

**ICAR-ATARI, Pune**  
**DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2018-19**  
**(1<sup>st</sup> April 2018 to 31<sup>st</sup> March 2019)**

**1. GENERAL INFORMATION ABOUT THE KVK**

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

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra, Junagadh Agricultural University, Pipalia (Dhoraji) Dist: Rajkot, Gujarat-360410	02824-292584	.....	kvkpipalia@jau. in	www.jau.in

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

Address	Telephone		E mail	Website address
	Office	FAX		
Junagadh Agricultural University, Junagadh (Gujarat)	0285-2672080-90	0285-2672653	dee@jau.in	www.jau.in

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. N. B. Jadav	02824-292584	992401264 9	nb_jadav@yahoo.com

**1.4. Year of sanction: March, 2012**

**1.5. Staff Position (as on March 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	Current Grade Pay		
1.	Senior Scientist and Head	Dr. N. B. Jadav	Ext.Edn.	37400-67000	9000	18.08.06	
2.	Subject Matter Specialist	S. V. Undhad	Pl.Prot.	15600-39100	6000	27.03.15	
3.	Subject Matter Specialist	Dr. V. S. Prajapati	AH	15600-39100	6000	01.04.15	
4.	Subject Matter Specialist	A.R Parmar	Horti	15600-39100	6000	17.01.17	
5.	Subject Matter Specialist	P.S Sharma	HS	15600-39100	6000	19.01.17	
6.	Subject Matter Specialist	Vacant	Agronomy	-	-	-	-
7.	Subject Matter Specialist	Vacant	Extension	-	-	-	-
8.	Programme Assistant	P.D. Choudhry	Soil Science	9300-34800	38090/- FIX	04.08.18	
9.	Computer Programmer	R. G. Panseriya	Com. Operator	9300-34800	4400	31.12.13	-
10.	Farm Manager	K. D	B.Sc.	9300-	38090/-	27.7.18	

		Choudhry		34800	FIX		
11.	Accountant/Superintendent	K. G. Dhaduk	Accounting & Admins.	9300-34800	4400	12.06.13	-
12.	Stenographer	K. R. Yadav	Steno. Grade III	5200-20200	2400	06.02.14	-
13.	Driver 1	Vacant	-	-	-	-	-
14.	Driver 2	Vacant	-	-	-	-	-
15.	Supporting staff 1	Vacant	-	-	-	-	-
16.	Supporting staff 2	L. B Chavda	-	5200-20200	1650	13.12.89	

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

S. No.	Item	Area (ha)
1	Under Buildings	-
2	Under Demonstration Units	-
3	Under Crops	20.00
4	Horticulture	-
5	Pond	-
6	Others if any	-
	<b>TOTAL</b>	<b>20.00</b>

**1.7. Infrastructural Development:**

**A) Buildings**

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	-	-	-	-	-	-	-
2.	Farmers Hostel	-	-	-	-	-	-	-
3.	Staff Quarters (6)	-	-	-	-	-	-	-
4.	Demonstration Units (2)	-	-	-	-	-	-	-
5	Fencing	-	-	-	-	-	-	-
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	-	-	-	-	-	-	-
8	Farm godown	-	-	-	-	-	-	-
9	ICT lab	-	-	-	-	-	-	-
10	Other	-	-	-	-	-	-	-

**B) Vehicles**

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep (Bolero)	2013	661107	58620	Working
Mahindra Tractor	2013	565000	-	Working
Mini Tractor (Mahindra)	2016	248000	-	Working

**C) Equipments & AV aids**

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Cultivator (9 tine)	2013	19000	Working
Blade Harrow	2013	11500	Working
Automatic seed drill	2016-17	37619	Working
Mini tractor drawn spray pump	2016-17	69500	Working
Rotavator	2016-17	91245	Working

Reversible MB Plough	2016-17	37500	Working
Pusa STFR meter kit (WST-312P)	2016-17	80600	Working
Mrida parikshak soil testing mini lab	2016-17	90300	Working

### 1.8. Details of 7<sup>th</sup> SAC meeting conducted in the year (7<sup>th</sup> SAC)

Date	Name and Designation of Participants	Salient Recommendations	Action taken
19 <sup>th</sup> March 2019	Dr. A.R.Pathak Hon. Vice Chancellor, JAU, Junagadh.	<ol style="list-style-type: none"> <li>In cotton (IPM) frontline demonstration, pheromone trap replaces with MDP as a critical input.</li> <li>Frontline demonstration of sesamum (Summer), Var. GT-3 replace with Var. GT-5.</li> <li>In frontline demonstration it is need to specify check variety.</li> <li>In Brinjal FLDs, use MDP technology which is available with university.</li> <li>Give due weightage to leafy vegetable and fertigation, either in training or FLDs.</li> <li>Only those success stories include in APR in which KVK had made intervention or farmers used new technology or innovative technology.</li> <li>Add parameter in related to animal husbandry practices in OFT and FLDs.</li> <li>Add training regarding CMT Kit in animal husbandry.</li> <li>Add OFT in home science using bio fortified Bajra biscuits.</li> <li>To work out impact studies of long term programme, FLDs and training.</li> <li>Create awareness about benefit of topping in Bt. Cotton.</li> </ol>	Suggestion accepted and incorporated in action plan
	Dr.V.P.Chovatiya Director of Research,JAU, Junagadh		
	Dr.P.V. Patel Director of Extension Education, JAU, Junagadh		
	Dr.D.S.Hirapara Research Scientist,DFRS, Targhadiya		
	Shri R.H. Ladani Dy. Director of Horticulture, Rajkot		
	Shri. S.A.Sinojia Dy. Director of Agriculture, Morbi		
	Dr. G. R. Sharma, Principal, Polytechnic in Agri. Engg., Targhadia		
	Shri. V.K.Dholariya All India Radio, Rajkot		
	Shri. Vasant Joshi All India Radio, Rajkot		
	Kiran Patel Reliance Foundation, Rajkot		
	Dinesh Kanara Reliance Foundation, Rajkot		
	Dr.H.C.Chhodavadiya Asso. Extension Educationist, Office of Director of Extension Education, JAU, Junagadh		
	Dr.A.M. Polara Assistant Extension Educationist, Office of Director of Extension Education, JAU, Junagadh		
	Shri M.R.Bhoraniya Senior Scientist & Head, KVK, JAU, Chotila		
	Dr.B.B.Kabariya Senior Scientist & Head, KVK, Targhadiya		
	D.A.Saradava Scientist, KVK-Morbi		
	Dr. H. D. Maheta Scientist (Home Science) KVK-Morbi		
	Dr.J.H.Chaudhary Scientist (Animal Hus.), KVK, Targhadiya		
	D.P.Sanepar Scientist (Agril. Engg.), KVK, Targhadiya		
	Hetal Padsumbiya Scientist (Home Science), KVK, Targhadia		
Shri S. V. Undhad Scientist (Plant protection), KVK, JAU, Pipalia			
A.R. Parmar Scientist (Horticulture), KVK-Pipalia			
Dr. V. S. Prajapati Scientist (Animal Husbandry), KVK, JAU, Pipalia			
P.S.Sharma Scientist (Home Science), KVK, JAU, Pipalia			
S.R.Rathwa AO, KVK-Targhadiya			
A.B.Dabhi AO, KVK, Targhaidya			
Shri K.D. Chaudhary Agril. Officer, KVK, Pipalia			

Shri Hitesh Mathukiya Progressive farmers Thanagalol, Ta: Jetpur Dist:Rajkot		
Shri Ashwin Bachubhai Trada Progressive farmers Dudhivadar, Ta:Jamkandorna Dist:Rajkot		
Shri Jentibhai Popatbhai Babaria Progressive farmers Jasapar, Ta:Jamkandorna Dist:Rajkot		
Shri Navanitbhai S. Chovatiya Progressive farmers Jasapar, Ta:Jamkandorna Dist:Rajkot		
Shri Arvindbhai Bhimjibhai Paria Progressive farmers Gadhaka Dist:Rajkot		
Shri. Vallabbhai Mungra Progressive farmers Rajkot-Targhadiya		
Dr. N.B.Jadav, Senior scientist & Head, KVK, Pipalia		

## 2. DETAILS OF DISTRICT

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

S. No	Farming system/enterprise
1	Groundnut-Wheat/Coriander, Cumin, Garlic, Cotton-Summer Groundnut/Pulse crop/Sesame
2	Live stock
3	Farm waste management specially cotton stalk
4.	Fruit and vegetable preservation
5.	Value addition in Groundnut and wheat

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

#### a) Soil type

Sl. No.	Agro-climatic Zone	Characteristics
Zone-VI	North Saurashtra	The influence area of North Saurashtra Agro climatic Zone is spread among five districts (35.2 lakh Ha). Out of total area 73.40 per cent area falls under arid and semi-arid region. The soils of this zone are shallow to moderately deep. The soils of Rajkot district are medium black and low in their availability of nitrogen while medium phosphorus and high in available potash. Monsoon commences usually by the end of June and withdraws by middle of September. Average annual rainfall of districts is 1141.2 mm.
Zone-VII	South Saurashtra	The influence area of South Saurashtra Agro climatic Zone is spread among four districts. (Part of Rajkot, Bhavnagar, Amreli and whole district of Junagadh). Type of soil is shallow medium black calcareous soils. Soil are medium to high in nitrogen content, phosphorus low and potash high. Average annual rainfall of the zone is 625-750 mm.

#### b) Topography

S. No.	Agro ecological situation	Characteristics
1	Situation No. 2	Medium Black Soil with 500-600 mm Rainfall
2	Situation No.4	Shallow Black Soil with 500-600 mm Rainfall
3	-	Shallow medium black soil with 620-750 mm Rainfall

### 2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Clay to clay loam	Medium black calcareous soil	
2	Sandy clay loam to clayey	Well drained soil with rapid permeability	
3	Sandy to sandy 10 cm calcareous	Well drained soils	
4			

### 2.4. Area, Production and Productivity of major crops cultivated in the district (2017-18)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
1	Groundnut (Kharif+ summer)	263915	925525	29.25
2	Sesamum	2613	2494	10.49
3	Castor	8546	25348	29.66
4	Cotton	238643	664512	27.85
5	Wheat	60015	258337	43.05
6	Green gram	178	252	14.16
7	Coriander	4143	6149	14.84
8	Cumin	21962	19508	8.88
9	Garlic	2936	25872	88.12
10	Onion	3722	110502	300.90
11	Chickpea	16660	34865	20.93

Source: District agriculture department/Authentic Source

### 2.5. Weather data (2018-19)

Month	Rainfall (mm)	Temperature 0 C		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
April	-	-	-	-	-
May	-	-	-	-	-
June	-	-	-	-	-
July	334	-	-	-	-
August	27	-	-	-	-
September	62	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
Total	423	-	-	-	-

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

Category	Population	Production	Productivity
<b>Cattle</b>			
Cow	515003	1150 lit /lactation	4.60 lit / day
Buffalo	430795	1390	5.26 lit/day
Sheep	192994		
Goats	171515		
<b>Pigs</b>			
Crossbred			
Indigenous			
Rabbits	212		
<b>Poultry</b>			
Hens		100 eggs /year	
Desi	9988	140 eggs /year	
Improved	13527		
<b>Category</b>			
Fish (Reservoir)		Production (Q.)	Productivity

## 2.7. Details of Operational area / Villages

Taluka	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Dhoraji	Patanvav Nani Parabdi	Groundnut, Cotton, Sesame, Wheat, Cumin, Chickpea, Garlic and onion. Enterprise are dairy business, vermicomposting	-Heavy infestation of pink bollworm in cotton -sucking pest in all crops -Stem rot disease in groundnut -Sesame wilt - Less area under horticultural crops -Infertility in livestock	- IPM, IDM and INM in major crops - Motivate the farmers for horticulture crop - To create awareness for value addition - Popularization of MIS Create awareness of artificial insemination
Jetpur	Amrapur Mandlikpur			
Jamkandona	Jashapar Nani Dudhivadar			
	Sanala			
	Nagvadar			
Upleta	Talangna			
Gondal	Daliya			
	Shemla Bhojpara			

## 2.8. Priority thrust areas:

Sl. No	Crop/ Enterprise	Thrust area
1.	Groundnut, Sesame etc.	Increase productivity of crops by adopting recommended practices in integrated pest management & IDM (Management of white grub and stem rot)
2.	Cotton	-Integrated pest management (management of pink bollworm in Bt. cotton) & INM in cotton -Recycling of cotton stalk (Popularizing of cotton shredder)
3.	Coriander, Sesame, etc.	Increasing the productivity of major crops by adopting recommended technologies, newly release variety and to create awareness of value addition
4.	Cumin	Integrated disease management
5.	Farm waste	Recycling of farm waste through composting, Vermicomposting, green manuring, etc.
6.	Micro irrigation	Efficient use of water by micro irrigation system, water harvesting structure, and water conservation techniques
7.	Farm Women	Farm women empowerment by training in value addition, handicrafts, and small scale enterprises
8.	Horticulture (Papaya, Pomegranate, Chilly etc.)	Postharvest technology and value addition in fruit and vegetable, INM, canopy management in orchard
9.	Animal Husbandry	Increasing the productivity of livestock animals by adopting scientific practices and to create awareness about clean milk production

## 3. TECHNICAL ACHIEVEMENTS

### 3.1. A. Details of target and achievements of mandatory activities

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
6	6	52	52	341	381	341	381

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
43	59	1215	1734	3081	2175	8247	14863

Seed Production (Qtl.)			Planting materials (Nos.)	
5			6	
Target	Achievement		Target	Achievement
230	50		4000	-

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
NIL	NIL	4000	7197

### 3.1. B. Operational areas details during 2018-19

S.No.	Major crops & enterprises being practiced in cluster of villages	Prioritized problems in these crops/ enterprise	Extent of area (ha/No.) affected by the problem in the district	Name of Cluster Villages identified for interventions	Interventions (OFT, FLD, Training, extension activity etc.)*
1.	Groundnut	White grub infestation	-	All adopted village	OFT conducted -1 FLDs – 10 No. Training, Campaign Diagnostic visit
2.	Groundnut	Low yield and infestation of stem rot	-	All adopted village	FLDs-10 (GJG-22) CFLD FLDs : 125 No. (GJG-22) Training, Advisory service
3.	Groundnut	Stem rot infestation	-	All adopted village	FLDs : 10 Training, Diagnostic visit, Provide technological product (Trichoderma selling : 4860 kg)
4.	Cotton	Pink Bollworm Infestation	-	All adopted village	FLDs : 50 (Beauveria, Trap) Training Diagnostic visit, Campaign Provide technological product (Beauveria :2211 kg)
5.	Cotton	Nutrient deficiency	-	All adopted village	FLDs : 10 Training Advisory service
6.	Wheat	Lack of knowledge about INM and Biofert.	-	All adopted village	OFT-1, FLDs:10 Training, Advisory service Provide technological product ( Azoto : 283)
7.	cumin	Wilt incidence in cumin	-	All adopted village	FLDs : 10 Training Advisory service
8.	Chick pea	Low yield of chick pea	-	All adopted village	FLDs : 10 (GG-5) Training Advisory Service
9.	Chilli	Fungal Disease	-	All adopted village	OFT -1 Training, Diagnostic visit
10.	Papaya Onion	Low Yield	-	All adopted village	Frontline demonstrations Papaya (GJP-1) Onion (GJRO-11) Training, Advisory service
11.	Nutritional security	Unaware about the concept of kitchen gardening to combat balanced Nutrition with easy availability	-	All adopted village	FLDs : 50 Training
12.	Nutritional Security	Less knowledge regarding the importance of solar cooker	-	All adopted village	OFT :1 Training
13.	Buffalo	Lack of knowledge about nutrition management	-	All adopted village	OFT:1 Training Advisory service
14.	Cattle	Lack of knowledge about nutrition management in cattle	-	All adopted village	OFT:1 Training Diagnostic visit Advisory Service
15.	Cattle	Lack of knowledge about nutrition management in cattle	-	All adopted village	FLDs: 50 (calcium supplement, Bypass fat) Training

\* Support with problem-cause and interventions diagram

### 3.2. Technology Assessment

#### 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	1	-	-	-	-	-	-	-	-	1
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	1	-	-	-	-	-	-	-	-	1
Storage Technique	-	-	-	-	-	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
<b>Total</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4</b>

#### A2. Abstract on the number of technologies assessed in respect of livestock enterprises

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management	2	-	-	-	-	2
Disease of Management	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-
Production and Management	-	-	-	-	-	-
Feed and Fodder	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-
<b>TOTAL</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>



## B. Achievements on technologies Assessed

### B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trail covering all the Technological Options)
Integrated Nutrient Management		Use of Bio-Fertilizer	3	3	1.2
Varietal Evaluation					
Integrated Pest Management		Integrated Pest Management	3	3	1.5
Integrated Crop Management					
Integrated Disease Management		Integrated Disease Management	3	3	1.2
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction		Comparison of solar Cooker with traditional cooking system	3	3	0
Storage Technique					
Mushroom cultivation					
<b>Total</b>			12	12	3.9

### B.2. 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
Evaluation of breeds				
Nutrition management	Cattle	Nutritional management of milch animals	1	20
	Buffalo	Nutritional management of milch animals	1	20
Disease management				
Value addition				
Production and management				
Feed and fodder				
<b>Total</b>			2	40

## C1. Results of Technologies Assessed

### Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Wheat	Irrigated	Low yield due to improper nutrient management	Assessment of response of bio fertilizer on wheat yield	3	INM	Yield	Yield	Yield Net returns and B:C ratio was higher under intervention and recommended practices then farmer practices	Use of bio-fertilizer increases crop yield also they had started using bio-fertilizer in other crops	-	-
Groundnut	Rainfed	Low yield from groundnut cultivation	Assessment of management of white grub in Groundnut	3	IPM	Yield & White grub infestation	Yield & White grub infestation	Yield Net returns and B:C ratio was higher under intervention and recommended practices then farmer practices	Seed treated with Chlorpyriphos @ 25 ml per kg was better effective for management of white grub as compared to other insecticide and gave higher yield with less cost of cultivation		
Chilli	Irrigated	Low yield from Chilli cultivation due to wilt	Assessment of effect of the fungicides on disease of chilli	3	IDM	Yield & Wilt disease incidence		Yield Net returns and B:C ratio was higher under recommended practices and farmer practices then intervention	Reduce wilt disease incidence and increase the crop yield		

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Farmers practices: Application of only DAP and Urea in diff doses	Junagadh Agricultural University	4250	kg/ha	12251	1:1.22
Recommended practices : Recommended dose of ferti. RDF -120-60-0		4625	kg/ha	19694	1:1.36
Intervention: Seed treatment with Azatobacter & PSB culture (250g/10seed kg) + 75 RDF		4833	kg/ha	24030	1:1.44
Farmer's practice : Chloropyriphos @ 4 lit./ha at the time of attack	Junagadh Agricultural University	1830	kg/ha	55663	1:1.94
Recommended practice: 1.Seed treatment with Chloropyriphos @ 25 ml/kg 2. Application of Chloropyriphos @ 4 lit./ha 3. Spraying the trees on bund with lambda cyalothrin 1.5 ml/1 lit water		2230	kg/ha	83946	1:2.51
Intervention: 1. Application of carbofuran 3G@ 40kg/ha at time of sowing 2.Spraying the trees on bund with lambda cyalothrin 1.5 ml/1 lit water 3.Application of UREA @ 50 kg/ha with irrigation water at time of infestation.		1900	kg/ha	62853	1:2.12
<b>Farmer practices:</b> Two spray of Hexaconazole @ 1ml/liter of water. at 15 days interval	Junagadh Agricultural University	7917	kg/ha	52958	1:2.15
<b>Recommended practices:</b> Seed treatment of carbendenzim @ 3gm/kg seed + + soil application of Trichoderma @2.5 kg/ha at 15 DAS + soil drenching of C.O.C. @ 40 gm./10 ltr.of water during disease infestation		8000	kg/ha	54000	1;2.17
<b>Intervention:</b> Two spray of Hexaconazole @ 1ml/liter of water. At 15 days interval + soil drenching of C.O.C. @ 40 gm./10 ltr.of water during disease infestation		9792	kg/ha	78570	1:2.79

**C2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details**

**OFT-1 Assessment of response of Bio fertilizers to wheat yield**

1. **Title of OFT:** - Assessment of Response of Bio fertilizers to wheat yield

2. **Introduction:** -

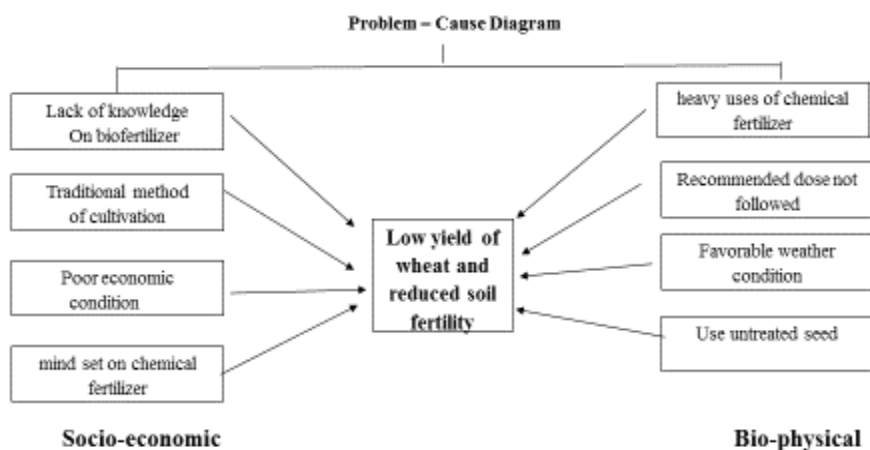
In Rabi season the area of wheat cultivation in Rajkot district is higher after coriander crops as compare to other crops. due to canal facilities in this area the production and productivity is higher.

But the continues use of chemical fertilizer in this crops the productivity is decreasing day by day and cost of cultivation increased. High uses of chemical fertilizer in crops the soil fertility also reduced. In this situation the KVK decide to increase uses of bio fertilizer to reduce cost of cultivation and increase soil fertility as well as quality and quantity of wheat yield.

3. **Problem definition** : Reduce yield and soil fertility

4. **Problem cause diagram** :

5. **Intervening point** : Response of Bio fertilizers to wheat yield



6. **Crop** : Wheat

7. **Season/Year** : Rabi 2017-18

8. **Plot size** :- 0.4 ha

9. **No. of Replication:** 3 (Farmer)

10. **Cost** : Rs. 360 /-

11. **Source of technology:** Junagadh Agricultural University, Junagadh

12. **Treatments:**

**Farmer's practice** :- Application of only DAP & Urea in different doses

**Recommended practice** :- 120-60-0 NPK kg/ha

**Intervention:-** Application of Azatobacter & PSB culture (250g/10kg) + 75% of RDF

13. **Observations and results:**

Crop/enterprise	Farming situation	Problem Diagnosed	Title of OFT	No. of trials*	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Wheat	Irrigated	Low yield due to improper nutrient management	Effect of bio fertilizer on wheat yield	3	Farmers practices: Application of only DAP and Urea in diff doses Recommended practices : Recommended dose of ferti. RDF - 120-60-0	Yield	Yield	Yield Net returns and B:C ratio was higher under intervent	-

					Intervention: Seed treatment with Azatobacter & PSB culture (250g/10seed kg) + 75 RDF			ion and recommended practices then farmer practices	
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Details	Yield (Kg/ha)	Net profit	BCR
Farmer's practices	4250	12251	1:1.22
Recommended practices	4625	19694	1:1.36
Intervention	4833	24030	1:1.44

#### Economic Impact (Continuation of previous table)

Crop	Average Cost of cultivation (Rs./ha)			Average Gross Return (Rs./ha)			Average Net Return (Profit) (Rs./ha)			Benefit-Cost Ratio
	Farmer practices	Reco. Practices	Intervention	Farmer practices	Reco. Practices	Intervention	Farmer practices	Reco. Practices	Intervention	
Wheat	56812	54512	55462	75438	82094	85792	18628	27582	30330	1:1.42

**14. Farmers' Perception:** Use of bio-fertilizer increases crop yield also they had started using bio-fertilizer in other crops

#### OFT:2

**1. Title of OFT:** - Assessment of management of white grub in Groundnut

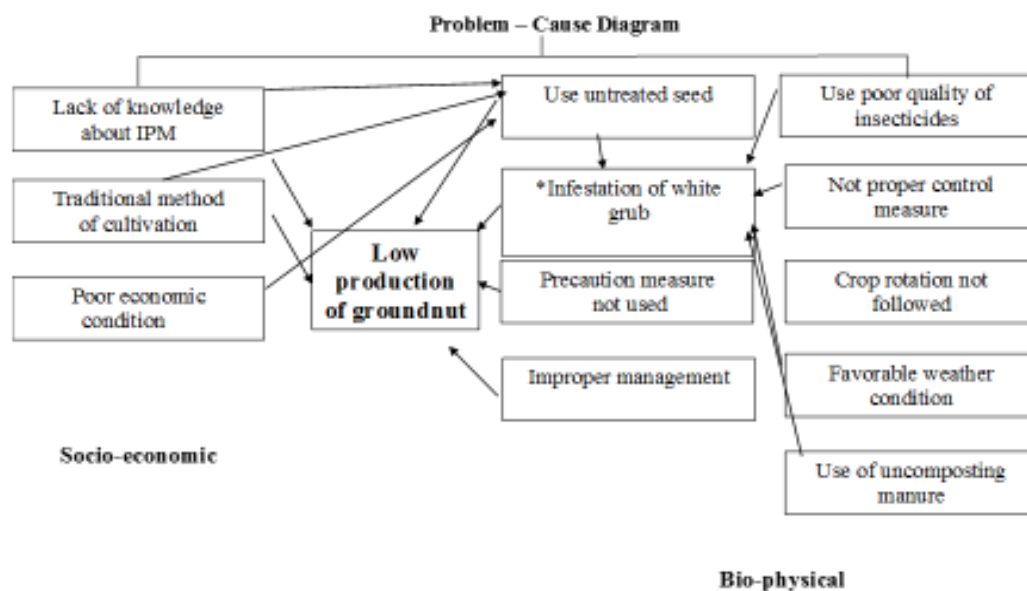
**2. Introduction:** -

The area under groundnut cultivation in Rajkot district is higher after cotton crops as compare to other crops. In this area groundnut crops are well suitable crops and gave higher production and productivity.

But last two to three years this crops suffering from heavy infestation of white grub insect. This insect cause severe damage to groundnut crops and resulting in yield loss. It is difficult to manage this pest. Farmer spent lots of money for uses of insecticides for control of this insect but not proper control. Therefore, it is very necessary to management through different possible solution of white grub in groundnut.

**3. Problem definition :** Low yield from groundnut cultivation

**4. Problem cause diagram :**



**5. Intervening point :** Management of white grub in groundnut

- 6. Crop : Groundnut
- 7. Season/Year : Kharif-18
- 8. Plot size :- 0.4 ha
- 9. No. of Replication: 3 (Farmer)
- 10. Cost : Rs. 4575 /-
- 11. Source of technology: Junagadh Agricultural University, Junagadh
- 12. Treatments:

**Farmer's practice :** Chloropyriphos @ 4 lit./ha at the time of attack  
**Recommended practice:** 1. Seed treatment with Chloropyriphos @ 25 ml/kg  
 2. Application of Chloropyriphos @ 4 lit./ha  
 3. Spraying the trees on bund with lambda cyalothrin 1.5 ml/1 lit water  
**Intervention:** 1. Application of carbofuran 3G @ 40kg/ha at time of sowing  
 1. Spraying the trees on bund with lambda cyalothrin 1.5 ml/1 lit water  
 2. Application of UREA @ 50 kg/ha with irrigation water at time of infestation.

**13. Observations :**

**Results:**

Details	Yield (Kg/ha)	Net profit	BCR
Farmer's practices	1830	55663	1:1.94
Recommended practices	2230	83946	1:2.51
Intervention	1900	62853	1:2.12

**Economic Impact (Continuation of previous table)**

Crop	Average Cost of cultivation (Rs./ha)			Average Gross Return (Rs./ha)			Average Net Return (Profit) (Rs./ha)			Benefit-Cost Ratio
	Farmer practices	Reco. Practices	Intervention	Farmer practices	Reco. Practices	Intervention	Farmer practices	Reco. Practices	Intervention	
G'nut	58920	55637	55897	114583	139583	118750	55663	83946	62853	1:2.51

White grub infestation (Observation)				
Treatments	Percent plant damage per 1 meter row length			Percent pod damage per plant At harvest
	30 DAS	60 DAS	90 DAS	
Recommended practices	0.0 (0.0)	1.0 (3.0)	3.0 (13.0)	4.7
Farmer practices	4.0 (17.5)	7.0 (24.0)	12.0 (37.0)	39.0
Intervention	1.0 (5.0)	3.0 (14.0)	7.0 (24.0)	20.50

**Farmers perception:**

Seed treated with Chlorpyriphos @ 25 ml per kg was better effective for management of white grub as compared to other insecticide and gave higher yield with less cost of cultivation

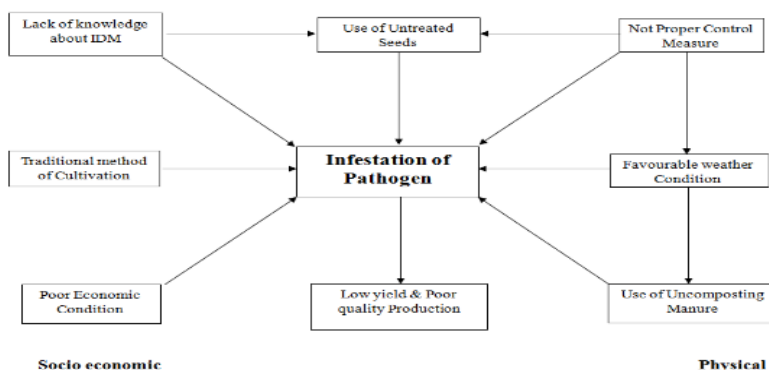
**OFT:3**

**Title: Assessment of effect of the fungicides on disease of chilli**

**Objective :** To inhibit the growth of pathogen.

- 1. District : Rajkot
- 2. Intervention points : IDM
- 3. Problem diagnosed /definition:

**PROBLEM CAUSE DIAGRAM**



**4. Treatment:**

**Farmer practices:** Two spray of Hexaconazole @ 1ml/liter of water. at 15 days interval

**Recommended practices:** Seed treatment of carbendazim @ 3gm/kg seed + + soil application of Trichoderma @2.5 kg/ha at 15 DAS + soil drenching of C.O.C. @ 40 gm./10 ltr.of water during disease infestation

**Intervention:** Two spray of Hexaconazole @ 1ml/liter of water. At 15 days interval + soil drenching of C.O.C. @ 40 gm./10 ltr.of water during disease infestation

5. Plot: 0.40 ha(1 Acre)/farmer

6. No. of farmers : 3

7. Source of technology : JAU, Junagadh

8. Critical inputs to be supplied : 1 kg Trichoderma and 500 gm copper oxychloride

9. Cost : Rs. 2460

10. Observation and results:

Details	Yield (Kg/ha)	Net profit	BCR
Farmer's practices	7917	52958	1:2.15
Intervention	8000	54000	1:2.17
Recommended practices	9792	78570	1:2.79

Wilt disease incidence (Observation)		
Treatments	Wilt disease incidence (%)	
	90 (DAS)	120 (DAS)
Farmer practices	15.00	25.00
Intervention	12.00	17.00
Recommended practices	7.00	10.00

**Economic Impact (Continuation of previous table)**

Average Cost of cultivation (Rs./ha)			Average Gross Return (Rs./ha)			Average Net Return (Profit) (Rs./ha)			Benefit-Cost Ratio (H)
Farmer practices	Reco. practices	Intervention	Farmer practices	Reco. practices	Intervention	Farmer practices	Reco. practices	Intervention	
46000	43825	46000	98958	122395	100000	52958	78570	54000	2.79

**Farmers Perception:** Reduce wilt disease incidence and increase the crop yield

**OFT:4**

**Title: Comparison of solar Cooker with traditional cooking system**

**Items: -**

1. Boiled Rice
2. Boiled Sweet potato
3. Salted groundnut

**Objective: -**

- (1) To improve quality and nutrition of Prepared items
- (2) To reduce drudgery of farm women
- (3) To reduce time and fuel consumption

**Treatment: -**

- 1) Preparation by traditional method
- 2) Preparation by roasting
- 3) Preparation by solar cooker

**No. of Replications: - 5**

**No. of beneficiaries:** 3 Farm women from three different locations

**Observations: -**

- (1) Time consumption
- (2) Fuel consumption
- (3) Movement
- (4) Cost saving
- (5) Organo-leptic test
  - i. Colour
  - ii. Texture
  - iii. Taste

**Results:**

Sr. No	Item	Boiled Rice			Salted Groundnut			Sweet Potato		
		Traditional Method (Firewood)	Preparation by Roasting (Gas)	Solar Cooker	Traditional Method (Firewood)	Preparation by Roasting (Gas)	Solar Cooker	Traditional Method (Firewood)	Preparation by Roasting (Gas)	Solar Cooker
1	Time Consumption (minute)	35	15	50	60	30	180	20	60	120
2	Fuel Consumption (g)	190	60.	-	410	100	-	350	210	-
3	Cost Saving (%)	-	1.86	7.01	-	10.4	26.9	-	43.70	73.9
<b>4</b>										
a	Taste	5	5	6	4	6	7	4	4	6
b	Consistency	4	5	7	3	5	8	3	4	6
d	Overall Acceptance	-	-	√	-	-	√	-	-	√

**OFT-5**

**Title: To assess the effect of Probiotic on milk production in cattle.**

**Problem Diagnosed:** Improper mixing and proportion of cereals, legumes and concentrated animal feed leads to imbalance microbial activity and results into low digestibility which leads to decrease milk production

**Treatment:**

**T1: Farmer's Practice:** Routine feeding (green fodder 20 kg + dry fodder 8 kg/animal/day)

**T2: Recommended:** T1+probiotic (20gm/animal/day)

**Experimental Animals:** 40 (20 Animals/Treatment)

**Source of Technology:** SAU, Gujarat

**Cost :** Rs. 10000 (500/ animal)

**Production system thematic Area:** Integrated Nutrient management

**Thematic Area:** Feed Management

**Results:**

Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
T1: Routine Farmer Practice (Green & Dry fodder, cottonseed cake)	Milk production daily (lit./day), B:C ratio and Farmers perception  (20 animals/treatment)	Milk prod. at week (Lt./Day) 0 = 7.0 2 = 7.2 4 = 7.2 6 = 7.5 8 = 7.5 10 = 7.2 12 = 7.6	Increase milk production in Probiotic (T <sub>2</sub> ) fed group	- Proper digestion of feed - Improve animal health - Increases animal productivity - Increases income



T2: T1+ Probiotic powder 20 gm/day/animal		Milk prod. at week (Lt./Day) 0 = 7.5 2 = 7.8 4 = 8.0 6 = 8.3 8 = 8.3 10 = 8.5 12 = 8.9		
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Technology Option	No. of trials	Av. Milk Production/ week (lit/day)	B:C ratio
T1: Routine Farmer Practice (Green & Dry fodder, cottonseed cake)	40	7.6	1:1.4
T2: T1+ Probiotic powder 20 gm/day/animal		8.2	1:2.2

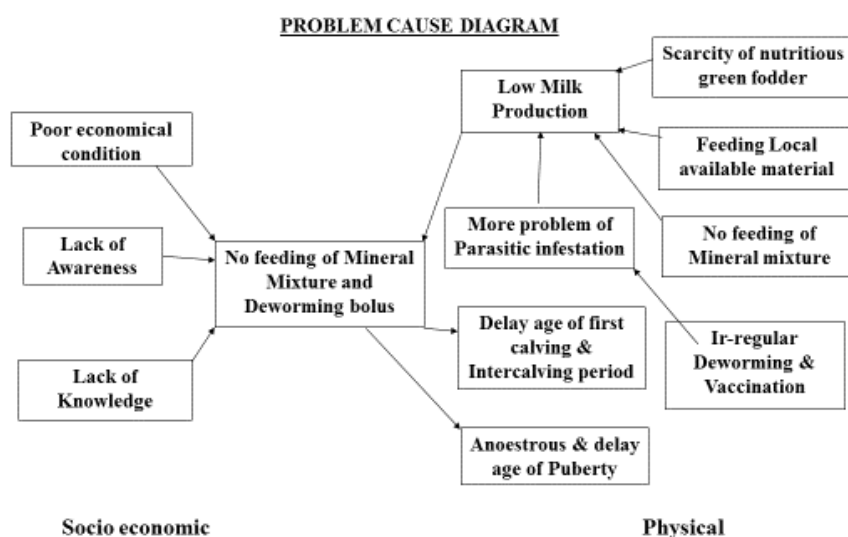
### OFT-6 (Animal husbandry)

#### Assessment of effect of mineral mixture on milk yield of cattle

1Title: Assessment of effect of mineral mixture on milk yield of cattle

2Problem diagnose/defined:

1. Low milk production due to parasitic infestation & mineral imbalance
2. Lack of knowledge about feeding of mineral powder & deworming bolus



3.Experiment animal : 40 (20 animals/treatments)

4. Source of technology : Veterinary college, NAU, Navsari

5. Cost : Rs. 11680 (584/ animal)

6.Treatment:

**T1: Farmers practices :** Routine feeding (Green fodder 20 kg +dry fodder 8 kg/animal/day)

**T2: Recommended:** T1 + Fenbendazol @5-7.5 mg Kg body weight + Mineral mixture supplementation @50gm /animal/ day

7 Observations to be recorded: Milk Yield (Lit/Animal/Day), B:C ratio and Farmers perception

8. Results: Awaited

### 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

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
1	Groundnut*	IPM	IPM	FLDs, Field days, Group discussion, Extension literature	16	80	56
2	Groundnut	IDM	Trichoderma	FLDs, Field days, Group discussion, Extension literature	25	247	87
3.	Sesame	Varietal	GT-3	FLDs, Field days, Group discussion	12	65	70
4.	Chick pea	Varietal	GG-5	FLDs, Personal visit, Training,	20	180	105
5.	Wheat	Varietal	GW-366	FLDs, Extension literature, Training	11	34	17
6.	Cumin	Varietal	GC-4	FLDs, Training	9	46	19
7.	Cotton	INM	INM	FLDs, Field days, Group discussion	22	187	112
8.	Cotton	IPM	IPM	FLDs, Personal visit, Training, Extension literature	5	45	10
9.	Animal Husbandry	Feed Management	Calcium supplement	FLDs, Personal visit, Training,	16	128	5
10.	Kitchen Gardening	Household food security	Kitchen Gardening	FLDs, Personal visit, Training,	6	48	4

#### B. Details of FLDs implemented during 2018-19 .

Sl. No.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Short fall
					Pro.	Actual	SC/ST	Others	T	
<b>Oilseeds</b>										
1	Groundnut	Variety	GJG-22	<i>Kharif</i> 2018-19	4	4	2	8	10	-
2	Groundnut	IDM	Trichoderma	<i>Kharif</i> 2018-19	4	4	2	8	10	-
3	Groundnut	IPM	IPM	<i>Kharif</i> 2018-19	4	4	2	8	10	-
4	Sesame	Variety	GT-3	<i>Summer</i> -2019	4	4	2	8	10	-
<b>Pulse</b>										
5	Chickpea	Varietal	GG-5	<i>Rabi</i> 2018-19	4	4	2	8	10	-
<b>Others: Cereals</b>										
6	Wheat	INM	GW-496	<i>Rabi</i> 2018-19	5	5	3	7	10	-
<b>Others: Vegetables</b>										
7	Onion	Varietal	GJRO-11	<i>Rabi</i> -2018-19	1.2	1.2	0	3	3	-
8	Brinjal	IPM	Local	<i>Kharif</i> -2018-19	4.04	4.04	2	8	10	-
9	Tomato	INM	Local	<i>Kharif</i> -2018-19	4.04	4.04	2	8	10	-
<b>Others: Fruits</b>										
10	Papaya	Varietal	GJP-1	<i>Kharif</i> -2018-19	1.2	1.2	1	2	3	-
<b>Others: Spices</b>										
11	Cumin	IDM	GC-4	<i>Rabi</i> 2018-19	4	4	2	8	10	-
<b>Others: Commercial crops</b>										
12	Cotton	INM	INM	<i>Kharif</i> 2018-19	4	4	2	8	10	-
13	Cotton	IPM	IPM	<i>Kharif</i> 2018-19	20	20	10	40	50	-
<b>Animal Husbandry</b>										
14	Cattle	Feed Managt	Calcium	2018-19	10	10	4	6	10	-
15	Cattle	Nutrient magt.	Bypass Protein	2018-19	-	-	4	16	20	-
16	Cattle	Nutrient magt.	Bypass fat	2018-19	-	-	5	15	20	-
<b>Home Science</b>										
17	Vegetable	Household	Kitchen	<i>Kharif</i> 2018-19	0.5	0.5	10	40	50	-

	Crops	food security by kitchen gardening and nutrition gardening	Gardening								
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#### Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
<b>Oilseeds</b>											
Groundnut	<i>Kharif</i>	Rainfed	MB	M	M	H	Wheat	21-6-18	15-10-18	423	14
Groundnut	<i>Kharif</i>	Rainfed	MB	M	M	H	Cotton	21-6-18	12-10-18	423	14
Groundnut	<i>Kharif</i>	Rainfed	MB	M	M	H	Wheat	21-6-18	15-10-18	423	14
Sesame	<i>Summer</i>	Irrigated	MB	M	M	H	Cotton	25-2-19	-	423	14
<b>Pulse</b>											
Chick pea	<i>Rabi</i>	Irrigated	MB	M	M	H	G'nt	3-11-18	20-2-19	423	14
<b>Cereals</b>											
Wheat	<i>Rabi</i>	Irrigated	MB	M	M	H	G'nt	10-11-18	10-03-19	423	14
<b>Other</b>											
Onion	<i>Rabi</i>	Irrigated	MB	M	M	H	G'nt	3-11-18	25-2-19	423	14
Brinjal	<i>Kharif</i>	Irrigated	MB	M	M	H	Wheat	5-7-18	15-11-18	423	14
Tomato	<i>Kharif</i>	Irrigated	MB	M	M	H	Wheat	12-7-18	8-11-18	423	14
Papaya	<i>Kharif</i>	Irrigated	MB	M	M	H	Papaya	28-6-2018	-	423	14
Cumin	<i>Rabi</i>	Irrigated	MB	M	M	H	G'nt	15-11-18	25-2-19	423	14
Cotton (INM)	<i>Kharif</i>	Rainfed	MB	M	M	H	Cotton	21-6-18	10-1-19	423	14
Cotton (IPM)	<i>Kharif</i>	Rainfed	MB	M	M	H	Cotton	21-6-18	10-1-19	423	14
Kitchen garden	<i>Kharif</i>	Irrigated	MB	M	M	H	-	15-7-2018	17-11-18	423	14

#### Technical Feedback on the demonstrated technologies

Sl. No.	Crop	Variety/ Technology	Farmers' Feed Back
1	Groundnut	IPM	Application of chlorpyrifos 25 ml /kg as a seed treatment of groundnut seed reduce infestation of white grub (Very less white grub infestation)
2	Groundnut	Varietal	GJG-22 variety gives higher yield as compare to GG-20 and less infestation of stem rot as compare to other variety in kharif season
3	Groundnut	IDM	Application of Trichoderma in Groundnut crop reduce infestation of stem rot and increase yield
4	Cotton	IPM	Integrated approach for management of pink boll worm i.e. pheromone trap and two or three spray of Beauveria reduce incidence of pink boll worm
5	Cotton	INM	Application of Azotobactor and PSB culture reduce cost of chemical fertilizer and increase yield
6	Wheat	INM	Application of biofertilizer reduce the cost of chemical fertilizer and increase yield
7	Wheat	INM	Application of Azotobactor and PSB culture increase yield
8	Cumin	IDM	Application of trichoderma with castor cake reduce wilt in cumin and increase yield
9	Chick pea	Varietal	Less incidence of wilt in GG-5 var of chick pea and higher yield as compare to other variety
10	Sesame	Varietal	G.T-3 var. Bold and white seeded and higher yield

11	Papaya	Varietal	GJP-1 newly released variety and gives higher yield and market price as compare to other
12	Onion	Varietal	Higher yield as compare to other variety
13	Tomato	INM	Application of micro nutrient Grade -4 reduce nutrient deficiency and increase yield
14	Brinjal	IPM	Pheromone trap in brinjal field control the shoot and fruit borer
15	Nutritional security	Balanced Nutrition	Provide balanced Nutrition with easy availability
16	Nutritional Security	importance of solar cooker	Nutritional enrichment with high nutritious and tasty low cost diet with reducing drudgery of women
17	Cattle	nutrient management	-Balance ration feeding, increase in use of mineral mixture feeding in animals helps to increase milk production and reduce the reproduction disorders
18	Cattle	nutrient management	Increase milk production and reduce cost of production through probiotic feeding of animal
19	Cattle	nutrient management	Reduce the metabolic disorder to feeding a calcium supplementation in animal
20	Buffalo	Integrated nutrient management	Improve nutritional status of cattle and increase animal productivity of milch animal through feeding bypass fat
21	Cattle	Integrated nutrient management	Improve nutritional status of cattle and increase animal productivity of milch animal through feeding bypass protein

#### Farmers' reactions on specific technologies

Sl. No.	Crop	Variety/ Technology	Farmers' Feed Back
1	Groundnut	IPM	Application of seed treatment of chloropyriphos reduce white grub infestation and increase yield
2	Groundnut	Varietal	GJG-22 variety give higher yield as compare to GG-20 and also less stem rot infestation
3	Groundnut	IDM	Application of Trichoderma in Groundnut crop reduce infestation of stem rot and increase yield
4	Cotton	IPM	Beauveria reduce incidence of pink boll worm and increase yield of cotton
5	Cotton	INM	Application of Azotobactor and PSB culture reduce cost of chemical fertilizer and increase yield
6	Wheat	INM	Application of biofertilizer reduce the cost of chemical fertilizer and increase yield
7	Wheat	INM	Application of Azotobactor and PSB culture increase yield
8	Cumin	IDM	Application of trichoderma with castor cake reduce wilt in cumin and increase yield
9	Chick pea	Varietal	GG-5 give higher yield as compare to other chick pea variety
10	Sesame	Varietal	G.T-3 var. Bold and white seeded and higher yield
11	Papaya	Varietal	GJP-1 newly released variety and gives higher yield and market price as compare to other
12	Onion	Varietal	Higher yield as compare to other variety
13	Tomato	INM	Micro nutrient Grade -4 increase yield
14	Brinjal	IPM	Pheromone trap in brinjal field control the shoot and fruit borer
15	Nutritional security	Balanced Nutrition	Provide balanced Nutrition with easy availability
16	Nutritional Security	solar cooker	Nutritional enrichment with high nutritious and tasty low cost diet with reducing drudgery of women
17	Cattle	nutrient management	-Balance ration feeding, helps to increase milk production

#### Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	23	-	302	-
2	Farmers Training	24	-	478	-
3	Media coverage	-	-	-	-
4	Training for extension functionaries	1	-	28	-

## C. Performance of Frontline Demonstrations

### Frontline demonstrations on Oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut		Variety	GJG-22	10	4	26	13	19	16	18.75	57526	118750	61224	2.06	55426	100000	44574	1.79
Groundnut		IDM	Tricho	10	4	25	14	19	16	16.97	54902	120625	65723	2.20	56985	103125	46140	1.80
Groundnut		IPM	GG-20	10	4	25	14	18.8	16	17.50	56551	117500	60949	2.08	54221	100000	45779	1.84
Sesamum		Variety	G.Til-3	10	4	Result Awaited												

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

\*\* BCR= GROSS RETURN/GROSS COST

### Frontline Demonstration on Pulse crops

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Chickpea		Variety	GG-5	10	4	33.8	22.5	28.3	23.3	21.46	59462	109468	50006	1.84	58212	90335	32123	1.55

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

\*\* BCR= GROSS RETURN/GROSS COST

### 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												
<b>Cereals</b>																			
Wheat	INM	GW-496	10	5	62.5	37.5	49.4	46.4	6.47	Yield	Yield	56732	87751	31019	1.55	58532	82315	23783	1.40
<b>Fruits and Vegetables</b>																			
Tomato	INM	Local	10	4.04	278.8	262.5	269	248.8	8.12	Yield	Yield	60500	201750	141250	2.87	65000	186562	121562	2.87
Brinjal	IPM	Local	10	4.04	400	368.8	384.3	335	14.72	Yield	Yield	52400	192125	139725	3.67	55000	167500	112500	3.04
Onion	Variety	GJRO-11	3	1.2	325	306.3	314.6	297.9	5.61	Yield	Yield	120500	393229	272729	3.26	125000	372395	247395	2.97
Papaya	Variety	GJP-1	3	1.2	Result Awaited														
<b>Spices &amp; condiments</b>																			
Cumin	IDM	GC-4	10	4	13.1	5.6	9.2	7.5	22.67	Yield	Yield	54562	133219	78653	2.44	54312	108750	52437	2.00

Medicinal & aromatic plants																				
Mentholment																				
Commercial Crops																				
Cotton	INM	INM	10	4	35	20	25.7	23	11.74	Yield	Yield	56360	180703	124343	3.21	59136	161718	102555	2.73	
Cotton	IPM	IPM	50	20	35	18	25.5	22.4	13.84	Yield	Yield	54712	179438	124726	3.26	59163	157219	98056	2.65	

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

\*\* BCR= GROSS RETURN/GROSS COST

#### FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cattle		Anabolite liquid	10	-	8.5	6.7	26.27	Milk yield	Milk Yield	52984	74187	21204	1.40	51385	71595	20120	1.39
Cattle	By Pass Fat		20	-						Result Awaited							
Cattle	By Pass Protein		20	-						Result Awaited							

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

\*\* BCR= GROSS RETURN/GROSS COST

#### FLD on Fisheries

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demonstration	Check		Demonstration	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Common Carps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

\*\* BCR= GROSS RETURN/GROSS COST

#### FLD on Other Enterprises

Category	Name of the technology demonstrated	No. of Farmer	No. of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.) or Rs./unit				Economics of check (Rs.) or Rs./unit			
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Oyster Mushroom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Button Mushroom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apiculture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Maize Sheller	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Value Addition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vermi Compost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sericulture	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

#### FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
-	-	-	-	-	-

#### FLD on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farmer	Area (ha)	Major parameters	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit etc.)				
						Demo	Check		Land preparation	Sowing	Weeding	Total	Land preparation	Labour	Irrigation	Total	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

#### FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Vegetables	Nutritional security	Nutritional security	50	50	213.6	201.4	5.6	Yield	Yield	116470	212340	95870	1.82	123450	210380	86930	1.70

#### FLD on Demonstration details on crop hybrids

Crop	technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average						
Oilseed crop	-	-	-	-	-	-	-	-	-	-	-	-	-
Pulse crop	-	-	-	-	-	-	-	-	-	-	-	-	-
Cereal crop	-	-	-	-	-	-	-	-	-	-	-	-	-
Vegetable crop	-	-	-	-	-	-	-	-	-	-	-	-	-
Fruit crop	-	-	-	-	-	-	-	-	-	-	-	-	-
Other (specify)	-	-	-	-	-	-	-	-	-	-	-	-	-

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

**D. Performance of Cluster Frontline Demonstrations (CFLD)**

**CFLD 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	GJG-22	125	50	27	11	19.73	15.15	23.19	46750	58650	51900	2.11	46750	75766	29016	1.62
Castor																		

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

\*\* BCR= GROSS RETURN/GROSS COST

**CFLD on Pulse crops**



### 3.4. Training Programmes

Thematic Area	No. of Courses	No. of Participants								
		Others			SC/ST			Total		
		M	F	T	M	F	T	M	F	T
<b>Plant Protection</b>										
Integrated Pest & Diseases management in cotton & groundnut	1	28	0	28	7	0	7	35	0	35
Zero Budget Management in farming	1	0	26	26	0	15	15	0	41	41
Integrated Pest and Diseases management in Rabi crops	1	27	0	27	5	0	5	32	0	32
Diseases management in spices	2	54	0	54	8	0	8	62	0	62
Storage pest management	1	0	32	32	0	4	4	0	36	36
<b>Home Science</b>										
Preparation of different types of bakery products like Pizza base, Nankhatai, different types of biscuits, Cake etc.	1	0	27	27	0	3	3	0	30	30
Preparation of Protein and Energy rich diet	2	0	58	58	0	6	6	0	64	64
Preparation of different products from Aonla	1	0	22	22	0	15	15	0	37	37
<b>Animal Husbandry</b>										
Infertility of cows & buffalo by disease and its prevention	1	33	0	33	3	0	3	36	0	36
Importance of colostrums feeding in new born calves	1	25	0	25	6	0	6	31	0	31
Importance of Artificial Insemination in Cattle	1	0	26	26	0	10	10	0	36	36
Prevention and control of mastitis in cattle and buffalo	2	57	0	57	6	0	6	63	0	63
<b>Horticulture</b>										
Production technology of Fruit and vegetable crops	1	31	0	31	3	0	3	34	0	34
Nursery raising	2	60	0	60	6	0	6	66	0	66
Production technology of spices crops	1	27	0	27	6	0	6	33	0	33
<b>Extension</b>										
Formation of new SHGs, CIGs,	2	58	0	58	3	0	3	61	0	61
Leadership Development	1	26	0	26	5	0	5	31	0	31
<b>Grand Total</b>	<b>22</b>	<b>426</b>	<b>191</b>	<b>617</b>	<b>58</b>	<b>53</b>	<b>111</b>	<b>484</b>	<b>244</b>	<b>728</b>

### B. Off Campus

Thematic Area	No. of Courses	No. of Participants								
		Others			SC/ST			Total		
		M	F	T	M	F	T	M	F	T
<b>Plant Protection</b>										
Integrated Pest management in cotton & groundnut	1	31	0	31	2	0	2	33	0	33
Integrated Disease Management in cotton & groundnut	2	54	0	54	7	0	7	61	0	61
Bio-control of pests and diseases	1	29	0	29	3	0	3	32	0	32
Diseases management in cumin & coriander	1	31	0	31	4	0	4	35	0	35
Storage pest management	1	0	27	27	0	5	5	0	32	32
<b>Home science</b>										
Preparation of different types of	1	0	27	27	0	4	4	0	31	31

masala										
Work simplification in household activities and Drudgery reduction technologies in agriculture	1	0	28	28	0	1	1	0	29	29
Importance of Kitchen Waste decomposition in Kitchen Gardening	1	0	41	41	0	4	4	0	45	45
Organic Kitchen gardening & its importance on health	1	0	31	31	0	5	5	0	36	36
<b>Animal Husbandry</b>	0	0	0	0	0	0	0	0	0	0
Infertility of cow and Buffalo by diseases & its prevention	1	28	0	28	3	0	3	31	0	31
Importance of colostrums feeding in new born calves	2	33	29	62	0	0	0	33	29	62
Importance of Artificial Insemination in Cattle	2	61	0	61	3	0	3	64	0	64
Increase nutritive value of low quality roughages for milking animals	1	35	0	35	0	0	0	35	0	35
Fodder crop production technology	1	32	0	32	3	0	3	35	0	35
Prevention and Control of Mastitis in Cattle and Buffalo	2	63	0	63	0	0	0	63	0	63
<b>Horticulture</b>	0	0	0	0	0	0	0	0	0	0
Production technology in protected cultivation	1	28	0	28	4	0	4	32	0	32
Pruning and training in fruit crops	1	30	0	30	4	0	4	34	0	34
Management of young Plants/ Orchards	1	29	0	29	0	0	0	29	0	29
Cultivation practices of onion and garlic	1	29	0	29	1	0	1	30	0	30
Post Harvest Management Technology	1	24	0	24	5	0	5	29	0	29
<b>Extension</b>	0	0	0	0	0	0	0	0	0	0
Procedure for formation of new SHGs, CIGs	1	30	0	30	4	0	4	34	0	34
Development of entrepreneurship among rural youth	1	33	0	33	4	0	4	37	0	37
<b>Grand Total</b>	<b>26</b>	<b>600</b>	<b>183</b>	<b>783</b>	<b>47</b>	<b>19</b>	<b>66</b>	<b>647</b>	<b>202</b>	<b>849</b>

### C. Consolidated table (On and OFF Campus)

Thematic Area	No. of Courses	No. of Participants								
		Others			SC/ST			Total		
		M	F	T	M	F	T	M	F	T
<b>Plant Protection</b>										
Integrated Pest management in cotton & groundnut	2	59	0	59	9	0	9	68	0	68
Integrated Disease management in cotton & groundnut	2	54	0	54	7	0	7	61	0	61
Zero Budget Management in farming	1	0	26	26	0	15	15	0	41	41
Integrated Pest and Diseases management in Rabi crops	1	27	0	27	5	0	5	32	0	32
Diseases management in spices	3	85	0	85	12	0	12	97	0	97
Storage pest management	2	0	59	59	0	9	9	0	68	68
<b>Home Science</b>										
Bio-control of pests and diseases	1	29	0	29	3	0	3	32	0	32

Preparation of different types of masala	1	0	27	27	0	4	4	0	31	31
Preparation of different types of bakery products like Pizza base, Nankhatai, different types of biscuits, Cake etc.	1	0	27	27	0	3	3	0	30	30
Importance of Kitchen Waste decomposition in Kitchen Gardening	1	0	41	41	0	4	4	0	45	45
Preparation of Protein and Energy rich diet	2	0	58	58	0	6	6	0	64	64
Preparation of different products from Aonla	1	0	22	22	0	15	15	0	37	37
Work simplification in household activities and Drudgery reduction technologies in agriculture	1	0	28	28	0	1	1	0	29	29
Organic Kitchen gardening & its importance on health	1	0	31	31	0	5	5	0	36	36
<b>Animal Husbandry</b>										
Infertility of cow and Buffalo by diseases & its prevention	2	61	0	61	6	0	6	67	0	67
Importance of colostrums feeding in new born calves	3	58	29	87	6	0	6	64	29	93
Prevention and Control of Mastitis in Cattle and Buffalo	4	120	0	120	6	0	6	126	0	126
Importance of artificial insemination in Cattle	3	61	26	87	3	10	13	64	36	100
Fodder crop production technology	1	32	0	32	3	0	3	35	0	35
Increase nutritive value of low quality roughages for milking animals	1	35	0	35	0	0	0	35	0	35
<b>Horticulture</b>										
Production technology of Fruit and vegetable crops	1	31	0	31	3	0	3	34	0	34
Nursery raising	2	60	0	60	6	0	6	66	0	66
Production technology of spices crops	1	28	0	28	4	0	4	32	0	32
Production technology in protected cultivation	1	30	0	30	4	0	4	34	0	34
Pruning and training in fruit crops	1	29	0	29	0	0	0	29	0	29
Management of young Plants/ Orchards	1	29	0	29	1	0	1	30	0	30
Cultivation practices of onion and garlic	1	24	0	24	5	0	5	29	0	29
Post Harvest Management Technology	1	28	0	28	4	0	4	32	0	32
<b>Extension</b>										
Formation of new SHGs, CIGs,	3	86	0	88	7	0	7	95	0	95
Leadership Development	1	26	0	26	5	0	5	31	0	31
Development of entrepreneurship among rural youth	1	34	0	34	4	0	4	38	0	38
<b>Grand Total</b>	<b>48</b>	<b>1026</b>	<b>374</b>	<b>1400</b>	<b>105</b>	<b>72</b>	<b>177</b>	<b>1131</b>	<b>446</b>	<b>1384</b>

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

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	-	-	-	-	-	-	-	-	-	-
Training and pruning of orchards	-	-	-	-	-	-	-	-	-	-
Protected cultivation of vegetable crops	-	-	-	-	-	-	-	-	-	-
Commercial fruit production	-	-	-	-	-	-	-	-	-	-
Integrated farming	-	-	-	-	-	-	-	-	-	-

Seed production	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Planting material production	-	-	-	-	-	-	-	-	-	-
Vermi-culture	-	-	-	-	-	-	-	-	-	-
Mushroom Production	-	-	-	-	-	-	-	-	-	-
Bee-keeping	-	-	-	-	-	-	-	-	-	-
Sericulture	-	-	-	-	-	-	-	-	-	-
Repair and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-	-	-
Value addition	-	-	-	-	-	-	-	-	-	-
Small scale processing	-	-	-	-	-	-	-	-	-	-
Post Harvest Technology	-	-	-	-	-	-	-	-	-	-
Tailoring and Stitching	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
Dairying	-	-	-	-	-	-	-	-	-	-
Sheep and goat rearing	-	-	-	-	-	-	-	-	-	-
Quail farming	-	-	-	-	-	-	-	-	-	-
Piggery	-	-	-	-	-	-	-	-	-	-
Rabbit farming	-	-	-	-	-	-	-	-	-	-
Poultry production	-	-	-	-	-	-	-	-	-	-
Ornamental fisheries	-	-	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-	-	-
Freshwater prawn culture	-	-	-	-	-	-	-	-	-	-
Shrimp farming	-	-	-	-	-	-	-	-	-	-
Pearl culture	-	-	-	-	-	-	-	-	-	-
Cold water fisheries	-	-	-	-	-	-	-	-	-	-
Fish harvest and processing technology	-	-	-	-	-	-	-	-	-	-
Fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Any other (pl.specify)	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-	-	-	-	-	-

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	-	-	-	-	-	-	-	-	-	-
Training and pruning of orchards	-	-	-	-	-	-	-	-	-	-
Protected cultivation of vegetable crops	-	-	-	-	-	-	-	-	-	-
Commercial fruit production	-	-	-	-	-	-	-	-	-	-
Integrated farming	-	-	-	-	-	-	-	-	-	-
Seed production	-	-	-	-	-	-	-	-	-	-
Production of organic inputs	-	-	-	-	-	-	-	-	-	-
Planting material production	-	-	-	-	-	-	-	-	-	-
Vermi-culture	-	-	-	-	-	-	-	-	-	-
Mushroom Production	-	-	-	-	-	-	-	-	-	-
Bee-keeping	-	-	-	-	-	-	-	-	-	-
Sericulture	-	-	-	-	-	-	-	-	-	-
Repair and maintenance of farm machinery and implements	-	-	-	-	-	-	-	-	-	-
Value addition	-	-	-	-	-	-	-	-	-	-
Small scale processing	-	-	-	-	-	-	-	-	-	-
Post Harvest Technology	-	-	-	-	-	-	-	-	-	-

Tailoring and Stitching	-	-	-	-	-	-	-	-	-	-
Rural Crafts	-	-	-	-	-	-	-	-	-	-
Production of quality animal products	-	-	-	-	-	-	-	-	-	-
Dairying	-	-	-	-	-	-	-	-	-	-
Sheep and goat rearing	-	-	-	-	-	-	-	-	-	-
Quail farming	-	-	-	-	-	-	-	-	-	-
Piggery	-	-	-	-	-	-	-	-	-	-
Rabbit farming	-	-	-	-	-	-	-	-	-	-
Poultry production	-	-	-	-	-	-	-	-	-	-
Ornamental fisheries	-	-	-	-	-	-	-	-	-	-
Composite fish culture	-	-	-	-	-	-	-	-	-	-
Freshwater prawn culture	-	-	-	-	-	-	-	-	-	-
Shrimp farming	-	-	-	-	-	-	-	-	-	-
Pearl culture	-	-	-	-	-	-	-	-	-	-
Cold water fisheries	-	-	-	-	-	-	-	-	-	-
Fish harvest and processing technology	-	-	-	-	-	-	-	-	-	-
Fry and fingerling rearing	-	-	-	-	-	-	-	-	-	-
Any other (pl.specify)	-	-	-	-	-	-	-	-	-	-
<b>TOTAL</b>	-	-	-	-	-	-	-	-	-	-

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	28	5	33	0	0	0	28	5	33
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	0	0	0	0	0	0	0	0	0	0
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Any other (pl.specify)	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>1</b>	<b>28</b>	<b>5</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>5</b>	<b>33</b>

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	0	0	0	0	0	0	0	0	0	0
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	1	34	3	37	0	0	0	34	3	37
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery	0	0	0	0	0	0	0	0	0	0

and implements										
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Integrated Disease Management	1	34	2	36	2	0	2	36	2	38
<b>TOTAL</b>	<b>2</b>	<b>68</b>	<b>5</b>	<b>73</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>70</b>	<b>5</b>	<b>75</b>

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	1	28	5	33	0	0	0	28	5	33
Integrated Pest Management	0	0	0	0	0	0	0	0	0	0
Integrated Nutrient management	1	34	3	37	0	0	0	34	3	37
Rejuvenation of old orchards	0	0	0	0	0	0	0	0	0	0
Protected cultivation technology	0	0	0	0	0	0	0	0	0	0
Production and use of organic inputs	0	0	0	0	0	0	0	0	0	0
Care and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Gender mainstreaming through SHGs	0	0	0	0	0	0	0	0	0	0
Formation and Management of SHGs	0	0	0	0	0	0	0	0	0	0
Women and Child care	0	0	0	0	0	0	0	0	0	0
Low cost and nutrient efficient diet designing	0	0	0	0	0	0	0	0	0	0
Group Dynamics and farmers organization	0	0	0	0	0	0	0	0	0	0
Information networking among farmers	0	0	0	0	0	0	0	0	0	0
Capacity building for ICT application	0	0	0	0	0	0	0	0	0	0
Management in farm animals	0	0	0	0	0	0	0	0	0	0
Livestock feed and fodder production	0	0	0	0	0	0	0	0	0	0
Household food security	0	0	0	0	0	0	0	0	0	0
Integrated Disease Management	1	34	2	36	2	0	2	36	2	38
<b>TOTAL</b>	<b>3</b>	<b>96</b>	<b>10</b>	<b>106</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>98</b>	<b>10</b>	<b>108</b>

**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
<b>Crop production and management</b>										
Increasing production and productivity of crops	1	32	0	32	2	0	2	34	0	34
Commercial production of vegetables	1	75	0	75	12	0	12	87	0	87
<b>Production and value addition</b>										
Fruit Plants	1	34	0	34	0	0	0	34	0	34
Ornamental plants	0	0	0	0	0	0	0	0	0	0
Spices crops	1	45	0	45	4	0	4	49	0	49
Soil health and fertility management	1	87	0	87	0	0	0	87	0	87
Production of Inputs at site	0	0	0	0	0	0	0	0	0	0
Methods of protective cultivation	2	94	0	94	5	0	5	99	0	99

<b>Integrated Pest and Disease Management</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Major crops	1	34	0	34	5	0	5	39	0	39
Vegetable crops	1	41	0	41	4	0	4	45	0	45
Spices crops	0	0	0	0	0	0	0	0	0	0
Bio-control of pests and diseases	1	35	0	35	0	0	0	35	0	35
<b>Total</b>	<b>10</b>	<b>477</b>	<b>0</b>	<b>477</b>	<b>32</b>	<b>0</b>	<b>32</b>	<b>509</b>	<b>0</b>	<b>509</b>
<b>Post harvest technology and value addition</b>										
Processing and value addition	2	0	43	43	0	2	2	0	45	45
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>0</b>	<b>43</b>	<b>43</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>45</b>	<b>45</b>
<b>Farm machinery</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Farm machinery, tools and implements	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Livestock and fisheries</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Livestock production and management	1	22	203	225	3	12	15	25	215	240
Animal Nutrition Management	1	30	95	125	2	18	20	32	113	145
Animal Disease Management	0	0	0	0	0	0	0	0	0	0
Fisheries Nutrition	0	0	0	0	0	0	0	0	0	0
Fisheries Management	0	0	0	0	0	0	0	0	0	0
Animal Health Camp	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>2</b>	<b>52</b>	<b>298</b>	<b>350</b>	<b>5</b>	<b>30</b>	<b>35</b>	<b>57</b>	<b>328</b>	<b>385</b>
<b>Home Science</b>										
Household nutritional security	1	0	41	41	0	0	0	0	41	41
Economic empowerment of women	0	0	0	0	0	0	0	0	0	0
Drudgery reduction of women	2	28	12	40	0	0	0	28	12	40
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>3</b>	<b>28</b>	<b>53</b>	<b>81</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>28</b>	<b>53</b>	<b>81</b>
<b>Agricultural Extension</b>										
Capacity Building and Group Dynamics	0	0	0	0	0	0	0	0	0	0
Others (pl. specify)	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>GRAND TOTAL</b>	<b>17</b>	<b>557</b>	<b>394</b>	<b>951</b>	<b>37</b>	<b>32</b>	<b>69</b>	<b>594</b>	<b>426</b>	<b>1020</b>

#### 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	0	0	0	0	0	0	0	0	0	0
Commercial floriculture	0	0	0	0	0	0	0	0	0	0
Commercial fruit production	0	0	0	0	0	0	0	0	0	0
Commercial vegetable production	0	0	0	0	0	0	0	0	0	0
Integrated crop management	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Preparation of chochlet and bakery item	1	0	42	42	0	3	3	0	45	45
Preservation of different bakery item	1	0	131	131	0	0	0	0	131	131
Value addition in Gnut	1	0	38	38	0	10	10	0	48	48
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Livestock and fisheries	0	0	0	0	0	0	0	0	0	0
Dairy farming	0	0	0	0	0	0	0	0	0	0
Poultry farming	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>



Agricultural Extension	0	0	0	0	0	0	0	0	0	0
Capacity building and group dynamics	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0
Grand Total	3	0	211	211	0	13	13	0	224	224

### Details of trainings organized under ASCI

Area of training	No. of Courses	No. of Participants												
		General			SC/ST			Grand Total						
		Male	Female	Total	Male	Female	Total	Male	Female	Total				
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

### 3.5. Extension Programmes

Sl No	Nature of Extension Activity	No. of activities	Participants											
			Farmers (Others) (I)			SC/ST (Farmers) (II)			Extension Officials (III)			Grand Total (I+II+III)		
			M	F	T	M	F	T	M	F	T	M	F	T
1	Field Day	17	230	78	308	15	5	20	3	1	4	248	84	332
2	Kisan Gosthi	12	448	97	545	17	9	26	4	1	5	469	107	576
3	Exhibition	1	173	60	233	12	4	16	8	3	11	193	67	260
4	Film Show	19	424	106	530	24	11	35	3	1	4	451	118	569
5	Group meetings	51	1864	503	2367	67	14	81	12	4	16	1943	521	2464
6	Lectures delivered	34	1306	305	1611	38	9	47	11	2	13	1355	316	1671
7	Newspaper coverage	2	0	0	0	0	0	0	0	0	0	0	0	0
8	Popular articles	2	0	0	0	0	0	0	0	0	0	0	0	0
9	Extension Literature	12	2184	917	3101	81	29	110	0	0	0	2265	946	3211
10	Advisory Services	1	2410	188	2598	77	15	92	4	0	4	2491	203	2694
11	Scientific visit to farmers field	163	288	14	302	26	6	32	4	1	5	318	21	339
12	Farmers visit to KVK	1751	1432	264	1696	39	11	50	4	1	5	1475	276	1751
13	Diagnostic visits	33	48	7	55	7	2	9	4	1	5	59	10	69
14	Animal Health Camp	9	18	25	43	4	7	11	1	0	1	23	32	55
15	Soil test	65	58	0	58	7	0	7	0	0	0	65	0	65
16	Technology Week	1	186	51	237	26	9	35	4	1	5	216	61	277
17	Swachhata Hi Sewa	1	245	88	333	44	18	62	6	1	7	295	107	402
18	Mahila Kisan Divas	1	12	87	99	3	21	24	4	1	5	19	109	128
	Total	2175	11326	2790	14116	487	170	657	72	18	90	11885	2978	14863

### Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	
Extension Literature	3032
Newspaper coverage	
Popular articles	
Radio Talks	
TV Talks	
Animal health amps (Number of animals treated)	120
Others (pl. specify)	
<b>Total</b>	<b>3152</b>

### 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)	Value (Rs)	Number of farmers
Oilseeds	Groundnut	GJG-17	Breeder	7.78	-	-
	Groundnut	GAUG-10	Breeder	6.60	-	-
	Groundnut	GJG-22	Breeder	5.80	-	-
	Groundnut	GJG-31	Breeder	28.10	-	-
	Castor	GCH-9	Hybrid	3.00	-	-
Pulses	Black Gram	Guj Udad-1	TF	1.89	-	-
<b>Total</b>				<b>53.17</b>	-	-

#### Production of Planting Materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Papaya	Papaya	GJP-1	-	72	360	22
Vegetables seeds	-	-	-	20	200	8

#### Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg/bottle/no		
Bio Fertilisers	Azotobacter culture (500 ml)	123 (500 ml)	65	7380
	PSB culture (500 ml)	160 (500 ml)	75	9600
	Rhizobium culture (500 ml)	31 (500 ml)	18	1620
Bio-pesticide	Beauveria Bassiana (1 kg)	2211 (1 kg)	990	331650
	Metarhizium (1 kg)	--	-	-
Bio-fungicide	Trichoderma (1 kg)	4862 (1 kg)	2140	340140
Others	Pheromone Trap nos.	930	380	18600
	Pink bollworm Lure nos.	60	25	600
	BSFB Lure	8	3	80
<b>Total</b>				

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

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

B. Literature developed/published

Contributors	Year of publication	Title	Journal Name	Vol /Issue /Page No
P S Sharma, V S Prajapati, A R Parmar and S V Undhad	2018	Spending time with their kids: Distribution of school going and non-school going migrant children and their family interaction	Advance Research Journal of Social Science NAAS Rating: 3.56	9(1):20-25, June 2018
F P Kargatiya, V R Malam, V.S. Prajapati and P S Sharma	2018	Effect of different planting geometry on yield and quality of Watermelon (Citrullaslanatus Thunb.)	Asian Journal of Horticulture NAAS Rating: 3.26	13(1),14-17, June 2018
F P Kargatiya, V R Malam, V.S. Prajapati and P S Sharma	2018	Effect of retention of fruits on yield and quality of Watermelon (Citrullaslanatus Thunb.)	Asian Journal of Horticulture NAAS Rating: 3.26	13(1),14-17, June 2018

P S Sharma, J K Gulati , N B Jadav , V S Prajapati and S V Undhad	2018	Time Spent in Various Activities and Cognitive Abilities of School Going and Non School Going Children in Migrant Labour Families	Journal of Krishi Vigyan NAAS Rating: 4.41	6(2), 234-37, June 2018
N B Jadav , S V Undhad and V S Prajapati	2018	Information seeking behavior of Bt. cotton growers about IPM technology	Gujarat Journal of Extension education NAAS Rating: 3.86	29(1), 48-51, December 2018
S V Undhad, P S Sharma and V S Prajapati	2018	Impact of Frontline demonstrations on Integrated approaches against the management of pinkboll worm in Bt. cotton	Gujarat Journal of Extension education NAAS Rating: 3.86	29(2), 184-86, December 2018
N.B.Jadav, S.V.Undhad and P.S. Sharma	2019	Growers knowledge and adoption of chemical fertilizers in Bt. Cotton	Journal of Krishi Vigyan, NAAS rating 4.41	7 special issue 2018 pp 69-73
Zala P.H., Jadav N.B. and Kapuriya T.D.	2019	Perception of the groundnut growers about damage caused by pests in Junagadh district of Gujarat state	International Journal of Agriculture Sciences NAAS 4.20	Volume 11, Issue 5, 2019, pp.-7988-7989.
Zala P.H., Jadav N.B. and Kapuriya T.D.	2019	Relationship between profiles of the groundnut growers and their perception about damage caused by pests	International Journal of Agriculture Sciences NAAS 4.20	Volume 11, Issue 5, 2019, pp.-7986-7987.
Prajapati V. S., Sharma P.S., Undhad S.V. and Jadav N.B.	2019	Socio-Economic Status Of Dairy Farm Women Of Rajkot District Of Gujarat	International Journal of Agriculture Sciences NAAS 4.20	Volume 11, Issue 1, 2019, pp.-7704-7706.
V.S. Prajapati, P.S. Sharma, S.V. Undhad, N.B. Jadav and A.R. Parmar	2019	Training Needs of Dairy farm Women Regarding Scientific Animal Husbandry Practices in Rajkot District of Gujarat	International Journal of Current Microbiology and Applied Sciences NAAS 5.38	ISSN: 2319-7706 Volume 8 Number 03 (2019)

### C. Details of Electronic Media Produced

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

**D. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs: The Success Stories / Case Studies need not be restricted to the reporting period). At this point please give titles of the success stories/ case studies. Detailed case study documents may be given at the end as an Annexure.**

**(A) Success Story: 1 (Animal Husbandry)**

**(B)**

**Title: Entrepreneurship Development through Dairy Farming**

**(B) Bio-data of Farmers**

- 1. Name of Farmer:** Jayantibhai Khimjibhai Ranpariya
- 2. Present Address:** Nani Dudhivadar, Jamkadorna and  
Taluka: Jamkadorna  
Dist.: Rajkot
- 3. Date of Birth:** 01/06/1972
- 4. Education:** 12<sup>th</sup> Pass
- 5. Source of Income (last three years)**

### (a) Animal Husbandry

**Output:** Milk production and net profit for last three years

Years	Total animal	Milking animal	Total income	Total expenditure	Net profit
2014-15	42	20	2400,000	16,00,000	8,00,000
2015-16	55	25	30,00,000	18,00,000	12,00,000
2017-18	55	25	30,00,000	18,00,000	12,00,000

### 6. Brief information about Farmer

Jayantibhai Khimjibhai Ranpariya is a Progressive farmer of Village Nanidudhivadar, Taluka Jamkadorna and District Rajkot in Gujarat. He studied up to 12<sup>th</sup> pass, after 12<sup>th</sup> pass one incidence occurred, under such situation; it was difficult to fulfill the requirement of his family member without any other income sources. Therefore, he was in search of some alternate sources of income. At this time Jayantibhai was started small dairy unit with the 7 Gir cows and 2 other non descriptive breed of animal. These animals were a burden rather than a source of income due to the meager productivity.

### 7. Brief information regarding innovation

Shri Jayantibhai is an educated farmer of Nanidudhivadar village who came and did contact with KVK Pipalia through Rajkot cooperative dairy and getting more return from his traditional practices. He inspired by KVK, Pipalia to established a modern scientific dairy farming unit in his farm. He was provided all the scientific information regarding housing, breeding, feeding and scientific management of a dairy farm. The Scientists of KVK started a series of activities i.e. training, demonstration, exposure visit etc to deal with the existing problems and observed a positive impact. Jayantibhai was always ready to adopt latest technology and scientific knowledge in his field.

At present, Jayantibhai has adopted the scientific concepts to rear his animals as per the suggestions given by KVK scientists. Jayantibhai has established improvised cattle shed at his home. In addition, he has procured chaff-cutter machine for reducing loss of fodder while feeding the animals. He has engineered with the help of scientists, indigenous technology for providing drinking water to the animals 24 hours a day. He uses animal mate in the shed to prevent the occurrence of bacterial/viral diseases and it also helps in proper sanitation of shed. He has just procured milking machine for time efficiency and clean milk production, and also provide balanced nutrition to their animals by adding some mineral mixtures and mixing of dry and green fodder as per requirement and also care about cattle shed must be remain clean by washing daily and by adjusting auto drainage system for collecting the urine and collecting the animal dugs. He has also generated extra income by selling of cow urine and animal dug also. Due to adoption of improved practices, his constant efforts, hard work and timely support from KVK and other line departments and Rajkot dairy he could achieved very impressive growth in dairy farming.

He had started animal husbandry since last 12 years and now a days he has 55 total number of animals in which 25 are milking animals and he has produced 12,00,000/- Rs. net profit excluding the expenditure of Rs. 18,00,000/- Rs out of Total income of Rs. 30,00,000/-. His annual milk production per animal is of Rs. 40,000/- per animal thus obtaining 30 lakhs of annual income.

### 7. Impact of success story on other farmer's locality:

Shri Jayantibhai has set an example for other farmers of the district to adopt animal husbandry as sole occupation and generate higher income by producing milk, cow urine and animal dug. He always encourage the farmers who has land to adopt at least small scale animal husbandry which help them to produce organic fertilizer to improves their soil fertility. In addition, from the small scale farmers can improve it to the large-scale milk production by using scientific technology of animal husbandry. Hence, by observing these scientific practices for management of dairy farm, a number of farmers (15) started to manage their farm by this way and this technology disseminated as horizontal way.

### Success story-2

#### Title: Cultivation of Date palm and apple ber in barren land

#### Introduction:

Shri Anilbhai is the farmers with land holding of 1.30 ha. barren land out of total cultivable land, in the village Tanasva, Block –Upleta, Dist. - Rajkot. Earlier this land was not cultivated and remains barren, and whatever crops sown, there is no special success. This land is so much saline with low moisture holding. In this type of soil Mr. Anilbhai decide to cultivate date palm and apple ber crop which require this type of soil and water.

#### KVK Intervention:

Mr. Anil bhai is a young educated farmer of Tanasava village. Earlier Anilbhai visited Junagadh Agri. University for getting the knowledge of Date palm and ber cultivation and decide to cultivate this both crop. Then after they visit KVK pipalia by doing one training of horticultural crops. Shree anilbhai get all the knowledge of cultivation of date palm from the KVK.

Shri Anil bhai shown Barhi variety of Date palm and Apple ber in his 1.30 ha. land in the year 2014. He shown 223 plant of apple ber and 127 plant of Barhi variety of Date palm. After showing the apple ber next year he get production of 60 to 70 kg of Ber production and after four year of showing he get 70 kg of Date palm fruit production per plant.

**Output:**

## Two year production data of anilbhai's 1.30 ha. land

Year	Crop	Prod./plant)kg	Production/ha.	Rate/kg	Income/ha.	Expenditure/ha.	Profit
2016-17	Apple ber	65	14495 kg.	35	5,07,325	1,50,000	3.57 lack
	Date palm	60	7620 kg	100	8,62,000	2,00,000	6.62 lack
2017-18	Apple ber	70	15610 kg	40	6,24,400	2,00,000	4.24 lack
	Date palm	70	8890 kg	100	8,89,000	2,00,000	6.89 lack

**Impact:**

By adopting this crop shri Anilbhai appreciate that he stands his Barren land economically viable. Even they get good value in his village. He proved that by adopting new technology and good efforts, hard work we can achieve our goal. And they also like to encourage other farmers to do farming in such type of soil who have completely barren land and never cultivate any crop in their land. They encourage the young generation to do modern farming and get more income by less expense. They also told that by encouraging farmers of nearby villages of Tanasva village 30 to 35 farmers are willing to this type of crop in their barren land.

**Success story : 3****Title: Khakhra Production with use of Advanced and New techniques****(B) Profile of Farmer:**

- 1. Name of Farmwomen:** Smt. Madhuben Rajubhai Banguriya
- 2. Presen Address: - Village:** Supedi, **Block:** Upleta ,**Dist.** Rajkot  
**Mobile:** 9998200431,
- 3. Birth Date:** 21-08-1980 **Age:** - 40
- 4. Education:-** 10<sup>th</sup> Pass

**5. Brief Information about the Entrepreneur –**

Smt. Madhuben Rajubhai Banguriya was not only successfully preparing Snack called Khakhra since 2014 at a large scale and helped her family financially but also given employment to other 12 ladies as a worker in her business. she had two sons and both are gaining education, out of which the elder one is Civil engineer and doing job professionally in a company at Rajkot. professional the couple is farmer itself but this idea of making khakhra Upgraded their financial deposits and status too in a society. Moreover, she is using advanced equipment like weighing scale, vacuum packaging, Atta maker for khakhra preparation, segregated Gas Connection for roasting and frying of the snack.

**6. Brief Information about Subject Matter**

Smt. Madhuben Rajubhai Banguriya basically is only metric pass but only due to her strong determination and dedication after meeting with KVK Pipalia had eventually grows her business of khakhra making at a large level. And also the khakhra prepared is no longer available in the market but exported in foreign countries like London, England and attaining a good profit over there. because of its good quality having 3-4 flavours like Masala, Jeera, Methi, Methi Masala, Garlic easily exported and consumed by different peoples across the foreign countries too.

**7. Economic Output:** The production of Khakhra by the group is 70 kg per day whose rate is Rs 110/Kg which constitutes monthly income of Rs 2,31,000 per month. After deducting the labour charges and other commodities expenditure which approximately constitutes 40 percent of the total income and hence net profit per month is Rs 1,38,000 monthly. The running period of the factory is approximately ten months in a year which clearly indicates a large profit annually.

**8. Horizontal Spread:** Smt. Madhuben Rajubhai Banguriya had learly set an example of empowerment by showing a great success with her determination. and also she is ready to give self-employment to other twelve ladies too by involving them in a processing process of preparation of Kharkhra. Along with she also trained a number of ladies by giving 8 days short training course of preparation of Khakhra at a small level. Gradually two small units also had started their own business at a small level and spread horizontally at a village level.

**Success story : 4****Title: Cultivation Drum stick crop****Introduction:**

Shree Rohitbhai was always cultivating a local cultivable crop of his area, just like Groundnut, Cotton, Wheat, Cumin, Coriander, and Sesamum etc. But due to unpredictable rain and climate change, continuous reductions in production and market prices they diverted to do something new in his land. After getting some knowledge and by doing deep study they decided to shown horticultural crop which results in two or three year. And finally he decides to grow drum stick in 14 acre oh his land.

**KVK Intervention:**

Mr. Rohitbhai is a young educated farmer of Jamnavad village. His farm is nearby KVK pipalia approximately one km. So he always visit KVK pipalia whenever he wants to adopt any new technology in his farm. By getting materials and knowledge regarding drumstick cultivation from kvk pipalia he starts to do drumstick cultivation.

He starts to cultivate drum stick in his 14 acre of land in 2016. He also done intercrop of soybean, black gram and coriander. By cultivating drumstick he never faces shortage of labors. Even he also gets yearly contract base labour due to continuous operations of laborious work in drumstick crop.

**Output:** Two year production data of Rohitbhai's 14 acre. land

Year	Crop	Expenditure/acre	Prod. (kg/acre)	14 acre land		
				Expenditure(Rs./acre)	Income(Rs./acre)	Profit(Rs./acre)
2016-17	Drum stick	22,100-/-	357	3,09,400	10,50,000	7,40,600
	Inter crop	2500-/-	-	35,000-/-	1,12,000	77,000
	Total			3,44,400	11,62,000	8,17,600
2017-18	Drumstick	17,000-/-	6858	2,38,000	15,36,192	12,98,192
	Intercrop	2200-/-		30,800	70,000	39,200
	Total			2,68,800	16,06,192	13,37,392

**Impact:**

By adopting this crop shri Rohitbhai initially short out the main hurdles of farming the laborious work and the non availability of labors. In this crop continuously harvesting of drum stick carried out, so yearly on contract base labour he hire and whenever he need labour he get immediately, whether in other crops the harvesting is done on same time and at that time labors are unavailable, if they avail that cost high wages and it is not affordable. Second most impact is all part of drum stick crop are useful even leaves, twig, wood and fruit also. So he get maximum price of every part of the drumstick plant.

**E. Give details of innovative methodology or innovative technology of Transfer of Technology developed and used during the year**

---NIL---

**F. Give details of indigenous technology practiced by the farmers in the KVK operational area which can be considered for technology development (in detail with suitable photographs)**

S. No.	Crop / Enterprise	ITK Practiced	Purpose of ITK
1.	Chilly	Use castor as a trap crop	For controlling thrips and jassids
2	Crop husbandry	Crop rotation and mixed cropping	Control weed
3	Fertility Management	Application of <i>tach / morum</i>	To improve soil physical condition
4	Fertility Management	Sheep and goat penning	To improve soil fertility
5	Harvesting	Harvest pulse crop in the morning hours	To reduce shattering

**5.1. Indicate the specific training need analysis tools/methodology followed for****A. Practicing Farmers**

- Group discussion
- Field observation
- Diagnostic visit

**B. Rural Youth**

- Discussion
- Observation

**C. In-service personnel**

- Questionnaire
- Discussion

**5.2. Indicate the methodology for identifying OFTs/FLDs****For OFT:**

- PRA
- Field level observations
- Farmer group discussions

**For FLD:**

- New variety/technology
- Poor yield at farmers level

### 5.3. Field activities

Number of villages adopted : 12

Sr. No	Name of village	Sr. No.	Name of Village	Sr. No.	Name of Village
1.	Talangana	5.	Mandlikpar	9.	Dalia
2.	Nagavadar	6.	Amrapar	10.	Sanala
3.	Patanvav	7.	Bhojpara	11.	NaniDudhivadar
4.	NaniParabdi	8.	Shemla	12.	Jashapar

### 6. LINKAGES

#### A. Functional linkage with different organizations

A	Junagadh Agricultural University	
1	College of Agriculture, Junagadh.	Impart training on Agril. aspects.
2	College of Agril. Engg, Junagadh	Impart training on Engg. aspects
3	Pulse Research Station, Junagadh	Supply of seeds for FLDs
4	Oilseeds Research Station, Junagadh	Supply of seeds for crop museum
5	Oilseeds Research Station, Amreli	Supply of seeds for crop museum
6	Director, DGR, Ivnagar, Junagadh	Training & exposure visit
7	Bio-control Lab, Dept of Ento. JAU. Junagadh	Supply of Beauveria, P. Trap, Lure etc.
8	Dept. of Plant Pathology, JAU, Junagadh	Supply of Bio fertilizer and Trichoderma
9	Vegetable Research Station, JAU, Junagadh	Supply of Vegetable Seeds
10	Cattle Breeding Farm, JAU, Junagadh	Training & exposure visit
B	State corporation and state deptt.	
1	District Agricultural Officer, Deptt. of Agriculture, District Panchayat, Rajkot	<ul style="list-style-type: none"> <li>➤ Joint diagnostic team visit at farmers' field</li> <li>➤ Organizing collaborative training to farmers</li> <li>➤ For collaborative off campus training</li> <li>➤ For collaborative training and demonstration Programme</li> <li>➤ Collaborative on campus training programme</li> <li>➤ For providing hostel facilities to participants and organizing collaborative Mahila Krishi Mela</li> </ul>
2	District Rural Development Agency, Rajkot	
3	Deputy Director of Veterinary, Department of veterinary & Animal Husbandry, Rajkot	
4	Deputy Director of Horticulture, Rajkot	
5	Deputy Director of Agriculture (Training), Farmer Training Centre, Rajkot	
6	Deputy Director of Agriculture (Extension), Rajkot	
10	Estate Engineer, Department of Irrigation, Dhoraji	
11	All Taluka Development Officers, and their team at Taluka level	
13	ATMA, Rajkot	

Note: The nature of linkage should be indicated in terms of joint diagnostic survey, joint implementation, and participation in meeting, contribution received for infrastructural development, conducting training programmes and demonstration or any other

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
NMOOP (CFLD)	2017-18	GOI	300000
Evaluation of Bioefficacy PII 301 (10 % SC) against c;hilli thrips and Phytotoxicity effect on natural enemies and yield of chilli sponsored by PI Industries Ltd.	2018-19	-	219500

Evaluation of Bioefficacy and Phytotoxicity of PIF 320 5% SC against Powdery Mildew disease of Chili sponsored by PI Industries Ltd.	2017-18	-	219500
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### C. Details of linkage with ATMA

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

#### 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	<b>Meetings</b>	AGB meeting	1	-	-
02	<b>Research projects</b>	-	-	-	-
03	<b>Training programmes</b>	Farmers training programme	12	5	-
04	<b>Demonstrations</b>	-	-	-	-
05	<b>Extension Programmes</b>				
	Kisan Mela	1	2	-	-
	Technology Week	-	-	-	-
	Exposure visit	-	-	-	-
	Exhibition				
	Soil health camps				
	Animal Health Campaigns				
	Others (Pl. specify)				
06	<b>Publications</b>				
	Video Films				
	Books				
	Extension Literature				
	Pamphlets				
	Others (Pl. specify)				
07	<b>Other Activities (Pl. specify)</b>				
	Watershed approach				
	Integrated Farm Development				
	Agripreneurs 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
-	-	-	-	-	-

### 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
-	-	-	-	-	-



#### 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
-	-	-	-	-	-

#### 7. Convergence with other agencies and departments: Activities may be specified under DAESI, YCMOU study centres and others

#### 8. Innovator Farmer's Meet

Sl.No.	Particulars	Details
	Have you conducted Farm Innovators meet in your district?	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:

S. No	Crop/Enterprise	Feed Back
1	Groundnut	Less incidence of stem rot disease and higher yielding
2	Groundnut*	-Application of trichoderma at proper time act as a precaution measure for the stem rot
3	Groundnut**	-IPM in G'nut effectively manage the pest and increase the yield
4	Sesame	-Bold seeded, wilt resistance, higher yield
5	Chick pea	-GG-3 variety of gram gave higher yield and wilt resistance
6	Wheat	-GW-366 variety of wheat is high yielding as compare to GW-496
7	Onion	High Yielding Variety, Less incidence of pest and disease
8	Brinjal	High Yielding Variety, Less incidence of pest and Little leaf of Brinjal
9	Brinjal*	High Yielding Variety, Less incidence of pest and Little leaf of Brinjal disease
10	Okra	High Yielding Variety Less incidence of pest and Yellow Vein Mosaic Virus Disease
11	Papaya	Resistance to papaya mosaic
12	Cumin	-Wilt resistance as compare to other variety
13	Cotton	-INM in cotton reduce the cost of fertilizers and reduce the reddening of cotton and increase the yield
14	Cotton*	Less infested cotton with pink bollworm and reduce cost of cultivation
15	Animal Husbandry	-Increase in milk production after calving
16	Kitchen Gardening	- Easy availability of vegetables at low cost

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

#### 11. Technology Week celebration during 2018-19: Yes, If Yes

Period of observing Technology Week: From 24, sept, 2018 to 29, sept, 2018

Total number of farmers visited :277

Total number of agencies involved :

Number of demonstrations visited by the farmers within KVK campus:2

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology	
Gosthies	-	-	IPM, INM, IDM in field crops & horticultural crops AI, feed and Fodder Management and nutrition management in Livestock, value addition, storage techniques, nutritional education, women empowerment for farm women	
Lectures organized	25	200		
Exhibition	-	--		
Film show	5	200		
Fair				
Farm Visit	5	200		
Diagnostic Practicals	4	200		
Supply of Literature (No.)	12	200		
Supply of Seed (q)	-	--		
Supply of Planting materials (No.)	1	16		Vegetable seedlings
Bio Product supply (Kg)	1	50		
Bio Fertilizers (q)	1	11		
Supply of fingerlings	-	-		
Supply of Livestock specimen (No.)	-	-		
Total number of farmers visited the technology week		277		

**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
-	-	-	-
-	-	-	-

B. Major area coverage under alternate crops/varieties

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

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No. of participants
-	-	-	-
-	-	-	-
<b>Total</b>			

D. Animal health camps organized

State	Number of camps	No. of animals	No. of farmers
-	-	-	-
-	-	-	-
<b>Total</b>			

E. Seed distribution in drought hit states

State	Crops	Quantity (qtl)	Coverage of area (ha)	Number of farmers
-	-	-	-	-
-	-	-	-	-
<b>Total</b>				

F. Large scale adoption of resource conservation technologies

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

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
<b>Total</b>												

13. IMPACT

A. Impact of KVK activities (Not to be restricted for reporting period).

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
-	-	-	-	-

NB: Should be based on actual study, questionnaire/group discussion etc. with ex-participants.

B. Cases of large scale adoption- full cases may be given at the end as Annexure. (Please furnish detailed information for each case and )

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

14. Kisan Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	68	75	65	30	31	21	290
	Voice only	321	452	374	32	75	71	1325
	Voice & Text both	-	-	-	-	-	-	-
	<b>Total Messages</b>	389	527	439	62	106	92	1615
	<b>Total farmers Benefitted</b>	389	527	439	62	106	92	1615

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	
Nil									

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

Name of the crop	Date of sowing	Date of harvest	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Type of Produce	Qty. (Kg.)	Cost of inputs	Gross income	
<b>Pulses</b>									Sell During 2019-20
Black Gram	-	-	2.70	GujUdad-1	Truthful	189	-	-	
<b>Oilseeds</b>									

Groundnut	-	-	1.40	GJG-17	Breeder	778	-	-
Groundnut	-	-	4.00	GAUG-10	Breeder	660	-	-
Groundnut	-	-	4.00	GJG-22	Breeder	579.52	-	-
Groundnut	-	-	5.00	GJG-31		2810		
Castor	-	-	1.00	GCH-9	Breeder	300	-	-

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
NIL					

### 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	
NIL							

### E. Utilization of hostel facilities

Accommodation available (No. of beds): NIL

### F. Database management

S. No	Database target	Database created
NIL		

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

## 6. 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	---				---		
With KVK	SBI	Dhoraji	060072		32586636847	360002082	SBIN0060072

### B. Utilization of KVK funds during the year 2017-18 (Rs. in lakh)

Sr. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	Pay & Allowances	76.00	76.00	74.04
2	Traveling allowances	1.00	1.00	0.70
3	Contingencies	9.80	9.80	10.88
TOTAL (A)		86.80	86.80	85.62
<b>B. Non-Recurring Contingencies</b>				
1	Works			
2	Equipments including SWTL & Furniture			
3	Vehicle (Four wheeler)			
4	Library (Purchase of assets like books & journals)			
TOTAL (B)				
<b>C. REVOLVING FUND</b>				
GRAND TOTAL (A+B+C)		86.80	86.80	85.62

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

Year	Opening balance as on 1 <sup>st</sup> April	Income during the year	Expenditure during the year	Net balance in hand as on 1 <sup>st</sup> April of each year
April 2016 to March 2017	236314	1833862	1047720	1022456
April 2017 to March 2018	1022456	2181697	2415203	788950
April 2018 to March 2019	788950	3661217	2552946	1897221

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

Sr. No.	Date	Name of Scientist	Title	Venue	Type
1	26-04-2018 27-04-2018	V.S. Prajapati, S.V Undhad, Dr. N.B.Jadav P.S Sharma	Extension Strategies for Doubling the Farmers' Income for Livelihood Security	Anand Agricultural University Anand	National Seminar
2	05-05-2018 07-05-2018	Dr. N.B.Jadav	Zonal workshop of KVKs zone VIII at MPKV Rahuri	MPKV Rahuri	Annual Zonal workshop
3	19-06-2018 09-07-2018	V.S. Prajapati	Production and Post-Production Interventions to Increase Returns from Livestock Enterprises-A Step Towards Doubling Farmers Income	Division of Livestock Production & Management F.V.Sc. & A.H., SKUAST-Kashmir, Shuhama, Alusteng, Srinagar-190006, Kashmir (J&K) India	CAFT Training
4	04-09-2018 24-09-2018	P.S Sharma	Extension led Nutritional Security	Division of Agriculture Extension, ICAR-IARI, New Delhi	CAFT Training
5	30-10-2018 01-11-2018	P.S Sharma	International Conference on Rural Livelihood improvement by enhancing farmer's income through sustainable innovative Agri and Allied Enterprises (RLISSAe)	Birla Institute of Technology, Patna	International Conference
6	05-12-2018 07-12-2018	Dr. N.B.Jadav	National seminar on Integrated Farming System for Enhancing Farmers' Income and Nutritional Security"	Kolkata, West Bengal, India	National Seminar
7	07-12-2018 09-12-2018	S.V Undhad,	Review Workshop cum Training on CFLDs on Pulses and Oilseeds	KVK, Sanosara, Bhavnagar	Workshop
8	08-12-2018 02-01-2019	A.R. Parmar	Winter school on good agricultural practices for doubling farmer's income and enhanced resource use efficiency	Department of Agronomy IARI New Delhi	Winter school training
9	17-01-2019 19-01-2019	Dr. V.S. Prajapati	National Conference on Enhancing Rural Livelihood Through Improved Buffalo productivity and Health	Navsari Agricultural University, Navsari	National Conference
10	27-01-2019 30-01-2019	A.R.Parmar	Master Trainer's Programme for Developing Entrepreneurship	KVK Narayangaon. PUNE-II	Workshop cum training

18. List the other collaborative research/ extension projects and also write brief key achievements of the projects.

- Pro SOIL
- NARI (Please indicate the name of one adopted village and give the activities carried over on nutri sensitive agriculture)
- VATICA
- Seed Hub
- Others (if any)

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

#### 19.1 Celebration of Technology Week:

Technology week was celebrated at Krishi Vigyan Kendra, J.A.U., Pipalia during 24<sup>th</sup> to 29<sup>th</sup> September, 2018. In which following Total 277 farmers and farm women from different villages of KVK operational area were participated.

Date	Villages	Taluka	Numbers of participants		
			Male	Female	Total
24.9.2018	Hariyasan, Jamkandorna, Pipalia	Jam Kandorna, Dhoraji	49	0	49
25.9.2018	Dardi, Anida	Gondal	52	0	52
26.9.2018	Kharchiya, Thana Galol, Motimarad	Jetpur, Dhoraji	43	0	43
27.9.2018	Bhukhi, Pipalia	Dhoraji	18	29	47
28.9.2018	Samatyada, Laath	Upleta	11	32	43
29.9.2018	Rogel, Satodad	Jamkandorna	43	00	43
Total			216	61	277

Dr. N. B. Jadav, Senior Scientist & Head, KVK , J.A.U., Pipalia welcomed all the participants during the technology week- 2018 and highlighted the achievements and activities of the KVK in brief.

Technology Week was celebrated by KVK, J.A.U., Pipalia during 24<sup>th</sup> to 29<sup>th</sup> September, 2018. During the Technology Week Dr. H.C. Chhodvadiya, Training Associate, office of Director of Extension Education, JAU, Junagadh has visited for giving the information about activities of Junagadh agricultural university and informed farmers about newly released variety and recommendation.

In a week, out of 6 days 4 days for farmers and 2 days for especially for farm women, the programme was arranged accordingly. Different scientists of KVK have given talk on different subjects and provide scientific information. Dr. N.B. Jadav and Shri S.V. Undhad, SMS, (Plant Protection) delivered different lecture on “Management of white grub in groundnut and pink boll worm in cotton”, “Pest and disease management in major kharif crops”, “Package of practices of major rabi crops”, “Role of Seed treatments in management of Pest and Diseases” topics with presentation. Smt. P. S. Sharma, SMS (Home Science) has delivered different lecture to rural farm women on “Balance diet and nutrition”, Value addition of different crops”, “Drudgery reduction technology” and “Importance of kitchen gardening”, Gender mainstreaming with self-help group formation. Dr. V. S. Parajapati, SMS (AH), delivered different lecture on milk production and management of livestock, awareness about the Colostrum feeding in the calves and importance of vaccination and Deworming of the animal and Shri Arvind Parmar SMS (Horticulture) has given training on “Cultivation of vegetables in green houses”, “Importance of drip irrigation in Horticultural crops”, “knowledge about scientific cultivation of Spice Crop” and during the week on all days farmers and farm women visited the KVK, Farm and crop cafeteria.

The day to day Theme is as under.

#### Themes of the Technology Week:

1. **1<sup>st</sup> day:** Pest and disease management in major kharif crops, Package of practices of fruit crops
2. **2<sup>nd</sup> day:** Clean milk production and management of livestock, uses of recommended pesticides and fungicides
3. **3<sup>rd</sup> day:** Management of white grub in groundnut and pink boll worm in cotton, scientific cultivation of Spice Crop
4. **4<sup>th</sup> day:** Kitchen gardening and Value addition in different crops, Drudgery Reduction Tools
5. **5<sup>th</sup> day:** Drudgery reduction technology in agriculture and work simplification in house hold activities
6. **6<sup>th</sup> day:** Recycling for farm waste material and composting

Following are the topics delivered by scientist

1. Whit grub in groundnut and their management
2. Integrated pest and disease management in kharif crops
3. Control and management of pink boll worm in cotton
4. Importance of drip irrigation in Horticultural crops
5. Value addition in fruits and vegetables
6. Importance of kitchen gardening
7. Balance diet and nutrition
8. Drudgery reduction technology in agriculture and work simplification in house hold activities
9. Gender mainstreaming through self-help group formation
10. Vermin compost and organic farming
11. Recycling for farm waste material and composting
12. Clean milk production
13. Balance nutrition of farm animal
14. Awareness about artificial insemination and knowledge about vaccination
15. Cultivation of vegetables in green houses
16. Package and practices of fruit crops
17. Introduction of new release variety of horticultural crops

All the days at the end of the day discussion session was held during these six days, farmers get satisfied during this week and encouraged for adopting scientific technologies in agriculture, Horticulture and animal husbandry. And all the days' farmers actively participated in discussion session and get resolved their problems.

### 19.2 “Mera Gaon Mera Gaurav” Scheme:

The Mera Gaon Mera Gaurav scheme was implemented during the year 2018-19. Under this scheme, first following two groups of scientists were formed for village selection and base line survey.

Table 1: Details of MGMG Team and status of benchmark survey of selected villages

Team	Name of scientists with discipline	Name of village	Name of block	Name of district	Benchmark survey Status
1	2	3	4	5	6
Team 27	Dr. N. B. Jadav (ExtnEdu) Ms Pinki Sharma (Home Sci.) Shri S V Undhad (Pl. Prot.)	Patanvav	Dhoraji	Rajkot	Completed
		Toraniya	Dhoraji		
		Zanzmer	Dhoraji		
		Arni	Upleta		
		Pedhala	Jetpur		
Team 28	Dr. V. S. Prajapati (LPM), Shri A R Parmar (Horti.) Shri P D Chaoudhry (Plant Breeding)	KhajuriGundala	Jetpur	Rajkot	Completed
		CharanSamdhiyala	Jetpur		
		Jasapar	Jamkandorna		
		Satodad	Jamkandorna		
		Chitravad	Jamkandorna		

Table 2: Activities carried in the selected villages

Team	Visit to village		Goshthis/ Interface meetings conducted		Demonstrations conducted		
	No. of visits	No. of farmers	No. of goshthis/ interface meetings	No. of farmers	Title of demonstration	No. of demons	No. of farmers
1	2	3	4	5	6	7	8
Team 27	20	273	3	136	Feed Management Kitchen gardening	7	7
Team 28	17	234	4	158		11	11

Team	Trainings conducted		Mobile-based advisory		Literature support provided		Input support	
	No. of training	No. of farmers	No. of farmers	No. of advisories	No. of literature	No. of farmers	Area (ha)	No. of farmers
9	10	11	12	13	14	15	16	17
Team 27	7	183	223	19	658	298	-	-
Team 28	5	146	198	17	672	269	-	-

Table 3: Any other activity carried out

Team	Name of activity	No. of farmers
1	2	3
Team 27	Mahila Krishi Divas	38
	Technology week	27
Team 28	Mahila Krishi Divas	23
	Technology week	36

### 19.3 Exposure Visit of farmers:

Sr.No.	Date	Scientist	Village	No. of participant	Place visited
2.	21-02-2019	K D Chaudhri	Raydi	35	Machinery and Technology Demonstration Fair at College of Agricultural Engineering & Technology, JAU, Junagadh

### 19.4 Celebration Mahila Kisan Divas

The event was organized at Talagana village of Upleta Taluka where 125 farmwomen had keenly participated in the programme. training and a group discussion was organized to emphasis on their esteemed role in agriculture and all other allied activities. the event was concluded with a motivating lecture on the importance of health and other nutritional benefits which can be done with diet diversity and other home based techniques like balanced meal planning, kitchen gardening and use of kitchen waste to make the gardening more organic.

### 19.5 Celebration of Mahila Krushi diwas

Mahila Krushi Diwas was celebrated with an objective to create awareness and to encourage the women farmers to take up different income generation activities in agriculture and allied sector and to recognize their invaluable contribution in Indian agriculture and economy. During the event, they are get sensitized about their immense role in the society and motivated them to come out of the four walls of the house. Also make aware about their role in making the mission of Doubling farmers income by 2020 successful one. Their queries regarding self-help group policies, Pink bollworm control in Bt. Cotton, Wilt disease in chilli, different types of short and long term baking and canning classes were addressed in question answer session. A special class was held on soil health management and importance of soil health card for better crop productivity. 125 farmwomen participated in the programme from five different talukas of Rajkot district.

### 19.5 Celebration of Swachta Pakhwada

Swachhta Pakhwada was celebrated by KVK Pipalia during 15<sup>th</sup> September to 2<sup>nd</sup> Octas a part of Swachh Bharat Mission. A camapaign was organized by KVK in which many activities were performed by the Staff i.e. celebration of Sewa Divas, tree plantation, shramdaan, etc.

### 19.6 Celebration of Swachhata Hi Sewa (15 days programme)

Scientist of KVK Pipalia had actively participated in Swachhata Hi Sewa 15 days commenced from 16/12/2018 till 31/12/2018 programme in which many extension activities were done to make the event successful one. The events are like awareness campaign for better sanitation practices like using toilet, hand washing, health and hygiene related concepts, pledge of swachhata along with cleaning of office premises, Cleanliness and sanitation drive in the village adopted under MGMG programme.

### 19.7 Soil Health Day:

World Soil Health Day was organised on the auspicious occasion of World Soil health day to celebrate the importance of soil health and its importance to increase the soil fertility which directly enhance their farming income with increase in productivity. A total 200 number of farmers and farm women had participated and taken actively part during the occasion. Training, lecture delivered, Extension literature distribution, farm visit, and many other extension strategies were used to complete the occasion. Dr. P J Gohil, Training Associate, DEE JAU, Junagadh had grace the occasion, along with two officers from ATMA Rajkot District, Officers from AFPRO NGO had actively participated and completed the occasion and made it successful one.



### 19.8 Live Webcast programme of PM Sanman Nidhi Programme

KVK Pipalia (Rajkot-II) organized live telecast programme "PRADHAN MANTRI KISAN SAMMAN NIDHI" for farmers with briefed the major highlights of "PM – KISAN" scheme assured as an income support to the small and marginal farmers and other programme was "Mann Ki Baat", telecasted through Doordarshan. Finally, the Inaugural programme of national level launching of PM - KISAN scheme by Hon'ble PM from Gorakhpur, Uttar Pradesh was telecasted through DD National. In this programme 100 farmers and kvk staff member actively participated.

### 19.9 Celebration of International Women Day

The international Women Day was celebrated by KVK Pipaliya among 62 number of Farmwomen including officers from Junagadh Agricultural University with a goal to accelerate the minds of beneficiaries towards the theme of International Women Day- 2019 i.e. Think equal, Build Smart innovate for change. Many ideas were shared among the beneficiaries with a two-way communication with a focus on innovative ways to advance gender equality and empowerment of women particularly among rural women. With a goal to make the nation with equal opportunity for both male as well as female, equal opportunity should be there in all phases of life at all stages was the major theme to be discussed during the programme. Lecture delivered, two-way discussion among the beneficiaries, training programmes and also the feedback was taken during the programme which as a whole makes the programme a successful one.

### 19.10 Celebration of Kisan Diwas

Kvk Pipalia had celebrated Kisan Diwas on dated 23/12/2018 as a part of Swachhta Hi Sewa programme with 47 number of participants and had done many activities during the event. many extension activities include training programme, exhibition, tree plantation, two-way communication among the beneficiaries.

### 19.11 Live Webcast of Live Video Conferencing with PM

The event was organised with an objective of to interact and motivate farmers with the help of video conferencing and its live telecast in KVK Campus among the beneficiaries. during which great motivating Live video conference held with our Honorable PM Shri Narendra Modi and also most important our food producing farmers with a total number of 165 beneficiaries. among which 92 were farm women and 73 were farmers.

### 19.12 Live Webcast of Live Video Conferencing with PM

The live video conferencing was done at KVK Pipalia on date 12/07/2018 with a view to show the work done by different Self-help group members across the nation. the beneficiaries were 35 who all are self-help group members only from two operational villages of KVK Pipalia.

### 19.13 Awards Received

- 1) **Dr. N B Jadav** had received an award of "**Best KVK Professional Award**" by the Society of Extension Education, Agra during 9<sup>th</sup> National Extension Education Congress 2018 held at CAEPHT, Ranipool, Sikkim during 15-17 November 2018.
- 2) **Ms. Pinki S. Sharma** had received an award of "**Woman Scientist Award**" by the Society for Upliftment of Rural Economy, Varanasi on the Occasion of International Conference in collaboration with Bihar Agricultural University, Sabour held at Birla Institute of technology, Patna during 30<sup>th</sup> October- 01<sup>st</sup> November 2018.

### 19.4 Technical Programme (Results):

#### Technical Programme 1

**Title : Impact of Recommended seed treatment practices in Groundnut of South Saurashtra agro climatic zone**

#### **Name of Principle investigator & Associates:**

1. Dr. N.B. Jadav, Senior Scientist and Head (PI),
2. S. V. Undhad, Scientist (Co-PI)
3. P.S. Sharma , Scientist (Home Science) (Associate),
4. Dr V S Prajapati Scientist (LPM) (Associate)
5. A.R. Parmar, Scientist, Horticulture (Associate)

#### **Introduction:**

The Groundnut (*Arachis hypogaea* L.) has been recognized around the world by an assortment of colorful names. In India it is known as Mungfali and Magfali in Gujarat. In India, around 85 percent area of groundnut is grown under rainfed conditions in marginal lands. Gujarat cultivates kharif groundnut in about 1.62 million ha with an annual production of 3.05 million MT and productivity of 1979 kg/ha. Rajkot district of Gujarat has 0.43 million hectares under Kharif groundnut and produces 0.55 million MT of groundnut with an average yield of 1874 kg/ha., which is substantially lower than the Potential yield. Considerable scope of enhancement in productivity leading to higher production exists,

especially in Saurashtra region, which is a remarked as important Agro Export Zone for HPS (Hand Picking Seed) groundnut in the country. It is feasible through regular surveys, farmer's meetings and field diagnostics visit followed by persuasion for provision of timely management of pest and diseases. There may be many reasons for such a low productivity of groundnut.

It is proven fact that for successful cultivation of any crop the seed must be free from pest and diseases especially seed and soil born mycoflora which affect germination, emergence and performances of crops. These may include incidence of collar rot, stem rot diseases and white grub pest infestation and that cause production losses of groundnut. The several recommendations practices especially by seed treatments made by university for reduce these losses. Keeping in view of all the points in mind the present study was carried out with the following specific objectives:

#### Objectives:

- 1) To study the personal characteristics of the respondents
- 2) To measure the knowledge level of respondents regarding recommended seed treatment practices
- 3) To know the yield level of respondents regarding the recommended seed treatment practices
- 4) To compare all the variables of demonstrator and non demonstrator respondents
- 5) To identify the constraints faced by the respondents in adoption of recommended seed treatment practices and seek suggestions

#### METHODOLOGY:

##### Selection of respondents:

The study was conducted in Krishi Vigyan Kendra, Junagadh Agricultural University, Pipalia (Rajkot-2) operational area of Saurashtra region. Out of seven operational taluka viz. Dhoraji and Jam kandorana were selected purposively for the study and Three villages were selected from each of taluka. Thus, total 6 villages selected from Two taluka and 10 seed treatment adopted and 10 non adopted farmer respondents were selected randomly from each village, mean 20 farmer selected from each villages. Total 120 respondents were selected for the study.

**Table :1 : Selection of respondents according to village, taluka of Rajkot district.**

Sr. No.	Taluka	Villages	Respondents	
			Demonstrator	Non Demonstrator
1	Dhoraji	1.Patanvav	10	10
		2.Dumiyani	10	10
		3.Chinchod	10	10
2.	Jam Kandorana	1.Boriya	10	10
		2.Sanala	10	10
		3.Bandhiya	10	10
Total			60	60
			120	

#### Measurement of variables

For measuring the knowledge of respondents about recommended seed treatments, the teacher made knowledge test was developed and used. A set of twenty-two statement questions was prepared by referring related review of literature and in consultation with field experts. The objective questions were prepared in which the responses can be recorded as yes/no, correct/incorrect, True/False. The anomalies in the questions were rectified by making necessary correction for finalising the knowledge test final schedule. questions were kept in the schedule while exercising the matter to measure the knowledge of respondents. A unit score was given to correct answer and total score obtained by individual respondents for all the statement was calculated. With the help of mean and standard deviation the respondents were categorized as low, medium and high level of knowledge. In order to test the significance of difference in average for different variables of both categories of the respondents under study. "Z" test was used (Rao, 1983). Constraints and suggestions kept open ended and data was collected by personal interview method. The collected data was quantified, categorized and tabulated by using frequencies and percentage.

#### FINDINGS:

##### 1. Characteristics of the respondents

The data presented in table no. 2 revealed that majority of the respondents; demonstrator (66.67%) and non-demonstrator (60.00) belonged to middle age group. While in case of education one half (51.68%) demonstrator and 65.00 non –demonstrator had educated up to primary level. While 28.33 per cent demonstrators and 20.00 per cent non-demonstrator were from secondary education group. Demonstrator respondents only 6.67 per cent were illiterate and non-demonstrator farmers (11.67 per cent) were illiterate.

More than one half (53.33 %) demonstrator farmers holding land in between 1.1 to 2 ha. while in non-demonstrator 60.00 per cent respondents had medium size of land holding. Only 18.33 per cent demonstrator farmers had big size of land holding while 16.67 per cent non-demonstrator farmers were from big size land holding group. 65.00 per cent of the respondents in demonstrator farmers belonged to medium size of family group followed by 23.33 per cent respondents in demonstrator farmers had less than 5 members in family. In case of non-demonstrator 71.67

per cent farmers had medium size of family followed by 18.33 per cent respondents belonged to small size of family group. Majority (60.00 %) of demonstrator farmers had medium level of annual income followed by 21.67 per cent respondents were from high annual income group. While in non demonstrator farmers 58.33 per cent farmers had medium annual income followed by 25.00 per cent respondents had low annual income group.

The psychological variables i.e. social participation and innovativeness. 58.33 per cent demonstrator farmers were from medium social participation while 60.00 per cent non-demonstrator farmers belong to medium social participation group. 28.33 per cent respondents of demonstrator farmers had high social participation while 13.33 per cent respondents had high social participation in non-demonstrator. In case of innovativeness, majority (61.67 %) respondents of demonstrator farmers were from medium innovativeness group while 66.67 per cent respondents of non-demonstrator farmers were from medium innovativeness group. 25.00 per cent of respondents of demonstrator farmers belonged to high innovativeness group and only 13.33 per cent respondents of non demonstrator group had high innovativeness.

**Table :2 Distribution of respondents according to their selected characteristics**

Sr.	Characteristics	Categories of respondents			
		Demonstrator (n1=60)		Non-Demonstrator (n2=60)	
		Frequency	Percentage	Frequency	Percentage
<b>1</b>	<b>Age</b>				
	Young age (Up to 35 years)	8	13.33	6	10.00
	Middle age (36 to 55 years)	40	66.67	36	60.00
	Old age (above 55 years)	12	20.00	18	30.00
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
<b>2</b>	<b>Education</b>				
	Illiterate	4	6.67	7	11.67
	Primary (Up to 8 <sup>th</sup> std.)	31	51.67	39	65.00
	Secondary (9 to 10 <sup>th</sup> std.)	17	28.33	12	20.00
	Higher Secondary (11 <sup>th</sup> to 12 <sup>th</sup> std.)	5	8.33	2	3.33
	Graduate (above 12 <sup>th</sup> std.)	3	5.00	0	0.00
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
<b>3</b>	<b>Size of land holding</b>				
	Small size (up to 1ha )	17	28.33	14	23.33
	Medium size (1.1 to 2 ha )	32	53.33	36	60.00
	Big size (above 2 ha )	11	18.33	10	16.67
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
<b>4</b>	<b>Size of family</b>				
	Small size family (Below 5 members)	14	23.33	11	18.33
	Medium size family ( 5 to 8 members)	39	65.00	43	71.67
	Large size family ( Above 8 members)	7	11.67	6	10.00
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
<b>5</b>	<b>Annual income</b>				
	Low (Up to Rs. 50,000)	11	18.33	15	25.00
	Medium (Rs. 50,001 to 1,00,000)	36	60.00	35	58.33
	High (Above Rs. 1,00,000)	13	21.67	10	16.67
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
<b>6</b>	<b>Social Participation</b>				
	Low social participation (X-SD)	8	13.33	16	26.67
	Medium social participation (X+SD)	35	58.33	36	60.00
	High social participation (X+SD)	17	28.33	8	13.33
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
	Mean	2.91		2.11	
	SD	1.89		1.63	
<b>7</b>	<b>Innovativeness</b>				
	Low innovativeness	8	13.33	12	20.00
	Medium innovativeness	37	61.67	40	66.67
	High innovativeness	15	25.00	8	13.33
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
	Mean	2.13		1.38	
	SD	1.06		1.14	

## 2. Knowledge level of respondents

The data of Table: 3 clearly indicate that 50.00 per cent and 36.67 per cent demonstrator farmers were from categories of medium and high level of knowledge group respectively. In case of non-demonstrator 56.67 per cent and 33.33 per cent respondents were from medium and low level of knowledge group respectively. The rest of 13.33 per cent respondents in demonstrator farmers belonged to low level of knowledge while in case of non demonstrator farmers, only 10.00 per cent of farmers had high level of knowledge. More over the mean knowledge score of demonstrator was 13.33 against the mean score of non demonstrator was 11.06. Thus the demonstrator were found superior than non demonstrator farmers regarding the seed treatment in groundnut.

**Table 3 : Distribution of respondents according to their knowledge level**

Sr.	Knowledge level	Categories of respondents			
		Demonstrator (n1=60)		Non-Demonstrator (n2=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low level of knowledge	8	13.33	20	33.33
2	Medium level of knowledge	30	50.00	34	56.67
3	High level of knowledge	22	36.67	6	10.00
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
	Mean	13.13		11.06	
	SD	4.15		3.93	

## 3. Yield level of the respondents about recommended seed treatment in groundnut

Data presented in Table 4 indicated that majority (56.67 %) demonstrator respondents belong to high yield level category while majority non demonstrator respondents (63.33 per cent) belonged to medium yield level category. The 26.67 per cent and 16.67 per cent demonstrator respondents were from medium and low yield level category respectively. in case of non demonstrator respondents 26.67 per cent and 10.00 per cent respondents were from high and low level category respectively. The mean yield score of demonstrator respondents was 2376.38 kg/ha against the mean yield score 1628.01 kg/ha of non demonstrator respondents. Thus the demonstrator respondents were found superior over the non demonstrator respondents regarding yield level.

**Table 4 : Distribution of respondents according to their Yield level**

Sr.	Yield level	Categories of respondents			
		Demonstrator (n1=60)		Non-Demonstrator (n2=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low yield level	10	16.67	16	26.67
2	Medium yield level	16	26.67	38	63.33
3	High yield level	34	56.67	6	10.00
	Total	<b>60</b>	<b>100</b>	<b>60</b>	<b>100</b>
	Mean	2376.38 kg/ha		1628.01 kg/ha	
	SD	478.81		590.14	

## 4. Comparison between the selected characteristics of the demonstrator and non demonstrator respondents

The impact of demonstration is influenced by different characteristics of the respondents. It was not possible to consider all the characteristics of the respondents for the study. However some of the important characteristics were selected. The responses obtained from the respondents were subjected to statically test to find out the different between two group of respondents with respect to eight selected characteristics. For this purpose, Z-test was applied.

The data in table : 5 indicate that Z-value were not significant in case of age, education, size of land holding and size of family. Hence it can be concluded that there was no significant different in case of age, education, size of land holding and size of family of demonstrator and non demonstrator respondents while in case of annual income significant difference was observed at 0.05 level of significance. While remaining variable like social participation, innovativeness, knowledge and yield were highly significant difference were observed at 0.01 level of significance. Looking to the mean value to these characteristics of demonstrator and non demonstrator respondents, it can be concluded that demonstrator respondents found superior than non demonstrator respondents in case of annual income, social participation, innovativeness, knowledge and yield level.

**Table : 5 Comparison between the selected characteristics of demonstrator and non-demonstrator respondents**

Sr. No.	Variables	Unit	Mean Values		Mean difference	"Z" Value
			DF (n=60)	Non-DF (n=60)		
1	Age	Year	Year	41.2	42.05	-0.85
2	Education	Std	Std	7.4	6.9	0.5
3	Size of land holding	Hect.	Hect.	1.52	1.2	0.32
1	Size of family	Number	Number	5.43	5.2	0.23
4	Annual income	Rank	Rank	1.98	1.24	0.74
5	Social participation	Score	Score	2.91	2.1	0.81
6	Innovativeness	Score	Score	2.13	1.8	0.33
7	Knowledge	Score	Score	13.13	11.06	2.07
8	Yield	Kg/ha	Kg/ha	2376.38	1628.01	748.37

### 5. Constraints faced by the respondents in adoption of recommended seed treatment in groundnut

Table no. 6 indicate that the majority of the farmers expressed constraints in adoption of recommended seed treatment practices were difficult to give three treatment at a time (93.33 per cent) ranked I, seed treatment of insecticides reduced groundnut germination in pre kharif sowing (90.00 per cent) ranked II, unawareness regarding recommended dose of seed treatment in groundnut (81.67 per cent) ranked III, seed treatment increase the cost (75.00 per cent) ranked IV, lack of knowledge about sequence of seed treatment in groundnut (72.50 per cent) ranked V, seed treatment of Chlorpyrifos 25 ml/kg detoriate fodder quality (70.83 per cent) ranked VI, adoption of recommended seed treatment increase seed rate (68.33 per cent) ranked VII, it is difficult to maintain seed rate of treated through automatic seed drill (67.50 per cent) ranked VIII and lack of availability of rhizobium culture at local level (62.50 per cent) ranked IX.

**Table :6 Constraints faced by the respondents in adoption of recommended seed treatment in Groundnut (n=120)**

Sr. No.	Constraints	Frequency	Percent	Rank
1	Lack of availability of rhizobium culture at local level	75	62.50	IX
2	Seed treatment of insecticide reduce groundnut germination in pre Khari sowing	108	90.00	II
3	Seed treatment increase the cost	90	75.00	IV
4	Seed treatment of Chlorpyrifos 25ml /kg detoriate fodder quality	85	70.83	VI
5	Difficult to give three treatment at a time	112	93.33	I
6	Adoption of recommended seed treatment increase seed rate	82	68.33	VII
7	It is difficult to maintain seed rate of treated seed through automatic seed drill	81	67.50	VIII
8	Unawareness regarding recommended dose of seed treatment in Groundnut	98	81.67	III
9	Lack of knowledge about sequence of seed treatment in Groundnut	87	72.50	V

### 6.Suggestion offered by respondents in adoption of recommended seed treatment practices in Groundnut

The data presented in Table no. 7 revealed that majority of the farmers suggested that training should be imparted to the groundnut growers (81.67 per cent) ranked first, method demonstration should be organized (70.83 per cent) ranked second, provision of seed dressing drum at local level (68.33 per cent) ranked third, input for seed treatment must be subsidized (65.00 per cent) ranked fourth and all input made available at local level (60.00 per cent) ranked fifth.

**Table : 7. Suggestions offered by the respondents in adoption of recommended seed treatment in Groundnut (n=120)**

Sr.	Suggestions	Frequency	Percent	Rank
1	Training should be imparted to the Groundnut growers	98	81.67	I
2	Method demonstrations should be organized about seed treatment	85	70.83	II
3	All inputs made available at local level	72	60.00	V
4	Provision of seed dressing drum at local level	82	68.33	III
5	Input for seed treatment must be subsidized	78	65.00	IV

## **CONCLUSION:**

It can be concluded that majority demonstrator and non-demonstrator groundnut growers was middle age, medium size of land holding, medium size of family and majority of respondents educated up to primary level. More than fifty per cent of demonstrator and non-demonstrator farmers had medium social participation, annual income and medium innovativeness. Majority of demonstrator and non demonstrator farmers' were from medium level of knowledge about seed treatment practices in groundnut. Demonstrator farmers had more knowledge as compare to non demonstrator farmers resulted in higher mean score of demonstrator farmers. In case of yield level, majority of demonstrator farmers were from high yield level category while non-demonstrator farmers, majority farmers were from medium yield level category. There is no significant difference between demonstrator and non-demonstrator respondents in case of age, education, size of land holding, size of family while in case of annual income, social participation, innovativeness, knowledge and yield level of demonstrator and non-demonstrator respondents differed significantly. It can be revealed that demonstrator respondents were found superior than non demonstrator respondents. Major constraints faced by farmers in adoption of recommended seed treatment practices was difficult to give three treatments at a time and majority farmers suggested that training and method demonstrations should be organised for specific seed treatment practices.

## **Reference :**

Rao, N.G. (1983). Statistics for agricultural sciences. Oxford & IBH Publishing com. Bombay

## **Technical programme : 2**

### **Assessment of skill oriented training needs of rural women in home science, agriculture and animal husbandry activities in operational area of KVK**

## **Name of Principle investigator & Associates**

- (1) Dr. N.B. Jadav Senior Scientist and Head (PI)
- (2) P.S. Sharma, Scientist (Home Science) (Co-PI)
- (3) Dr V S Prajapati Scientist (LPM) (Associate)
- (4) S. V. Undhad, Scientist (Associate)
- (5) A.R. Parmar, Scientist (Associate)

## **INTROUDCTION:**

Human resources are the most important assets of any nation and calls for mobilization to be used as instrumental forces for attaining the developmental goals. It stands equally for both men and women. The performance of developmental roles more efficiently and effectively by women calls for specialized knowledge and skill up gradation based on their skill training needs. Training plays an important role in the advancement of human performance in a given situation. Training provides a systematic improvement of knowledge and skills which in turn help the trainees to function effectively in their given task on completion of the crucial steps towards identifying the area of farmer's interest, design and development of curriculum that can best suit to the existing real condition of farmers. Hence it becomes increasingly important that a special focus on advancement of skills and these skills have to be relevant to the emerging environment economically.

Skill building, as a process towards getting a job, is something seriously lacking in our education system. Skill development has now become extremely vital in order to accelerate one's professional abilities as well contribution to the economic growth of the country. Furthermore, being skilled in various fields can increase the efficiency in the workplace and enhance time management whether it may be in any activity either in home science, agriculture or animal husbandry related activities. We can say that skill development is now become an integral part of professional growth and also increase in working capacity of the individual in a prescribed time format. Skill building, as a process towards getting a job, is something seriously lacking in our educational system. For rural women or those who were from economically weaker backgrounds, manual labour is still the most easily available work. When the group of women we are talking about hails from economically lower or from rural backgrounds, the problems are endless. Hence there is a great need to properly skill thus significantly large workforce so that they can become a major part of the economy through desk-oriented jobs. We can conclude that skill development is an integral factor for both individual and economic development, creating a self-sustained and able ecosystem that benefits all involved.

Although much of the work related to training needs programme to rural women who are dealing with all the three above activities but structured need based skill training programme are not given due consideration while designing any training programme. Thus need based skill training programme can act as a catalyst for increasing the motivational level of trainees who in turn try to put their sincere efforts to learn and gain maximum from training programme. It can thus be assumed that skill training need identification acts as a foundation pillar to help and prioritize the training ideas to the beneficiaries for smooth functioning of their KVK.

Considering these facts the present study on accessing the skill need of farm women engaged in home science, agriculture and animal husbandry related activities. So, the present study has been undertaken with the following objectives:

- 1) To study the socio-economic profile of respondents
- 2) To assess the need of skill training of rural women in home science, agriculture and animal husbandry related activities
- 3) To find out the appropriateness of method, time and place used for training
- 4) To seek suggestions from the respondents for better skill oriented trainings

## METHODOLOGY:

### Selection of Respondents

The study was conducted in Krishi Vigyan Kendra, Junagadh Agricultural University, Pipalia (Rajkot II) operational area of Saurashtra region. Eight KVK operational villages was selected purposively for the study where rural women are having extensive involvement in household, agriculture and animal husbandry related activities. From each selected village, 10 respondents (Total: 80) was selected for the study.

**Table 1 Selection of respondents**

Sl. No.	Village	Respondents
1	Patanvav	10
2	Kolki	10
3	Dumiyani	10
4	Arani	10
5	Talngana	10
6	Toraniya	10
7	Moti parabdi	10
8	Fareni	10
<b>Total</b>		<b>80</b>

An exhaustive list of training areas related to home science, agriculture and animal husbandry was prepared in terms of usefulness of particular training area for rural women. In a way, eight, ten and seven training areas related to agriculture, home science, and animal husbandry respectively were finally retained for skill oriented training need assessment of rural women. For assessing the training need of rural women, a detailed interview schedule was prepared. A three point rating scale (most needed, needed and not needed) was employed to measure the training need in selected areas. The women were asked to indicate any of the three alternate responses against each selected area depending on their training needs. Firstly, the total training need score of a particular area was calculated by multiplying the cell frequencies with respective score values. Secondly the mean score of a particular item was worked out by dividing the total score by number of respondents.

## FINDINGS:

### 1. Distributions of selected characteristics of the respondents

The data presented in table 2.1 indicates that majority (45.00 per cent) of the respondents were lie in the middle age group followed by 42.50 percent and 12.50 percent of the respondents belonged to the young and old age group respectively. This may be due to the reason that these finding were supported with the facts that major group were middle age group who can physically look after their animals. As far as level of education is concerned which is reflected in table 2.2 shows clearly that majority (38.75 percent) of the respondents had attained primary level of education, whereas 33.75 per cent had achieved secondary level of education, 13.75 percent of the respondents were educated up to higher secondary level of education, 7.50 percent respondents were graduate and 6.25 percent respondents were illiterate. The data presented in table 2.3 that majority (51.25 per cent) of the respondents belongs to the nuclear type of family as compare to 48.75 percent who were from joint family. The perusal of the data in table 2.4 indicates that little less than half (43.75 percent) were having size of land holding followed by 27.50 percent farmwomen were found to have marginal size of land holding and also 18.75 percent and 10.00 per cent had medium and large size of land holding respectively. The reason might be due to that farmwomen had main occupation is rearing the animals in order to maintain their animals; they may be cultivating the land. Annual income earned by the beneficiaries which is discussed in table 2.5 shows that 31.25 percent and 30.00 percent of women had annual income between Rs. 1,50,001 to Rs. 2,00,000 and Rs 1,00,001 to Rs. 1,50,000 annually. While 20.00 percent of women were having an annual income of low income group (Rs 50,001 to Rs. 1, 00,000) and only 11.25 percent and a meager (7.50 percent) were those beneficiaries who lies in the annual income of Rs very high i.e. above Rs. 2,00,000 and very low (up to Rs 50,000) annually respectively.

**Table : 2 Distribution of respondents according to their selected characteristics n=80**

Sr.	Characteristics	Frequency	Percentage
<b>1</b>	<b>Age</b>		
	Young age (Up to 35 years)	34	42.50
	Middle age (36 to 55 years)	36	45.00
	Old age (above 55 years)	10	12.50
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>2</b>	<b>Education</b>		
	Illiterate	5	6.25

	Primary (1 to 7 <sup>th</sup> std.)	31	38.75
	Secondary (8 to 10 <sup>th</sup> std.)	27	33.75
	Higher Secondary (11 <sup>th</sup> to 12 <sup>th</sup> std.)	11	13.75
	Graduate (above 12 <sup>th</sup> std.)	6	7.50
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>3</b>	<b>Type of Family</b>		
	Nuclear family	41	51.25
	Joint family	39	48.75
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>4</b>	<b>Size of land holding</b>		
	Marginal (up to 1 ha)	22	27.50
	Small farmers (1.01 to 2 ha )	35	43.75
	Medium (2.01 to 4 ha )	15	18.75
	Big farmers (Above 4 ha)	8	10.00
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>5</b>	<b>Annual income</b>		
	Very low annual income (up to ₹ 50,000)	6	7.50
	Low annual income (₹ 50,001 to 1,00,000)	16	20.00
	Medium annual income (₹ 1,00,001 to 1,50,000)	24	30.00
	High annual income (₹ 1,50,001 to 2,00,000)	25	31.25
	Very high annual income (above ₹ 2,00,000)	9	11.25
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>6</b>	<b>Social participation</b>		
	Low social participation (below 1.01)	21	26.25
	Medium social participation (1.01 to 3.28)	45	56.25
	High social participation (above 3.28)	14	17.50
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>7</b>	<b>Mass media exposure</b>		
	Low mass media exposure (below 1.90)	12	15.00
	Medium mass media exposure (1.90 to 5.47)	57	71.25
	High mass media exposure (above 5.47)	11	13.75
	<b>Total</b>	<b>80</b>	<b>100.00</b>
<b>8</b>	<b>Training received</b>		
	Untrained (0 Score)	14	17.50
	Less trained (Below 1.85)	39	48.75
	More trained (Above 1.85)	27	33.75
	<b>Total</b>	<b>80</b>	<b>100.00</b>

Further in table 2.6 concluded that more than half (56.25 per cent) of the respondents belonged to medium social participation followed by 26.25 per cent of the respondents had low social participation while 17.50 percent respondents had high social participation. As far as mass media exposure to the particular targeted beneficiary group concludes that majority of the group (71.25 per cent) had medium level of mass media exposure in the entire three prescribed areas i.e. animal husbandry, home science and agriculture related activities. While meager percentage (15.00 per cent) and 13.75 percent were having low social participation and high level of social participation respectively in all the three prescribed areas. Further in table 2.8 concluded that less than half (48.75 per cent) of the respondents were less trained followed by 33.75 percent of the female respondents were more trained followed by only 17.50 percent who were untrained and hence had not taken any of the professional training in any of the three activities which were home science, agriculture and animal husbandry related activities.

## 2. Need of skill training of rural women in home science, agriculture and animal husbandry

Table 4 described the distribution of respondents according to the skill oriented training need subject wise differently in three different subject i.e. agriculture, home science and animal husbandry in which three-point rating



scale were categorized with most needed, needed and not needed and after which mean score was calculated and hence rank was given subject wise in all the three category differently. Eight sub training skill activities were find out in agriculture, ten in home science and seven in animal husbandry related activities were find out and mean score were worked out differently in each category and also overall weighted mean score were also worked out. table clearly indicates that in agriculture related activities, use of drudgery improved agricultural equipment's is the most needed training area with a weighted mean score equals to 1.56 and thus ranked first followed by training needed in terms of value addition techniques (WMS=1.53) and scored second rank. the training area of winnowing and grading (WMS=1.50) achieved third rank followed by skill oriented training need in compost pit formation and preparation of vermicomposting (WMS=1.41) and thus got fourth rank followed by irrigation and fertilizer application properly (fifth rank) with a weighted mean score equals to 1.26. Training need in seed treatment technology (WMS=1.13) scored sixth rank followed by seventh and eight ranks goes to different harvesting technologies (WMS=1.05) and in training area like seed production technology (WMS=0.98) respectively.

Going further in table, it indicates different home science training areas in which women may need skill oriented trainings. table clearly revealed that theme area like importance of diet during pregnancy and during lactation is the most important in which female wants skillful training and thus scored first rank with a weighted mean score equals to 1.66. training is also needed in or about the use of green leafy vegetable (WMS=1.60) to combat many diseases like anemia, night blindness etc. and hence secured second rank followed by preparation of cheap and seasonal nutritious recipes (WMS=1.58) got third rank, fruit and vegetable preservation got fourth rank with weighted mean score equals to 1.55. Skill oriented training need is also needed mostly in preparation of bakery items (WMS=1.48) and thus achieved fifth rank followed by prevention of nutrient loses while grain storage (WMS=1.38) scored sixth rank and stain removal techniques (WMS=1.25) attained seventh rank, clothing construction and repair of sewing machines (WMS=1.14) having eighth rank. Ninth and tenth ranks were achieved by areas like handicraft skill (WMS=1.06) and preparation of khoya (WMS=1.01) respectively.

The third category subject wise is to find out the training areas in terms of animal husbandry related activities and the table clearly indicates that first rank goes to the training needed in the making of cheap and compound livestock feed with a weighted mean score equals to 1.61 followed by preparation of low cost and clean animal housing (WMS=1.58) scored second rank in terms of skill training need aspects related to animal husbandry related activities. third and fourth rank goes to taking care of milking and pregnant animal (WMS=1.56) and taking care of new born calf (WMS=1.43) respectively followed by training need in safe and clean milk production with a weighted mean score equals to 1.34 and thus attained fifth rank. Skill oriented training need in areas like animal deworming (WMS=1.00) and animal vaccination (WMS=0.93) are least preferred in terms of training need and thus scored sixth and seventh ranks respectively. If we take a look on overall mean scored out in all the three subjects and results clearly shown that first rank goes to training need in respect to home science related sub area with a highest mean score equals to 1.37 which clearly means that women although working all the three works perfectly but they need skill oriented training mostly in the home science related areas. secondly they need preferably training in animal husbandry (WMS=1.35) related activities followed by training in theme areas related to agriculture (WMS=1.3) and thus rank wise got the second and third respectively.

**Table No.3 Distribution of the respondents according to the need of skill training (n=80)**

Sr. No.	Particulars	Most needed	Needed	Not needed	Means score	Rank
<b>1</b>	<b>Agriculture</b>				<b>1.3</b>	<b>III</b>
A	Seed production technology	24	30	26	0.98	8
B	Harvesting technologies	26	32	22	1.05	7
C	Value addition	50	22	8	1.53	2
D	Use of drudgery Improved agricultural equipment	52	21	7	1.56	1
E	Winnowing and Grading	48	24	8	1.50	3
F	Seed treatment	28	34	18	1.13	6
G	Irrigation and fertilizer application	36	29	15	1.26	5
H	Compost pit and vermicomposting	45	23	12	1.41	4
<b>2</b>	<b>Home Science</b>				<b>1.37</b>	<b>I</b>
A	Prevention nutrient losses while grain storage	42	26	12	1.38	6
B	Stain removal techniques	38	24	18	1.25	7
C	clothing construction and repair of sewing machines	32	27	21	1.14	8
D	Use of green leafy vegetables	54	20	6	1.60	2
E	Diet of pregnant and lactating mother	56	21	3	1.66	1
F	Cheap and seasonal available nutritious recipes	53	20	7	1.58	3
G	Fruit and vegetable preservation	52	20	8	1.55	4
H	Khoya making	29	23	28	1.01	10

I	preparation of bakery items	48	22	10	1.48	5
J	Handicraft skill	30	25	25	1.06	9
<b>3</b>	<b>Animal Husbandry</b>				<b>1.35</b>	<b>II</b>
A	Preparation of low cost and clean animal housing	55	16	9	1.58	2
B	Taking care of milking and pregnant animal	52	21	7	1.56	3
C	Making of cheap compound livestock feed	57	15	8	1.61	1
D	Animal vaccination	26	22	32	0.93	7
E	Safe and clean milk production	42	23	15	1.34	5
E	Animal deworming	28	24	28	1.00	6
F	Taking care of new born calf	46	22	12	1.43	4

### 3. Relative suitability of skill oriented training method, training place and training time

For effective organization of skill oriented training programme, the respondents were asked to give their opinion regarding training method, place and time of training of teacher-trainer by working out the mean score on different types of training method with different places and at different timings of giving training which is further got categorized into ranks separately. The data regarding their opinions are presented in table 3.

The data presented in table 3 clearly indicates that method demonstration was the most effective type of training with a weighted mean score of 2.19 and ranked first in the type of training methods for appropriateness and suitability. Training given with the help of computer presentation (WMS=1.95) scored second rank followed by training received with the help of television (WMS=1.85) and thus scored third ranked in terms of its effectiveness towards the beneficiaries. The last ranked scored by the training received with group discussion with a worked out weighted mean score of 1.53 which is the least effective in all the four training methods listed to know the suitability in terms of type of training received with different techniques of training received by the beneficiaries in all the three aspects in which women are working.

**Table : 4 Relative suitability of skill oriented training method, training place and training time (n=80)**

Sr. No.	Particular	Highly Appropriate	Appropriate	Less appropriate	Not appropriate	WMS	Rank
<b>A</b>	<b>Training method</b>						
	Television	29	20	21	10	1.85	III
	Group discussion	22	19	18	21	1.53	IV
	Method demonstration	39	23	12	6	2.19	I
	Computer presentation	32	21	18	9	1.95	II
<b>B</b>	<b>Training Place</b>						
	Village level	36	26	11	7	2.14	I
	Taluka level	22	28	20	10	1.78	III
	KVK/FTC	32	28	12	8	2.05	II
<b>C</b>	<b>Training time</b>						
	Before monsoon season	32	30	10	8	2.08	I
	After monsoon season	25	22	20	13	1.74	III
	Before cropping season	28	26	15	11	1.89	II
	After cropping season	22	18	21	19	1.54	IV

As far as training place is concerned in order to find out the relative suitability in terms of different types of training place where respondents can achieve skill oriented training highly depends upon the venue or training place according to their suitability to grasp the knowledge as it highly depends on the place where they actually sit and taken the training and hence the table 3 further shown and concluded that training conducted at village level was the most effective and highly preferable place with a weighted mean score of 2.14 and thus scored first rank followed by knowledge given or training organized at KVK or at FTC level (WMS=2.05) and scored second rank. While at taluka level, respondents were preferably not interested to go and take training usually due to may be personal reasons might be as they are crucially indulged in all the activities related to home science, agriculture and animal husbandry. the reason may be due to lots of work pressure may be creating time mismanagement to go and take training at taluka

level and thus scored last rank i.e. 3<sup>rd</sup> rank amongst all sub categories of training place according to the suitability to grasp and take skill oriented trainings.

Training time is also important for effective training, before monsoon season(WMS=2.08) ranked first, before cropping season (WMS=1.89) ranked second, after monsoon season (WMS=1.74) ranked third and after cropping season (WMS=1.54) ranked fourth in terms of the training time according to the relative suitability by the respondents who were working in all the three discussed above activities.

#### 4. Suggestions from the respondents for better skill oriented trainings

The data on table 5 indicated that majority of the respondents offered suggestion were : Duration of training should be increased (95.00 per cent) ranked first, Marketing facilities may be created at village level for sell out their product (90.00 per cent) ranked second, Involvement of marketing and agribusiness related organizations (81.25 per cent) ranked third, Awareness among the people may be created (78.75 per cent) ranked fourth, Provision of field visit for demonstrations (75.00 per cent) ranked fifth, Good combination of A.V. aids (72.50 per cent) ranked sixth, provision of sufficient number of trials and follow up (71.50 per cent) ranked seventh and Easy vocabulary and local terminology may be used during training (68.75 per cent) ranked eighth.

**Table : 5 Suggestions from the respondents for better skill oriented trainings (n=80)**

Sr. No.	Suggestions	Frequency	Percent	Rank
1	Provision of field visit for demonstrations	60	75.00	V
2	Marketing facilities may be created at village level for sell out their product	72	90.00	II
3	Involvement of marketing and agribusiness related organizations	65	81.25	III
4	Easy vocabulary and local terminology may be used during training	55	68.75	VIII
5	Good combination of A.V. aids	58	72.50	VI
6	Awareness among the people may be created	63	78.75	IV
7	provision of sufficient number of trials and follow up	57	71.25	VII
8	Duration of training should be increased	76	95.00	I

#### CONCLUSION:

It is concluded that majority of the respondents were having small size of land holding and from middle age having primary level of education who are basically residing in nuclear family. In case of annual income, majority of respondents were from high annual income to medium annual income group and had medium level of social participation and mass media exposure. Most of the respondents are less trained followed by more trained group in all the three activities. As far as skill training need by the respondents is concerned, they need maximum training in home science related activities followed by need in animal husbandry and in agriculture related activities.

Most of the respondents offered to received training with the help of method demonstrations at village level and preferable should be before monsoon season. To organized effective skill training, duration of training should be increased and marketing facilities may be created at village level.

## 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	48	1131	446	1384
Rural youths	0	0	0	0
Extension functionaries	3	98	10	108
Sponsored Training	17	596	426	102
Vocational Training	3	0	224	224
<b>Total</b>				

### 2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	16	40	
Pulses	4	10	
Cereals	5	10	
Vegetables	10	23	
Other crops	29.2	73	
Hybrid crops	0	0	
<b>Total</b>	64.2	156	
Livestock & Fisheries	3	0	50
Other enterprises	0.5	50	
<b>Total</b>			
<b>Grand Total</b>	67.7	206	50

### 3. Technology Assessment

Category	No. of Technology Assessed	No. of Trials	No. of Farmers
<b>Technology Assessed</b>			
Crops	3	9	9
Livestock	2	40	
Various enterprises	0	0	0
<b>Other</b>	1	3	
<b>Total</b>	6	52	9

### 4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	48	808
Other extension activities	1328	14863
<b>Total</b>	1376	15671

### 5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awar e-ness	Other enterprise	
	Text only	68	75	65	30	31	21	290
	Voice only	321	452	374	32	75	71	1325
	Voice & Text both	-	-	-	-	-	-	-
	<b>Total Messages</b>	389	527	439	62	106	92	1615
	<b>Total farmers Benefitted</b>	389	527	439	62	106	92	1615

**6. Seed & Planting Material Production**

	Quintal/Number	Value Rs.
Seed (q)	53.16	--
Planting material (No.)	73	360
Bio-Products (kg)	70.73	6.71 lakh
Livestock Production (No.)	-	-
Fishery production (No.)	-	--

**7. Soil, water & plant Analysis**

Samples	No. of Beneficiaries	Value Rs.
Soil	60	-
Water	-	-
Plant		
<b>Total</b>	<b>60</b>	

**8. HRD and Publications**

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