
3.		Groundnut seed production	41	3	44	0	0	0
4.		House hold food security by kitchen gardening	0	34	34	0	0	0
5.		Income generation activity for empowerment rural women	0	56	56	0	0	0
6.		Use and importance of bio-pesticides, bio-fertilizers and bio-fungicides in agriculture	19	0	19	1	0	1
7.		Awareness about soil health card	54	0	54	0	0	0
8.		Pre-kharif plant protection measures	96	0	96	16	0	16
9.		Water management through MIS in <i>kharif</i> crops	146	0	146	5	0	5
10.		Management of pink worm in cotton and other <i>Kharif</i> crops	30	0	30	0	0	0
11.		Use of bio-fertilizer and recycling of farm waste	83	0	83	0	0	0

	through composting						
12.	Value addition in fruit and vegetables and other agricultural product	0	45	45	0	5	5
13.	Location Specific drudgery reduction technology	0	44	44	0	7	7
14.	Importance of major and micro nutrients in crop production	42	22	64	4	0	4
Total		532	232	764	26	14	40

F. Extension Activity:

Sr. No.	Name of Activity	No. of Activity	No. of Participant		
			M	F	T
1	Group meeting, Kishan goshthi	12	413	148	561
2	Field visit/Field Day	13	162	4	166
3	Night meeting etc.	11	475	245	720
4	Literature	10	35	0	35

18.2. District Agro-Met Units (DAMU) under Gramin Krishi Mausam Sewa (GKMS) Scheme

1. Title of the Project:District Agromet Unit (DAMU) Under GKMS

2. Sanction letter:A.Extn.16/01/2017-AE-I Dt. 02/11/2018

3. Name of Damu, District, ATARI zone and Year

DAMU Name:Krishi Vigyan Kendra, Jamnagar

Name of Blocks: Dhrol, Jamjodhpur, Jamnagar, Jodiya, Kalavad, Lalpur

Year of start of AAS at DAMU: November, 2019

4. Name and address with landline and mobile numbers along with STD code (also provide e-mail address) of head of ATARI, Project Coordinator, Head of the Krishi Vigyan Kendra (KVK)

Designation	Name	Address	STD code Telephone no.& Fax	Email-id
Head of ATARI	Dr. Lakhansingh	ATARI, Pune,Maharastra	020-2512665	atari.pune@gmail.com
Head of KVK	Dr. K. P. Baraiya	KVK, Jamnagar	0288-2710165	kvkjamnagar@gmail.com
Project Coordinator (PC)	Dr. K. P. Baraiya	KVK, Jamnagar	0288-2710165	kpbaraiya@gmail.com
SMS	Shree A. V. Savaliya	KVK, Jamnagar	8758180926	ankurv.savaliya@gmail.com
Agromet Observer (AO)	Shree R. B. Pandya	KVK, Jamnagar	7621877811	ramanikpandya@gmail.com

5. Date of start of Agromet Advisory Bulletins:10th December, 2019

6. Nearest Air, Tv And Railway Station (provide the road distance from DAMU)

i) Air Station : Rajkot- 90km

ii) Tv Station : Rajkot- 90km

iii) Railway Station: Jamnagar-6km

7. Status of Agro-AWS:(Not installed)

7.1 Date of installation of AWS: NIL

- 7.2 List of instruments presently available in working condition: NIL
 7.3 Instruments to be replaced/repared indicating type of defect: NIL
 7.4 Please provide frequency of observation, exposure conditions of the site etc.: NIL
 7.6 Number of years of data records available: NIL
 7.8 Whether the observatory is periodically inspected, maintained and calibrated by IMD (If yes, please indicate the latest data of inspection by the IMD): NIL
 7.9 Details of soil moisture observations taken, if any (please provide frequency and depths of observation etc.): NIL

8. Details of Agromet Advisory Services

i. How many times the weather forecasts were received during the year

Daily(365) through DSS model

ii. When do you receive the forecasts from MC/RMC?

Not by MC or RMC we are preparing AAS Bulletin using IMD DSS portal (<http://agromet.imd.gov.in>)

iii. How many AAS bulletins were prepared and disseminated to the farmers in the year?

We don't have any permission to disseminate the AAS Bulletin to farmers and also not receiving value added data by MC

iv. How many AAS bulletins were prepared using Agromet-DSS in English and regional languages?

39 bulletin * 6 block = Total 234 bulletin were prepared

v. List the modes of mass communication adopted for AAS dissemination

We don't have any permission to disseminate the AAS Bulletin to farmers

vi. Details of broadcast on AIR and TV (name of station broadcast frequency, time slot provided etc.) (Audio tape of the recent broadcast)

NIL

vii. Give list of farmers awareness programmes conducted like Krishi/KishanMelas, training, participation in national day parades etc. and photograph of Farmer's Awareness Programme (no of Farmer attended)

S. No.	FAP/ Farmers meet /Meghdoot Popularization activities	Date	Location (Block/Village)	Approx. No. of Farmers attended the Program
1	FAP	05/12/2019	Kalavad	32
2	FAP	30/12/2019	Jamnagar	40
3	Farmers meet	01/01/2020	Jodiya	60
4	Farmers meet	17/01/2020	Jamnagar	37
5	FAP	21/01/2020	Dhrol	40
6	Meghdoot Popularization activities	06/02/2020	Lalpur	48
7	Meghdoot Popularization activities	19/02/2020	Jodiya	56
8	Krishi Mela, at KVK Jamnagar	03/03/2020	Jamnagar	1500

viii. No of SMS sent through Kisan Portal and how many farmers were benefitted during the year

NIL

ix. List of other organizations receiving Agromet advisories

NIL

9. Verification results of District and Block level weather forecast

NIL

10. Economic impact of Agromet advisory services

Now days due to climate change weather system pattern changed, so AAS provide the current or before weather condition to farmers so some main operation like sowing, harvesting are not fail.

All the operation like fertilizer application, weeding, planting, spraying, inter culturing etc are carried out on the basis of AAS so that maximum benefit get by plant growth.

11. Mobile APP based Agromet advisory services for farmers

NIL

12. Feedback from progressive farmers

NIL

13. Newspaper cuttings

NIL

14. Any other important information

NIL

18.3. OTHER PROGRAMME CELEBRATED

Mahila Krushi Divas at Jamnagar 6th August, 2019

KVK, DAO, ATMA, Animal Husbandry and Horticulture Department, Jamnagar Jointly celebrated “Mahila Krushi Divas” on 6th August. 2019 at KVK, JAU, Jamnagar. In this Programme **148** farm women of Jamnagar District were participated. The inaugural session was chaired by Smt. Naynaben Madhani, Chairmen District Panchayat, Jamnagar. Dr. K. P. Baraiya, Senior Scientist & Head, KVK, JAU, Jamnagar; Shri. C. O. Lashkari, DAO & Dy.Dir.Hort.; Shri. S. N. Dadhaniya, PD(ATMA) & Dy.Dir. Agri (Ext.); Dr. B. D. Patel Dy.Dir.AH.; Dr. A. G. Bathvar, Chief Health Officer and other scientist of KVK & ATMA Staff remained present and delivered lecture. Low cost farming for doubling the farers income. Empowerment of women by value addition in agriculture produce, Mechanized farming, High tech farming, Drudgery reduction Technology, Animal Husbandry, Varmi compost, Organic farming, Kitchen gardening etc were topic of hot discussion in this programme.

Mahila Krushi Divas at Khambhaliya 6th August, 2019

KVK, DAO, ATMA, Animal Husbandry and Horticulture Department, Devbhumi Dwarka Jointly celebrated “Mahila Krushi Divas” on 6th August. 2019 at Ahir Samaj Vadi, Jam Khambhaliya. In this Programme **116** farm women of Devbhumi Dwarka District were participated. The inaugural session was chaired by Shri Jadeja, Chairmen, District Panchayat, Devbhumi Dwarka; Smt. A. K. Baraiya, Scientist, KVK, JAU, Jamnagar; Dr. G. M.. Parmar, Asso.Res. Sci., JAU, Jamagar; Shri. A. B. Kamani, Asst. Dir. Agri., Dr. K. K. Gorla, Veterinary officer; Shri. J. N. Sanghani, DPD(ATMA) and other officers remained present and delivered lecture. Empowerment of women by value addition in agriculture produce, Mechanized farming, High tech farming, Drudgery reduction Technology, Animal Husbandry, Varmi compost, Organic farming, Kitchen gardening etc were topic of hot discussion in this programme.

Mahila Kisan Divas 15th October, 2019

Krishi Vigyan Kendra, JAU, Jamnagar and ATMA Jamnagar jointly organized Mahila Kisan Divas on 15th October, 2019 at Panjarapol, Jamjodhpur, Dist.- Jamnagar. In this programme arranged lectures on Kitchen Gardening, Value addition, Income generation activity, Organic farming, Drudgery reduction Technology and IPM in vegetable crops. 93 farm women and 51 farmers were actively participated in this programme. Dr. K. P. Baraiya, Senior Scientist & Head, KVK, Jamnagar, Mr. Korat, Dy.Dir. (Agri.), JDA, Rajkot; P.B. Dadhania, Ex.Ext.Officer, Karkar Chirag, Assitt.Dir.(Agri.), Jamnagar and ATMA staff members were remain present in this programme. We arranged Group discussion on role of women in agriculture. Farm women visited to demonstration unit on organic input production at panjarapol.

Parthenium Awareness Week (16 to 22 August)

KVK, Jamnagar organized awareness programme under the Parthenium awareness week. In this programme 25 farmer are participated and to create awareness about skin diseases caused by parthenium, its remedy and removal of parthenium and kept surrounding area free from Parthenium. Particle demonstration were also done at KVK, farm.

Swachh Bharat Pakhwada (16th Dec to 31st Dec, 2019)

KrishiVigyan Kendra, Jamnagar celebrated Swachh Bharat Pakhwada during 16th December to 31st December, 2019. During this celebration on 16th December, 2019 Awareness Programme on stop single use Plastic and Swachhta Pakhwada were organized at KVK, JAU, Jamnagar 37 farmers participated. On the 17th December, 2019 “Awareness training programme on stop single use Plastic and Swachhta Pakhwada” and “Lecture Delivered on Composting and NADEP Composting” with 79 farmers participated. On 19th December, 2019 “Awareness Programme about minimize use of plastic materials and Swachhta around the tea shops, General shops, cabins and public places” with 15 participants. All the KVK staff members actively participated in the above swachh bharaat pakhwada.

World Soil Health Day (5th December, 2019)

On 5th December, 2019 KrishiVigyan Kendra, JAU, Jamnagar celebrated World Soil Health Day at Mulila, Ta. Kalavad, Dist. Jamnagar. Programme was inaugurated by Dr. K. P. Baraiya, Senior Scientist & Head, KVK, JAU, Jamnagar. During this programme a number of activities like Farmer-Scientist Interactions, soil sampling and soil testing demonstrations, plant nutrient deficiency diagnostics and advisories for balanced nutrition of crops, field visits and distribution of soil health cards were organized on the occasion. Total 32 farmers from KVK jurisdiction were present for this programme.

Lonching programme Animal disease programme 11.09.19

Krishi Vigyan Kendra, JAU, Jamnagar and Dy. Director of Animal Husbandary, district panchayat, Jamnagar have jointly celebrated the launching programme “National Animal Diseases Control Programme (NADCP) from FMD and Brucellosis & National Artificial Insemination Programme (NAIP) at Training hall, KVK, JAU, Jamnagar on September 11, 2019. Live programme were observed by web casting. In this programme 136 farmers and farm women with 22 extension functionaries were participated.

Fertilizer Application Awareness Programme 22.10.19

Krishi Vigyan Kendra, JAU, Jamnagar organized fertilizer application awareness programme on October 22, 2019 at Harshadpur village of Jamnagar taluka. Total 263 farmers and farm women were participated this programme. They were aware with the fertilizer application video clips, power point presentation. Scientist of KVK were discussion on nutrition management, reduction of quantity of fertilizers by using liquid fertilizers. Bio-fertilizers also for ecofriendly usages and cost reduction tools for the nutritional management.

Tree Plantation Programme (17th September, 2019)

Tree plantation programme was celebrating by Krishi Vigyan Kendra, JAU, Junagadh on September 17, 2019 at KVK, Jamnagar and another programme were organized at Mota Thavariya village total 245 farmers were participate in both the programme and total 1125 plants were distributed to all the farmers.

Swachhta Hi Sewa (SHS) campaign (15th Sept. to 2nd Oct, 2019)

Krishi Vigyan Kendra, Jamnagar celebrated Swachhta Hi Sewa campaign during 15th September to 2nd October, 2019. As a part of this campaign 7 staff members joined cleaned KVK office premises, staff Quarters and different units by removing plastics, paper wastes and also weeded out parthenium. Different activities carried out as per below table.

Sr. No.	Date	Name of activities as per theme of SHS	No. of adopted village	No. of Activity	No. of Farmers
1.	02.10.19	1.Celebration Jal Shakti Abhiyan and lecture Delivered on Swachhta; 2.Awareness regarding Plastic Usages and stop single use Plastic; 3.Swear on Swachhta Abhiyan	2	4	93
2	17.09.19	1. Awareness regarding plastic usage and stop single use plastic materials; 2.Shramdaan for general swachhata in Mota Thavariya village	0	2	245
3	19.09.19	1. Awareness regarding plastic usage and stop single use plastic materials; 2.Shramdaan for general swachhata in Mokhana village	0	2	200
4	27.09.19	1. Cleaning Office Premises	-	1	9

18.4 DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)
Soil	140	140	24	44100
Water	12	12	9	600
Plant	120	120	94	0
Manure				
Others (pl.specify)				
Total	272	272	127	44700

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	45	1771	793	2564
Rural youths	2	32	32	64
Extension functionaries	11	1002	8	1010
Sponsored Training	34	1953	547	2344
Vocational Training	2	32	32	64
Grand Total	58	2805	833	3638

2. Frontline demonstrations

Enterprise	Area(ha)	No. of Farmers	Units/Animals
Oilseeds	50	125	
Pulses	20	50	
Cereals	8	20	
Vegetables	0	0	
Other crops	68	170	
Hybrid crops	0	0	
Total	146	365	
Livestock & Fisheries			
Other enterprises	6.5	70	
Total	6.5	70	
Grand Total	152.5	435	

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	2	6	6
Livestock			
Various enterprises	1	10	10
Total	3	16	16
Technology Refined			
Crops	2	6	6
Livestock	1	3	3
Various enterprises			
Total	3	9	9
Grand Total	6	25	25

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	1338	33503
Other extension activities	12397	
Total	13735	33503

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Lives tock	Weath er	Marke- ting	Aware- ness	Other enterprise	
Jamna gar	Text only	4	0	3	0	2	1	10
	Voice only							0
	Voice & Text both							0
	Total Messages	4		3		2	1	10
	Total farmers Benefitted	296690	0	233190	0	155460	46	685386

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	134	1743020
Planting material (No.)	0	0
Bio-Products (kg)	24511	2174170
Livestock Production (No.)	0	
Fishery production (No.)		

7. Soil, water & plant Analysis

Samples	No. of Samples	No. of Beneficiaries	Amount realized (Rs.)
Soil	140	140	44100
Water	12	12	600
Plant	120	120	0
Total	272	272	44700

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	4
2	Conferences	4
3	Meetings	4
4	Trainings for KVK officials	2
5	Visits of KVK officials	3
6	Book published	0
7	Training Manual	5
8	Book chapters	0
9	Research papers	3
10	Lead papers	0
11	Seminar papers	0
12	Extension folder	0
13	Proceedings	2
14	Award & recognition	0
15	On going research projects	2
16	Newsletter	4

ANNEXURE –I

PROCEEDING OF THE 16th SCIENTIFIC ADVISORY COMMITTEE MEETING OF KRISHI VIGYAN KENDRA, JAU, JAMNAGAR HELD ON 7th March, 2020

The Sixteenth Scientific Advisory Committee meeting of Krishi Vigyan Kendra, JAU, Jamnagar was held at Training Hall, Krishi Vigyan Kendra, JAU, Jamnagar on 7th March, 2020.

The following members were remaining present in the meeting.

Sr. No.	Name & Designation	Position
1	Vice Chancellor, Junagadh Agricultural University, Junagadh.	Chairman
2	Director of Extension Education, Junagadh Agricultural University, Junagadh	Member
3	Director of Research, Junagadh Agricultural University, Junagadh	Member
4	Associate Director of Research, Main Dry Farming Research Station, Junagadh Agricultural University, Targhadia (Rajkot).	Member
5	Research Scientist (Millet), Main Millet Research Station, Junagadh Agricultural University, Jamnagar- 361 006.	Member
6	Director, District Rural Development Agency, Jamnagar	Member
7	Project Director, District Watershed Development Unit, Jamnagar	Member
8	Dy. Director of Horticultural, Jamnagar	Member
9	Dy. Director of Agriculture (Extension), Jamnagar	Member
10	Dy. Director of Agriculture, Farmers Training Centre, Jamnagar	Member
11	Project Director, Agricultural Technology Management Agency (ATMA), Jamnagar	Member
12	Deputy Director, Gujarat Land Development Corporation Ltd., Jamnagar	Member
13	Asstt. Director of Fisheries, Sumer club road, Jamnagar	Member
14	Research Officer, Fisheries Research Station, Okha	Member
15	Senior Scientist & Head, Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia (Rajkot), Dist. Rajkot	Member
16	Progressive farmer (SC) Shri Chhaganbhai Punjabhai Sondarva At:- Gokalpur, Ta Dhrol, Dist.- Jamnagar	Member
17	Progressive farmer (SC): Shri Laxmanbhai Hamirbhai Vaghora, At:-Bhensdad, Ta. Dhrol, Dist.- Jamnagar	Member
18	Progressive farmer (Horticulture) : Shri Jentibhai Parsana, At. Haripar Ta.:- Lalpur, Dist. Jamnagar.	Member
19	Progressive farmer (Organic) : Shri Vitthalbhai Lakhabhai Sanghani, At. Nani Bhalsan, Ta.:- Kalavad, Dist. Jamnagar.	Member
20	Progressive farmer (Organic) : Shri Altafbhai Bodubhai Sama , At. Dhichada, Ta.:- Jamnagar, Dist. Jamnagar.	Member
21	Progressive farmer (Animal Husbandry) : Shri. Pravinbhai Devchandbhai Dodhiya, At. Dhichada, Ta.:- Jamnagar, Dist. Jamnagar.	Member
22	Progressive farmer (G): Shri Subhasbhai , At.- Lothiya, Ta.:-Jamnagar, Dist. Jamnagar.	Member
23	Progressive farm women (G): Shri Dakshaben Subhasbhai , At.- Lothiya, Ta.:-Jamnagar, Dist. Jamnagar.	Member

24	Senior Scientist & Head, Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar	Member Secretary
25	Smt. Anjanaben K. Baraiya, Scientist (Home Science), KVK, JAU, Jamnagar	Member
26	Shri S. H. Lakhani, Scientist (Crop Production), KVK, JAU, Jamnagar	Member
27	Dr. J.N. Thaker, Scientist (Fisheries), KVK, JAU, Jamnagar	Member
28	Dr. K. D. Mungara, Associate Research Scientist, Pearl Millet Research Station, JAU, Jamnagar	Invitee
29	Dr. K. K. Dhedhi, Associate Research Scientist, Pearl Millet Research Station, JAU, Jamnagar	Invitee
30	Dr. H. M. Bhuva, Associate Research Scientist, Pearl Millet Research Station, JAU, Jamnagar	Invitee
31	Mr. N. D. Ambaliya, Agri. Officer, KVK, Jamnagar	Invitee
32	Mr. H. S. Godhani, Agri. Officer, KVK, Jamnagar	Invitee
33	Mr. A. V. Savaliya, SMS, (Agromet), KVK, Jamnagar	Invitee
34	Mr. R. B. Pandya, Agromet Observer, KVK, Jamnagar	Invitee
35	Progressive farmer (G): Shri Kiritbhai Karshanbhai , At.- Sadodar, Ta.-Jamjodhpur, Dist. Jamnagar.	Invitee

Dr. D. L. Kadvani, Research Scientist (Pearl Millet) Pearl millet Research Station, Junagadh Agricultural University, Jamnagar welcomed the dignitaries and all the members of the Scientific Advisory Committee and highlighted the brief achievements of the Centre.

Dr. V. P. Chovatiya, Hon'ble Vice-Chancellor, JAU, Junagadh and Chairman of Scientific Advisory Committee chaired the meeting and grant permission to proceed the meeting.

Invocation song of Junagadh Agricultural University, were played as a prayer by all members. Dignitaries on dais were welcomed by presenting flower. After garlanding the guests and dignitaries on the dais, and inaugurating the meeting by lightening a lamp.

Dr. K. P. Baraiya, Senior Scientist & Head, Krishi Vigyan Kendra, JAU, Jamnagar presented action taken report of the minutes of 15th SAC meeting, progress report (January to December-2019) and Action Plan (January to December- 2020) in brief. Dr. K. P. Baraiya, Senior Scientist & Head, Krishi Vigyan Kendra, JAU, Jamnagar presented progress report and Action Plan for discipline of Plant Protection. Smt. A. K. Baraiya, Scientist (Home Science), presented progress report & Action Plan for discipline of home science & Horticulture. Dr. J. N. Thaker, Scientist (Fisheries), presented progress report & Action Plan for discipline of fisheries and animal science & ATIC Scheme. Shri S. H. Lakhani, Scientist (Crop production), presented progress report & Action Plan for discipline of crop production, Agri. Engineering and Soil Health Fertility Management, NMOOP & NFSM. The annual report and action plan both were approved by the members with following suggestions.

Suggestions made by committee members during presentation:

1.	Dr. V. P. Chovatiya, Hon'ble Vice Chancellor and Director of Research, Junagadh Agricultural University, Junagadh & Chairman of the SAC suggested following points.
	<ul style="list-style-type: none"> ➤ Periodically send information through by mass SMS for contingency plant and weather effect to farmers. ➤ Arrange FLD on latest released variety of pearl millet.

	<ul style="list-style-type: none"> ➤ Arrange training on pink bollworm awareness during second quarter. ➤ Analyze maximum soil and water sample at KVK Soil Testing Laboratory.
2.	<p>Dr. B. K. Sagarka, Director of Extension Education, JAU, Junagadh advised that</p> <ul style="list-style-type: none"> ➤ Write down the record of success stories of different farmers success and highlight them
3.	<p>Dr. K. D. Mungara, Associate Research Scientist, Pearl Millet Research Station, JAU, Jamnagar advised that</p> <ul style="list-style-type: none"> ➤ Arrange training on bakery products.
4.	<p>Shri Vitthalbhai Sanghani and Jentibhai Parsana progressive farmers of Jamnagar suggested for</p> <ul style="list-style-type: none"> ➤ increase organic farming and advice about dangerousness effect of chemical on human being.

Dr. B. K. Sagarka, Director of Extension Education, JAU, Junagadh appreciated work done by all scientist and presentation. Successful became with collaborative work. His emphasis on diagnostic crop problem and solve them maximum. Provide literatures to farmers on latest technology. Expose the enthusiastic and progressive farmers and give better platform.

After above suggestions from the house Dr. V. P. Chovatiya, Hon'ble Vice Chancellor, Junagadh Agricultural University, Junagadh, delivered the chairmen's remarks. He emphasized on nominate area specific variety under PPV&FRA. He also suggested to aware the farmers for water conservation technology, and utilize it for crop production by micro irrigation system. He also suggested to give inventory on SMS for changing climate well in advance for better curative measures. At last he emphasized to aware the nutritive value of millets and its benefits for health. At last he appreciated for overall work done by KVK.

The meeting ended with the vote of thanks by Dr. K. P. Baraiya, Senior Scientist & Head, Krishi Vigyan Kendra, JAU, Jamnagar.

Member Secretary, SAC &
Senior Scientist & Head
KVK, JAU, Jamnagar

Director of Extension Education,
Junagadh Agricultural University
Junagadh

Note: Proceeding for approval please.

Chairman, SAC
KVK, JAU, Jamnagar &
Vice Chancellor
Junagadh Agricultural University, Junagadh

RESEARCH RESULT OF TECHNICAL PROGRAMME

Technical Programme :- 1

Title :- KNOWLEDGE OF ECO-FRIENDLY ORGANIC FARMING PRACTICES FOLLOWED IN CROP BY THE FARMERS OF JAMNAGAR DISTRICT

Principle investigator

1. Dr. K. P. Baraiya, Senior Scientist & Head, KrishiVigyan Kendra, JAU, Jamnagar

Co-investigator

1. Smt. A. K. Baraiya Scientist (Home Science), KVK, JAU, Jamnagar
2. Shri. S.H. Lakhani, Scientists (Agronomy), KVK, JAU, Jamnagar
3. Dr. P. V. Patel, Director of Extension Education, JAU, Junagadh

INTRODUCTION :-

Organic farming follows the principle of circular causation and has emerged in response to questions on health, environment and sustainability issues. It assesses the status, opportunities and sequestration potentials of in India. It identifies constraints that impede adoption of especially for small farm holders who constitute over 70% of farming community in India.

Although India occupies second position in terms of number of certified organic farms (44,926), it is 13th in terms of area under of representing only 0.3 % of total agricultural lands. This scenario appears poor compared to many other countries. Farmer's apprehension towards in India is rooted in non-availability of sufficient organic supplements, bio fertilizers and local market for organic produce and poor access to guidelines, certification and input costs. An integrated effort is needed from government and non-government agencies to encourage farmers to adopt of as a solution to climate change, health and sustainability issue.

India's organic food market has potential to grow more than 25 per cent annually to touch \$1.36 billion by 2020. (Joshi, 2017).

Organic farming system is not new in our country and is being followed from ancient time. It is a dynamic interaction between the soil, the plants, the ecosystem and the environment which primarily aimed at cultivating land and raising crops in such a way as to keep the soil alive and in good health by use of organic waste i.e. crop, animal and farm waste and other biological material along with beneficial microbes.

Gujarat has remained a pioneer state in adopting organic farming. There are more than dozen groups and networks across the state working voluntarily for promotion, training and marketing of organic produce.

But still there is a huge gap in efforts being made by govt and adoption of observe and do effort to document the practices followed by farmers who adopted organic farming in the region. Looking to this, the study was empirically carried out with following specific objectives

OBJECTIVES:-

1. To study the socio-economic profile of farmers.
2. To assess the adoption level of farmers about organic farming practices
3. To study knowledge of farmers for organic farming practices.

METHODOLOGY :-

Krishi Vigyan Kendra, Junagadh Agricultural University, Jamnagar working in Jamnagar and DevbhumiDwarka district. The present research study was conducted in jurisdiction of KVK, JAU, Jamnagar. **Four** talukas of Jamnagar district were selected purposively where organic farming is being practiced for conduction the present investigation. **Three** villages were further selected purposively from each selected taluka; where organic farming is being practiced and village wise organic farmers list will prepared. **Ten** farmers were selected randomly for the study purpose. Thus, overall **120** farmers were selected study purpose and an interview schedule was developed as preferred by farmer time period and data were

collected by personal interview method. The data collected by personal interview method were processed, tabulated, classified and analyzed in light of objectives.

RESULTS AND DISCUSSION:-

The present study was conducted on 120 cotton growers of Jamnagar districts to evaluate for knowledge of farmers about integrated management of pink bollworm in cotton. The data to statistical analysis and results are presented as per the objectives of study as below.

1. Socio-demographic characteristics

Table 1. Socio-demographic characters of organic growers

(n=120)

Sr. No.	Particulars	Frequency	Per cent	Mean \pm S.D.
1	Age group			
	Young (18 to 35 Years)	23	19.17	30.26 \pm 6.031
	Middle Age (36 to 305 Years)	69	57.50	
	Old Age (Above 50 Years)	28	23.33	
2	Educational status			
	Post Graduate	9	7.50	
	Graduate	14	11.67	
	Higher secondary	45	37.50	
	Secondary	36	30.00	
	Primary	13	10.83	
	Illiterate	3	2.50	
3	Size of land holding (Total)			
	Marginal (<1 ha)	5	4.17	3.369 \pm 1.927
	Small (1.1 to 2 ha)	27	22.50	
	Medium (2.1 to 4 ha)	44	36.67	
	Big (>4 ha)	44	36.67	
4	Family Type			
	Nuclear	92	76.67	
	Joint	28	23.33	
5	Family Income			
	Up to Rs. 25000	5	4.17	
	Rs. 25000 to Rs. 50000	27	22.50	
	Rs. 50001 to Rs. 100000	44	36.67	
	Above Rs. 100000	44	36.67	
6	Milch Animal Possession			
	Cow	12	10	
	Buffalo	52	43.33	
	Others	0	0	
	Both (Cow + Buffalo)	35	29.167	
	Without animal	21	17.5	
7	Occupation			
	Agriculture	56	46.67	
	Agriculture & Animal Husbandry	44	36.67	
	Agriculture labour	16	13.33	
	Labour	4	3.33	
8	Residence			
	Pakka House	44	36.67	
	Kachcha House	32	26.67	
	Mix (Half Pakka + Half Kachcha)	44	36.67	

9	Extension Participation			
	Low extension participation (Below 0.48)	11	9.17	3.092 ± 2.05
	Medium extension participation (0.48 to 5.73)	92	76.67	
	High extension participation (Above 5.73)	17	14.17	
10	Social Participation			
	Low Social participation (Below 0.68)	11	9.17	3.342 ± 2.13
	Medium Social participation (0.68 to 5.99)	88	73.33	
	High Social participation (Above 5.99)	21	17.5	

Note : Figures in parenthesis indicates frequencies in number of participants

The results disclosed in Table 1 indicate that more than half (57.50 %) of farmers were from middle age group, followed by 23.33 per cent from old age and remaining 19.17 per cent of them were in young age group. The data indicated that 37.50 per cent of the farmers were educated up to higher secondary level, whereas 30, 11.67 and 10.83 per cent of the farmers were educate up to secondary, graduate and primary level. However, very few were illiterate (2.5%) and very low were post graduate (7.50%).

According to land holding of the farmers both big and medium size farmers having equally with 36.67 per cent. However, the farmers were small and marginal having 22.50 and 4.17 per cent, respectively. In this era of nuclear family, farming business were done on cooperative basis of their cousins and siblings. Though, joint farmer's family type were found 23.33 per cent whereas only 76.67 per cent were farming in nuclear type. The same way 36.67 per cent farmers of them were in annual income between Rs.50000 to 100000, followed by 36.67 per cent (above Rs.100000), 4.17 per cent (below Rs.25000) and 22.50 per cent (Rs.25000 to 50000). Majority of the farmers (43.33 %) were kept buffalo, 29.17 per cent farmers kept cow & buffalo, 10 per cent having cow and 17.50 per cent farmers having no any animal keeping. According to occupation along with 46.67 per cent farmers having only agriculture, 36.67 per cent farmers have both agriculture along with animal husbandry business. The category of residence 36.67 per cent of the farmers having pakka house, 36.67 per cent have mix (half pakka + half Kachcha) house and 26.67 per cent have kachcha house.

According to participation of less than half of farmers (76.19%) of them were medium extension participation, 14.17 per cent were high extension participation and very few (9.17%) of them were low extension participation. Same way, in social participation, 73.33 per cent of them were medium, 17.5 per cent were high and 9.17 per cent were low participation.

2. Mass media exposure

The majority of farmers were using tools of mass media. The following table 2 show the results about the use of mass media means for communication for the management of pink bollworm management.

Table 2 Mass media exposure

(n=120)

Sr. No.	Mass Media Exposure	Regularly (3)	Frequently (2)	Once in a week (1)	Not at all (0)	Wt. Mean	Per centage	Rank
1	Radio	3	16	38	63	19.75	16.46	VI
2	Television	6	24	43	47	27.25	22.71	III
3	News paper	2	18	46	54	22.00	18.33	V
4	Printed literature	18	43	38	21	44.50	37.08	II
5	Agril. Exhibition	0	12	34	74	14.50	12.08	VIII
6	Demonstration	1	19	54	46	23.75	19.79	IV
7	University level (KVK)	21	55	30	14	50.75	42.29	I
8	Kisan call centre	7	9	25	79	16.00	13.33	VII
9	Any other	0	2	24	94	7.00	5.83	IX

It can be concluded from table 2, Krishi Vigyan Kendra or University level information for organic farming were rank first (42.29%), followed by second printed literature (37.08%), third television (22.71%),

fourth demonstration (19.79%), fifth newspaper coverage (18.33%), sixth radio (16.26%), seventh kishan call Centre (13.33%), eighth agricultural exhibition (12.08%) and lastly any other means (5.83%).

3. Use of information sources:

Majority farmers having different source of information according to their requirement for pink boll worm management in proper way studied in table e were presented below

Table 3. Information Source (n=120)

Sources of information	Extent of Utilization			Wt. Mean	Per cent	Rank
	Often	Someti me	Never			
A. Formal sources						
1. Village level worker Agril. Extension officer	50	54	16	29	23.89	V
2. SMS/Sub-divisional officer	99	17	4	8	6.94	XI
3. Service of co-operative society	92	25	3	10	8.61	X
4. Agricultural University	48	31	41	38	31.39	II
5. Agricultural Research Stations/KVK	23	21	76	58	48.06	I
B. Informal sources						
6. Neighbors	64	51	5	20	16.94	VII
7. Fertilizer Depot.	52	48	20	29	24.44	IV
8. Progressive farmers	79	41	0	14	11.39	IX
9. Local leader	97	23	0	8	6.39	XII
10. Seed/pesticide dealer	55	17	48	38	31.39	III
11. Demonstrations	77	37	6	16	13.61	VIII
12. Self-experience/experimentation	73	32	15	21	17.22	VI

Now a days organic growing is the most crucial efforts for the healthy production. Proper guideline were taken from Krishi Vigya Kendra or Agricultural Research Station and it come on first rank of information provide to farmers (48.06%) followed by Agricultural University (31.39%) Rank II. However, seed/pesticide dealer (31.39%) stand on third rank, fertilizer depot (24.44%) stand on fourth position, village level worker/Agricultural Extension officer (23.89%) stand on fifth position. The subsequent information source decrease chronologically were Self-experience/experimentation (17.22%), Neighbours (16.94%), demonstration (13.61%), progressive farmers (11.39%), Service of cooperative society (8.61%), SMS/Sub divisional officers (6.94%) and lastly local leader (8.33%).

4. Knowledge of farmer about organic farming

The respondents were asked to show their opinion for the following listed area of organic farming.

Table 4. Knowledge of farmer about organic farming (n=120)

Sr. No.	Areas of Information	Frequency	Percentage	Rank
1	For in situ management			
a	Green manures	26	21.67	29 th
b	Crop residues	21	17.50	30 th
c	Poultry manure	57	47.50	16 th
d	Urban and rural waste	65	54.17	12 th
e	Recycling the weed biomass	73	60.83	1 st
f	Recycling the agro based industrial wastes	55	45.83	21 st
g	Fish wastes	6	5.00	34 th
h	Use of oil industry products	71	59.17	8 th
i	Use of oil industry products	72	60.00	5 th

<i>j</i>	Sewage farming	51	42.50	26 th
2	Use of pre-digested semi digested manure			
<i>a</i>	Farm yard manure	33	27.50	28 th
<i>b</i>	Composting	56	46.67	20 th
<i>c</i>	Other livestock wastes	39	32.50	27 th
<i>d</i>	Biomass conversion of unconventional methods	54	45.00	25 th
<i>e</i>	Weed bio-mass	21	17.50	31 st
3	Bio-fertilizers			
<i>a</i>	N-fixing agents	57	47.50	17 th
<i>b</i>	N-containing vegetation	65	54.17	13 th
<i>c</i>	P-solubilizing microbes	73	60.83	2 nd
<i>d</i>	K-mobilizing microbes	55	45.83	22 nd
<i>e</i>	Vermin-culture	6	5.00	35 th
<i>f</i>	Vermin wash	71	59.17	9 th
<i>g</i>	N-fixing crops and trees	72	60.00	6 th
4	Cultural methods			
<i>a</i>	Crop rotation with pulses for N-fixation	21	17.50	32 nd
<i>b</i>	Crop rotation for diseases management	57	47.50	18 th
<i>c</i>	Intercropping with pulses for N-fixation	65	54.17	14 th
<i>d</i>	Minimum tillage for nutrient conservation	73	60.83	3 rd
<i>e</i>	Agro-forestry methods i.e. alley cropping	55	45.83	23 rd
<i>f</i>	Strip cropping and vegetative /live bunds	6	5.00	36 th
<i>g</i>	Mulching cover crops	71	59.17	10 th
<i>h</i>	Pheromone trap for trapping male moths	72	60.00	7 th
<i>i</i>	Light trap for trapping the adults	21	17.50	33 rd
<i>j</i>	Use of trichogramma for management lepidopteron pest	57	47.50	19 th
<i>k</i>	Use of trichoderma for soil borne diseases	65	54.17	15 th
<i>l</i>	Use of Beauveria bassiana for management of soil and above ground pests	73	60.83	4 th
<i>m</i>	Honey bee increase the production of crops	55	45.83	24 th
<i>n</i>	Use of Sea weed liquid for better crop growth and high yielding	6	5.00	37 th
<i>o</i>	Bird purcher is important of natural pest management	71	59.17	11 th

The respondents were scheduled interviewed and asked to opine their views about the organic farming. The area of information were on the management, marketing, cultivation practices on organic farming. The data presented in table 5 concluded that green manures(21.67)rank-29th; crop residues(17.5)rank-30th; poultry manure(47.5)rank-16th; urban and rural waste(54.17)rank-12th; recycling the weed biomass(60.83)rank-1st; recycling the agro based industrial wastes(45.83)rank-21st; fish wastes(5)rank-34th; use of oil industry products(59.17)rank-8th; use of oil industry products(60)rank-5th; sewage farming(42.5)rank-26th; farm yard manure(27.5)rank-28th; composting(46.67)rank-20th; other livestock wastes(32.5)rank-27th; biomass conversion of unconventional methods(45)rank-25th; weed bio-mass(17.5)rank-31st; farm yard manure(27.5)rank-28th; composting (46.67) rank-20th; other livestock wastes(32.5)rank-27th; biomass conversion of unconventional methods(45)rank-25th; weed bio-mass(17.5)rank-31st; n-fixing agents(47.5)rank-17th; n-containing vegetation(54.17)rank-13th; p-solubilizing microbes(60.83)rank-2nd; k-mobilizing microbes(45.83)rank-22nd; vermin-culture(5)rank-35th; vermin wash(59.17)rank-9th; n-fixing crops and trees(60)rank-6th; crop rotation with pulses for n-fixation(17.5)rank-32nd; crop rotation for diseases management(47.5)rank-18th; intercropping with pulses for n-fixation (54.17)rank-14th; minimum tillage for nutrient conservation (60.83)rank-3rd; agro-forestry methods i.e. alley cropping(45.83)rank-23rd; strip cropping and vegetative /live bunds (5)rank-36th; mulching cover crops

(59.17)rank-10th; pheromone trap for trapping male moths(60)rank-7th; light trap for trapping the adults(17.5)rank-33rd ;use of trichogramma for management lepidopteron pest (47.5)rank-19th; use of trichoderma for soil borne diseases(54.17)rank-15th; use of Beauveria bassiana for management of soil as well as (60.83)rank-4th; honey bee increase the production of crops (45.83)rank-24th; use of sea weed liquid for better crop growth and high yielding (5)rank-37th; bird purcher is important of natural pest management (59.17)rank-11th.

Distribution of respondents according to the knowledge level regarding organic farming (n=120)

Sr. No.	Knowledge level	No. of respondents	Percentage
1	Low	86	71.67
2	Medium	34	28.33
3	High	0	0.00
	Total	120	100.00

Knowledge is the cognitive behavior of an individual. The body of knowledge is the product of learning process. Once the knowledge is acquired, it produces changes in the thinking process of an individual, which would lead to further changes in attitude and helps the farmers in making rational decisions. It is prerequisite for adoption of any agricultural innovation. With this view, attempt has been made to determine the level of knowledge of farmers about organic farming. The data regarding extent of knowledge are presented in table. It is observed from the table that nobody having high level knowledge of the respondents, only 28.33 per cent having medium level knowledge. However, 71.67 per cent of the respondents having very low level of knowledge.

5. Constraints faced by organic growers

The respondents were asked to show the problem or constraints for management of organic cultivation. On the basis of frequency and percentage were ranked and assign as for interpretation.

Table 5. Constraints faced by organic growers (n=120)

Sr. No.	Constraints	Frequency	Percentage	Rank
A.	Technical			
1	Lack of technical information and recommendation on organic farming	29	24.17	15 th
2	Inadequate and untimely supply of organic agricultural inputs	42	35.00	10 th
3	Distance between producer and market or delivery point	33	27.50	13 th
4	Poor contact or extension workers with farmers	42	35.00	11 th
5	Lack of market facility for organic produced commodity	81	67.50	4 th
6	Lack of publication on proven organic farming practices	33	27.50	14 th
7	It is difficult to manage pest & insect damage	42	35.00	9 th
8	Lack of trust regarding organic farming practices	59	49.17	6 th
9	Risk in adoption of new technology	59	49.17	7 th
10	Lack of crop specific scientific recommendations	42	35.00	8 th
11	Slow result of bio-products	37	30.83	12 th
B.	Institutional			
1	No Govt. subsidies for organic farming	87	72.50	1 st
2	Lack of premium price on organic product	87	72.50	2 nd
3	Lack of awareness	29	24.17	17 th
4	Lack of technical guidance	17	14.17	19 th
5	Less exposure of training	17	14.17	18 th
6	Lack of special administrative setup to promote organic farming	75	62.50	5 th
7	Lack of awareness regarding price and availability of organic food in people	12	10.00	20 th
8	Lack of marketing network for organic products	1	0.83	29 th

9	There is no special incentive or awards for adopters of organic farming practices	81	67.50	3 rd
C.	Economic			
1	Time consuming and tedious work for organic production	2	1.67	28 th
2	High labour requirement	3	2.50	27 th
D.	Situational			
1	Small holding	12	10.00	21 st
2	Fragmented holding	12	10.00	22 nd
3	Inadequate transport facility	4	3.33	26 th
E.	Social			
1	Problem of human labour in preparation	12	10.00	23 rd
2	Preferring adoption of traditional agricultural practices	10	8.33	24 th
3	Controversy among family members regarding organic farming	29	24.17	15 th

The respondents mentioned some problem in adoption of organic cultivation. The problems suggested by majority of organic growers : No Govt. subsidies for organic farming 72.5per cent (Rank-1st), Lack of premium price on organic product 72.5per cent (Rank-2nd), There is no special incentive or awards for adopters of organic farming practices 67.5per cent (Rank-3rd), Lack of market facility for organic produced commodity 67.5per cent (Rank-4th), Lack of special administrative setup to promote organic farming 62.5per cent (Rank-5th), Lack of trust regarding organic farming practices 49.17per cent (Rank-6th), Risk in adoption of new technology 49.17per cent (Rank-7th), Lack of crop specific scientific recommendations 35per cent (Rank-8th), It is difficult to manage pest & insect damage 35per cent (Rank-9th), Inadequate and untimely supply of organic agricultural inputs 35per cent (Rank-10th), Poor contact or extension workers with farmers 35per cent (Rank-11th), Slow result of bio-products 30.83per cent (Rank-12th), Distance between producer and market or delivery point 27.5per cent (Rank-13th), Lack of publication on proven organic farming practices 27.5per cent (Rank-14th), Lack of technical information and recommendation on organic farming 24.17per cent (Rank-15th), Controversy among family members regarding organic farming 24.17per cent (Rank-16th), Lack of awareness 24.17per cent (Rank-17th), Less exposure of training 14.17per cent (Rank-18th), Lack of technical guidance 14.17per cent (Rank-19th), Lack of awareness regarding price and availability of organic food in people 10per cent (Rank-20th), Small holding 10per cent (Rank-21st), Fragmented holding 10per cent (Rank-22nd), Problem of human labour in preparation 10per cent (Rank-23rd), Preferring adoption of traditional agricultural practices 8.33per cent (Rank-24th), Inadequate transport facility 3.33 per cent (Rank-26th), High labour requirement 2.5per cent (Rank-27th), Time consuming and tedious work for organic production 1.67per cent (Rank-28th), Lack of marketing network for organic products 0.83 per cent (Rank-29th).

6. Suggestions from organic growers to overcome the constraints faced by them in adoption of organic growing

The respondents were asked to give suggestion to overcome the constraints and minimize the problem for adaptation of organic farming.

Table 6. Suggestions from organic growers to overcome the constraints faced by them (n=120)

Sr. No.	Suggestions	Frequency	Percentage	Rank
1.	Government should give subsidies to increase area of organic farming	108	90.00	I
2.	Premium price for organic product should be fixed by government	98	81.67	II
3.	Establishment of market facility specially for organic produce with good support price	73	60.83	III
4.	Research should be done on organic farming for minimize the cost of cultivation	61	50.83	IV
5.	Technical information should be provide to the farmers	46	38.33	V
6.	Literature should be print and distribute among farmers	35	29.17	VI

7.	Mass media communication should be used for fast transfer of newer technology among organic farming	32	26.67	VII
8.	Awareness campaign should be done for organic producer and consumers	13	10.83	VIII
9.	Organic mall should be kept with the facility of online purchasing for wider market of organic products at premium price	7	5.83	IX

Suggestions from organic growers to overcome the constraints faced by them in adoption of organic growing different suggestion were given by different farmers and it were ranked as per :-

Government should give subsidies to increase area of organic farming 90 per cent (Rank-I), Premium price for organic product should be fixed by government 81.67 per cent (Rank-II), Establishment of market facility specially for organic produce with good support price 60.83 per cent (Rank-III), Research should be done on organic farming for minimize the cost of cultivation 50.83 per cent (Rank-IV), Technical information should be provide to the farmers 38.33 per cent (Rank-V), Literature should be print and distribute among farmers 29.167 per cent (Rank-VI), Mass media communication should be used for fast transfer of newer technology among organic farming 26.67 per cent (Rank-VII), Awareness campaign should be done for organic producer and consumers 10.83 per cent (Rank-VIII), Organic mall should be kept with the facility of online purchasing for wider market of organic products at premium price 5.83 per cent (Rank-IX),

CONCLUSION

It can concluded that the organic growers were medium in extension as well as social participation. They usage Krishi Vigyan Kendra as a knowledge hub for the source of information as well as mass media exposure. The knowledge level of farmers were very poor in green manures, crop residues, bio fertilizer usages, and cultural methods for organic farming.

Government subsidy, premium price, lack of marketing facility, technical guideline are major constraints in organic farming. To overcome the constraints faced by farmers were subsidy, market facility with premium price, proper knowledge transfer by research and aware them about organic farming.

Technical Programme :-2

Title : KNOWLEDGE OF HUMAN NUTRITIONAL PRACTICES AMONG THE FARM WOMEN OF JAMNAGAR DISTRICT

Principle investigator

1. Smt. A. K. Baraiya Scientist (Home Science), KVK, JAU, Jamnagar

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INTRODUCTION :

Health is a precious asset for everyone. It is an essential requirement of all irrespective age, caste, creed, race, religion and economic standard. There is a significant relationship between housing conditions and health. An adequate and safe water supply, disposal of excreta and solid wastes drainage of surface water, facilities for personal and domestic hygiene and sanitary food preparation, control of indoor air pollution, safe handling of things and suitable precautions where the home serves as a work place. Moreover, the health problems are rampant in rural areas, not merely because of lack of medical facilities but because of general poverty, lack of balanced and nutritious diet to large proportion of rural population and more over lack of knowledge with regard to health and hygiene.

Good nutrition is a firm foundation for human happiness, and sound health and skilled performance. It constitutes the most important readily improved environmental influence of health. Even, today 25 percent of our Indian populations trapped in the viscous circle of poverty, malnutrition and diseases, which reduce their work performance, nullify all efforts under taken for their development and finally impede over nation's progress.

Even though, there are many schemes, programmes, medical services to serve the people, there is a great bulk of illness in our country. The common factors, which contribute, are personal ignorance, poverty, isolation, lack of resources and lack of knowledge.

The overall objective of the study is to bring the awareness to improve the nutrition status. The study provides the information on the knowledge of the nutritional practices of the farmwomen. It would also give the information on the suggestions to improve the health and nutrition status among the rural livelihood.

OBJECTIVES

- To know the social variables of farmwomen
- To study knowledge of farmwomen on selected human nutritional practices

METHODOLOGY

The study area of this research programme were all six blocks viz., Jamnagar, Jodia, Dhrol, Kalavad, Lalpur&Jamjodhpur of Jamnagar District. From each talukafour villages and from selected villages five women were select randomly for the study. Thus, total 120 women were constitute the sample size for this study. For collection of data personal interview technique were used. Data collected with the help of structured interview schedule. Frequencies, percentage and mean percent score were used for analysing the data statistically.

District Name	Taluka Name	Village Name	No. of Respondent
Jamnagar	Jodiya	Keshiya, Hadiyana, Lakhtar, Bhadara	20
	Dhrol	Majoth, Soyala, Kharva, Vankiya	20
	Lalpur	Arablus, Rampar, Karana, Haripar	20
	Kalavad	Kalavad, NaniVavdi, Shanala, Nana Vadala	20
	Jamjodhpur	Gingni, Motigop, Vasantpur, AmbaradiMevasa	20
	Jamnagar	Harsadpur, Surpara, Chandragadh, MotaThavariya	20
Total	6	24	120

RESULTS AND DISCUSSION

In the present study results emerged out from the analysis of the data of the present investigation. The data have been organized and by taking into account the objectives of the study. All the pertinent information has been categorized and reported under the following major sections.

1. Background information of the respondents

The socio economic characteristics were studied by interview method and depicted in table 1.

Table 1: Personal Characteristics of respondents Rural Women (n=120)

Sr. No.	Personal Characteristics	Frequency	Percentage
1	Age		
	a) 18 – 35 years	38	31.67
	b) 36 – 50 years	79	65.83
	c) 50 above	3	2.50
2	Marital Status		
	a) Married	120	100
3	Family structure		
(i)	Family Type		
	a) Nuclear	58	48.33
	b) Joint	62	51.67
(ii)	Family Size		

	a)	Small (up to 4)	69	57.50
	b)	Medium (5-8)	47	39.17
	c)	Large (above 8)	4	3.33
4	Education			
	a)	Illiterate	4	3.33
	b)	Primary (up to VII Std.)	21	17.50
	c)	Secondary School (VIII to X Std.)	30	25.00
	d)	Higher Secondary (XI & XII Std.)	21	17.50
	e)	Graduate	36	30.00
	f)	Post graduate	8	6.67
5	Occupation			
	a)	Farming	35	29.17
	b)	Farming + Animal Husbandry	67	55.83
	c)	Farm Labour	0	0.00
	d)	Farming + other activity	18	15.00
6	No of animals			
	a)	No animal	53	44.17
	b)	Up to 1 animals	24	20.00
	c)	2 to 5 animals	43	35.83
	d)	Above 5 animals	0	0.00
7	Annual income			
	a)	Low annual income (up to Rs.100000/-)	37	30.83
	b)	Medium annual income (Rs. 100001 to Rs.200000/-)	61	50.83
	c)	High annual income (Above Rs. 200000/-)	22	18.33

Table 1 revealed that the respondent were young age group (18 to 35 years) 31.67 per cent, middle age group (36 to 50 years) were 65.83 per cent, however, old age group (above 50 years) were very low (2.5%). According to marital status all the respondents were 100 per cent married. Looking to the family structure, more than half (52.67%) lived in joint family, followed by 48.33 per cent were lived in nuclear family. Similar way, size of the family also small (less than 4 members) were 57.50 per cent, medium size (5 to 8 members) were 39.17 per cent, whereas very few (3.33 %) large size family (more than 8 members) were found in the recent era.

On other way of education, highest members were educate up to graduate (30%), however, few respondents 3.33 per cent were remain illiterate and only 6.67 per cent having higher education up to post graduate. The secondary school (VIII to X Std.), higher secondary (XI & XII Std.) and primary (upto VII Std.) having 25, 17.50 and 17.50 per cent education, respectively. According to family occupation, the majority of farmwomen were engaged agriculture + animal husbandry field (55.83%), whereas 19.17 per cent were engaged with agriculture and, 15 per cent with farming including other activity. Along with the occupation number of animal keeping groups no body have more than 5 animals, 35.83 per cent farm women having 2 to 4 animals, 20.00 per cent farmwomen having only one animals and 44.17 per cent farm women without animals.

According to annual income majority groups 50.83 per cent having medium annual income (Rs. 100000 to 200000), and it was followed by Low annual income (up to Rs.100000/-) 30.83 per cent and High annual income (Above Rs. 200000/-) 18.33 per cent.

2. Use of Mass media for increasing the knowledge

How frequently do you use the following mass media for Nutrition requirement and supplementary food for infant?

Table 2 : Use of Mass media usages

(n=120)

Sr. No.	Mass Media Exposure	Regularly	Frequently	Not at all	Wt. Mean	Rank
1	Radio	10	46	64	22.00	VII
2	Television	39	76	5	51.33	I
3	News paper	23	64	33	36.67	III
4	Printed literature	6	76	38	29.33	V
5	Mobile	36	48	36	40.00	II
6	Visit to Anganvadi	0	95	25	31.67	IV
7	Any other Programme organized in village	1	83	36	28.33	VI

It can be concluded from table 2, television was proved the most favorite of every women. It stand on first rank for media usage with 51.33 weightage mean. The another media usages chronologically, mobile stand second rank (40.00), newspaper stand third rank (36.67), visit to anganvadi stand fourth rank (31.67), printed literature stand fifth rank (29.33), other programme organized in village were stand sixth rank (28.33) and radio stand last rank (22.00) for mass media usage by farm women. These finding can be prove that very few respondents were usage of radio.

3. Knowledge of rural women regarding weaning food for infant

In India nearly 75% of the population lives in rural areas. These rural women especially belonging to agricultural families are mostly engaged in agriculture activities with household responsibilities like cooking, cleaning, care of family members especially children and adults.

Knowledge is most important component of behavior and it plays major role in the convert and overt behavior of human being. Once knowledge is acquired, it produces change in one's opinion/thinking, which would lead to further changes in attitude of the individual. Knowledge as a function or stages in the innovation-decision process was recognized. This exemplifies the importance of knowledge in innovation-decision process.

Table 3 : Distribution of the respondents regarding their knowledge about human nutritional practices

(n=120)

Sr. No.	Nutritional practices	High	Medium	Low	Wt. Mean	Rank
1	Proteins helps the body to grow and development and defend against infections	63	44	13	56.67	VII
2	Animal food like meat, fish, egg and milk contains high amount of protein and good quality proteins.	57	46	17	53.33	VIII
3	Consume whole grains and sprouted pulses in daily diet.	75	39	6	63.00	IV
4	Sprouted pulses are easy to digest and increase amount of Vitamin C & B	29	41	50	33.00	XII
5	Vitamin and minerals are protect our body and maintain hormones balance	21	39	60	27.00	XIII
6	Green leafy vegetables are rich source of calcium, iron, B-carotene and Vitamin C, Riboflavin and folic acid	36	40	44	37.33	X
7	Amla and guava and other sour(Acidic) fruits are the rich sources of Vitamin C	65	50	5	60.00	VI
8	Papaya, mango and other yellow colour fruit & vegetable are the source of vitamin-A	76	39	5	63.67	II
9	Consume more nutritive food in maximum quantity	93	21	6	69.00	I

	during pregnancy					
10	During Pregnancy more requirement of iron, folate and calcium	40	47	33	42.33	IX
11	Daily consumption of different millets (Bajari, sorghum, maize, oat, ragi, rice with husk) reduce the risk of diabetes, heart attack, obesity etc	65	52	3	60.67	V
12	Seasonal fruits having sufficient and natural nutritional amount instead of off seasonal fruit	81	29	10	63.67	III
13	Avoid tea before and after an hour of meal	12	34	74	19.33	XIV
14	Increase in haemoglobin by jointly consumption of ferrous, Vitamin-c and folic acid.	12	32	76	18.67	XV
15	Green leafy vegetables, legumes, nuts and liver are good sources of folic acid	7	34	79	16.00	XVI
16	Leaves of beet, radish, cauliflower and drum stick are good source of Iron	29	54	37	37.33	XI

In the area of Jamnagar district, nearly half of the farm women know about consume more nutritive food in maximum quantity during pregnancy (69.00 wt. mean) having Rank-I; Papaya, mango and other yellow colour fruit & vegetable are the source of vitamin-A (63.67 wt. mean) having Rank-II; Seasonal fruits having sufficient and natural nutritional amount instead of off seasonal fruit (63.67 wt. mean) having Rank-III; Consume whole grains and sprouted pulses in daily diet. (63.00 wt. mean) having Rank-IV; Daily consumption of different millets (Bajari, sorghum, maize, oat, ragi, rice with husk) reduce the risk of diabetes, heart attack, obesity etc (60.67 wt. mean) having Rank-V; Amla and guava and other sour(Acidic) fruits are the rich sources of Vitamin C (60.00 wt. mean)having Rank-VI; Proteins helps the body to grow and development and defend against infections (56.67 wt. mean) having Rank-VII; Animal food like meat, fish, egg and milk contains high amount of protein and good quality proteins. (53.33 wt. mean) having Rank-VIII; During Pregnancy more requirement of iron, folate and calcium (42.33 wt. mean) having Rank-IX; Green leafy vegetables are rich source of calcium, iron, B-carotene and Vitamin C, Riboflavin and folic acid (37.33 wt. mean) having Rank-X; Leaves of beet, radish, cauliflower and drum stick are good source of Iron (37.33 wt. mean) having Rank-XI; Sprouted pulses are easy to digest and increase amount of Vitamin C & B (33.00 wt. mean) having Rank-XII; Vitamin and minerals are protect our body and maintain hormones balance (27.00 wt. mean) having Rank-XIII; Avoid tea before and after an hour of meal (19.33 wt. mean) having Rank-XIV; Increase in haemoglobin by jointly consumption of ferrous, Vitamin-c and folic acid (18.67 wt. mean) having Rank-XV; and lastly Green leafy vegetables, legumes, nuts and liver are good sources of folic acid (16.00 wt. mean) having Rank-XVI.

CONCLUSION

It can concluded that majority of farm women were from middle age group, married marital status, small size of land holding and nuclear family. It is also be concluded that, major source of information was television and mobile regarding getting knowledge about nutritional pattern.

Front Line Demonstration Beneficiaries farmers list

1. NMOOP - Groundnut : Kharif 2019-20

(Inputs: Groundnut Seed (GJG-22) - 30.0 kg)

Sr.No.	Name	Village	Taluka	District	Mo. No.
1	Kanjariya Govindbhai Savjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9429140980
2	Nakum Nitin Ravajibhai	Dwarka	Dwarka	Devbhumi Dwarka	9558996369
3	Kanzariya Jamanbhai Devrajbhai	Dwarka	Dwarka	Devbhumi Dwarka	7778001476
4	Kanzariya Pravinbhai Shamjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9428863846
5	Kanjariya Shamjibhai Bhurabhai	Dwarka	Dwarka	Devbhumi Dwarka	9510205078
6	Maghodiya Premjibhai Naranbhai	Dwarka	Dwarka	Devbhumi Dwarka	9979493429
7	Kanzariya Ashokbhai Devshibhai	Dwarka	Dwarka	Devbhumi Dwarka	9998486718
8	Kanzariya Gopalbhai Devshibhai	Dwarka	Dwarka	Devbhumi Dwarka	9427237192
9	Kanjariya Devashibhai Gokalbhai	Dwarka	Dwarka	Devbhumi Dwarka	9328414853
10	Kanzariya Kanabhai Devsibhai	Dwarka	Dwarka	Devbhumi Dwarka	9722872467
11	Kanzariya Mohanbhai Valabhai	Dwarka	Dwarka	Devbhumi Dwarka	9979647139
12	Nakum Kanjibhai Madhavjibhai	Dwarka	Dwarka	Devbhumi Dwarka	7016283337
13	Chopda Nathabhai Mandanbhai	Dwarka	Dwarka	Devbhumi Dwarka	9427248845
14	Chopada Chhaganbhai Mandanbhai	Dwarka	Dwarka	Devbhumi Dwarka	9722665262
15	Kanzariya Gopalbhai Valabhai	Dwarka	Dwarka	Devbhumi Dwarka	8128851757
16	Chopda Nathubhai Arjanbhai	Dwarka	Dwarka	Devbhumi Dwarka	8128381403
17	Kanzariya Naranbhai Pethabhai	Dwarka	Dwarka	Devbhumi Dwarka	9722725475
18	Chopada Harjibhai Arjanbhai	Dwarka	Dwarka	Devbhumi Dwarka	9408277614
19	Kanzariya Narshibhai Ravjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9228210302
20	Nakum Arvindbhai Nanjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9904814860
21	Kanzariya Govindbhai Ravjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9974059702
22	Chopada Kanjibhai Mandanbhai	Dwarka	Dwarka	Devbhumi Dwarka	9409391656
23	Kanzariya Vasantbhai Devjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9879479905
24	Kanzariya Jivanbhai Devjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9725637343
25	Kanzariya Rajeshbhai Valjibhai	Dwarka	Dwarka	Devbhumi Dwarka	9924035313
26	Sanghani Maganlal Dayabhai	Chavda	Jamnagar	Jamnagar	9427773615
27	Sanghani Bhurabhai Valajibhai	Chavda	Jamnagar	Jamnagar	7878508011
28	Kamani Babubhai Laljibhai	Chavda	Jamnagar	Jamnagar	8160532431
29	Kothiya Chandulal Samjibhai	Chavda	Jamnagar	Jamnagar	9427943738
30	Sanghani Parshotam Jerambhai	Chavda	Jamnagar	Jamnagar	9712132403
31	Sanghani Nagjibhai Nathalal	Chavda	Jamnagar	Jamnagar	9427210736
32	Sanghani Rasikbhai Parshotambhai	Chavda	Jamnagar	Jamnagar	9016508064
33	Sanghani Chhagan Thakarashibhai	Chavda	Jamnagar	Jamnagar	9979575184
34	Sanghani Jayantilal Vallabhbhai	Chavda	Jamnagar	Jamnagar	9426711034
35	Sanghani Vallabhbhai Popatbhai	Chavda	Jamnagar	Jamnagar	9510512610
36	Kamani Labhuben Manjibhai	Chavda	Jamnagar	Jamnagar	9375727017
37	Mungara Chhaganbhai Govindbhai	Chavda	Jamnagar	Jamnagar	8000494321
38	Kamani Hanshaben Chandubhai	Chavda	Jamnagar	Jamnagar	9428298235
39	Kothiya Amarsibhai Samjibhai	Chavda	Jamnagar	Jamnagar	9426715815
40	Kamani Chandulal Mohanlal	Chavda	Jamnagar	Jamnagar	9979265830
41	Kamani Manjulaben Rameshbhai	Chavda	Jamnagar	Jamnagar	9428127059
42	Kamani Rameshbhai Limbabhai	Chavda	Jamnagar	Jamnagar	9428127059
43	Kamani Kishorbhai Limbabhai	Chavda	Jamnagar	Jamnagar	9825956467
44	Sanghani Gandubhai Tapubhai	Chavda	Jamnagar	Jamnagar	9979141280

45	Kamani Tulshibhai Vasrambhai	Chavda	Jamnagar	Jamnagar	9979191224
46	Sanghani Kishorbhai Valjibhai	Chavda	Jamnagar	Jamnagar	7878507787
47	Kamani Odhavjibhai Popatbhai	Chavda	Jamnagar	Jamnagar	9512327431
48	Kamani Jivrajbhai Juthabhai	Chavda	Jamnagar	Jamnagar	9825145453
49	Kamani Manjibhai Juthalalbhai	Chavda	Jamnagar	Jamnagar	9099168910
50	Sanghani Dayabhai Jerambhai	Chavda	Jamnagar	Jamnagar	9429141187
51	Chovatiya Mukeshbhai Ramjibhai	Mota Thavariya	Jamnagar	Jamnagar	9601477032
52	Chovatiya Vipulbhai Ramjibhai	Mota Thavariya	Jamnagar	Jamnagar	9723490507
53	Chovatiya Chana Dhramashibhai	Mota Thavariya	Jamnagar	Jamnagar	6354901185
54	Chovatiya Rameshbhai Bavabhai	Mota Thavariya	Jamnagar	Jamnagar	8980398936
55	Chovatiya Shaileshbhai Mankanbhai	Mota Thavariya	Jamnagar	Jamnagar	9979256585
56	Chovatiya Bhikhabhai Lavjibhai	Mota Thavariya	Jamnagar	Jamnagar	7567161362
57	Chovatiya Chandulal Hirabhai	Mota Thavariya	Jamnagar	Jamnagar	9904419082
58	Chovatiya Karamshibhai Lakhabhai	Mota Thavariya	Jamnagar	Jamnagar	8849240981
59	Chovatiya Rajeshbhai Karamsibhai	Mota Thavariya	Jamnagar	Jamnagar	9725029032
60	Chovatiya Jaysukhbhai Ramjibhai	Mota Thavariya	Jamnagar	Jamnagar	9904112618
61	Chovatiya Jaysukhbhai Hirabhai	Mota Thavariya	Jamnagar	Jamnagar	9924259515
62	Chikhaliya Madhavaji Mohanbhai	Mota Thavariya	Jamnagar	Jamnagar	9824190971
63	Shikhliya Ramjibhai Mohanbhai	Mota Thavariya	Jamnagar	Jamnagar	9714497275
64	Shikhliya Shantilal Nathalal	Mota Thavariya	Jamnagar	Jamnagar	9925778844
65	Shikhliya Harsukhbhai Nathabhai	Mota Thavariya	Jamnagar	Jamnagar	9913102053
66	Shikhliya Ranchhod Chanabhai	Mota Thavariya	Jamnagar	Jamnagar	9825588628
67	Shikhliya Khodubhai Sadabhai	Mota Thavariya	Jamnagar	Jamnagar	9824553124
68	Shikhliya Maganbhai Chanabhai	Mota Thavariya	Jamnagar	Jamnagar	9712169014
69	Shikhliya Chanabhai Ratanbhai	Mota Thavariya	Jamnagar	Jamnagar	9574063417
70	Chovatiya Mukeshbhai Shamjibhai	Mota Thavariya	Jamnagar	Jamnagar	9737414450
71	Chovatiya Rashikbhai Shamjibhai	Mota Thavariya	Jamnagar	Jamnagar	9824949846
72	Chovatiya Shamjibhai Ramjibhai	Mota Thavariya	Jamnagar	Jamnagar	9737414450
73	Chovatiya Parsotam Dharmashi	Mota Thavariya	Jamnagar	Jamnagar	9909516504
74	Chovatiya Chandu Dharamshibhai	Mota Thavariya	Jamnagar	Jamnagar	9979538544
75	Taraviya Shailesh Vashrambhai	Mota Thavariya	Jamnagar	Jamnagar	

2. ATIC – Groundnut Kharif 2019-20 : ha. 20, No. of farmers 50

(Inputs: Beauveria - 2 kg, Trichoderma - 2 kg, Rhizobium - 500 ml, PSB-500ml)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Gordhanbhai Veljibhai Sabhaya	Nani Banugar	Jamnagar	Jamnagar	9824839547
2	Sureshbhai Popatbhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9714233697
3	Harjibhai Panchabhai Kantariya*	Nani Banugar	Jamnagar	Jamnagar	9909897881
4	Ratilal Shamjibhai Sorathiya	Nani Banugar	Jamnagar	Jamnagar	9328611777
5	Kantilal Ganeshbhai Pambhar	Nani Banugar	Jamnagar	Jamnagar	9979500340
6	Vallabhbhai Gordhanbhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9427236644
7	Chanabhai Panchbhai Kantariya*	Nani Banugar	Jamnagar	Jamnagar	6352658076
8	Dhirajlal Ganeshbhai Pambhar	Nani Banugar	Jamnagar	Jamnagar	9979208734
9	Mansukh Gordhanbhai Limbasiya	Nani Banugar	Jamnagar	Jamnagar	8158928749
10	Vallabhbhai Vasrambhai Mungara	Nani Banugar	Jamnagar	Jamnagar	9925750492
11	Harishbhai Hansarajbhai Busa	Nani Banugar	Jamnagar	Jamnagar	9979375944
12	Kankuben Harjibhai Kantariya*	Nani Banugar	Jamnagar	Jamnagar	9909897881
13	Jayantilal Veljibhai Sabhaya	Nani Banugar	Jamnagar	Jamnagar	9427773442
14	Popatbhai Vasrambhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9099018997
15	Arvindbhai Dharamsibhai Busa	Khilos	Jamnagar	Jamnagar	9099755965
16	Vikramsinh Bhupatsing Kanchava	Bavariya	Jamnagar	Jamnagar	9924944983

17	Yuvrajsinh Bhupatsinh Kanchava	Bavariya	Jamnagar	Jamnagar	9327392210
18	Jethubha Lakhmanji Jadeja	Vasai	Jamnagar	Jamnagar	7016655837
19	Vanrajsinh Bhupatsinh Kanchava	Bavariya	Jamnagar	Jamnagar	9429806239
20	Bhupatsinh Jivansang Kanchava	Bavariya	Jamnagar	Jamnagar	9427284609
21	Maganbhai Dhanabhai Sapovadiya	Kharva	Dhrol	Jamnagar	9723190649
22	Kurjibhai Gokalbhai Hinshu	Kharva	Dhrol	Jamnagar	9879565026
23	Jayshukhbhai Pitambarbhai Hinsu	Kharva	Dhrol	Jamnagar	9925569392
24	Arvindbhai Nanjibhai Ghetiya	Kharva	Dhrol	Jamnagar	9099721762
25	Thakarsibhai Naranbhai Parmar	Soyal	Dhrol	Jamnagar	9904214459
26	Bhagvanjibhai Bhavanbhai Nakum	Soyal	Dhrol	Jamnagar	8469011293
27	Dineshbhai Bhagvanjibhai Dalsaniya	Soyal	Dhrol	Jamnagar	9727064090
28	Kathadbhai Bhurabhai Mandh	Hamapar	Dhrol	Jamnagar	9574611273
29	Bhagvanjibhai Bijalbhai Dangar	Hamapar	Dhrol	Jamnagar	9825968922
30	Bharatbhai Laljibhai Chhatrara	Jayva	Dhrol	Jamnagar	9408516150
31	Shamjibhai Bhavanbhai Mungara	Jayva	Dhrol	Jamnagar	9998469740
32	Karsanbhai Deshabhai Vaghera	Dhrol	Dhrol	Jamnagar	9909644580
33	Jayeshbhai Dayabhai Vaghera	Dhrol	Dhrol	Jamnagar	6354341747
34	Nileshbhai Ramjibhai Chhatrala	Laiyara	Dhrol	Jamnagar	6354091261
35	Miyazar Naranbhai Boricha	Latipur	Dhrol	Jamnagar	9662090380
36	Gafarbhai Isabhai Nakani	Bediya	Kalavad	Jamnagar	9924402745
37	Salimbhai Isabhai Nakani	Bediya	Kalavad	Jamnagar	9723586992
38	Nurmamadbhai Varidbhai Patani	Nikava	Kalavad	Jamnagar	9904023912
39	Yakubbhai Aamadbhai Dodhiya	Nikava	Kalavad	Jamnagar	9924265643
40	Gulmamadbhai nathabhai Dodhiya	Pipar	Kalavad	Jamnagar	9913398686
41	Chhaganbhai Samjibhai Dabhi	Jampar	Kalyanpur	Devboomi Dwarka	9879236867
42	Mukeshbhai Mohanbhai Dabhi	Jampar	Kalyanpur	Devboomi Dwarka	9998541112
43	Jamanbhai Mohanbhai Dabhi	Jampar	Kalyanpur	Devboomi Dwarka	9904615949
44	Ranmalbhai Narsibhai Dabhi	Jampar	Kalyanpur	Devboomi Dwarka	9726770075
45	Nathiben Narsibhai Kanjariya	Jampar	Kalyanpur	Devboomi Dwarka	9537844681
46	Nathabhai Dayabhai Hadiyal	Jampar	Kalyanpur	Devboomi Dwarka	9624414576
47	Kishorbhai Madhabhai Dabhi	Jampar	Kalyanpur	Devboomi Dwarka	9978468211
48	Madhabhai Nanjibhai Nakum	Jampar	Kalyanpur	Devboomi Dwarka	9725913049
49	Ranmalbhia Ratnabhai Rathod	Jampar	Kalyanpur	Devboomi Dwarka	6354226520
50	Madhabhai Juthabhai Dabhi	Jampar	Kalyanpur	Devboomi Dwarka	9825796130

* Farmers belongs to SC/ST

3. NFSM-Chickpea : Rabi-2019-20 : 20 ha. 50 farmers

(Inputs: Seed (GG-5) - 25.0 kg, .Beauveria -2.0 kg, Trichoderma -2.0 kg, Rhizobium -500 ml, PSB- 500 ml)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Mungara Chandulal Kurajibhai	Dodhiya	Jamnagar	Jamnagar	9909581831
2	Mungara Rameshbhai Kurajibhai	Dodhiya	Jamnagar	Jamnagar	6352527032
3	Sudani Vallbhabhai Ladhambhai	Dodhiya	Jamnagar	Jamnagar	9925620965
4	Mungara Damajibhai Bhagabhai	Dodhiya	Jamnagar	Jamnagar	9723355486
5	Mungara Kurajibhgai Bhagabhai	Dodhiya	Jamnagar	Jamnagar	9033001432
6	Dobariya Valajibhai Lavabhai	Dodhiya	Jamnagar	Jamnagar	9879866732
7	Dobariya Polubhai Lavabhai	Dodhiya	Jamnagar	Jamnagar	9574630031
8	Dobariya Ramajibhai Kanabhai	Dodhiya	Jamnagar	Jamnagar	9537203573
9	Mungara Govindbhai Jerambhai	Dodhiya	Jamnagar	Jamnagar	9714336543
10	Mungara Manasukhbhai Damajibhai	Dodhiya	Jamnagar	Jamnagar	9723355486
11	Mungara Jamanbhai Kadavabhai	Dodhiya	Jamnagar	Jamnagar	9737131294

12	Dobariya Jayantibhai Kanajibhai	Dodhiya	Jamnagar	Jamnagar	7359506243
13	Mungara Chandubhai Karasanbhai	Dodhiya	Jamnagar	Jamnagar	9624210781
14	Mungara Viththalbhai Valajibhai	Dodhiya	Jamnagar	Jamnagar	9978808226
15	Mungara Vallbhabhai Valajibhai	Dodhiya	Jamnagar	Jamnagar	8140299433
16	Mungara Goradhanbhai Jerambhai	Dodhiya	Jamnagar	Jamnagar	9714316744
17	Mungara Manasukhbhai Valajibhai	Dodhiya	Jamnagar	Jamnagar	9727089792
18	Mungara Babubhai Ratanabhai	Dodhiya	Jamnagar	Jamnagar	9726623315
19	Mungara Bhikhubhai Ratanabhai	Dodhiya	Jamnagar	Jamnagar	7621062452
20	Ukani Pyarilal Mahamadali	Dodhiya	Jamnagar	Jamnagar	8511530665
21	Mungara Jentibhai Valajibhai	Dodhiya	Jamnagar	Jamnagar	9925867991
22	Mungara Dakubhai Karasanbhai	Dodhiya	Jamnagar	Jamnagar	9574928726
23	Mungara Chaganabhai Karasanbhai	Dodhiya	Jamnagar	Jamnagar	9624380828
24	Mungara Hrishbhai Ramanikbhai	Dodhiya	Jamnagar	Jamnagar	9924078321
25	Mungara Chaganbhai Jerambhai	Dodhiya	Jamnagar	Jamnagar	9624690708
26	Sodha Nitendrasinh Nayubha	Mulila	Kalavad	Jamnagar	9879276078
27	Vadodariya Keshavjibhai Panchabhai	Mulila	Kalavad	Jamnagar	9712498497
28	Amipara Arajanbhai Ladhambhai	Mulila	Kalavad	Jamnagar	9099366123
29	Savaliya Lalajibhai Goradhanbhai	Mulila	Kalavad	Jamnagar	9913707117
30	Vadodariya Ranchodbhai Chaganbhai	Mulila	Kalavad	Jamnagar	9265594456
31	Nasit Aravindbhai Ranchodbhai	Mulila	Kalavad	Jamnagar	9773181835
32	Chavada Tejabhai Babvabhai	Mulila	Kalavad	Jamnagar	9081790893
33	Amipara Dineshbhai Viththalbhai	Mulila	Kalavad	Jamnagar	9638241005
34	Vadodariya Jerambhai Bhavanbhai	Mulila	Kalavad	Jamnagar	9712783139
35	Amipara Vajubhai Lakhambhai	Mulila	Kalavad	Jamnagar	9712844688
36	Vadodariya Babubhai Panchabhai	Mulila	Kalavad	Jamnagar	9825706078
37	Vadodariya Gopalbhai Lakhmanbhai	Mulila	Kalavad	Jamnagar	9879067703
38	Vadodariya Chandulal Laxman	Mulila	Kalavad	Jamnagar	9725050237
39	Vadodariya Sureshbhai Bhagavanjibhai	Mulila	Kalavad	Jamnagar	9537700167
40	Vadodariya Bhagavanjibhai Bhavanbhai	Mulila	Kalavad	Jamnagar	9638666273
41	Vadodariya Pravinbhai Goradhanbhai	Mulila	Kalavad	Jamnagar	9979492613
42	Vadodariya Dineshbhai Lakhmanbhai	Mulila	Kalavad	Jamnagar	9924335294
43	Sorathiya Limbhabhai Hirabhai	Mulila	Kalavad	Jamnagar	9909660155
44	Busha Ujiben Nathabhai	Saravaniya	Kalavad	Jamnagar	7359285206
45	Pansuriya Lavajibhai Gopalbhai	Saravaniya	Kalavad	Jamnagar	9913857025
46	Busa Prafulbhai Ranchoabhai	Saravaniya	Kalavad	Jamnagar	9879239575
47	Amipara Hakabhai Punjabhai	Mulila	Kalavad	Jamnagar	9265177422
48	Pansuriya Ranchiodbhai Mohanbhai	Saravaniya	Kalavad	Jamnagar	9825751165
49	Pansuriya Kalabhai Mohanbhai	Saravaniya	Kalavad	Jamnagar	9426568295
50	Nariya Viththalbhai Chanabhai	Saravaniya	Kalavad	Jamnagar	9909651923

4. KVK-Cumin (Rabi 2019-20) 4 ha. 10 farmers

(Inputs: Beauveria -1.0 kg, Trichoderma -2.0 kg, Azotobactor -500 ml, PSB- 500 ml)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Arshibhai Nathabhai Bhatiya	Patelka	Kalyanpur	Devboomi Dwarka	9427943442
2	Nathabhai Kanabhai Bhadarka	Kalyanpur	Kalyanpur	Devboomi Dwarka	9998602650
3	Dhaniben Meraman Lagariya	Kalyanpur	Kalyanpur	Devboomi Dwarka	9904780845
4	Devabhai Samatbhai Bela	Kalyanpur	Kalyanpur	Devboomi Dwarka	9067947677
5	Karsanbhai Nagabhai Karmur	Kalyanpur	Kalyanpur	Devboomi Dwarka	8140490000
6	Jethabhai Vajsibhai Bela	Kalyanpur	Kalyanpur	Devboomi Dwarka	9904376753
7	Karnabhai Nagabhai Karmur	Kalyanpur	Kalyanpur	Devboomi Dwarka	8733942222
8	Karnabhai Jethabhai Bela	Kalyanpur	Kalyanpur	Devboomi Dwarka	8000320145

9	Tulsibhai Vasrambhai Kamani	Chavda	Jamnagar	Jamnagar	9825956467
10	Maganlal Dayabhai Sanghani	Chavda	Jamnagar	Jamnagar	9429141187

5. KVK-Ajwain (Rabi 2019-20) 4 ha. 10 farmers

(Inputs: Beauveria -1.0 kg, Trichoderma -2.0 kg, Azotobactor -500 ml, PSB- 500 ml)

Sr. No.	Name	Village	Taluka	District	Cell Number
1	Jaysukhbhai Jivrajbhai Mungra	Mota Itala	Dhrol	Jamnagar	9904031928
2	Jivrajbhai Devsibhai Mungra	Mota Itala	Jamnagar	Jamnagar	9904031928
3	Narsibhai Vasrambhai Patel`	Khara Beraja	Jamnagar	Jamnagar	9978991940
4	Kishorbhai Valjibhai Sanghani	Chavda	Jamnagar	Jamnagar	7878507787
5	Amarsibhai Shamjibhai Kothiya	Chavda	Jamnagar	Jamnagar	9426715815
6	Vipulbhai Babubhai Changani	Varna	Jamnagar	Jamnagar	9426494243
7	Parsotambhai Babubhai Borsadiya	Virpar	Jamnagar	Jamnagar	6355064879
8	Popatbhai Becharbhai Borsadiya	Virpar	Jamnagar	Jamnagar	9016206929
9	Shaileshbhai Girdharbhai Dudhagra	Veratiya	Jamnagar	Jamnagar	9316058066
10	Nilleshbhai Jasmatbhai Faldu	Chelabedi	Jamnagar	Jamnagar	9428670704

6. Coriander (Rabi 2019-20) 8 ha. 20 farmers

(Inputs: Beauveria -1.0 kg, Trichoderma -2.0 kg, Azotobactor -500 ml, PSB- 500 ml)

Sr. No.	Name	Village	Taluka	District	Cell Number
1	Chandulal Mohanbhai kamani	Chavda	Jamnagar	Jamnagar	8000906510
2	Kasam Husain Patani	Nikava	Kalavad	Jamnagar	9879309163
3	Ismail Abhram dodhiya	Nikava	Kalavad	Jamnagar	9714118692
4	Haji Husain Patani	Nikava	Kalavad	Jamnagar	9925137486
5	Suleman Nurmamad savan	Nikava	Kalavad	Jamnagar	9723837742
6	Jusab Hasam Bela	Nikava	Kalavad	Jamnagar	9925867472
7	Aziz Ismail Dodhiya	Nikava	Kalavad	Jamnagar	9725622088
8	Kasam Sumar Dodhiya	Nikava	Kalavad	Jamnagar	9913322348
9	Alimamad Kasam Savan	Nikava	Kalavad	Jamnagar	8511304753
10	Ismail Hasam Nakani	Nikava	Kalavad	Jamnagar	9909636176
11	Husain Mamad Nakani	Bedia	Kalavad	Jamnagar	9824674329
12	Jusab Isha Nakani	Bedia	Kalavad	Jamnagar	9924163902
13	Sahed Hasam Nakani	Bedia	Kalavad	Jamnagar	9879677896
14	Aarif Gafar Nakani	Bedia	Kalavad	Jamnagar	9773166535
15	Satar Natha Dodhiya	Piper	Kalavad	Jamnagar	9925492439
16	Aaziz Aadam Dodhiya	Piper	Kalavad	Jamnagar	9979598811
17	Hanif Harun Dodhiya	Piper	Kalavad	Jamnagar	9913115835
18	Gafar Natha Dodhiya	Piper	Kalavad	Jamnagar	9825725899
19	Harun Isha Dodhiya	Piper	Kalavad	Jamnagar	9909887594
20	Salim Aziz Dodhiya	Piper	Kalavad	Jamnagar	9998130749

7. ATIC Cumin (Rabi 2019-20) 10 ha. 25 farmers

(Inputs: Beauveria -1.0 kg, Trichoderma -2.0 kg, Azotobactor -500 ml, PSB- 500 ml)

Sr. No.	Name	Village	Taluka	District	Cell Number
1	Bhartbhai Maganbhai Borsadiya	Virpar	Jamnagar	Jamnagar	9913134224
2	Vishalbhai Rameshbhai Ghadiya	Virpar	Jamnagar	Jamnagar	9879292750
3	Chandreshbhai Ramjibhai Sojitra	Virpar	Jamnagar	Jamnagar	9427514406
4	Ramnikbhai Gandabhai Ghadiya	Virpar	Jamnagar	Jamnagar	9712097240
5	Rajesh Bavanjibhai Borsadiya	Virpar	Jamnagar	Jamnagar	8780119139

6	Samjibhai Govindbhai Ghadiya	Virpar	Jamnagar	Jamnagar	9909604913
7	Karsanbhai Hansrajbhai Ghadiya	Virpar	Jamnagar	Jamnagar	9429473019
8	Kanjibhai Devrajbhai Ghadiya	Virpar	Jamnagar	Jamnagar	9979798806
9	Manuben Gordhanbhai Bhanderi	Virpar	Jamnagar	Jamnagar	9913036362
10	Jamanbhai Hansrajbhai Ghadiya	Virpar	Jamnagar	Jamnagar	7698675676
11	Lakhubhai Ramabhai Varotariya	kalyanpur	Kalyanpur	Devbumi Dwarka	8511570109
12	Babubhai Devanandbhai Duva	kalyanpur	Kalyanpur	Devbumi Dwarka	9601169143
13	Rasikbhai Lavjibhai Kodinariya	Mota Panchasara	Lalpur	Devbumi Dwarka	9537830337
14	Devanandbhai Arsibhai Bela	kalyanpur	Kalyanpur	Devbumi Dwarka	9998574846
15	Arjanbhai Jethabhai Bela	Kalyanpur	Kalyanpur	Devbumi Dwarka	8264826036
16	Madhavjibhai Nathabhai Pathak	Ambaradi	Khambhaliya	Devbumi Dwarka	7600832200
17	Devabhai Sagabhai Jogal	Ambaradi	Khambhaliya	Devbumi Dwarka	9825268583
18	Ranmalbhai Vajshibhai Vasara	Ambaradi	Khambhaliya	Devbumi Dwarka	-
19	Vejanand Jetha Karangiya	Ambaradi	Khambhaliya	Devbumi Dwarka	9913298764
20	Odhavji Ukabhai Joshi	Ambaradi	Khambhaliya	Devbumi Dwarka	9974769969
21	Mathurdas Bhanji Pathak	Ambaradi	Khambhaliya	Devbumi Dwarka	-
22	Markhi Meraman Pindariya	Ambaradi	Khambhaliya	Devbumi Dwarka	-
23	Bachu Sida Pathak	Ambaradi	Khambhaliya	Devbumi Dwarka	-
24	Saga Vaja Vasara	Ambaradi	Khambhaliya	Devbumi Dwarka	-
25	Vallabhabhai Govindbhai Joshi	Ambaradi	Khambhaliya	Devbumi Dwarka	-

8. ATIC Coriander (Rabi 2019-20) 10 ha. 25 farmers

(Inputs: Beauvaria -1.0 kg, Trichoderma -2.0 kg, Azotobactor -500 ml, PSB- 500 ml)

Sr. No	Name	Village	Taluka	District	Cell Number
1	Vinesh Premjibhai Dobariya	Virpar	Jamnagar	Jamnagar	9925708596
2	Maganbhai Nanjibhai Ghadiya	Virpar	Jamnagar	Jamnagar	9687015494
3	Jaman Narsibhai Dudhagara	Virpar	Jamnagar	Jamnagar	9687860116
4	Jayesh Hansrajbhai Borsadiya	Virpar	Jamnagar	Jamnagar	9879405248
5	Ranchhod Narsibhai Dudhagara	Virpar	Jamnagar	Jamnagar	9427625431
6	Jigarbhai Kantilal Ghadiya	Virpar	Jamnagar	Jamnagar	7990031056
7	Kusumben Vallabha Dudhagara	Virpar	Jamnagar	Jamnagar	9426938138
8	Naranbhai Jivabhai Ghadiya	Virpar	Jamnagar	Jamnagar	8238542244
9	Ramesbhai Jivabhai Ghadiya	Virpar	Jamnagar	Jamnagar	8238542244
10	Babubhai Nathabhai Pathak	Ambardi	Khambhaliya	Devbumi Dwarka	8128208200
11	Jiva Devsi Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9909591241
12	Natha Deva Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9725045508
13	Hamir Deva Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9974988653
14	Jesa Deva Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	8128844562
15	Malde Muru Pindariya	Ambardi	Khambhaliya	Devbumi Dwarka	9712215108
16	Soma Arsi Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9724913872
17	Nathu Khima Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9998018113
18	Bhimsi Arjan Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9638568164
19	Paba Hada Bhatiya	Ambardi	Khambhaliya	Devbumi Dwarka	9904957337
20	Chhagan Govindbhai Mungra	Lakhani Moti	Jamnagar	Jamnagar	9978874119
21	Rasikbhai Nathabhai Moliya	Jam Vanthali	Jamnagar	Jamnagar	9924941648
22	Muriben Nagjibhai Kodinariya	Mota Panchasara	Lalpur	Jamnagar	9429473450
23	Govindbhai Mohanbhai Ajudiya	Mota Panchasara	Lalpur	Jamnagar	9429142243
24	Amrut Hansrajbhai Kodinariya	Mota Panchasara	Lalpur	Jamnagar	9428997988
25	Parsotam Khodabhai Sakhia	Mota Panchasara	Lalpur	Jamnagar	9426337971

9. KVK - Wheat (Rabi 2019-20) 4 ha. 10 farmers**(Inputs: Seed GW-463- 40 kg)**

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Arjanbhai Bhayabhai Kandoriya	Patelka	Kalyanpur	Devbume Dwarka	9724560154
2	Rajsibhai Naranbhai Kandoriya	Patelka	Kalyanpur	Devbume Dwarka	9601114215
3	Khimabhai Dosabhai Gohil	Patelka	Kalyanpur	Devbume Dwarka	9904737582
4	Pragjibhai Bachubhai Sodha	Patelka	Kalyanpur	Devbume Dwarka	7600142676
5	Hiriben Karubhai Kandoriya	Patelka	Kalyanpur	Devbume Dwarka	9099019500
6	Devsibhai Gordhanbhai Dabhi	Juvanpur	Kalyanpur	Devbume Dwarka	9723523421
7	Naranbhai Kurjibhai Nakum	Juvanpur	Kalyanpur	Devbume Dwarka	9601625796
8	Devabhai Arjanbhai Rudhach	Juvanpur	Kalyanpur	Devbume Dwarka	9558819771
9	Ranchhod Chakubhai Kachhatiya	Juvanpur	Kalyanpur	Devbume Dwarka	6309312344
10	Keshubhai Karsanbhai Hadiyal	Juvanpur	Kalyanpur	Devbume Dwarka	9067280905

10. KVK – Cotton – Kharif 2019-20, ha. 20 No. of farmers 50**(Inputs: Beauveria -1.0 kg, SNPV – 250 ml, MDP-3 tube, Azadirachtin-1 Li., Profenophos – 1 Li.)**

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Versibhai Gangabhai Bosariya	Sarmat	Jamnagar	Jamnagar	9824296046
2	Kanubha Khimaji Jadeja	Sarmat	Jamnagar	Jamnagar	9408185102
3	Mahobatsinh Devubha Jadeja	Sarmat	Jamnagar	Jamnagar	7698203108
4	Madhubha Vaktaji Jadeja	Sarmat	Jamnagar	Jamnagar	6351375736
5	Devabhai Ashabhai Bosariya	Vasai	Jamnagar	Jamnagar	9924263424
6	Mahipatsinh Jethubha Jadeja	Sarmat	Jamnagar	Jamnagar	9723690173
7	Natubha Keshubha Vadher	Vasai	Jamnagar	Jamnagar	9099130104
8	Hathabhai Mangabhai Bosariya	Vasai	Jamnagar	Jamnagar	9824888627
9	Karansinh Jethubha Jadeja	Sarmat	Jamnagar	Jamnagar	9424939409
10	Dosabhai Ashabhai Bosariya	Sarmat	Jamnagar	Jamnagar	9824232334
11	Jasabhai Amthabhai Bosariya	Vasai	Jamnagar	Jamnagar	9824267381
12	Mahobatsinh Jethubha Jadeja	Sarmat	Jamnagar	Jamnagar	9924760490
13	Devabhai Karabhai Bhambhi*	Sarmat	Jamnagar	Jamnagar	7698203108
14	Hemubha Devubha Jadeja	Sarmat	Jamnagar	Jamnagar	7016655837
15	Hakabhai Maiyabhai Thunga	Vasai	Jamnagar	Jamnagar	9924638803
16	Vallabhbhai Karamsibhai Mungra	Nani Banugar	Jamnagar	Jamnagar	7698727814
17	Pitambarbhai Popatbhai Pambhar	Nani Banugar	Jamnagar	Jamnagar	9879011578
18	Mansukh Gordhanbhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9327104491
19	Parsotam Karamsibhai Mungra	Nani Banugar	Jamnagar	Jamnagar	814197821
20	Bharatbhai Chanabhai Galani	Khankotada	Kalavad	Jamnagar	9427978797
21	Khodabhai Shamjibhai Virani	Khankotada	Kalavad	Jamnagar	8000399182
22	Chanabhai Bhimabhai Galani	Khankotada	Kalavad	Jamnagar	8160112206
23	Mohanbhai Keshavbhai Rathod	Jampar	Kalyanpur	Devbume Dwarka	9825796130
24	Ukabhai Madhabhai Dabhi	Jampar	Kalyanpur	Devbume Dwarka	9825796130
25	Kanabhai Samatbhai Dabhi	Jampar	Kalyanpur	Devbume Dwarka	9825796130

*Farmers belongs to Schedule Cast

11. ATIC –Cotton : Kharif 2019-20, ha. 20 ; No. of farmers 50

(Inputs: Beauveria -1.0 kg, SNPV – 250 ml, MDP-3 tube, PSB-500ml, Azotobactor- 500ml)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Muneshbhai Valjibhai Sorathiya	Mota Garediya	Dhrol	Jamnagar	8141141457
2	Miyazar Devayat Boricha	Latipur	Dhrol	Jamnagar	9998932322
3	Meghajibhai Mohanbhai Mathiya	Latipur	Dhrol	Jamnagar	9898850227
4	Dineshbhai Mohanbhai Keshur	Latipur	Dhrol	Jamnagar	9428279992
5	Kantilal jerambhai Rabadiya	Latipur	Dhrol	Jamnagar	9909035846
6	Harilal Ganeshbhai Pipariya	Latipur	Dhrol	Jamnagar	9725140839
7	Hirabhai Naranbhai Kesur	Latipur	Dhrol	Jamnagar	9265802231
8	Mohanbhai Karsanbhai Malani	Latipur	Dhrol	Jamnagar	9825955926
9	Lavjibhai Naranbhai Mendapara	Latipur	Dhrol	Jamnagar	8469562560
10	Raydhanbhai Gandubhai Boricha	Latipur	Dhrol	Jamnagar	9327056514
11	Kalabhai Damjibhai Ramani	Latipur	Dhrol	Jamnagar	8780401982
12	Mansukhbhai Valjibhai Bhanderi	Haripar	Dhrol	Jamnagar	9979350382
13	Vallabhbhai Lakhamanbhai Bhanderi	Haripar	Dhrol	Jamnagar	9879353073
14	Bhikhabhai Chakubhai Bhanderi	Haripar	Dhrol	Jamnagar	9979742070
15	Laljibhai Damjibhai Ramani	Haripar	Dhrol	Jamnagar	8140923631
16	Dhanjibhai Bhavanbhai Chikhaliya	Nani Banugar	Jamnagar	Jamnagar	9879270981
17	Pravinbhai Gandubhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9727252537
18	Dilipbhai Parsotambhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9737718821
19	Karsanbhai Bhagabhai Sabhaya	Nani Banugar	Jamnagar	Jamnagar	9979701540
20	Vitthalbhai Gandubhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9925291664
21	Arvindbhai Panchabhai Mungra	Nani Banugar	Jamnagar	Jamnagar	9727503529
22	Nileshbhai Hansrajbhai Busa	Nani Banugar	Jamnagar	Jamnagar	9909617775
23	Lavjibhai Madhabhai Chikhaliya	Nani Banugar	Jamnagar	Jamnagar	7016290648
24	Vijaybhai Juthabhai Busa	Nani Banugar	Jamnagar	Jamnagar	9428074615
25	Bharatbhai Govindbhai Chikhaliya	Nani Banugar	Jamnagar	Jamnagar	9586532582
26	Dipakbhai Juthabhai Busa	Nani Banugar	Jamnagar	Jamnagar	9428074615
27	Ashokbhai Juthabhai Busa	Nani Banugar	Jamnagar	Jamnagar	9428074615
28	Jitendrabhai Jamnabhai Busa	Nani Banugar	Jamnagar	Jamnagar	9725048202
29	Jigneshbhai Jamanbhai Busa	Nani Banugar	Jamnagar	Jamnagar	9725048202
30	Damjibhai Ranchhodbhai Mungra	Suryapara	Jamnagar	Jamnagar	7016290648
31	Shaileshbhai Damjibhai Mungra	Suryapara	Jamnagar	Jamnagar	7016290648
32	Samjibhai Ranchhodbhai Mungra	Suryapara	Jamnagar	Jamnagar	9428074615
33	Ashokbhai Damjibhai Mungra	Suryapara	Jamnagar	Jamnagar	7016290648
34	Umar Adam Dodhiya	Dhutarpar	Jamnagar	Jamnagar	9825736147
35	Manjulaben Dhanjibhai Dalsaniya	Lakhtar	Jodiya	Jamnagar	9979742105
36	Dharmendrabhai Kanjibhai Dalsaniya	Lakhtar	Jodiya	Jamnagar	9879235452
37	Ramnkbhai Dharamsibhai Godhani	Keshiya	Jodiya	Jamnagar	8511783288
38	Rameshbhai Ambabhai Bhanderi	Mota Itala	Dhrol	Jamnagar	9978561429
39	Arvindbhai Hansrajbhai Detroja	Dhrol	Dhrol	Jamnagar	9824928525
40	Mahendrabhai Ramjibhai Vachhani	Lalpur	Lalpur	Jamnagar	9825562652
41	Bhagvanjibhai Jivabhai Vachhani	Lalpur	Lalpur	Jamnagar	9974959919
42	Vinodbhai Jadavjibhai Bhalodiya	Lalpur	Lalpur	Jamnagar	9909897904
43	Rameshbhai Devrajbhai Bariya	Lalpur	Lalpur	Jamnagar	9429141365
44	Damjibhai Shamjibhai Vachhani	Lalpur	Lalpur	Jamnagar	9909164009
45	Rameshbhai Gordhanbhai Bariya	Lalpur	Lalpur	Jamnagar	9904594598
46	Girishbhai Mandanbhai Vadaliya	Dharampur	Lalpur	Jamnagar	9469300460

47	Mukeshbhai Tarsibhai Virsodiya	Aarablus	Lalpur	Jamnagar	9725308313
48	Bharatbhai Jivanbhai Vachhani	Khirasara	Lalpur	Jamnagar	9904594195
49	Maganbhai Bhanjibhai Bechara	Gajana	Lalpur	Jamnagar	9913224416
50	Tapubhai Gangaram Dalsaniya	Mavapar	Dhrol	Jamnagar	9979742105

12. KVK-Chicory (Kharif :2019-20) 2 ha. 5 farmers

(Inputs: Beauveria -1.0 kg, Azotobactor -500 ml, PSB- 500 ml)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Hematbhai Tulsibhai Parmar	Jivapar	Jamnagar	Jamnagar	9898322360
2	Mavjibhai Govindbhai Parmar	Jivapar	Jamnagar	Jamnagar	8780773344
3	Parsotambhai Govindbhai Parmar	Jivapar	Jamnagar	Jamnagar	9574572734
4	Keshavjibhai Savjibhai Dharaviya	Amra	Jamnagar	Jamnagar	9825688394
5	Karsanbhai Savabhai Dharaviya	Amra	Jamnagar	Jamnagar	9377661892

13. KVK-Cotton Picking Apron (Kharif :2019-20) 2 ha. 5 farmers

(Inputs: Cotton Picking Apron -1)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Jagrutiben Vijaybhai Parmar	Dhichda	Jamnagar	Jamnagar	7698112315
2	Kankuben Kanaiyalal Parmar	Dhichda	Jamnagar	Jamnagar	9904597564
3	Rasilaben Ramjibhai Parmar	Dhichda	Jamnagar	Jamnagar	9904998543
4	Shobhanaben Jayeshbhai Sabhaya	Chandragadh	Jamnagar	Jamnagar	9724101469
5	Dakshaben Pareshbhai Sabhaya	Chandragadh	Jamnagar	Jamnagar	9737965883

14. KVK- Kitchen Gardening (2019-20) ha. 4 : No. of farmers 50

(Inputs : Different vegetable seed packets - Brinjal GJLB-4;GJB-3;GRB-5, Lady's Finger, Sponge Gourd, Valor, Indian beans, Cucumber, Cow pea, Tomato, Bitter Gourd, Bottle Gourd, Spinach, Cluster beans)

Sr. No.	Name	Village	Taluka	District	Cell Number
1	Meenaben Dipakbhai Mungra	Chandragadh	Jamnagar	Jamnagar	9704524249
2	Shobhanaben Jayeshbhai Sabhaya	Chandragadh	Jamnagar	Jamnagar	9924290361
3	Prabhaven Nagjibhai Sorthiya	Chandragadh	Jamnagar	Jamnagar	
4	Prabhaven Girdharbhai Chovatiya	Chandragadh	Jamnagar	Jamnagar	9913719977
5	Hinaben Hiteshbhai Sorathiya	Chandragadh	Jamnagar	Jamnagar	9924118865
6	Sangitaben Jayeshbhai Bhandari	Chandragadh	Jamnagar	Jamnagar	9723124885
7	Krishnaben Jentibhai Chovatiya	Chandragadh	Jamnagar	Jamnagar	
8	Shobhaben Bipinbhai Sorathiya	Chandragadh	Jamnagar	Jamnagar	
9	Dakshaben Pareshbhai Sabhaya	Chandragadh	Jamnagar	Jamnagar	9737965883
10	Joshnaben Ashokbhai Sabhaya	Chandragadh	Jamnagar	Jamnagar	9714245840
11	Varshaben Pravinbhai Dudhagara	Chandragadh	Jamnagar	Jamnagar	9714052643
12	Jayshreeben Jayeshbhai Mungra	Suryapara	Jamnagar	Jamnagar	9428089251
13	Samjuben Champakbhai Pambhar	Suryapara	Jamnagar	Jamnagar	9723686030
14	Urmilaben Vithalbhai Pambhar	Suryapara	Jamnagar	Jamnagar	9428986795
15	Jagrutiben Raghubhai Vaishnav	Suryapara	Jamnagar	Jamnagar	8141134041
16	Arunaben Vipulbhai Mungra	Suryapara	Jamnagar	Jamnagar	8160295967
17	Denishaben Nitinbhai Rangani	Suryapara	Jamnagar	Jamnagar	8758748919
18	Savliya Naynaben Rameshbhai	Suryapara	Jamnagar	Jamnagar	
19	Savliya Vasantben Rameshbhai	Suryapara	Jamnagar	Jamnagar	9638631290
20	Madhaviben Khimjibhai Mungra	Suryapara	Jamnagar	Jamnagar	8238602562
21	Punamben Chandreshbhai Mungra	Suryapara	Jamnagar	Jamnagar	9724273799
22	Meenaben Mansukhbhai Bhadr	Sadodar	Jamjodhpur	Jamnagar	9722498530

23	Manjulaben Jivrajibhai Sondarva	Sadodar	Jamjodhpur	Jamnagar	8347917048
24	Sarojben Premjibhai Solanki	Sadodar	Jamjodhpur	Jamnagar	9727607962
25	Pallaviben Devabhai Sagathiya	Sadodar	Jamjodhpur	Jamnagar	8238942554
26	Maniben Ramabhai Vargiya	Sadodar	Jamjodhpur	Jamnagar	9714742871
27	Pamiben Devrambhai Songara	Jampar	Kalyanpur	Devbhumi Dwarka	7359984855
28	Jetuben Karshanbhai	Jampar	Kalyanpur	Devbhumi Dwarka	9726972297
29	Ramiben Chandubhai Sonagara	Jampar	Kalyanpur	Devbhumi Dwarka	9727320428
30	Maniben Babubhai Nakum	Jampar	Kalyanpur	Devbhumi Dwarka	9687077001
31	Kasturben Nanjibhai Nakum	Jampar	Kalyanpur	Devbhumi Dwarka	9016254551
32	Lakshmiben Aambabhai Sonagara	Jampar	Kalyanpur	Devbhumi Dwarka	9979254693
33	Pamiben Gordhanbhai Sonagara	Jampar	Kalyanpur	Devbhumi Dwarka	9924953213
34	Jasodaben Ishvarbhai Sonagara	Jampar	Kalyanpur	Devbhumi Dwarka	6351066382
35	Jamnaben Ratabhai Vesara	Haripar	Kalyanpur	Devbhumi Dwarka	8141492385
36	Ramiben Dahyabhai Nakum	Haripar	Kalyanpur	Devbhumi Dwarka	9727857739
37	Jamnaben Ranchhodhbhai Nakum	Haripar	Kalyanpur	Devbhumi Dwarka	7698687934
38	Viruben Girdharbhai Nakum	Haripar	Kalyanpur	Devbhumi Dwarka	9727697048
39	Gangaben Mayurbhai Nakum	Haripar	Kalyanpur	Devbhumi Dwarka	9998574678
40	Nathiben Jerambhai Parmar	Haripar	Kalyanpur	Devbhumi Dwarka	9913264985
41	Santokben Devrambhai Kanzariya	Haripar	Kalyanpur	Devbhumi Dwarka	9998912910
42	Kasturben Arajanbhai Parmar	Haripar	Kalyanpur	Devbhumi Dwarka	9726618621
43	Motiben Mathurbhai Hadiyal	Juvanpur	Kalyanpur	Devbhumi Dwarka	
44	Amrutben Jentibhai Hadiyal	Juvanpur	Kalyanpur	Devbhumi Dwarka	
45	Kankuben Savjibhai Hadiyal	Juvanpur	Kalyanpur	Devbhumi Dwarka	
46	Heenaben Mathurbhai Hadiyal	Juvanpur	Kalyanpur	Devbhumi Dwarka	
47	Dayben Dilipbhai Hadiyal	Juvanpur	Kalyanpur	Devbhumi Dwarka	
48	Hiriben Ukabhai Hadiyal	Juvanpur	Kalyanpur	Devbhumi Dwarka	
49	Pamiben Devrambhai	Juvanpur	Kalyanpur	Devbhumi Dwarka	
50	Dakshaben Sunilbhai Nakum	Juvanpur	Kalyanpur	Devbhumi Dwarka	

15. KVK-Plastic Mulching (Summer:2019-20); 2.5 ha. 10 farmers

(Inputs : Plastic mulching roll)

Sr. No.	Name	Village	Taluka	District	Mo. No.
1	Maheshbhai Bhagvanjibhai Boot	Mota Vagudad	Dhrol	Jamnagar	9428864027
2	Chandulal Kanabhai Patel	Mota Vagudad	Dhrol	Jamnagar	6351575317
3	Chaturbhai Ganeshbhai Bhimani	Mota Vagudad	Dhrol	Jamnagar	9825424535
4	Mukeshbhai Parsotambhai Panara	Mota Vagudad	Dhrol	Jamnagar	9662094650
5	Ashwinbhai Jerambhai Nariya	Karana	Lalpur	Jamnagar	9824297255
6	Devanandbhai Arshibhai Bela	Kalyanpur	Kalyanpur	Devbhumi Dwarka	9958574846
7	Rameshbhai Tarshibhai Dangariya	Pithadiya-2	Kalavad	Jamnagar	9265137102
8	Tarshibhai Jadavbhai dangariya	Pithadiya-2	Kalavad	Jamnagar	9265137102
9	Labhuben Bijalbhai Dangar	Nesada	Jodiya	Jamnagar	9909492103
10	Mahendrabhai Ramjibhai Vachhani	Lalpur	Lalpur	Jamnagar	9825562652

ANNUAL ACTION PLAN

(January 2020 to December 2020)

KRISHI VIGYAN KENDRA JUNAGADH AGRICULTURAL UNIVERSITY, JAMNAGAR

1. Details of Operational area/ Villages (2018-19 to 2020-21)

Sl No	Taluka	Name of the village	Major crops & enterprises	Major problem identified	Identified thrust area
1	Jamnagar	Chandragadh, Khojaberaja, Lothiya, NaniBanugar, Suryapara	Cotton, groundnut, sesame, castor, greengram, wheat, Gram, cumin, mustard, Vegetable, Soyabean, flowers, live stock, fisheries	Heavy infestation of sucking pest in cotton, stem rot disease & white grub in Groundnut, Root rot in castor, Less area under horticulture crops, Blight in cumin, salinity, pink bollworm in cotton	<ul style="list-style-type: none"> - ICM in major crops of the district - Organic crop production - Introduction of new crop - Recycling of farm waste - Popularization of MIS - Motivation of fisheries cultivation - Soil Reclamation - Farm women empowerment - Farm mechanization
2	Kalyanpur	Gadhka, Patelka, Haripar, Juvanpur, Jampar			

2. Priority thrust areas

Sl. No	Crop/ Enterprise	Thrust area
1.	Cotton, groundnut, castor, cumin, coriander, wheat, vegetables, fruits, etc.	<ul style="list-style-type: none"> ➤ Integrated Crop Management in major crops ➤ IPM & IDM in major field crops ➤ White grub management in Groundnut ➤ Wireworm management in garlic & Onion ➤ Micronutrient management in wheat
2.	Organic farming	Enhancement of organic farming through improved technologies
3.	Farm waste/ organic matter	Recycling of farm waste through composting, vermicompost, green manuring, etc.
4.	Micro irrigation	Efficient use of water by micro irrigation system, water harvesting structure, and water conservation techniques
5.	Soil	Reclamation of saline & alkaline soils
6.	Farm Women	Farm women empowerment by training in value addition, handi crafts, and small scale enterprises
7.	Fisheries	Fish Farming
8.	Improved Implements	Popularization of the mechanized technological know how
9.	Plant protection	Pink boll worm in cotton and white grub in groundnut,
10.	Horticultural area	Enhancement of pomegranate, date palm, draganfruit,
11.	Storage facility	Requirement of storage techniques and value addition in farm produce
12.	Water conservation & use of Micro irrigation	Efficient use of water by micro irrigation system, water harvesting structure, and water conservation techniques

3. TECHNICAL PROGRAMME

3.1. Details of targeted mandatory activities by KVK

OFT		FLD	
(1)		(2)	
Number of OFTs	Number of Farmers	Area (ha)	Number of Farmers
6	18	100	303

Training		Extension Activities	
(3)		(4)	
Number of Courses	Number of Participants	Number of activities	Number of participants
55	1400	377	38572

Seed Production (Qtl.)	Planting material (Nos.)	Fish seed prod. (kg)	Soil Samples
(5)	(6)	(7)	(8)
208.8	700	120	500

3.2. Details of On Farm Trial / Technology Assessment/Refinement during 2020

S. No.	Crop/ enterprise	Prioritized problem	Title of OFT
1	Sesame	To manage the leaf webber infestation in sesame	Management of sesame leaf webber
2	Sesame	Low Yield, Introduction of new high yielding variety,	Assessment of the performance of high yielding Sesame varieties in summer irrigated condition for Jamnagar District
3	Groundnut	Low yield in existing variety, Enhancing productivity	Assessment of suitable high yielding Groundnut Variety in kharif season for Jamnagar District
4	Fisheries	Directly stocking of large number of Rohu(<i>Labio rohita</i>) spawn into village pond/reservoirs hampered the total production as well as survival rate of fish	Assessment of the technique of rearing the Rohu(<i>Labio rohita</i>) seed from spawn to fry stage in "Hapa" system
5	Groundnut	Heavy loss of food grains and seeds during storage, Heavy attack of storage pests	Assessment of PICS bag for Groundnut storage
6	Cumin	To minimize the infestation of aphid in Cumin, To increase productionTo reduce yield loss of Cumin	Management of aphid in cumin.

OFT-1 Sesame (Assessment)

Title: Management of sesame leaf webber

Objective: To manage the leaf webber infestation in sesame

Problem definition: attack of leaf webber is increase

- Heavy infestation of leaf webber was found
- Improper cultivation practices
- Lack of knowledge about pest outbreaks and its management

Problem diagram :-

Improper cultivation practices	Management of sesame leaf webber	Irregular irrigation
Mono-cropping system		Lack irrigation facilities
No adoption of recommended practices		Lack of knowledge about pest outbreaks and its management
Crop failure due to water logging condition in rainy season		In judicious use of chemical pesticide
Farmer follows instruction given by the local pesticides retailer		Heavy incidence of pest and disease attack

Treatments:

1. Injudicious use of insecticides. (Spray insecticides at weekly interval) (**Farmers practices**).
2. Recommended practices Application of the insecticide will be start at pest infestation occurred. Cartap hydrochloride 50% S.P. @ 10 g/10 Litre of water at the time of infestation. (**Recommendation**)

No. of Replication: 3 (Farmers)

Observations:

1. Record no. of larvae per plant/1 meter row length.
2. Yield data.

OFT :-2

Title :Assessment of the performance of high yielding Sesame varieties in summer irrigated condition for Jamnagar District

Objective : To find out suitable high yielding sesame variety for summer irrigated condition

Problem definition:

1. Low yield.
2. Threat to the sustainability of crop production
3. High cost of production
4. Shortage of irrigation water

Problem diagram :-

Improper cultivation practices	Assessment of the performance of high yielding Sesame varieties in summer irrigated condition for Jamnagar District	Multi season cropping system
Low yielding variety		Irregular irrigation/ irregular rainfall
Lack of knowledge about balance use of nutritional recommendation		Lack of knowledge about pest outbreaks and its management
High Wind velocity		In judicious use of chemical fertilizer

Treatments :

1. T₁ :- G. Til 2 (Farmer Practices)
2. T₂ :- G. Til 3
3. T₃ :- G. Til 5

No. of Replication :- 3 (Farmers)

Source of Technology: - Junagadh Agricultural University, Junagadh

Thematic area: Varietal evaluation

Observations :-

1. Yield (Kg/ha),
2. Plant Height (cm),
3. Capsule per plant,
4. 1000 seed weight (g),
5. Maturity days,
6. Economics

OFT:3

Title : Assessment of suitable high yielding Groundnut Variety in kharif season for Jamnagar District

Objective:: To find out suitable high yielding groundnut variety for kharif season

Problem definition:

1. Low yield.
2. Threat to the sustainability of crop production
3. High cost of production
4. Lack of well distributed rainfall & low rainfall

Problem diagram :-

Improper cultivation practices	Assessment of suitable high yielding Groundnut Variety in kharif season for Jamnagar District	Multi season cropping system
Low yielding variety		Mono-cropping system
Irregular rainfall		Lack of knowledge about nutrient management
Heavy incidence of pest and disease attack		In judicious use of chemical fertilizer
In judicious use of pesticide		Heavy infestation of white grub was found

Treatments:

1. **T 1** :- GG-20 (Farmer Practices)
2. **T 2** :- GJG-22
3. **T 3** :- GJG-32

No. of Replication :- 3 (Farmers)

Source of Technology: - Junagadh Agricultural University, Junagadh

Thematic area: Varietal evaluation

Observation:

1. Pod & Haulm yield (kg/ha),
2. Plant Height (cm) at harvest time,
3. No. of branches per plant ,
4. No. of pods per plant ,
5. 100 pods weight (g),
6. 100 kernel weight (g),
7. Economics

OFT: 4

Title : Assessment of the technique of rearing the Rohu(*Labio rohita*) seed from spawn to fry stage in "Hapa" system

Objective: To increase total yield and income

Problem definition:

Directly stocking of large number of Rohu(*Labio rohita*) spawn into village pond/reservoirs hampered the total production as well as survival rate of fish

Problem diagram :-

Over stocking of seed	Assessment of the technique of rearing the Rohu(<i>Labio rohita</i>) seed from spawn to fry stage in "Hapa" system	Mortality rate is higher
Lack of knowledge		Total production decrease
		Low income

Treatments:

T 1 :- Farmer Practices :Stocking of seed (Spawn) in large quantity

T 2 :- Recommended Practices :Stocking of Spawn @750 no./m³

No. of Replication :- 3 (Farmers)

Source of Technology: - AAU, Anand and CIFA-ICAR

Thematic area: To increase the final production by increasing survival rate

Observation:1.Total Biomass (Kg.)

2. Survival Rate (%)

OFT: 5**Title :Assessment of PICS bag for Groundnut storage****Objective :**

1. To provide sustainable and ecologically safe approach to preserve groundnut pods
2. To Reduce storage loss in groundnut seed
3. To increase storage period

Problem Definition :-

1. Residual effect of insecticides used for stored godown
2. Insecticidal effect on germination
3. High moisture retention during summer days
4. Heavy attack of storage pests
5. High cost of storage
6. Heavy loss of food grains and seeds
7. Lack of regular inspection in stored products.

Problem Diagram :-

Lack of regular inspection in stored products	Assessment of PICS bag for Groundnut storage	High cost of storage
Heavy loss of food grains and seeds		Heavy attack of storage pests
Residual effect of insecticides used for stored godown		Insecticidal effect on germination
High moisture retention during summer days		

Treatment

- T₁–Farmer Practices (Open heaps in storage godown)
 T₂–Local practices for storage in plastic bag /closely woven bag
 T₃–Storage in Triple layer hermetic “Purdue Improved Crop Storage”(PICS) bags

No. of Replication/farmers :-3 (Five bags/farmers)

Source of Technology : JAU, Junagadh Formerly it was from ICRISAT, Hyderabad

Observation :Post (after six month) storage

1. Weight loss
2. Insect (Bruchid)damage

OFT-6 (Refinement)**Title: Management of aphid in cumin.**

Objective: To minimize the aphid incidence in cumin. To reduce injudicious use of chemical pesticide. To minimize residual effect of chemical.

Problem definition:

1. Heavy infestation of aphid was found
2. Lack of seed treatment and improper cultivation practices
3. Lack of knowledge about pest outbreaks and its management
4. Injudicious use of nitrogenous fertilizer
5. Extra irrigation rather than recommendation during cloudy weather.
6. Overlapping of the crops seasons

Problem diagram :-

Resurgence of aphid	Management of aphid in	Multi season cropping system
Overlapping of the crops seasons		Lack of knowledge about pest outbreaks and its management

Lack of seed treatment	cumin	Lack of improper cultivation practices
In judicious use of pesticide		In judicious use of nitrogenous fertilizer
Extra irrigation		Improper use of FYM (without decomposition)

Treatments:

- Farmer's Practices:**-Injudicious use of insecticides. [use of deltamethrin, flubendiamide, imidacloprid, acetameprid, Thiamethoxam, cypermethrin, lamdacyhalothrin, carbosulfan, dimethoate after infestation of aphid repeatedly at weekly interval without follow ETL]
- Recommendation** :-First spray of Carbosulfan 25 EC 0.04% was made at initiation of pest and second spray was given after 15 days.
- Refinement:**-First spray of Spray of *Beauveria bassiana* @ 5 g/lit of water was made at initiation of pest and subsequent spray at 15 days interval.

No. of Replication: 3 (Farmers)**Source of Technology:** - State Agricultural University**Thematic area:** IPM**Observations:**

- Record aphid population (aphid index) from five randomly selected plants from each plot at 7 days after spray
- Record yield.

3.3 FRONTLINE DEMONSTRATIONS

A. Details of FLDs to be organized –

Sr. No.	Name of Crop/ Enterprise	Name of Variety/ Enterprises	Thematic area	Technology demonstrated	Critical Inputs	Season and year	Area (ha.)	No. of farmers/ Demo.	Parameters identified
1	Cotton	Bt. Cotton	IPM/INM	Insecticide, Bio pesticide	Azadirachtin, Profenophos., MDP, SNPV, <i>Beauveria bassiana</i>	Kh-20	10	25	yield
2	Chicory		ICM	Bio pesticide Bio fertilizer	<i>Beauveria bassiana</i> Azotobacter, PSB	Kh-20	2	5	Yield
3	Wheat	GW-463	Varietal	Variety	seed	Rabi-20	4	10	Yield
4	Ajwain	Gujarat Ajwain-2	IPM/IDM	Bio pesticide Bio fertilizer	Trichoderma, <i>Beauveria bassiana</i> Azotobacter, PSB	Rabi-20	4	10	Yield
Other Scheme									
5	NMOOP -Groundnut	GJG-22/ GJG 9	Improved Variety with ICM	Improved Variety, Bio pesticide, Bio fungicide, Bio fertilizer	Improved var. Seed (GJG-22/GJG-9), Metarhizium anisopliae, Trichoderma, PSB, Rhizobium	KH-20	20	50	Yield, % pod damage
6	NMOOP -Sesame	GTil -3/5	Improved Variety with ICM	Improved Variety, Bio pesticide, Bio fungicide, Bio fertilizer	Improved var. Seed (GTil-3/5), <i>Beauveria bassiana</i> , Trichoderma, PSB, Azotobacter	Sum-20	10	25	Yield, % pod damage
7	NFSM -Chickpea	GG-5	Improved Variety with ICM	Improved Variety, Bio pesticide, Bio fungicide, Bio fertilizer	Improved var. Seed (GG-5), <i>Beauveria bassiana</i> , Trichoderma, PSB, Rhizobium	Rabi-20	20	50	Yield, % pod damage

8	ATIC Castor	GCH-9	Varietal	Variety	seed	Kh-20	8	20	Yield
9	ATIC Cumin	GC-4	ICM	Bio pesticide Bio fertilizer	Beauveriabassiana, PSB, Azotobector Trichoderma	Rabi- 20	8	20	Yield
10	ATIC Coriander	GC-2	ICM	Bio pesticide Bio fertilizer	PSB, Azotobector, Beauveriabassiana, Trichoderma	Rabi- 20	8	20	Yield
Total							94	235	

C. Details of FLD on Enterprises

a. Farm Implements

Name of the implement	Crop	Season and year	No. of farmers	Area (ha)	Critical inputs	Performance parameters / indicators
Vegetable Mittens	Okra	Summer-20	5	2	Mittens	Picking efficiency Effect on skin
Cotton Picking Apron	Cotton	Kharif-20	5	2	Apron	Picking efficiency

b. Livestock Enterprises

Enterprise	Breed	No. of farmers	No. of animals, poultry birds/ha. etc.	Critical inputs	Performance parameters / indicators
Animal Husbandry	Local	3	3	Bypass Fat	1. % Fat increase in milk 2. Total Milk Production increase

c. FLD on Other enterprises

Enterprise	Name of the technology demonstrated	No. of farmers	No. of units	Critical inputs	Performance parameters / indicators
Solar Cooker	Solar Cooker	5	5	Solar Cooker	Time & fuel
Kitchen gardening	Nutritional gardening	50	50	Vegetable seeds	Yield

3.4. TRAINING (INCLUDING THE SPONSORED AND FLD TRAINING PROGRAMMES): ON Campus

(A) Farmers & Farm Women	No. of courses	No. of participant							Grand Total
		others			SC/ST				
		Male	Female	Total	Male	Female	Total		
I Crop Production	4	93	3	96	3	1	4	100	
II Horticulture	1	0	20	20	0	5	5	25	
III Soil Health and Fertility Management	1	18	5	23	1	1	2	25	
IV Livestock Production and Management	2	50	0	50	0	0	0	50	
V Home Science/Women empowerment	4	0	85	85	0	15	15	100	
VI Agril. Engineering	1	22	0	22	3	0	3	25	
VII Plant Protection	3	72	0	72	3	0	3	75	
VIII Fisheries	2	30	10	40	10	0	10	50	
IX Production of Inputs at site	1	23	0	23	2	0	2	25	
X Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0	
XI Agro-forestry	0	0	0	0	0	0	0	0	
XII Others (Pl. Specify)	0	0	0	0	0	0	0	0	
Total (A)	19	308	123	431	22	22	44	475	
(B) RURAL YOUTH	2	16	0	16	14	20	34	50	
(C) Extension Personnel	2	40	0	40	10	0	10	50	
Grand Total (A+B+C)	23	364	123	487	46	42	88	575	

Off Campus

(A) Farmers & Farm Women	No. of courses	No. of participant						Grand Total
		others			SC/ST			
		Male	Female	Total	Male	Female	Total	
I Crop Production	5	113	13	126	7	2	9	135
II Horticulture	1	0	25	25	0	0	0	25
III Soil Health and Fertility Management	4	89	21	110	5	0	5	115
IV Livestock Production and Management	3	25	50	75	0	0	0	75
V Home Science/Women empowerment	5	0	120	120	0	5	5	125
VI Agril. Engineering	0	0	0	0	0	0	0	0
VII Plant Protection	5	115	0	115	10	0	10	125
VIII Fisheries	4	75	20	95	5	0	5	100
IX Production of Inputs at site	2	47	0	47	3	0	3	50
X Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0
XI Agro-forestry	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)	0	0	0	0	0	0	0	0
Total (A)	29	464	249	713	30	7	37	750
(B) RURAL YOUTH	1	0	20	20	0	5	5	25
(C) Extension Personnel	2	40	0	40	10	0	10	50
Grand Total (A+B+C)	32	504	269	773	40	12	52	825

Consolidated (On + Off Campus)

(A) Farmers & Farm Women	No. of courses	No. of participant						Grand Total
		others			SC/ST			
		Male	Female	Total	Male	Female	Total	
I Crop Production	9	206	16	222	10	3	13	235
II Horticulture	2	0	45	45	0	5	5	50
III Soil Health and Fertility Management	5	107	26	133	6	1	7	140
IV Livestock Production and Management	5	75	50	125	0	0	0	125
V Home Science/Women empowerment	9	0	205	205	0	20	20	225
VI Agril. Engineering	1	22	0	22	3	0	3	25
VII Plant Protection	8	187	0	187	13	0	13	200
VIII Fisheries	6	105	30	135	15	0	15	150
IX Production of Inputs at site	3	70	0	70	5	0	5	75
X Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0
XI Agro-forestry	0	0	0	0	0	0	0	0
XII Others (Pl. Specify)	0	0	0	0	0	0	0	0
Total (A)	48	772	372	1144	52	29	81	1225
(B) RURAL YOUTH	3	16	20	36	14	25	39	75
(C) Extension Personnel	4	80	0	80	20	0	20	100
Grand Total (A+B+C)	55	868	392	1260	86	54	140	1400

Details of training programmes attached in Annexure –I

D. Skill development training

Crop / Enterprise	Identified Thrust Area	Training title*	Month	Duration (days)	No. of Participants			SC/ST participants			G.Total
					M	F	T	M	F	T	
Organic farming	Organic farming	Organic growers	Feb	30	20	0	20	0	0	0	20
Seed production	Seed production	Quality seed growers	Feb	30	20	0	20	0	0	0	20

3.5. Extension Activities (including activities of FLD programmes)

Nature of Extension Activity	No. of activities	Farmers			Extension Officials			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Field Day	12	210	35	245	65	50	115	275	85	360
KisanMela	1	1200	250	1450	200	50	250	1400	300	1700
KisanGhoshi	8	250	50	300	50	50	100	300	100	400
Exhibition	2	2000	1000	3000	500	200	700	2500	1200	3700
Film Show	50	1800	870	2670	250	80	330	2050	950	3000
Method demonstration	4	65	25	90	10	10	20	75	35	110
Farmers Seminar	5	250	40	290	80	10	90	330	50	380
Workshop	1	200	100	300	25	10	35	225	110	335
Group meetings	12	120	30	150	50	30	80	170	60	230
Lectures delivered as resource persons	55	8000	1500	9500	3000	1000	4000	11000	2500	13500
Newspaper coverage	5	0	0	0	0	0	0	0	0	0
Radio talks	1	0	0	0	0	0	0	0	0	0
TV talks	1	0	0	0	0	0	0	0	0	0
Popular articles	3	0	0	0	0	0	0	0	0	0
Extension Literature	25	2500	200	2700	1200	100	1300	3700	300	4000
Advisory Services	10	100	10	110	50	10	60	150	20	170
Scientific visit to farmers field	50	200	20	220	60	5	65	260	25	285
Farmers visit to KVK	80	1500	700	2200	400	250	650	1900	950	2850
Diagnostic visits	5	30	5	35	5	2	7	35	7	42
Exposure visits	1	30	0	30	10	0	10	40	0	40
Ex-trainees Sammelan	1	20	5	25	4	1	5	24	6	30
Soil health Camp	1	100	20	120	30	20	50	130	40	170
Animal Health Camp	1	50	10	60	20	5	25	70	15	85
Agri mobile clinic	1	3000	100	3100	1000	100	1100	4000	200	4200
Soil test campaigns	1	110	10	120	40	10	50	150	20	170
Farm Science Club Conveners meet	1	100	10	110	40	10	50	140	20	160
Self Help Group Conveners meetings	3	40	20	60	20	20	40	60	40	100
MahilaMandals Conveners meetings	6	10	50	60	10	40	50	20	90	110
Celebration of important days (specify)	7	600	600	1200	150	80	230	750	680	1430
KrishiMohostva	5	0	20	20	0	20	20	0	40	40
KrishiRath	3	40	0	40	20	0	20	60	0	60
Pre Kharif workshop	3	80	0	80	30	0	30	110	0	110
Pre Rabi workshop	7	250	40	290	100	30	130	350	70	420
PPVFRA workshop	1	20	10	30	10	5	15	30	15	45
Any Other (Specify)	5	220	20	240	90	10	100	310	30	340
Total	377	23095	5750	28845	7519	2208	9727	30614	7958	38572

3.6 Target for Production and supply of Technological products

SEED MATERIALS

Sl. No.	Crop	Variety	Quantity (qtl.)
CEREALS	Wheat	GW-451	95
OILSEEDS	Groundnut	GJG-9	53
	Groundnut	GJG-32	60
	Sesame	G.Til.-3	0.4
PULSES	Green gram	GM-4	0.4
		Total	208.8

PLANTING MATERIALS

Sl. No.	Crop	Variety	Quantity (Nos.)
FRUITS	Jamun, Guava, custard apple		100
SPICES			
VEGETABLES	Brinjal	GJLB-3,4	500
FOREST SPECIES			100
ORNAMENTAL CROPS			
		Total	700

Bio-products

Sl. No.	Product Name	Species	Quantity	
			No/Li.	(kg)
BIO PESTICIDES				
1	Beauveria			5000
2	Trichoderma			10000
3	PSB		200	
4	Azaobactor		200	
5	Rhizobium		200	
6	Pheromone trap			
7	NPV			
		Total	600	15000

LIVESTOCK

Sl. No.	Type	Breed	Quantity	
			(Nos)	Unit
FISHERIES	Advance Fingerlings	IMC	120 kg	

4. Targets of samples for analysis:

Details	No. of Samples	No. of Farmers	No. of Villages	Amount to be realized
Soil Samples	400	400	15	
Water	100	100	12	
Plant				
Total	500	500	27	

5. ACTION PLAN OF INFRASTRUCTURE IN KVK**A. Action plan of demonstration units (other than instructional farm)**

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production (expected)			Expected Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Crop Cafeteria	Every year	0.5	-	-	-	20000	-	
2	Vermicompost	2008	0.1	-	-	-	10000	20000	
3	Animal unit	2007	-	Gir	-	-	100000	120000	
4	Fisheries	2008	0.06	IMC	120	Kg.	1000	3600	
5.	Nursery	2012	0.05	Sapling	700	No	20000	30000	

B. Action plan of instructional farm (Crops) including seed production

Name of the crop	Area (ha)	Details of production (expected)			Expected Amount (Rs.)		Remarks
		Variety	Type of Produce	Qty.	Cost of inputs	Gross income	
Cereals							
Wheat	3	GW-451	Truthful	150	180000	300000	
Pulses							
Green gram	1	GM-4	Truthful	6	28000	54000	
Oilseeds							
Groundnut	4	GJG-9	Breeder	48	190000	600000	
Groundnut	5	GJG-32	Breeder	60	230000	800000	
Groundnut	1.5	GJG-32	TF	12	75000	200000	
Sesame	1	G.Til.-5	Breeder	5	40000	115000	
Sesame	1	G.Til.-5	TF	5	40000	75000	
Fibers							
Spices & Plantation crops							
Floriculture							
Fruits							
Vegetables							
Others (specify)							

6.6 Additional Activities Planned including sponsored projects (ProCRA / Pro SOIL/NARI/DAESI/DAMU/ DFI, etc.) / schemes during 2019-20, if involved.

S.No.	Name of the agency / scheme	Name of activity	Technical programme with quantification	Financial outlay (Rs.)	Names of the team members involved
1	DAMU	Farmers meeting for awareness	10	805000	Dr. K. P. Baraiya S. H. Lakhani A. V. Savaliya R. B. Pandya
		weather based agro advisory	105		

Annexure - I

TRAINING PROGRAMMES

i) Farmers & Farm women (On Campus)

Date	Client ele	Title of the training programme	Duration in days	Number of participants			Number of SC/ST			G. Total
				M	F	T	M	F	T	
Crop Production										
Quarter-2 nd	PF	NADEP Composting	1	20	3	23	1	1	2	25
Quarter-2 nd	PF	Doubling Farmers income through scientific production technology of major kharif crops	2	24	0	24	1	0	1	25
Quarter-3 rd	PF	Water management through micro irrigation system in kharif crops	2	25	0	25	0	0	0	25
Quarter-4 th	PF	Organic Farming: A Step towards doubling farmers income	2	24	0	24	1	0	1	25
Horticulture										
Quarter-3 rd	PF	Nursery Management	1	0	20	20	0	5	5	25
Livestock prod.										
Quarter-2 nd	PF	Feed and Fodder Management in Animal Husbandry	2	25	0	25	0	0	0	25
Quarter-3 rd	PF	Dairy Industry :Additional income generation through animal husbandry	3	25	0	25	0	0	0	25
Home Sc.										
Quarter-1 st	PF	Importance of nutrition in daily diet and techniques of Minimization of nutrition loss in processing	1	0	19	19	0	6	6	25
Quarter-2 nd	PF	Value addition in fruits, vegetables and agriculture produce for doubling farmers income	1	0	25	25	0	0	0	25
Quarter-3 rd	PF	Empowerment of rural Women through rural crafts	1	0	22	22	0	3	3	25
Quarter-4 th	PF	Location specific drudgery reduction technology	1	0	19	19	0	6	6	25
Agril. Engineering										
Quarter-4 th	PF	Installation and Maintenance of micro irrigation system	1	22	0	22	3	0	3	25
Plan prot.										
Quarter-2 nd	PF	IPM in vegetable and summer crops for doubling farmers income	1	22	0	22	3	0	3	25
Quarter-3 rd	PF	Bio-control of pest & Diseases for doubling farmers income	1	25	0	25	0	0	0	25
Quarter-4 th	PF	IPM and IDM in rabi crops for doubling farmers income	1	25	0	25	0	0	0	25
Fisheries										
Quarter-2 nd	PF	Doubling the farmers income by Integrated Fish Farming Approach	1	15	10	25	0	0	0	25
Quarter-3 rd	PF	Income generation in brackish water Aquaculture through Shrimp Farming in waste land	5	15	0	15	10	0	10	25
Production of Inputs at site										
Quarter-1 st	PF	Vermi-compost production	1	23	0	23	2	0	2	25
Soil Health										
Quarter-3 rd	PF	Importance of major and micro nutrient in crops production	1	18	5	23	1	1	2	25

ii) Farmers & Farm women (Off Campus)

Date	Client	Title of the training programme	Duration in days	Number of participants			Number of SC/ST			G. Total
				M	F	T	M	F	T	
Crop Production										
Quarter-1 st	PF	Pre Seasonal training on Summer Oilseed crops	2	28	0	28	2	0	2	30
Quarter-2 nd	PF	Groundnut seed production Technology	1	21	2	23	2	0	2	25
Quarter – 3 rd	PF	Integrated Weed Management in Oilseed crops	1	21	3	24	1	0	1	25
Quarter-4 th	PF	Pre-seasonal training on rabi crops (Chickpea, Cumin, Wheat)	1	23	2	25	0	0	0	25
Quarter-4 th	PF	Techniques of weed Management in Pulse crop	1	20	6	26	2	2	4	30
Horticulture										
Quarter-2 nd	PF	Processing and value addition in spices crops for doubling the farmers income	1	0	25	25	0	0	0	25
Livestock prod.										
Quarter-1 st	PF	Importance of Nutrients and Feed Management in Animal Husbandry to increase milk production	1	0	25	25	0	0	0	25
Quarter – 3 rd	PF	Common diseases and its remedies in cattle.	1	25	0	25	0	0	0	25
Quarter-4 th	PF	Importance of selection, housing, feed, breeding and health of animals for more profits in dairy industries	1	0	25	25	0	0	0	25
Home Sc.										
Quarter-1 st	PF	Women and Child Care	1	0	25	25	0	0	0	25
Quarter-1 st	PF	Women empowerment	1	0	25	25	0	0	0	25
Quarter-2 nd	PF	House hold food security by kitchen gardening and nutrition gardening	1	0	19	19	0	6	6	25
Quarter-3 rd	PF	Minimization of nutrition loss in processing / cooking	1	0	25	25	0	0	0	25
Quarter-4 th	PF	food processing and value addition in fruit, vegetable, and other agricultural produce for doubling the farmer income	1	0	25	25	0	0	0	25
Plan prot.										
Quarter-1 st	PF	Store grain pests and its management for reduction the storage loss	1	25	0	25	0	0	0	25
Quarter-1 st	PF	IPM in vegetable crops: onion & garlic	1	25	0	25	0	0	0	25
Quarter-2 nd	PF	Management of pink bollworm in cotton & management of white grub in groundnut and other kharif crops	1	20	0	20	5	0	5	25
Quarter – 3 rd	PF	Management of diseases in <i>kharif</i> crops	1	25	0	25	0	0	0	25
Quarter-4 th	PF	Integrated Disease and pest management in cumin and gram for doubling the farmers income	1	20	0	20	5	0	5	25
Fisheries										
Quarter-1 st	PF	Doubling the income in inland fisheries sector by stocking, rearing and selling the	3	25	0	25	0	0	0	25

		fish seeds.									
Quarter-2 nd	PF	Importance of composite/mix culture of IMC with exotic carp/Fresh water prawn spp.	1	20	2	20	5	0	5	25	
Quarter – 3 rd	PF	Additional income generation through fish processing and value addition in fisheries sector	3	10	15	25	0	0	0	25	
Quarter-4 th	PF	Pearl production: A source of additional income generation from inland fisheries	1	25	0	25	0	0	0	25	
Production of Inputs at site											
Quarter-1 st	PF	Seed production technology of summer sesame	1	22	0	22	3	0	3	25	
Quarter – 3 rd	PF	Bio pesticides production	1	25	0	25	0	0	0	25	
Soil Health											
Quarter-2 nd	PF	Awareness about soil health card (SHC)	1	20	8	28	2	0	2	30	
Quarter-2 nd	PF	Use of bio-fertilizers and recycling of farm waste through composting	1	28	0	28	2	0	2	30	
Quarter – 3 rd	PF	Integrated Nutrient Management in Groundnut	1	22	7	29	1	0	1	30	
Quarter-4 th	PF	Integrated Nutrient Management in rabi crops	1	19	6	25	0	0	0	25	

ii) Vocational training programmes for Rural Youth

Crop / Enterprise	Identified Thrust Area	Training title*	Month	Duration (days)	No. of Participants			SC/ST participants			G.Total
					M	F	T	M	F	T	
Rural craft	women Empowerment	Income generation activities for empowerment of rural women through rural crafts	April	4	0	20	20	0	5	5	25
Fish	Ornamental Fish	Additional income generation through Ornamental fish culture and aquarium maintenance	July	5	0	0	0	5	20	25	25
Integrated farming	Integrated farming	Integrated farming system	Feb.	4	16	0	16	9	0	9	25

iii) Training programme for extension functionaries

Date	Clientele	Title of the training programme	Duration in days	No. of participants			Number of SC/ST			G. Total
				M	F	T	M	F	T	
On Campus										
	EF	Pre-seasonal training on <i>kharif</i> crops (Pigeon pea, Green gram, Groundnut, Cotton)	2	20	0	20	5	0	5	25
	EF	Crop production technology in Cumin, Gram, Wheat, Onion, Garlic	2	20	0	20	5	0	5	25
Off Campus										
	EF	Pre-seasonal training on <i>kharif</i> crops (Pigeon pea, Green gram, Groundnut, Cotton)	2	20	0	20	5	0	5	25
	EF	Crop production technology in Cumin, Gram, Wheat, Onion, Garlic	2	20	0	20	5	0	5	25

iv) Skill development training

Crop / Enterprise	Identified Thrust Area	Training title*	Month	Duration (days)	No. of Participants			SC/ST participants			G.Total
					M	F	T	M	F	T	
Organic farming	Organic farming	Organic growers	Feb	30	20	0	20	0	0	0	20
Seed production	Seed production	Quality seed growers	Feb	30	20	0	20	0	0	0	20

Quarter and discipline wise summary of training programme :

Discipline	Subject Code	On-Campus					Off-Campus					GT
		Quarter					Quarter					
		I	II	III	IV	Total	I	II	III	IV	Total	
(A) Farmers & Farm Women, Rural Youth												
I Crop Production	CP		2	1	1	4	1	1	1	2	5	9
II Horticulture	HO			1		1		1			1	2
III Soil Health and Fertility Management	SFM			1		1		2	1	1	4	5
IV Livestock Production and Management	LPM		1	1		2	1		1	1	3	5
V Home Science/Women empowerment	WOE	1	1	1	1	4	2	1	1	1	5	9
VI Agril. Engineering	AEG				1	1					0	1
VII Plant Protection	PLP		1	1	1	3	2	1	1	1	5	8
VIII Fisheries	FIS		1	1		2	1	1	1	1	4	6
IX Production of Inputs at site	PI	1				1	1		1		2	3
X Capacity Building and Group Dynamics	CBD					0					0	0
	Total	2	6	7	4	19	8	7	7	7	29	48
(B) Extension Functionaries												
	EF		1	1		2		1	1		2	4
(C) Rural youth												
	RY	1		1		2		1			1	3
	Total	3	7	9	4	23	8	9	8	7	32	55

iv) Sponsored programme

Discipline	Sponsoring agency	Clientele	Title of the training programme	No. of courses	No. of participants			Number of SC/ST			G. Total
					M	F	T	M	F	T	
a) Sponsored training programme											
AEG	ATMA	PF	Importance of MIS	2	80	0	80	20	0	20	100
PLP	ATMA	PF	Kharif crop protection and production technology	3	100	40	140	10	10	20	160
SFM, AEG	AGAKHAN	PF	INM and MIS in rabi crops	2	50	50	100	5	5	10	110
PLP	DAO	PF	Integrated pest and diseases management in cumin	1	60	0	60	0	0	0	60
PLP	ATMA	PF	IPM & IDM in groundnut, cotton crops	1	55	0	55	5	0	5	60
PLP	DAO	PF	IPM, IDM, INM in groundnut and cotton	1	55	0	55	5	0	5	60
PLP	ATMA	PF	IPM & IDM in kharif crop	1	55	0	55	5	0	5	60
PLP	Dy.D.Hort.	PF	IPM, IDM, INM in Horticultural Crops	1	55	0	55	5	0	5	60
PLP	ATMA	PF	IPM, IDM, INM in Horticultural Crops	1	55	0	55	5	0	5	60
PLP, CP	DWDU	PF	IPM & IDM in kharif crop	1	55	0	55	5	0	5	60
PLP, CP	ATMA	PF	Seed Production technology and IPM in these crops	1	55	0	55	5	0	5	60
PLP	ATMA	PF	Storage Techniques and IPM in summer crops	1	0	55	55	0	5	5	60
			Total	16	675	145	820	70	20	90	910
b) Sponsored research programme											
			Total								
c) Any special programmes											

SFM	ATMA	PF	World Soil health day	1	50	50	100	10	10	20	120
WOE	ATMA	PF	Mahila Krushi Divas	1	0	10	100	0	20	20	120
			Total	2	50	150	200	10	30	40	240

Annexure - II

Details of Budget Estimate (2020-21) based on proposed action plan

S. No.	Particulars	BE 2020-21 proposed (Rs.)
25.1	Recurring Contingencies	
25.1.1	Pay & Allowances	123
25.1.2	Traveling allowances	2
25.1.3	Contingencies	35
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	
B	POL, repair of vehicles, tractor and equipment	
C	Meals/refreshment for trainees (ceiling up to Rs.40/day/trainee be maintained)	
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)	
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)	
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)	
G	Training of extension functionaries	
H	Maintenance of buildings	
I	Establishment of Soil, Plant & Water Testing Laboratory	
J	Library	
25.1	TOTAL Recurring Contingencies	160
25.2	Non-Recurring Contingencies	
25.2.1	Works	50
25.2.2	Equipments including SWTL & Furniture	
25.2.3	Vehicle (Four wheeler/Two wheeler, please specify)	
25.2.4	Library (Purchase of assets like books & journals)	1
25.2	TOTAL Non-Recurring Contingencies	51
25.3	REVOLVING FUND	
25.4	GRAND TOTAL	211