

**ICAR-ATARI, Pune**  
**DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2023**  
 (January 2023 to December 2023)

**1. GENERAL INFORMATION ABOUT THE KVK**

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

Address	Telephone		E mail	Website address
	Office	FAX		
Krishi Vigyan Kendra Navsari Agricultural University Panas Road, Athwa Farm, Surat	0261 2655565	--	<a href="mailto:kvksurat@nau.in">kvksurat@nau.in</a>	<a href="http://www.nau.in">www.nau.in</a>

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

Address	Telephone		E mail	Website address
	Office	FAX		
Director of Extension Education Navsari Agricultural University Navsari	(02637) 282026	(02637) 282706	<a href="mailto:dee@nau.in">dee@nau.in</a>	<a href="http://www.nau.in">www.nau.in</a>

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. J. H. Rathod	0261 2655565	8128686720	<a href="mailto:jhrathod@nau.in">jhrathod@nau.in</a>

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

**1.5. Staff Position (as on December, 2023)**

S.N.	Sanctioned post	Name of the incumbent	Mobile No.	Discipline	If Permanent, Please indicate			If Temporary, pl. indicate the consolidated amount paid (Rs./month)
					Current Pay Band	Current Grade Pay	Date of joining	
1.	Senior Scientist and Head	Dr. J. H. Rathod	8128686720	Entomology	131400-217100	--	16.11.16	Temporary (264357)
2.	Subject Matter Specialist	Dr. R. K. Patel	9979892927	Crop Protection	68900-205500	--	01.02.19	Temporary (143312)
3.	Subject Matter Specialist	--		Animal Husbandry	Vacant	--		--
4.	Subject Matter Specialist	Mr. S. J. Trivedi	9429018082	Agronomy	68900-205500	--	01.06.18	Temporary (149234)

5.	Subject Matter Specialist	Smt. B. B. Panchal	9662431848	Horticulture	57700-182400	--	20.01.17	Temporary (98966)
6.	Subject Matter Specialist	Smt. G. J. Bhimani	8511178903	Home Science	68900-205500	--	05.02.16	Temporary (139204)
7.	Subject Matter Specialist	--	--	Extension	Vacant	--	--	--
8.	Programme Assistant	Mr. Y. D. Patel	9586383403	--	39900-126600	--	10.08.15	Temporary (78690)
9.	Computer Programmer	Mr. C. G. Lad	9979393220	--	44900-142400	--	10.08.15	Temporary (74500)
10.	Farm Manager	Mr. A. T. Patel	9687614098	--	39900-126600	--	12.07.12	Temporary (72400)
11.	Accountant/Superintendent	Mrs. J. D. Patel	9662500670	--	25500-81100	--	01.07.17	Temporary (43302)
12.	Stenographer	Mrs. J. M. Verma	9426760841	--	25500-81100	--	19.08.15	Temporary (40888)
13.	Driver 1	Vacant	--	--	--	--	--	--
14.	Driver 2	Vacant	--	--	--	--	--	--
15.	Supporting staff 1	Vacant	--	--	--	--	--	--
16.	Supporting staff 2	Vacant	--	--	--	--	--	--

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

S. No.	Item	Area (ha)
1	Under Buildings	1.73
2.	Under Demonstration Units	1.00
3.	Under Crops	10.80
4.	Horticulture	0.75
5.	Pond	--
6.	Others if any (Specify)	--

### 1.7. Infrastructural Development:

#### A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	2023	796.72	206.16	--	--	--
2.	Farmers Hostel	--		--	--	--	--	--
3.	Staff Quarters	--	--	--	--	--	--	--
4.	Fencing	--	--	--	--	--	--	--
5	Rain Water harvesting system	--	--	--	--	--	--	--
6	Threshing floor	--	--	--	--	--	--	--
7	Farm godown	--	--	--	--	--	--	--
8	Soil and water testing lab	--	--	--	--	--	--	--
9	Mini soil testing Kit	--	--	--	--	--	--	--
10	Sell Contour	--	--	--	--	--	--	--
11	Demo unit	--	--	--	--	--	--	--
i								
ii								
12	ICT lab	--	--	--	--	--	--	--
13	Solar Panel	--	--	--	--	--	--	--
14	counter seal	--	--	--	--	--	--	--
	Other pl mention	--	--	--	--	--	--	--

#### B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Running	Present status
Jeep (Tata)	2012	599999	290288	Not Working
Tractor	2012	549900	2180 (h)	Working
Jeep (Mahindra)	2023	900000	8574(km)	Working

**C) Equipment & AV aids**

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Cultivator	2012-13	22500	Working
Plough	2012-13	22500	Working
Lenovo Computer with printer- 4	2015-16	162816	Working
Canon printer- 4	2015-16	34704	Working
Canon Copier machine	2015-16	47565	Working
Multi- media projector-2	2015-16	103691	Working
DSLR Camera	2015-16	39555	Working
Digital camera	2015-16	10305	Working
Multicrop Thresher	2016-17	180000	Working
Rotavetor	2016-17	67210	Working
Disc Harrow	2016-17	95000	Working
Multicrop seed cum fertilizer drill	2016-17	42000	Working
Bund former	2016-17	18000	Working
Cage wheel	2016-17	30450	Working
Ridger (with danti)	2016-17	13125	Working
Hydrulic luggage box	2016-17	16800	Working
V Ditcher	2016-17	12600	Working
Plank	2016-17	32550	Working
RO water purifier with cooler	2016-17	78000	Working
MridaParikshak Soil Testing minilab-kit	2016-17	86000	Working
A/C-2	2016-17	80000	Working
Tractor mounted sprayer	2018-19	13806	Working
Brush cutter	2018-19	24632	Working

### 1.8. Details of SAC meeting conducted in the year:

The Eleventh Scientific Advisory Committee Meeting of Krishi Vigyan Kendra, NAU, Surat was held at KVK, Surat on 11<sup>th</sup> January, 2023 to review the progress made by KVK during last year (01-01-2022 to 31-12-2022) and to discuss the future action plan for the next year (January-2023 to December-2023). The meeting was chaired by Dr. Z. P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari. Dr. N. M. Chauhan, Director of Extension Education, NAU, Navsari, Mr. S. B. Gamit, Joint Director of Agriculture, Surat and Mr. N. G. Gamit, DDA (T) & PD, ATMA, Surat graced the meeting. Dr. J. H. Rathod, Member Secretary & Senior Scientist and Head, Krishi Vigyan Kendra, Surat welcomed all the dignitaries, committee members, farmers and other invitees. He presented overall activities and achievements made by the KVK during the mentioned year. Scientists also presented the discipline wise activities & achievements made by them. Activities done by KVK, Surat was appreciated by the house and congratulated the Senior Scientist and Head and his team for addressing the key issues as per the need of the farmers of Surat district. The Action Plan for the next year was also presented before the house and it was approved by the house.

Dr. N. M. Chauhan, Director of Extension Education, NAU, Navsari congratulated team of KVK for good work done during the last year and gave suggestions to give more emphasis on millets and organize the awareness programme on it. He also appreciated the collaboration of Krishi Vigyan Kendra, Surat with other line departments.

Dr. Z. P. Patel, Hon'ble Vice Chancellor appreciated the activities of Krishi Vigyan Kendra, Surat. He wish that Surat-KVK should become model KVK of the country in urban horticulture. He advised Scientists to work for reducing the cost of cultivation in banana and sugarcane crops and also suggested to introduce the new crops in the district.

#### 11.1 Approval of the minutes of tenth Scientific Advisory Committee.

The action taken report of the minutes of tenth SAC meeting (Held on 25.01.2022) was presented before the house and it was approved by the Scientific Advisory Committee.

#### 11.2 Progress made by KVK during 01-02-2022 to 31-12-2022

Senior Scientist and Head and all Scientists of the KVK, NAU, Surat presented the report on progress made by KVK, for the period of 01-01-2022 to 31-12-2022. The committee was satisfied with the activities and achievements made by the KVK.

#### 11.3 Action plan for the period of January 2023 to December 2023.

Discussion was made on the Action Plan for the period of January 2023 to December 2023 which was approved by the house. However, few suggestions were made by the house to strengthen the action plan.

11.3.1	Conduct awareness programme and training on fodder sorghum.
11.3.2	Organize the awareness programme on millets.
11.3.3	Conduct enrich vermicompost unit at KVK
11.3.4	Conduct awareness programme on soil health and fertility.
11.3.5	Take feedback from peri-urban people regarding terrace gardening training.
11.3.6	Reduce the input cost in sugarcane through Single eye bud technique.
11.3.7	Introduce new crops in the district.
11.3.8	Increase the cultivation area of dragon fruit.

The meeting was ended with vote of thanks by Shri S. J. Trivedi, Scientist (Crop Production), KVK, NAU, Surat.

**Member Secretary & Senior Scientist and Head**  
**Krishi Vigyan Kendra, Athwa Farm, Surat**

**Chairman SAC and Vice – Chancellor**  
**Navsari Agricultural University**  
**Navsari**

**Following members and invitees were remained present in 11<sup>th</sup> Scientific Advisory Committee meeting.**

1	Dr. Z. P. Patel	Hon'ble Vice Chancellor, NAU, Navsari	Chairman
2	Dr. N. M. Chauhan	Director of Extension Education, NAU, Navsari	Member
3	Mr. S.B. Gamit	Joint Director of Agriculture, Surat	Member
4	Dr. M. P. Bhimani	Deputy Directorate of Animal Husbandry, District Panchayat, Surat	Member
5	Mr. N. G. Gamit	Dy. Director of Agriculture, Surat & PD, ATMA, Surat	Member
6	Dr. V. P. Usdadia	Professor & Head, Dept. of Agronomy, NMCA, Navsari	Member
7	Dr. S. J. Patil	Professor & Head, Department of Horticulture, NMCA, NAU, Navsari	Member
8	Dr.Santosh M.	I/C Director, RFS, Dhamrod	Member
9	Dr. N. B. Patel	Associate Research Scientist, LRS, NAU, Navsari	Member
10	Dr. R. L. Leva	Associate Professor, ASPEE bio-tech. Colege, Surat	Member
11	Mrs.KuntalSurati	DDM, NABARD, Surat	Member
12	Mr. D. B. Patel	Representative, Horticulture Officer, DDH, Surat	Member
13	Miss C. P. Pavagadhi	Representative, Deputy Director of Fisheries, Surat	Member
14	Dr. H. K. Patel	AGM (Vet.), Sumul Dairy, Surat	Member
15	Mr.ManishbhaiJinjala	Representative, JDA (Extension), Surat	Member
16	Mr. B. R. Chaudhary	Lead District Manager, Bank of Baroda, Surat	Member
17	Mrs. Rama Singh	Director and Managing trustee, Suruchi Centre, Bardoli	Member
18	Gaurang P. Shah	Ideal Image Trust, Surat	Member
19	Mr. Sanjay Khandhar	Programme Manager, Care India, Surat	Member
20	Mr. N. M. Barot	WA, WALMI, Surat	Member
21	Mr. N. M. Gamit	AE, WALMI, Surat	Member
22	Mr. S. Y. Solanki	Farm Assistance, RFS, Dhamrod	Member
23	Mr.RamsingbhaiChaudhary	Progressive Farmer- SahkariMandli	Member
24	Dr.Rekhaben N. Mistry	Terrace gardener	Member
25	Mrs.JamnabenNakum	Progressive Farmer (AH)	Member
26	HinalkumarPradyuman Patel	Progressive Farmer	Member
27	Dr. M. C. Patel	Research Scientist (Cotton), Main Cotton Research Station, NAU, Surat	Special Invitee
28	Dr. B. K. Davda	Research Scientist (Sorghum), Main Sorghum Research Station, NAU, Surat	Special Invitee
29	Dr. J. H. Rathod	Senior Scientist and Head, KVK, Surat	Member Secretary
		All 4 Scientists, KVK, Surat	

## 2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

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

S. No	Farming system/enterprise
1	Crop production
2	Crop production and Horticulture
3	Crop production and Livestock
4	Crop production, Horticulture and Livestock

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

#### a) Soil type

Taluka (AES)	Soil texture	Rainfall (mm)	Crops	Features
(AES-1) Mandvi (30%), Mangrol (40%), Umarpada	Hilly and highly undulating fine texture, highly erosive	< 1100	Paddy, Maize, Cotton, Sorghum, Pulses	Highly erosive Shallow to medium in depth Poor permeability Low to medium N & P content
(AES-2) Bardoli, Choryasi (75%), Kamrej, Palasana, Surat and Mahuva	Leveled, deep, fine textured	> 1450	Sugarcane, Paddy, Sorghum, Pulses, Orchards	Poor drainage Water logging Very poor permeability Poor soil physical condition Low to medium in N & P content
(AES-3) Mandvi (70%), Mangrol (60%), Olpad (70%)	Deep to medium black	1000 – 1250	Sorghum, Pulses, Paddy, Cotton, Oil Seeds	Moderate to severe erosive Poor soil fertility Poor irrigation facility
(AES-4) Choryasi (25%), Olpad (30%)	Coastal plain, deep, fine texture, salt affected	900-1000	Paddy - Cotton, Sorghum, Pulses, Wheat	High salt accumulation Poor soil physical condition High water table Water logging condition

#### a) Topography

S. No.	Agro ecological situation	Characteristics
1	(AES-1)	Hilly and highly undulating fine texture, highly erosive
2	(AES-2)	Leveled, deep, fine textured
3	(AES-3)	Deep to medium black
4	(AES-4)	Coastal plain, deep, fine texture, salt affected

## 2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Inceptisols	Inceptisols are found on the hilly areas as well as along the hill slopes. These soils are shallow to moderately deep and highly eroded. Their texture varies from loamy to clay. Their water holding capacity is moderate. They are moderate to high in nitrogen, low in phosphoric acid and high in potash content.	
2	Vertisols	Vertisols are found in the midlands and flood plains. These soils are very deep and silty to clay in texture. Their water holding capacity varies with clay content. These soils crack on drying and have poor drainage characteristics. These are moderate in nitrogen, low to medium in phosphoric acid and high in potash content	
3	Coastal saline soils	The soils are sandy clay loam to clay in texture. The soil reaction varies with situation ranging from neutral to highly alkaline. These soils are normally medium in fertility.	

## 2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2023)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
<b>A. Food grains</b>				
1	Paddy	43232	111366	2576
2	Wheat	4290	107708	2496
3	Jowar	9058	10788	1191
4	Bajra	1	2	1690
5	Maize	2321	5153	2220
6	Ragi	1	1	900
7	Other Kharif Cereals	18	11	599
	<b>Total Cereal</b>	<b>58921</b>	<b>138028</b>	<b>2343</b>
8	Tur(Red Gram)	8999	11627	1292
9	Udad	831	765	921
10	Mung	476	234	491
11	Math	13	7	500
12	Gram	1244	1928	1550
13	Other Pulses	379	264	697
14	Indian Bean	0	0	0
15	Cow Pea	0	0	0
	<b>Total Pulses</b>	<b>11942</b>	<b>14825</b>	<b>1241</b>
	<b>Total Food Grain</b>	<b>70863</b>	<b>152853</b>	<b>2157</b>
<b>B. Oil seeds</b>				
16	Groundnut	376	717	1907
17	Castor Seed	56	110	1958
18	Sesame	26	9	334



19	Rape Seed & Mustard Seed	10	19	1900
20	Soybean	9183	11791	1284
21	Other Rabi Oil Seeds	84	100	1186
	<b>Total Oilseeds</b>	<b>9735</b>	<b>12745</b>	<b>1309</b>
<b>C. Cash crops, Vegetables, Spices and Other</b>				
22	Cotton	5620	21654	655
23	Potato	0	0	0
24	Sugarcane	83955	6656036	79281
25	Tobacco	0	0	0
26	Guar Seeds	28	19	695
27	Chilli (Dry)	0	0	0
28	Fennel	0	0	0
29	Garlic	72	530	7358
30	Onion	496	14136	28501
31	Isabgul	0	0	0
32	Coriander Seed	54	53	985
33	Cumin	0	0	0
34	Banana	1996	158431	79374

Source: District Agriculture Department, Surat

## 2.5. Weather data (2023)

Month	Normal RF(mm)	Normal Rainy days (number)	Temperature (° C)		Relative Humidity (%)	
			Maximum	Minimum	Maximum	Minimum
January-2023	0	0	11.7	33.7	41	71
February-2023	0	0	16.7	36.4	20	82
March-2023	4	1	19.8	38.4	31	83
April-2023	12.5	2	22.1	39.4	30	85
May-2023	0	0	24.8	42.1	48	89
June-2023	212	9	25.3	38.9	63	90
July-2023	491	25	25.1	33.7	87	100
August-2023	50.5	6	25.2	33.9	86	100
September-2023	282.5	13	24.4	38.2	79	97
October-2023	0	0	22	38.4	36	59
November-2023	88	1	17.9	36.5	27	43
December-2023	0	0	16.6	33.1	38	84
<b>Total</b>	<b>1140.5</b>	<b>57</b>	<b>11.7</b>	<b>42.1</b>	<b>49</b>	<b>82</b>

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

Category	Population	Production	Productivity
<b>Cattle</b>			
Crossbred	289402	134000	7.9 liters
Indigenous	289402	44000	3.8 liters
Buffalo	300282	192000	4.6 liters
Sheep	1936	-	-
Goats	150464	5000	-
Pigs			
Crossbred	94000	-	-
Indigenous	68000	-	-
Rabbits	-	-	-
<b>Poultry</b>			
Hens	204000	55100	-
Desi	10000	-	-
Category		Production (Q.)	Productivity
Fish (Reservoir)	5	10414	-

Source: DAH, Surat

## 2.7. Details of Operational area / Villages

Name of the block	Name of the village	Major crops & enterprises	Major problems identified	Identified Thrust Areas
Mahuva	1. Machhisadada 2. Vasrai 3. Vaheval 4. Vadia	Paddy, Sugarcane, Pointed gourd, Okra, Brinjal, Vegetables, Mango Crop production- Horticulture-Livestock	<p><b>1.</b> The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation</p> <p><b>2.</b> Okra, brinjal and creepers are important crops but the productivity is very low, problem of insect pests and disease No technical knowhow regarding greenhouse net house technology and crops Lack of technical knowhow about mango orchards plantation and management.</p> <p><b>3.</b> High use of water in canal command area and water scarcity in hilly area</p> <p><b>4.</b> Lack of knowledge about Insect pests and diseases and their management and nutrient management in crops like paddy sugar cane, okra, creepers etc,</p>	<p><b>1.</b> Increase productivity of major crops e.g. Paddy, sugarcane</p> <p><b>2.</b> Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</p> <p><b>3.</b> Management of natural resource, including salinity management</p> <p><b>4.</b> Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</p>

			<p>Injudicious use of fertilizers and pesticides High incidence of wilt and parval vine borer in pointed gourd.</p> <p><b>5.</b> Low milk productivity High calf mortality Problem of anestrus Lack of awareness about Feeds and fodder management.</p> <p><b>6.</b> Lack of knowledge of small-scale agricultural base enterprises, value addition etc.</p> <p><b>7.</b> Drudgery reduction through improved hand tools.</p>	<p><b>5.</b> Increasing milk production by dissemination of latest technologies.</p> <p><b>6.</b> Imparting skill-oriented training to the tribal women for sustaining their livelihood.</p> <p><b>7.</b> Promotion of small-scale farm mechanization in tribal area.</p>
Mandvi	<ol style="list-style-type: none"> <li>1. Jamkui</li> <li>2. Gangapur</li> <li>3. Gamtalav Khurd</li> <li>4. Pipalvada</li> </ol>	<p>Paddy, Sugarcane, Brinjal, Okra, Cluster bean , Vegetables, Pulses, Soybean, Groundnut</p> <p>Crop production- Horticulture-Livestock</p>	<p><b>1.</b> The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation.</p> <p><b>2.</b> Brinjal and okra are important crops but the productivity is very low, problem of insect pests and disease. No technical knowhow regarding greenhouse net house technology and crops. Lack of technical knows how about mango orchards plantation and management.</p> <p><b>3.</b> High use of water in canal command area and water scarcity in hilly area.</p> <p><b>4.</b> Lack of knowledge about Insect pests and diseases and their management and nutrient management in crops like paddy sugar cane, okra, creepers etc, Injudicious use of fertilizers and pesticides High incidence of wilt and fruit and shoot borer in brinjal</p> <p><b>5.</b> Low milk productivity, High calf mortality, Problem of anestrus, Lack of awareness about Feeds and fodder management</p> <p><b>6.</b> Lack of knowledge of small-scale agricultural base enterprises, value addition etc.</p> <p><b>7.</b> Drudgery reduction through improved hand tools.</p>	<p><b>1.</b> Increase productivity of major crops e.g. Paddy, sugarcane, Soybean.</p> <p><b>2.</b>Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</p> <p><b>3.</b>Management of natural resource, including salinity management</p> <p><b>4.</b>Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</p> <p><b>5.</b> Increasing milk production by dissemination of latest technologies.</p> <p><b>6.</b> Imparting skill-oriented training to the tribal women for sustaining their livelihood.</p> <p><b>7.</b> Promotion of small-scale farm mechanization in tribal area.</p>

Umarpada	<ol style="list-style-type: none"> <li>1. Bilvan</li> <li>2. Umarkhadi</li> <li>3. Gondalia</li> <li>4. Chitalda</li> </ol>	<p>Paddy, Brinjal, Okra, Cotton, Pulses, Soybean, Groundnut</p> <p>Crop production - Livestock</p>	<ol style="list-style-type: none"> <li>1. The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation</li> <li>2. Indian bean is an important crop but the productivity is very low, problem of insect pests and disease Lack of technical knowhow about orchards plantation and management.</li> <li>3. Water scarcity in rabi / summer due hilly area</li> <li>4. Lack of knowledge about Insect pests and diseases and their management and nutrient management in crops like paddy vegetables etc, No use of bio fertilizers</li> <li>5. Low milk productivity, High calf mortality, Problem of anestrus Lack of awareness about Feeds and fodder management. Large no of non-descript animals.</li> <li>6. Lack of knowledge of small-scale agricultural base enterprises, value addition etc.</li> <li>7. Drudgery reduction through improved hand tools.</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase productivity of major crops e.g. Paddy, cotton, sorghum, pigeon pea</li> <li>2. Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</li> <li>3. Management of natural resource, including salinity management</li> <li>4. Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</li> <li>5. Increasing milk production by dissemination of latest technologies.</li> <li>6. Imparting skill-oriented training to the tribal women for sustaining their livelihood.</li> <li>7. Promotion of small-scale farm mechanization in tribal area.</li> </ol>
Mangrol	<ol style="list-style-type: none"> <li>1. Vankal</li> <li>2. Zarni</li> <li>3. Boria</li> <li>4. Ognisha</li> </ol>	<p>Paddy, Sorghum, Cotton, Pulses, Groundnut</p> <p>Crop production- Livestock</p>	<ol style="list-style-type: none"> <li>1. The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation.</li> <li>2. Okra, brinjal and creepers are crops but the productivity is very low, problem of insect pests and disease No technical knowhow regarding net house technology and crops Lack of technical knowhow about plantation and management.</li> <li>3. Water scarcity in hilly area and rain fed farming</li> <li>4. Lack of knowledge about Insect pests and diseases and their management and nutrient management in crops like paddy sugar cane, okra, creepers etc, Injudicious use of fertilizers and pesticides</li> </ol>	<ol style="list-style-type: none"> <li>1. Increase productivity of major crops e.g. Paddy, cotton, sorghum.</li> <li>2. Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</li> <li>3. Management of natural resource, including salinity management.</li> <li>4. Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</li> </ol>

			<p>High incidence of wilt and parval vine borer in pointed gourd.</p> <p><b>5.</b> Low milk productivity, High calf mortality Problem of anestrus Lack of awareness about Feeds and fodder management</p> <p><b>6.</b> Lack of knowledge of small-scale agricultural base enterprises, value addition etc.</p> <p><b>7.</b> Drudgery reduction through improved hand tools.</p>	<p><b>5.</b> Increasing milk production by dissemination of latest technologies.</p> <p><b>6.</b> Imparting skill-oriented training to the tribal women for sustaining their livelihood.</p> <p><b>7.</b> Promotion of small-scale farm mechanization in tribal area.</p>
Olpad	<ol style="list-style-type: none"> <li>1. Saras</li> <li>2. Kuvad</li> <li>3. Aadmor</li> <li>4. Pinjrat</li> </ol>	<p>Paddy, Sugarcane, Pointed gourd, Okra, vegetables</p> <p>Crop production-Livestock</p>	<p><b>1.</b> The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation</p> <p><b>2.</b> Okra and creepers are important crops but the productivity is very low, problem of insect pests and disease No technical knowhow regarding greenhouse net house technology and crops Lack of technical knowhow about fruit crops cultivation.</p> <p><b>3.</b> High use of water in canal command area and salinity problem in coastal area</p> <p><b>4.</b> Lack of knowledge about Insect pests and diseases and their management and nutrient management in crops like paddy sugar cane, okra, creepers etc, Injudicious use of fertilizers and pesticides High incidence of wilt and parval vine borer in pointed gourd.</p> <p><b>5.</b> Low milk productivity High calf mortality Problem of anestrus Lack of awareness about Feeds and fodder management</p> <p><b>6.</b> Lack of knowledge of small scale agricultural base enterprises, value addition etc.</p>	<p><b>1.</b> Increase productivity of major crops e.g. Paddy, sugarcane.</p> <p><b>2.</b> Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</p> <p><b>3.</b> Management of natural resource, including salinity management.</p> <p><b>4.</b> Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</p> <p><b>5.</b> Increasing milk production by dissemination of latest technologies.</p> <p><b>6.</b> Imparting skill oriented training to the tribal women for sustaining their livelihood.</p>
Kamrej	<ol style="list-style-type: none"> <li>1. Kodi-bharthana</li> <li>2. Dungra</li> </ol>	<p>Sugarcane, Banana, Paddy, Vegetables</p>	<p><b>1.</b> The productivity of crop is very low due to lack of technical knowhow regarding its</p>	<p><b>1.</b> Increase productivity of major crops e.g. sugarcane</p>

	3. Ghala	Crop production- Horticulture-Livestock	<p>scientific cultivation</p> <p><b>2.</b> Banana is an important crop but the problem of insect pests and disease No technical knowhow regarding greenhouse net house technology and crops</p> <p><b>3.</b> High use of water in canal command area problem of water logging</p> <p><b>4.</b> Lack of knowledge about Insect pests and diseases and their management and nutrient management in banana</p>	<p><b>2.</b> Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</p> <p><b>3.</b> Management of natural resource, including salinity management</p> <p><b>4.</b> Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</p>
Bardoli	1. Vaskui 2. Bhesudla 3. Moti Bhatlav 4. Boria	Paddy, Sugarcane, Banana, Brinjal, Okra, Vegetables Crop production- Horticulture- Livestock	<p><b>1.</b> The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation.</p> <p><b>2.</b> Okra and creepers are important crops but the productivity is very low, problem of insect pests and disease No technical knowhow regarding greenhouse net house technology and crops Lack of technical knowhow about fruit crops cultivation.</p> <p><b>3.</b> High use of water in canal command area and salinity problem in coastal area</p> <p><b>4.</b> Lack of knowledge about Insect pests and diseases and their management and nutrient management in crops like paddy sugar cane, okra, creepers etc, Injudicious use of fertilizers and pesticides High incidence of wilt and parval vine borer in pointed gourd.</p> <p><b>5.</b> Low milk productivity High calf mortality Problem of anestrus Lack of awareness about Feeds and fodder management</p> <p><b>6.</b> Lack of knowledge of small-scale agricultural base enterprises, value addition etc.</p>	<p><b>1.</b> Increase productivity of major crops e.g. Paddy, sugarcane.</p> <p><b>2.</b> Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.</p> <p><b>3.</b> Management of natural resource, including salinity management.</p> <p><b>4.</b> Popularize eco-friendly crop production with special reference to IPDM &amp; INM.</p> <p><b>5.</b> Increasing milk production by dissemination of latest technologies.</p> <p><b>6.</b> Imparting skill-oriented training to the tribal women for sustaining their livelihood.</p>
Choryasi	1. Damka 2. Vasva 3. Bhatlai Bhatpor 4. Budia	Paddy, Pointed gourd, Sorghum, Vegetables Crop production-Livestock	<p><b>1.</b> The productivity of crop is very low due to lack of technical knowhow regarding its scientific cultivation</p> <p><b>2.</b> No technical knowhow regarding</p>	<p><b>1.</b> Increase productivity of major crops e.g. sugarcane</p> <p><b>2.</b> Dissemination of production</p>

			greenhouse net house technology and crops  <b>3.</b> High use of water in canal command area problem of water logging <b>4.</b> Lack of knowledge about Insect pests and diseases and their management and nutrient management in banana <b>5.</b> Lack of knowledge of small-scale agricultural base enterprises, value addition etc.	technology of fruits and vegetables and their post-harvest management as well promotion of precision farming. <b>3.</b> Management of natural resource, including salinity management <b>4.</b> Popularize eco-friendly crop production with special reference to IPDM & INM. <b>5.</b> Imparting skill oriented training to the tribal women for sustaining their livelihood.
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## 2.8. Priority thrust areas:

1. Increase productivity of major crops e.g. Paddy, Cotton, Sorghum, sugarcane, pulses
2. Dissemination of production technology of fruits and vegetables and their post-harvest management as well promotion of precision farming.
3. Management of natural resource, including salinity management
4. Popularizing of location specific farming system
5. Popularize eco-friendly crop production with special reference to IPDM & INM.
6. Increasing milk production by dissemination of latest technologies.
7. Imparting skill oriented training to the tribal women for sustaining their livelihood.
8. Promotion of small scale farm mechanization in tribal area
- 9.** Value addition in Fruits, Vegetables & pulses

### 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	4	40	30	33	31	312	830 (KVK, Other Agency)
							658 (Adaptive Trial)

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
71	79	1740	3153	613	675	5213	45343

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Paddy(GR-17)-200	Paddy(GR-17)-384.25	20000 Vegetable Seedlings	00
Soybean- 40	Paddy(GR-25)-181.25		
Green gram- 10	Paddy Straw-257.80		

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
0	0	0	0



#### 4.1. B. Operational areas details during 2023

S. N.	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	Paddy, Sugarcane, Pointed gourd, Okra, Brinjal, Vegetables, Mango Crop production-Horticulture-Livestock	Use of local variety High seed rate, Imbalance use of fertilizers, No use of bio fertilizer	--	Umra Vasrai Machhisadada Vadia	OFT, FLD, Training, extension activity
2	Paddy, Sugarcane, Brinjal, Okra, Cluster bean , Vegetables, Pulses, Soybean, Groundnut  Crop production- Horticulture-Livestock	Use of local variety in brinjal Imbalance use of fertilizers in crops No use of bio- fertilizers No knowledge about post harvest management and processing Low technical know house regarding green house/ net house and production technology	--	Amba Parvat Uteva Titoi Gamtalav Khurd	OFT, FLD, Training, extension activity
3	Paddy, Brinjal, Okra, Cotton, Pulses, Soybean, Groundnut  Crop production – Livestock	Lack of knowledge about disease and insect pest management. Injudicious use of pesticides Lack of knowledge about Bio-fungicides	--	Kadvali Kadavidadra Bilvan Khotarampura Umarkhadi	OFT, FLD, Training, extension activity
4	Paddy, Sorghum, Cotton, Pulses, Groundnut  Crop production- Livestock	Poor dairy management Large number of non-descript animals with low milk production Poor availability of fodder in hilly area. Poor cultivation of fodder crops High calf mortality due to poor management	--	Balethi Mandan Ghodbar Boriya Ognisha	OFT, FLD, Training, extension activity
5	Paddy, Sugarcane, Pointed gourd, Okra, vegetables  Crop production-Livestock	In hilly area problem of water conservation In middle canal command area due to excess irrigation problems of water logging and salinity In coastal area salinity problem	--	Admor Kuvad Saras Pinrat	OFT, FLD, Training, extension activity
6	Sugarcane, Banana, Paddy, Vegetables Crop production-Horticulture-Livestock	Imbalance use of fertilizers lack of awareness about use of bio-fertilizers	--	Karjan Choryasi Ghala Bhairav	OFT, FLD, Training, extension activity

7	Paddy, Sugarcane, Banana, Brinjal, Okra, Vegetables  Crop production- Horticulture- Livestock	Lack of knowledge about value addition of locally available materials Lack of knowledge, skills regarding various small scale agricultural based enterprises	--	Balda Rajvad Afva Madhi	OFT, FLD, Training, extension activity
8	Paddy, Pointed gourd, Sorghum, Vegetables  Crop production-Livestock	Imbalance use of fertilizers lack of awareness about use of bio-fertilizers	--	Damka Bhatlai Budia Vasava	OFT, FLD, Training, extension activity

### 3.2. Technology Assessment (Kharif 2023, Rabi 2022-23, Summer 2023)

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management	-	-	-	-	-	-	-	-	-	-
Varietal Evaluation	-	-	-	-	-	-	-	-	-	-
Integrated Pest Management	-	-	1	-	1	-	-	-	-	2
Integrated Crop Management	1	1		-	-	-	-	-	-	2
Integrated Disease Management	-	-	-	-	-	-	-	-	-	-
Small Scale Income Generation Enterprises	-	-	-	-	-	-	-	-	-	-
Weed Management	-	-	-	-	-	-	-	-	-	-
Resource Conservation Technology	-	-	-	-	-	-	-	-	-	-
Farm Machineries	-	-	-	-	-	-	-	-	-	-
Integrated Farming System	-	-	-	-	-	-	-	-	-	-
Seed / Plant production	-	-	-	-	-	-	-	-	-	-
Value addition	-	-	-	-	-	-	-	-	-	-
Drudgery Reduction	-	-	-	-	-	-	-	-	-	-
Storage Technique	-	-	-	-	-	-	-	-	-	-
Mushroom cultivation	-	-	-	-	-	-	-	-	-	-
Total	1	1	1	-	1	-	-	-	-	4

**A2. Abstract on the number of technologies assessed in respect of livestock enterprises: Nil**

<b>Thematic areas</b>	<b>Cattle</b>	<b>Poultry</b>	<b>Piggery</b>	<b>Rabbitry</b>	<b>Fisheries</b>	<b>TOTAL</b>
Evaluation of Breeds	-	-	-	-	-	-
Nutrition Management	-	-	-	-	-	-
Disease of Management	-	-	-	-	-	-
Value Addition	-	-	-	-	-	-
Production and Management	-	-	-	-	-	-
Feed and Fodder	-	-	-	-	-	-
Small Scale income generating enterprises	-	-	-	-	-	-
<b>TOTAL</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 trial covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation					
Integrated Pest Management	Pigeonpea	Management of pigeonpea pod borer	1	5	1.5
	Okra	Management of shoot and fruit borer in okra	1	5	1.5
Integrated Crop Management	Paddy	Assessment different varieties of Paddy	1	10	3
	Sesame	Assessment different varieties of Sesame	1	10	12
Integrated Disease Management					
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
<b>Total</b>			<b>4</b>	<b>30</b>	<b>18</b>

## B. 2. Technologies assessed under Livestock & fishery assessment: Nil

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds	-	-	-	-
Health Management	-	-	-	-
Dairy Management	-	-	-	-
Nutrition management	-	-	-	-
Disease management	-	-	-	-
<b>Feed and fodder management</b>	-	-	-	-
Processing & Value addition	-	-	-	-
Production and management	-	-	-	-
<b>Composting fish culture</b>	-	-	-	-
Small scale income generating enterprises	-	-	-	-
<b>Fish production</b>	-	-	-	-
<b>Other</b>	-	-	-	-
<b>Total</b>				

## B.3 Technologies assessed under other enterprises: Nil

Name of Enterprises	Name of the technology assessed	No. of trials	No. of farmers
<b>Mushroom</b>	-	-	-
<b>Apiary</b>	-	-	-
<b>Vermicompost</b>	-	-	-
<b>Tailoring</b>	-	-	-
<b>Nutrition Garden</b>	-	-	-
<b>Nursery Management</b>	-	-	-
<b>Production and Management</b>	-	-	-
<b>Eentrepneurship development</b>	-	-	-
<b>Engegy consrvation</b>	-	-	-
<b>storage techniques</b>	-	-	-
<b>House hold food security</b>	-	-	-
<b>organic farming</b>	-	-	-
<b>mechanization</b>	-	-	-
<b>Bee keeping</b>	-	-	-
<b>Seed production</b>	-	-	-
<b>post-harvest management</b>	-	-	-
<b>other</b>	-	-	-

**B 4. Technologies assessed under Women empowerment assessment: Nil**

Name of Enterprises	Name of the technology assessed	No. of trials	No. of farmers
Drudgery Reduction	-	-	-
Entrepreneurship development	-	-	-
Health and Nutrition	-	-	-
value addition	-	-	-
Kitchen gardening	-	-	-
nutrition security	-	-	-
other	-	-	-

**C. 1. Results of Technologies Assessed**  
**Results of On Farm Trial**
**CROP PRODUCTION:**

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	Justificatio n for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Paddy	Irrigated	Old variety with low yield	Assessment of different varieties of Paddy	1	T1 : Gurjari T2 : GNR-3 T3 : GR-17(Sardar)	Yield & B: C ratio	T1 : Gurjari-55.4 q/ha T2 : GNR-3-62.6 q/ha T3 : GR-17(Sardar)-66.5 q/ha	GR-17 is highest yielder	GR-17 is best variety,fol lowed by GNR-3 and Gurjari	No	No
Sesame	Irrigated	Variety with low yield	Assessment of different varieties of Sesame	1	T1 : Local T2 : GT-3 T3 : GT-5	Yield & B: C ratio	T1 : Local -5.82 q/ha T2 : GT-3-6.68 q/ha T3 : GT-5-7.26 q/ha	GT-5 is highest yielder	GT-5 is best variety,fol lowed by GT-3	No	No

Pigeonpea	Limited irrigation	Infestation of pod borer in pigeonpea	Management of pigeonpea pod borer	1	<p>T<sub>1</sub>: Farmers practices as injudicious and indiscriminate use of pesticides at irregular time interval</p> <p>T<sub>2</sub>: Two sprays of Chlorantraniliprole 18.5% SC @ 0.006% (3 ml/10 lit of water) first at 50 per cent flowering stage and second at 50 per cent pod formation stage</p>	<p>1. Pod borer infestation (%)</p> <p>2. Pod fly infestation (%)</p> <p>3. Grain yield</p> <p>4.B:C ratio</p>	<p>T<sub>1</sub>: Pod borer infestation: 12.00 %, Pod fly infestation: 3.20 %, Grain yield: 13.17 q/ha &amp; BCR: 3.026;</p> <p>T<sub>2</sub>: Pod borer infestation: 3.20 %, Pod fly infestation: 3.94 %, Grain yield: 18.83 q/ha &amp; BCR: 4.144</p>	Chlorantraniliprole is highly effective insecticide for management of pod borer in pigeonpea	Chlorantraniliprole is highly effective insecticide against pod borer in pigeonpea	No	No
Okra	Irrigated	Infestation of shoot and fruit borer in okra	Management of shoot and fruit borer in okra	1	<p>T<sub>1</sub>: Spray <i>Bacillus thuringiensis</i> 1% WP @ 50 g or 1% AS @ 50 ml in 10 lit water at 15 days interval for three times from initiation of shoot and fruit borer</p> <p>T<sub>2</sub>: Two sprays of emamectin benzoate 5 % SG @ 5 g/10 lit water, first at initiation of damage and second at 15 days after the first spray</p> <p>T<sub>3</sub>: Farmers practices as injudicious and indiscriminate use of pesticides at irregular time interval</p>	<p>1. Shoot infestation (%)</p> <p>2. Fruit infestation (%)</p> <p>3. Yield</p> <p>4. B:C ratio</p>	<p>T<sub>1</sub>: Shoot infestation: 6.33 %, Fruit infestation: 7.05 %, Yield: 178.67 q/ha &amp; BCR: 5.118;</p> <p>T<sub>2</sub>: Shoot infestation: 4.07 %, Fruit infestation: 4.82 %, Yield: 195.50 q/ha &amp; BCR: 5.600;</p> <p>T<sub>3</sub>: Shoot infestation: 8.80 %, Fruit infestation: 10.14 %, Yield: 160.17 q/ha &amp; BCR: 4.518</p>	Emamectin benzoate is effective insecticide followed by Bacillus thuringiensis for management of shoot and fruit borer in okra	Emamectin benzoate is effective insecticide against shoot and fruit borer in okra	No	No

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	B:C Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	T1 : Gurjari-NAU T2 : GNR-3-NAU T3 : GR-17(Sardar)-NAU	T1 : Gurjari-55.4 q/ha	q/ha	81940	3.4
Technology option 2		T2 : GNR-3-62.6 q/ha		96760	3.8
Technology option 3		T3 : GR-17(Sardar)-66.5 q/ha		104950	4.0
Technology option 1 (Farmer's practice)	T1 : Local T2 : GT-3-JAU T3 : GT-5-JAU	T1 : Local -5.82 q/ha	q/ha	72600	2.26
Technology option 2		T2 : GT-3-6.68 q/ha		83000	2.41
Technology option 3		T3 : GT-5-7.26 q/ha		90300	2.62
T <sub>1</sub> : Farmers practices as injudicious and indiscriminate use of pesticides at irregular time interval	Farmers practices	13.17 q/ha	q/ha	59956	3.026
T <sub>2</sub> : Two sprays of Chlorantraniliprole 18.5% SC @ 0.006% (3 ml/10 lit of water) first at 50	NAU, Navsari, Gujarat	18.83 q/ha	q/ha	97144	4.144

per cent flowering stage and second at 50 per cent pod formation stage					
T <sub>1</sub> : Spray <i>Bacillus thuringiensis</i> 1% WP @ 50 g or 1% AS @ 50 ml in 10 lit water at 15 days interval for three times from initiation of shoot and fruit borer	AAU, Anand, Gujarat	178.67q/ha	q/ha	395343	5.118
T <sub>2</sub> : Two sprays of emamectin benzoate 5 % SG @ 5 g/10 lit water, first at initiation of damage and second at 15 days after the first spray	SDAU, Gujarat	195.50q/ha	q/ha	441625	5.600
T <sub>3</sub> : Farmers practices as injudicious and indiscriminate use of pesticides at irregular time interval	Farmers practices	160.17 q/ha	q/ha	342968	4.518

## C. 2. Details of each On Farm Trial for assessment to be furnished in the following format separately as per the following details:

### CROP PRODUCTION

#### OFT-1

- Title of Technology Assessed : Assessment of Paddy varieties for yield
- Problem Definition: Low yield due to use of old variety
- Details of technologies selected for assessment : **T<sub>1</sub>**: Gurjari (1997)(Farmers practices)  
**T<sub>2</sub>**: GNR-3 (2012)  
**T<sub>3</sub>**: GR-17(Sardar) (2018)
- Source of technology: NAU, Navsari
- Production system and thematic area : Paddy-Sugarcane, Integrated Crop Management
- Performance of the Technology with performance indicators: T<sub>1</sub>: Gurjari-55.4 q/ha  
T<sub>2</sub>: GNR-3-62.6 q/ha  
T<sub>3</sub>: GR-17(Sardar)-66.5 q/ha
- Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: GR-17 is best variety giving highest yield
- Final recommendation for micro level situation: GR-17 is best variety giving highest yield in olpad block
- Constraints identified and feedback for research : -
- Process of farmers participation and their reaction : Field visits
- Good Quality Photo in JPG (separate with proper caption)



		
<b>T1 : GURJARI</b>	<b>T2 : GNR-3</b>	<b>T3 : GR-17(SARDAR)</b>

## OFT-2

1. Title of Technology Assessed: Assessment of Sesame varieties for yield
2. Problem Definition: Low yield due to use of old variety
3. Details of technologies selected for assessment: **T<sub>1</sub>**: Local (Farmers practices)  
**T<sub>2</sub>**: GT-3  
**T<sub>3</sub>**: GT-5
4. Source of technology: JAU, Junagadh
5. Production system and thematic area: Paddy-Sesame, Integrated Crop Management
6. Performance of the Technology with performance indicators: T1: Local- 5.82 q/ha  
T2: GT-3-6.68 q/ha  
T3: GT-5-7.26 q/ha
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: GT-5 is best variety giving highest yield
8. Final recommendation for micro level situation: GT-5 is best variety giving highest yield in Mandvi block



9. Constraints identified and feedback for research: -
10. Process of farmers participation and their reaction: Field visits
11. Good Quality Photo in JPG (separate with proper caption)



## PLANT PROTECTION

### OFT-3

1. Title of Technology Assessed: Management of pigeonpea pod borer
2. Problem Definition: Infestation of pod borer in pigeonpea
3. Details of technologies selected for assessment:
  - T<sub>1</sub>: Farmers practices as injudicious and indiscriminate use of pesticides at irregular time interval
  - T<sub>2</sub>: Two sprays of Chlorantraniliprole 18.5% SC @ 0.006% (3 ml/10 lit of water) first at 50 per cent flowering stage and second at 50 per cent pod formation stage
4. Source of technology:
  - T<sub>1</sub>: Farmers practices
  - T<sub>2</sub>: NAU, Navsari, Gujarat
5. Production system and thematic area: *Kharif*Pigeonpea, Integrated Pest Management
6. Performance of the Technology with performance indicators:
  - T<sub>1</sub>: Pod borer infestation: 12.00 %, Pod fly infestation: 3.20 %, Grain yield: 13.17 q/ha & BCR: 3.026;
  - T<sub>2</sub>: Pod borer infestation: 3.20 %, Pod fly infestation: 3.94 %, Grain yield: 18.83 q/ha & BCR: 4.144



7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Chlorantraniliprole is highly effective insecticide for management of pod borer in pigeonpea
8. Final recommendation for micro level situation: Chlorantraniliprole is highly effective insecticide against pod borer in pigeonpea in tribal belt of Surat district
9. Constraints identified and feedback for research: -
10. Process of farmers participation and their reaction: Field visits
11. Good Quality Photo in JPG (separate with proper caption):



OFT inputs distribution to framers



OFT- Pigeonpea Field



Pod borer damage



Pod fly damage

## OFT-4

1. Title of Technology Assessed: Management of shoot and fruit borer in okra
2. Problem Definition: Infestation of shoot and fruit borer in okra
3. Details of technologies selected for assessment:
  - T<sub>1</sub>: Spray *Bacillus thuringiensis* 1% WP @ 50 g or 1% AS @ 50 ml in 10 lit water at 15 days interval for three times from initiation of shoot and fruit borer
  - T<sub>2</sub>: Two sprays of emamectin benzoate 5 % SG @ 5 g/10 lit water, first at initiation of damage and second at 15 days after the first spray
  - T<sub>3</sub>: Farmers practices as injudicious and indiscriminate use of pesticides (e.g. Chlorpyrifos 20 % EC, Profenofos 40 % + Cypermethrin 04 % EC, Chlorpyrifos 50 % + Cypermethrin 05 % EC) at irregular time interval
4. Source of technology:
  - T<sub>1</sub>: AAU, Anand, Gujarat
  - T<sub>2</sub>: SDAU, Gujarat
  - T<sub>3</sub>: Farmers practices
5. Production system and thematic area: Okra, Integrated Pest Management
6. Performance of the Technology with performance indicators:
  - T<sub>1</sub>: Shoot infestation: 6.33 %, Fruit infestation: 7.05 %, Yield: 178.67 q/ha & BCR: 5.118;
  - T<sub>2</sub>: Shoot infestation: 4.07 %, Fruit infestation: 4.82 %, Yield: 195.50 q/ha & BCR: 5.600;
  - T<sub>3</sub>: Shoot infestation: 8.80 %, Fruit infestation: 10.14 %, Yield: 160.17 q/ha & BCR: 4.518
7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Emamectin benzoate is effective insecticide against shoot and fruit borer in okra
8. Final recommendation for micro level situation: Emamectin benzoate is effective insecticide followed by *Bacillus thuringiensis* for management of shoot and fruit borer in okra
9. Constraints identified and feedback for research: -
10. Process of farmers participation and their reaction: Field visits
11. Good Quality Photo in JPG (separate with proper caption):



OFT inputs distribution to framers



OFT- Okra Field

### 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 2023 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		
					No. of villages	No. of farmers	Area in ha
Cereal crops							
1	Paddy (GNRH-2)	ICM	New Hybrid	FLDs	8	15	5
2	Paddy (GR-17-Sardar)	ICM	New variety	FLDs	1	10	5
3	Paddy (GR – 9-Lal Kada Gold)	ICM	New variety	FLDs	2	10	5
4	Paddy (GR – 24-Navsari Parimal)	ICM	New variety	FLDs	3	10	5
5	Paddy (GR – 18-Devli Kolam)	ICM	New variety	FLDs	3	10	5
6	Paddy (GR–16 Tapi)	ICM	New variety	FLDs	1	10	5
7	Sorghum (GNJ-1)	ICM	New variety	FLDs	4	12	5
8	Paddy	IPDM	IPDM	FLDs	1	10	4
Oilseed and Pulses crops							
9	Pigeonpea (GNP-2)	ICM	New variety	FLDs	4	12	5
10	Pigeonpea (GT-104)	ICM	New variety	FLDs	2	12	5
11	Pigeonpea (GT-105)	ICM	New variety	FLDs	2	12	5
12	Soybean (NRC-37)	ICM	New variety	FLDs	1	4	2
Fiber crops							
13	Cotton (G cot- Hy-10 Bt)	ICM	New variety	FLDs	1	10	4
Cash crops							
14	Sugarcane	IPDM	IPDM	FLDs	1	10	4
Rabi-22-23							
15	Sorghum (PhuleRaveti)	ICM	New variety	FLDs	2	12	5
Horticulture crops							
16	Banana	IPDM	IPDM	FLDs	1	10	4
17	Brinjal	IPDM	IPDM	FLDs	1	10	4
18	Okra	IPDM	IPDM	FLDs	1	10	4
19	Mango	IPM	IPM	FLDs	2	20	8
Home Science							
20	Kitchen garden kit	Nutrition Management	Seed & Seedling	FLDs	10	200	1
21	Kitchen garden kit	Nutrition Management	Seed & Seedling	FLDs	4	100	0.5
22	Twin Wheel hoe	Drudgery Reduction	Labour saving	FLDs	2	20	--
23	Rake for collecting garbage/ harvesting	Drudgery Reduction	Labour saving	FLDs	5	100	--

24	Stalk puller for uprooting crop stalk	Drudgery Reduction	Labour saving	FLDs	5	50	--
<b>FLDs of Other Agency</b>							
<b>Crop production</b>							
<b>CFLD (NMOOP)</b>							
1	Soybean (NRC-37)	ICM	New variety	FLDs	3	50	20
<b>CFLD (NFSM)</b>							
2	Gram (GG-6)	ICM	New variety + ST+INM	FLDs	2	75	30
<b>CFLD (NMOOP)</b>							
3	Sesame	New Variety+ ST+INM+IPDM	GT-5	FLDs	3	50	20
4	Groundnut	ICM	GG-34	FLDs	2	50	20
<b>CFLD (NFSM)</b>							
5	Green gram	New Variety+ ST+INM+IPDM	GM-6	FLDs	3	75	30
<b>Other FLDs by Sorghum Research Station- Dhamrod Surat</b>							
6	Sorghum fodder	Improved variety	Cofs-31	FLDs	2	35	3.5
7	Sorghum fodder	Improved variety	CSV-33-MF	FLDs	1	20	2
<b>Adaptive Trials</b>							
1	Paddy GNR-3	ICM	New variety	FLDs	1	8	4
2	Paddy Devli Kolam	ICM	New variety	FLDs	10	400	16
3	Paddy	IPDM	IPDM	FLDs	2	30	12
4	Sugarcane	IPDM	IPDM	FLDs	2	30	12
5	Pointed gourd	IPDM	IPDM	FLDs	3	30	12
6	Banana	IPDM	IPDM	FLDs	2	30	12
7	Brinjal	IPDM	IPDM	FLDs	3	30	12
8	Okra	IPDM	IPDM	FLDs	3	30	12
9	Mango	IPDM	IPDM	FLDs	4	30	12

B. Details of FLDs implemented during 2023 (**Kharif 2023, Rabi 2022-23, Summer 2023**) (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.**)

S. N.	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ST	Others	Total	
KVK:2023										
Kharif-23										
Cereal crops										
1	Paddy (GNRH-2)	ICM	New hybrid	Kharif -23	5	5	15	0	15	--
2	Paddy (GR-17-Sardar)	ICM	New variety	Kharif -23	5	5	10	0	10	--

3	Paddy (GR – 9-Lal Kada Gold)	ICM	New variety	<i>Kharif -23</i>	5	5	10	0	10	--
4	Paddy (GR – 24-Navsari Parimal)	ICM	New variety	<i>Kharif -23</i>	5	5	10	0	10	--
5	Paddy (GR – 18-Devli Kolam)	ICM	New variety	<i>Kharif -23</i>	5	5	10	0	10	--
6	Paddy (GR-16 Tapi)	ICM	New variety	<i>Kharif -23</i>	5	5	12	0	12	--
7	Sorghum (GNJ-1)	ICM	New variety	<i>Kharif -23</i>	5	5	10	0	10	--
8	Paddy	IPDM	IPDM	<i>Kharif -23</i>	4	4	10	0	10	--

#### Oilseed and Pulses crops

9	Pigeonpea (GNP-2)	ICM	New variety	<i>Kharif -23</i>	5	5	4	8	12	--
10	Pigeonpea (GT-104)	ICM	New variety	<i>Kharif -23</i>	5	5	5	10	15	--
11	Pigeonpea (GT-105)	ICM	New variety	<i>Kharif -23</i>	5	5	5	10	15	--
12	Soybean (NRC-37)	ICM	New variety	<i>Kharif -23</i>	4	2	4	0	4	--

#### Fiber crops

13	Cotton (G.Cot- Hy-10 Bt)	ICM	New variety	<i>Kharif -23</i>	4	4	10	0	10	--
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#### Cash crops

14	Sugarcane	IPDM	IPDM	<i>Rabi-22-23</i>	4	4	10	0	10	--
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#### Rabi-22-23

15	Sorghum (Phule Raveti)	ICM	New variety	<i>Rabi-22-23</i>	5	5	12	0	12	--
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#### Horticulture crops

16	Banana	IPDM	IPDM	<i>Kharif-23</i>	4	4	0	10	10	--
17	Brinjal	IPDM	IPDM	<i>Rabi-23</i>	4	4	10	0	10	--
18	Mango	IPDM	IPDM	<i>Rabi-23</i>	4	4	10	0	10	--
19	Okra	IPDM	IPDM	<i>Rabi-23</i>	4	4	10	0	10	--

#### Home Science

20	Kitchen garden kit	Nutrition Management	Seed & Seedling	<i>Rabi-22</i>	100	100	70	30	100	--
21	Kitchen garden kit	Nutrition Management	Seed & Seedling	<i>kharif-23</i>	100	50	25	25	50	--
22	Twin Wheel hoe	Drudgery Reduction	Labour saving	<i>Rabi-23</i>	20	20	20	0	20	--
23	Rake for collecting garbage/ harvesting	Drudgery Reduction	Labour saving	<i>Rabi-23</i>	50	50	50	0	50	--
24	Stalk puller for uprooting crop stalk	Drudgery Reduction	Labour saving	<i>Rabi-23</i>	30	30	30	0	30	--
25	Kitchen garden kit	Nutrition Management	Seed & Seedling	<i>Rabi-23</i>	100	50	50	0	50	--

FLDs of Other Agency: 2023										
Crop production :										
CFLD(NMOOP)										
1	Soybean (NRC-37)	ICM+INM	New variety + ST+INM	<i>Kharif-23</i>	20	20	50	0	50	--
CFLD(NFSM)										
2	Gram (GG-6)	ICM+INM+IPDM	New variety + ST+INM+IPDM	<i>Rabi-22-23</i>	30	30	75	0	75	--
CFLD(NMOOP)										
3	Sesame (GT-5)	ICM+INM+IPDM	New variety+ ST+INM+IPDM	<i>Summer-23</i>	10	10	25	0	25	--
4	Groundnut -GG- 34	ICM	New variety+ ST	<i>Summer- 23</i>	20	20	50	0	50	--
CFLD(NFSM)										
5	Greengram (GM-6)	ICM+INM+IPDM	New variety+ ST+INM+IPDM	<i>Summer- 23</i>	30	30	75	0	75	--
Other FLDs by Sorghum Research Station-Dhamrod, Surat										
6	Sorghum fodder	Improved variety	Cofs-31	<i>Kharif-23</i>	--	--	50	0	50	--
<b>Total:</b>					<b>597</b>	<b>495</b>	<b>737</b>	<b>93</b>	<b>830</b>	<b>--</b>
Adaptive Trials										
1	Paddy(GNR-3)	ICM	New Variety	<i>Kharif -23</i>	4	4	8	0	8	--
2	Paddy(GR-18-Devli Kolam)	ICM	New Variety	<i>Kharif -23</i>	16	16	400	0	400	--
Cash crops										
3	Sugarcane	IPDM	IPDM	<i>Rabi-22</i>	12	12	30	0	30	--
Horticulture crops										
4	Banana	IPDM	IPDM	<i>Kharif-22</i>	12	12	0	30	30	--
5	Pointed gourd	IPDM	IPDM	<i>Kharif-22</i>	12	12	30	0	30	--
6	Brinjal	IPDM	IPDM	<i>Rabi-22</i>	12	12	30	0	30	--
7	Okra	IPDM	IPDM	Summer-23	12	12	30	0	30	--
8	Mango	IPDM	IPDM	<i>Rabi-22</i>	40	40	64	36	100	--
<b>Total:</b>					<b>120</b>	<b>120</b>	<b>592</b>	<b>66</b>	<b>658</b>	<b>--</b>
<b>Grand Total (KVK, Other Agency + Adaptive Trials):</b>					<b>717</b>	<b>615</b>	<b>1329</b>	<b>159</b>	<b>1488</b>	



**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					
Paddy	<i>Kharif</i>	Irrigated	Medium black	Low	Medium	High	Greengram	20-30/07/23	22-25/11/23		
Sesame	<i>Summer</i>	Irrigated	Laterite	Low	Medium	High	Paddy	15-23/02/23	25-30/05/23	1140.5	57

# Technical Feedback on the demonstrated technologies

S.N.	Crop	Technology demonstrated	Feed back
1	Paddy	GNRH -2	1. Medium slender grain rice 2. It is moderately resistant against bacterial leaf blight, leaf blast, grain discoloration and sheath rot. 3. Tolerant to insect pest like BPH, WBPH, leaf folder and stem borer. 4. Suitable for rice growing areas of South Gujarat
2	Paddy	GR -17(Sardar)	1. Early maturing, Long bold grain 2. Moderately resistant against bacterial leaf blight, leaf blast, grain discoloration, sheath rot, WBPH and leaf folder.. 1. Suitable for transplanted rice growing areas.
3	Paddy	GNR -9(Lal-Kada Gold)	1. Red Kernel 2. Bio-fortified variety
4	Paddy	GR – 24(Navsari Parimal)	1. Long Slender 2. Early maturing 3. Non-Lodging
5	Paddy	GR-18(Devli Kolam)	1. Medium Slender 2. Medium Resistant to Pest & diseases 3. Early maturing & Non-lodging
6	Paddy	GR – 16 (Tapi)	1. Early maturing upland rice variety 2. Long bold variety with good grain quality, 3. Moderately resistant reaction against leaf blast and insect pest like stem borer and sheath mite. Suitable for upland rice growing areas.
7	Sorghum	GNJ-1	1. High yielding 2. Less incidence of smut, shoot borer and grain mould
8	Sorghum	Phule Revati	1. Higher yield with less incidence of pest & diseases 2. Suitable for Rabi season
9	Soybean	NRC-37	1. Moderate yield 2. Early maturing 3. Moderately Resistant to Pest & disease
10	Green gram	GM-6	1. Moderate Yield 2. Moderately Resistance to YMD
11	Sesame	GT-5	1. Moderate yield 2. Moderately Resistant to Helicoverpa
12	Groundnut	GG-34	1. Higher yield with bold grain 2. Tolerant to rust and late tikka disease 3. Lower infestation of trips and jassids

13	Cotton	G.Cot.Hy-10(Bt)	1.Higher yield 2.medium maturing 3.Suitable for rainfed and irrigated area 4.Resistant to pest & diseases
14	Pigeonpea	GNP-2	1.Seed is round, Pods are of light green colour 2.Tolerant to wilt & SMD
15	Pigeonpea	GT-104	1.Resistant to wilt and sterility 2.Red flowers & Pods set in clusters
16	Pigeonpea	GT-105	1.Resistant to sterility, early maturing 2.Yellow flowers
17	Paddy	IPDM	Lower infestation of stem borer, leaf folder in paddy field; lower intensity of Bacterial Leaf Blight, blast, grain discoloration and other diseases, increase yield of paddy
18	Sugarcane	IPDM	Lower infestation of borers and sucking pests in sugarcane, less incidence of soil borne diseases, increase yield of sugarcane
19	Banana	IPDM	Less incidence of wilt, nematodes, less infestation of weevil in banana field, increase yield of banana
20	Pointed gourd	IPDM	Less incidence of soil borne and other diseases, less infestation of pests, improve quality and production of pointed gourd fruits
21	Brinjal	IPDM	Lower infestation of fruit & shoot borer and sucking pests in brinjal, decrease use of chemical fertilizers and pesticides; increase quality and yield of brinjal fruits
22	Okra	IPDM	Less infestation of insect pests, decrease use of chemical fertilizers and pesticides; increase in yield and quality of fruits in okra
23	Mango	IPDM	Less infestation of fruitfly and incidence of diseases, increase in yield and quality of mango fruits
24	Kitchen Garden	Nutrition Management	Kitchen gardening gives continuous supply of fresh vegetables. Income is generated by selling extra vegetables grown in kitchen garden. Farm women are not applying any pesticides in kitchen garden so they get organic vegetables.
25	Twin wheel hoe	Drudgery Reduction	Twin wheel hoe weeder reduces women drudgery in terms of time and physical hazards (finger injuries, wrist pain, muscle stress etc.) During weeding, field capacity is increased by using twin wheel hoe weeder as compared to local sickle.
26	Rake for collecting garbage	Drudgery Reduction	Rake for collecting garbage/ harvesting increases working efficiency as compared to traditional method. Reduces fatigue, backache, muscle stress, wrist pain and pain in shoulders as compared to traditional method.
27	Stalk puller	Drudgery Reduction	Stalk puller increases working efficiency as compared to traditional method. Stalk puller reduces fatigue, backache, muscle stress, wrist pain and pain in shoulders as compared to traditional method.

**Extension and Training activities under FLD**

Extension and Training activities under FLD

Sl. No.	Activity	No. of activities organized	Date	Number of participants	Remarks						
1	Field days										
	Gram	1	17-01-2023	47	Umarkhadi(Umarpada)						
	Greengram	1	27-04-2022	36	Bilvan (Umarpada)						
	Groundnut	1	09-05-2023	22	Umarkhadi(Umarpada)						
	Sesame	1	21-04-2023	24	Uteva (Mandvi)						
	Soybean	1	22-09-2023	23	Uteva (Mandvi)						
	Mango	1	12-04-2023	31	Kadhaiya (Mahuva)						
	Mango	1	15-04-2023	43	Machhisadada (Mahuva)						
	Paddy	1	18-10-2023	33	Bilvan (Umarpada)						
2	Trainings										
		No.	Others			Number of SC/ST			Total number of participants		
			M	F	Total	M	F	Total	M	F	Total
	Crop Production	6	0	0	0	271	83	354	271	83	354
	Plant protection	6	49	5	54	56	60	116	105	65	170
	Horticulture	2	12	8	20	10	10	20	22	18	40
	Home Science	5	0	0	0	4	170	174	4	170	174
	Total	19	61	13	74	341	323	664	402	336	738

**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	ICM	New variety+ST	GG-34	50	20	24.10	20.39	22.15	17.85	24.09	46520	132900	86380	2.86	45800	107100	61300	2.34
Sesamum	ICM+ST+INM	New variety+Bio-fertilizer+Bio-Pesticide	GT-5	50	20	8.40	6.00	6.96	5.60	24.28	23000	57768	34768	2.51	21400	46480	25080	2.17
Soybean	ICM	New variety+ INM	NRC-37	50	20	15.88	9.05	11.31	9.02	25.39	22370	48633	26263	2.17	21870	38786	26263	1.77
Soybean	ICM	New variety	NRC-37	4	2	14.20	9.45	11.50	9.10	26.37	29400	52900	23500	1.8	28500	41860	13360	1.5

\* 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

[illegible]

\* 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

[illegible]

Brinjal	IPDM	IPDM	10	4	237.39	198.26	216.09	196.17	10.15			97000	399767	302767	4.121	96000	362915	266915	3.780
Okra	IPDM	IPDM	10	4	197.39	154.78	171.65	152.52	12.54			96000	472038	376038	4.917	97500	419430	321930	4.302
Fruit crops																			
Mango	IPDM	IPDM	10	4	68.70	55.22	59.78	55.80	7.13			52690	239120	186430	4.538	51000	223200	172200	4.376
Banana	IPDM	IPDM	10	4	788.69	706.95	735.47	683.30	7.64			128500	698697	570197	5.437	130000	649135	519135	4.993
Commercial Crops																			
Sugarcane	IPDM	IPDM	10	4	1291.68	833.34	1052.09	962.51	9.31			129250	320887	191637	2.483	125400	293566	168166	2.341
Cotton	ICM	G.Cot.Hy-10 (Bt-BG-II)	10	4	2650	1950	2350	1910	23.04			49200	155100	105900	3.2	47400	126060	78660	2.7
Fodder Crops: FLDs by Sorghum Research Station-Dhamrod Surat- Kharif-23																			
Sorghum (F)	Fodder crop	Improved Variety – Cofs-31	50	5	820	590	724	590	22.71	--	--	19280	45300	26020	2.35	18900	36855	17955	1.95

\* 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 Nutri cereals: Nil

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										
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

### FLD on Livestock: Nil

### FLD on Fisheries: Nil

### FLD on Other enterprises: Nil

### FLD on Women Empowerment: Nil

## FLD on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farm women	Area (ha)	Major Parameter	Field observation (ha/man hour)		% change in major parameter	Labor reduction (man days) (man-h/ha)				Cost reduction (Rs./ha/day)	
									Harvesting		Weeding		Labour**	
						Demo	Check		Demo	Check	Demo	Check	Demo	Check
Twin wheel hoe weeder for weeding	Vegetables / Pulses	Women drudgery reduction	20	-	-Field observation (ha/hr) -Labour requirement (Man hours/ha) -Cost of operation	0.018 ha (0.144 ha/day)	0.011 ha (0.088 ha/day)	63.63	-	-	56	91	1861	3045
Rake for collecting garbage/ harvesting	Dry matter of crops/Harvesting/ garbage	Women drudgery reduction	50	-	-Field observation -Drudgery parameters like physical hazards, muscle stress, fatigue	0.043 ha (0.344ha/day)	0.027 ha (0.216ha/day)	59.25	23	37	-	-	779	1240
Stalk Puller for uprooting crop stalks	Concerned crops	Women drudgery reduction	30	-	-Field observation -Drudgery parameters like physical hazards, muscle stress, fatigue	0.033 ha (0.264 ha/day)	0.020 ha (0.16 ha/day)	65.00	30	50	-	-	1005	1675

## FLD on Other Enterprise: Kitchen Gardening

Nutrition garden components	Thematic area	Area (sq mt)	No. of Farmer	No. of Units	Yield (Kg)- supply of vegetables, fruits, etc from KG in the year		% change in yield	Household size (number)		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check*		Demo	Check	Gross Cost	Gross Return/Savings*	Net Return	BCR (R/C)	Gross Cost	Gross Return/Savings*	Net Return	BCR (R/C)
Seeds and seedling	Household food security by kitchen gardening	100	100	100	127	25	102	0	0	1050	5060	4010	4.8	750	1000	250	1.33
Seeds and seedling	Household food security by kitchen gardening	100	50	50	114	25	89	0	0	400	5700	5300	14.2	300	1000	700	3.33

\*check maybe family adopting different Nutrition garden model/ no adoption of Nutrition garden model  
Savings from produce of Nutrition garden used for home consumption

## FLD on Demonstration details on crop hybrids: Nil

### 3.4. Training Programmes

### **Farmers' Training including sponsored training programmes (on campus)**

[illegible]



[illegible]

prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
<b>Total</b>										
<b>IX Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
<b>Total</b>										
<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
<b>Total</b>										
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>10</b>	<b>131</b>	<b>226</b>	<b>357</b>	<b>88</b>	<b>58</b>	<b>146</b>	<b>219</b>	<b>284</b>	<b>503</b>

### **Farmers' Training including sponsored training programmes (off campus)**

[illegible]

Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
<b>Total (a)</b>	<b>4</b>	<b>12</b>	<b>8</b>	<b>20</b>	<b>39</b>	<b>44</b>	<b>83</b>	<b>51</b>	<b>52</b>	<b>103</b>
<b>b) Fruits</b>										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	37	5	42	0	0	0	37	5	42
Management of young plants/orchards	1	0	0	0	17	0	17	17	0	17
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards	1	32	6	38	0	0	0	32	6	38
Plant propagation techniques										
Others (pl specify)										
<b>Total (b)</b>	<b>3</b>	<b>69</b>	<b>11</b>	<b>80</b>	<b>17</b>	<b>0</b>	<b>17</b>	<b>86</b>	<b>11</b>	<b>97</b>
<b>c) Ornamental Plants</b>										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
<b>Total (c)</b>										
<b>d) Plantation crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (d)</b>										
<b>e) Tuber crops</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (e)</b>										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (f)</b>										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post-harvest technology and value addition										
Others (pl specify)										
<b>Total (g)</b>										
<b>Grand Total (a to g)</b>	<b>7</b>	<b>81</b>	<b>19</b>	<b>100</b>	<b>56</b>	<b>44</b>	<b>100</b>	<b>137</b>	<b>63</b>	<b>200</b>
<b>III Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
<b>Total</b>										
<b>IV Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology	1	0	0	0	4	46	50	4	46	50
Production of quality animal products										
Others (pl specify)										
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>46</b>	<b>50</b>	<b>4</b>	<b>46</b>	<b>50</b>
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and	2	3	25	28	0	35	35	3	60	63

[illegible]

Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
<b>Total</b>										
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>42</b>	<b>294</b>	<b>83</b>	<b>377</b>	<b>583</b>	<b>589</b>	<b>1172</b>	<b>877</b>	<b>672</b>	<b>1549</b>

**Farmers' Training including sponsored training programmes – CONSOLIDATED (On + Off campus)**[illegible]

Processing and value addition										
Others (pl specify)										
<b>Total (e)</b>										
<b>f) Spices</b>										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
<b>Total (f)</b>										
<b>g) Medicinal and Aromatic Plants</b>										
Nursery management										
Production and management technology										
Post-harvest technology and value addition										
Others (pl specify)										
<b>Total (g)</b>										
<b>Grand Total (a to g)</b>	<b>11</b>	<b>124</b>	<b>164</b>	<b>288</b>	<b>56</b>	<b>44</b>	<b>100</b>	<b>180</b>	<b>208</b>	<b>388</b>
<b>III Soil Health and Fertility Management</b>										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
<b>Total</b>										
<b>IV Livestock Production and Management</b>										
Dairy Management										
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology	1	0	0	0	4	46	50	4	46	50
Production of quality animal products										
Others (pl specify)										
<b>Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>46</b>	<b>50</b>	<b>4</b>	<b>46</b>	<b>50</b>
<b>V Home Science/Women empowerment</b>										
Household food security by kitchen gardening and nutrition gardening	3	3	53	56	0	35	35	3	88	91
Design and development of low/minimum cost diet	1	0	30	30	0	0	0	0	30	30
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	3	0	25	25	0	60	60	0	85	85
Women empowerment	1	0	0	0	3	17	20	3	17	20
Location specific drudgery reduction technologies	3	0	0	0	0	89	89	0	89	89
Rural Crafts										
Women and child care	1	0	0	0	0	25	25	0	25	25
Others (pl specify)										
<b>Total</b>	<b>12</b>	<b>3</b>	<b>108</b>	<b>111</b>	<b>3</b>	<b>226</b>	<b>229</b>	<b>6</b>	<b>334</b>	<b>340</b>
<b>VI Agril. Engineering</b>										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post-Harvest Technology										
Others (pl specify)										
<b>Total</b>										
<b>VII Plant Protection</b>										
Integrated Pest Management	8	67	3	70	91	105	196	158	108	266
Integrated Disease Management	1	22	0	22	0	0	0	22	0	22

Bio-control of pests and diseases	1	46	0	46	0	0	0	46	0	46
Production of bio control agents and bio pesticides										
Others: Honeybee rearing	1	88	28	116	24	31	55	112	59	171
Others: Natural Farming	1	25	3	28	0	0	0	25	3	28
<b>Total</b>	<b>12</b>	<b>248</b>	<b>34</b>	<b>282</b>	<b>115</b>	<b>136</b>	<b>251</b>	<b>363</b>	<b>170</b>	<b>533</b>
<b>VIII Fisheries</b>										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
<b>Total</b>										
<b>IX Production of Inputs at site</b>										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										
Apiculture										
Others (pl specify)										
<b>Total</b>										
<b>X Capacity Building and Group Dynamics</b>										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
<b>Total</b>										
<b>XI Agro-forestry</b>										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>52</b>	<b>425</b>	<b>309</b>	<b>734</b>	<b>671</b>	<b>647</b>	<b>1318</b>	<b>1096</b>	<b>956</b>	<b>2052</b>

[illegible]

Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition	2	0	60	60	0	0	0	0	60	60
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>	<b>2</b>	<b>0</b>	<b>60</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>60</b>	<b>60</b>

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			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	1	0	0	0	0	24	24	0	24	24
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>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>24</b>	<b>0</b>	<b>24</b>	<b>24</b>



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

Area of training	No. of Courses	No. of Participants								
		General/ Others			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	3	0	60	60	0	24	24	0	84	84
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>	<b>3</b>	<b>0</b>	<b>60</b>	<b>60</b>	<b>0</b>	<b>24</b>	<b>24</b>	<b>0</b>	<b>84</b>	<b>84</b>

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing	1	47	3	50	0	0	0	47	3	50
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other -Terrace Gardening	1	36	6	42	0	0	0	36	6	42
<b>TOTAL</b>	<b>2</b>	<b>83</b>	<b>9</b>	<b>92</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>83</b>	<b>9</b>	<b>92</b>

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	2	90	10	100	0	0	0	90	10	100
Integrated Pest Management	1	25	3	28	0	0	0	25	3	28
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	1	0	0	0	0	60	60	0	60	60
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)										
<b>TOTAL</b>	<b>4</b>	<b>115</b>	<b>13</b>	<b>128</b>	<b>0</b>	<b>60</b>	<b>60</b>	<b>115</b>	<b>73</b>	<b>188</b>

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

Area of training	No. of Course s	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Mal e	Femal e	Tota l	Mal e	Femal e	Tota l	Mal e	Femal e	Tota l
Productivity enhancement in field crops	2	90	10	100	0	0	0	90	10	100
Integrated Pest Management	1	25	3	28	0	0	0	25	3	28
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	1	0	0	0	0	60	60	0	60	60
Low cost and nutrient efficient diet designing	1	47	3	50	0	0	0	47	3	50
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other -Terrace Gardening	1	36	6	42	0	0	0	36	6	42
<b>TOTAL</b>	<b>6</b>	<b>198</b>	<b>22</b>	<b>220</b>	<b>0</b>	<b>60</b>	<b>60</b>	<b>198</b>	<b>82</b>	<b>280</b>

## Sponsored training programmes

[illegible]

Others –Natural farming (PP)	2	27	0	27	32	7	39	59	7	66
<b>Total</b>	<b>6</b>	<b>202</b>	<b>37</b>	<b>239</b>	<b>32</b>	<b>7</b>	<b>39</b>	<b>234</b>	<b>44</b>	<b>278</b>
<b>Post-harvest technology and value addition</b>										
Processing and value addition										
Others –Terrace gardening	4	125	135	260	0	0	0	125	135	260
<b>Total</b>	<b>4</b>	<b>125</b>	<b>135</b>	<b>260</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>125</b>	<b>135</b>	<b>260</b>
<b>Farm machinery</b>										
Farm machinery, tools and implements										
Others (pl. specify)										
<b>Total</b>										
<b>Livestock and fisheries</b>										
Livestock production and management										
Animal Nutrition Management										
Animal Disease Management										
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
<b>Total</b>										
<b>Home Science</b>										
Household nutritional security										
Economic empowerment of women										
Drudgery reduction of women										
Others (pl. specify)										
<b>Total</b>										
<b>Agricultural Extension</b>										
Capacity Building and Group Dynamics										
Others (pl. specify)										
<b>Total</b>										
<b>GRAND TOTAL</b>	<b>10</b>	<b>327</b>	<b>172</b>	<b>499</b>	<b>32</b>	<b>7</b>	<b>39</b>	<b>359</b>	<b>179</b>	<b>538</b>

[illegible]

<b>Total</b>	<b>2</b>	<b>18</b>	<b>8</b>	<b>26</b>	<b>2</b>	<b>21</b>	<b>23</b>	<b>20</b>	<b>29</b>	<b>49</b>
<b>Agricultural Extension</b>										
Capacity building and group dynamics										
Others (pl. specify)										
<b>Total</b>										
<b>Grand Total</b>	<b>8</b>	<b>18</b>	<b>58</b>	<b>76</b>	<b>2</b>	<b>121</b>	<b>123</b>	<b>20</b>	<b>179</b>	<b>199</b>

### 3.5. Extension Programmes

<b>Activities</b>	<b>No. of programmes</b>	<b>No. of farmers</b>	<b>No. of Extension Personnel</b>	<b>TOTAL</b>
Advisory Services (Telephonic)	12	4175	6	4176
Whats app/ Social media advisories	12	5870	6	5876
Diagnostic visits	22	45	4	49
Field Day	8	249	10	259
Kisan Ghosthi	6	178	24	202
Film Show	38	840	7	847
Self –help groups	1	10	1	11
Lecture Delivered	26	2798	461	3259
Kisan Mela	4	3197	19	3216
Khedut Shibir	4	1317	62	1379
Mahila Shibir	2	186	8	194
SHG Mahila meeting	2	54	1	55
Exhibition	13	4567	48	4615
Scientists’ visit to farmers field	174	329	7	336
Farmers visit to KVK	127	227	1	228
Ex-trainees Sammelan	1	23	6	29
Farmers’ seminar/workshop	6	836	55	891
Method Demonstrations	41	1901	17	1918
Meeting Attended / Organized	51	522	487	1009
Technical programme meeting attended	5	0	277	277
Special day celebration	18	2059	23	2082
Special Programme	12	1780	63	1843
Rabi Krushi Mahotsav	4	1559	20	1579
Exposure visits	9	169	192	361
Students visit to KVK	14	1214	5	1219
Guidance to college students under RAWA programme	2	3	5	8
Viksit Bharat Sankalp Yatra (VBSY) in tribal districts- Celebration of Janjatiya Gaurav Diwas	4	1020	42	1062
Viksit Bharat Sankalp Yatra (VBSY) in Rural Area	8	3537	33	3570
Sample diagnosis	4	23	2	25
<b>Others:</b>				
Awareness on millets & Natural Farming	19	1012	22	1034
PM Kisan Flagship Pro.	1	32	1	33
PM Kisan Samman Nidhi	2	161	9	170
Guest Lecture on Natural Farming	5	1196	31	1227
Participated in Master trainers training	1	332	10	342
Swachchhta related activities-16-31/12/23	10	461	6	467
Online Webinar/ Workshops/ Meetings	5	42	1341	1383
Campaigns in agriculture under Mission Life Style for Environment (LiFE)	2	104	8	112
<b>Total</b>	<b>675</b>	<b>42028</b>	<b>3320</b>	<b>45343</b>

**Details of other extension programmes:**

Particulars	Number
Electronic Media (CD./DVD)	--
Extension Literature	4
Newspaper coverage	42
Popular articles	--
Radio Talks	--
TV Talks	--
Animal health camps (Number of animals treated)	--
Social Media (No. of platforms Used)	5
Others (pl. specify)	--
<b>Total</b>	<b>51</b>

**3.6 Online activities during year 2023**

S. No.	Activity Type	Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webex etc.)	Title of Program	No. of Programmes	No. of Participants/ Views
A	Farmers training				
	<b>Total</b>				
B	Farmers scientist's interaction programme				
C	Farmers seminars				
1		Zoom	Online training programme about the food use of soybean	1	46
	<b>Total</b>			<b>1</b>	<b>46</b>
D	Expert lectures				
	<b>Total</b>				
E	Any other (Pl. specify)				
1	E-sarkar training	Zoom	E-sarkar training	2	105
2	Kisan Sarthi	Zoom	Kisan Sarthi Training	1	218
			<b>Total</b>	<b>3</b>	<b>323</b>
			<b>Grand Total (A+B+C+D+E)</b>	<b>4</b>	<b>369</b>

**3.7. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS****Production of seeds by the KVKs**

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Paddy	GR-17	-	328.75	1025700	500
	Paddy	GR-17	-	55.5	-	-
	Paddy	GR-25	-	181.25	-	-
Oilseeds	-	-	-	-	-	-
	-	-	-	-	-	-
Pulses	-	-	-	-	-	-
	-	-	-	-	-	-
Commercial crops	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-
Flower crops	-	-	-	-	-	-

Spices	-	-	-	-	-	-
Fodder crop seeds	-	-	-	-	-	-
Fiber crops	-	-	-	-	-	-
Forest Species	-	-	-	-	-	-
Others	Paddy Straw	-	-	25780 kg	154680	
<b>Total</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
Commercial	-	-	-	-	-	-
Vegetable seedlings	-	-	-	-	-	-
Fruits	-	-	-	-	-	-
Ornamental plants	-	-	-	-	-	-
Medicinal and Aromatic	-	-	-	-	-	-
Plantation	-	-	-	-	-	-
Spices	-	-	-	-	-	-
Tuber	-	-	-	-	-	-
Fodder crop saplings	-	-	-	-	-	-
Forest Species	-	-	-	-	-	-
Others	-	-	-	-	-	-
<b>Total</b>	-	-	-	-	-	-

#### Production of Bio-Products

Bio Products	Name of the bio-product	Quantity	Value (Rs.)	No. of Farmers
		Kg/Lit		
Bio Fertilizers	-	-	-	-
Bio-pesticide	-	-	-	-
Bio-fungicide	-	-	-	-
Bio Agents	-	-	-	-
Others	-	-	-	-
<b>Total</b>	-	-	-	-

#### Production of livestock materials

Particulars of Live stock	Name of the animal / bird / aquatics	Name of the breed	Type of Produce	unit (no./ lit/kg)	Quantity	Value (Rs.)	No. of Farmers
<b>Dairy animals</b>	-	-	-	-	-	-	-
Cows	-	-	-	-	-	-	-
Buffaloes	-	-	-	-	-	-	-
Calves	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-
<b>Poultry</b>	-	-	-	-	-	-	-
Broilers	-	-	-	-	-	-	-
Layers	-	-	-	-	-	-	-
Duals (broiler and layer)	-	-	-	-	-	-	-
Japanese Quail	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-
Emu	-	-	-	-	-	-	-
Ducks	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-

<b>Piggery</b>	-	-	-	-	-	-	-
Piglet	-	-	-	-	-	-	-
Others (Pl.specify)	-	-	-	-	-	-	-
<b>Fisheries</b>	-	-	-	-	-	-	-
Indian carp	-	-	-	-	-	-	-
Exotic carp	-	-	-	-	-	-	-
Others (Pl. specify)	-	-	-	-	-	-	-
<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

Item	Citation/ Title	Authors name	Number
Research papers (Give Citation)	Assessment of bioagents against cotton diseases under South Gujarat of India (2023). <i>Int. J. Agric. Sci.</i> , <b>19</b> (1): 75-80 (ISSN: 0973–130X), (NAAS Score: 4.73)	Sandipan, P. B., Patel, P. S. and Patel, R. K.	1
	Prevalence and incidence of <i>Corynespora</i> leaf spot disease of cotton under South Gujarat of India (2023). <i>The Pharma Innovation Journal</i> , <b>12</b> (5): 2527-2532 (ISSN (E): 2277-7695), (NAAS Score: 5.23)	Patel, N., Sandipan, P. B., Saini, N., Patel, P. S. and Patel, R. K.	1
Technical reports	AAP, APR, MPR, AE-MPR, QPR, SAP, AGRESCO, ZREAC, SAC, NAU Spectrum, Monthly Activities Report etc	--	Periodically
News letters	--	--	--
Technical bulletins	--	--	--
Popular articles	--	--	--
Extension literature	<i>1.Pashu Aahar</i> <i>2.Silage-Lilo charo</i> <i>3.Matanu Dudh-Kudarat ni anmol bhet</i> <i>4.Krishi Vigyan Kendra-Ek Parichay</i>	<ul style="list-style-type: none"> <li>Dr. H. C. Parmar, Prof. G. J. Bhimani, Dr. J. H. Rathod</li> <li>Dr. H. C. Parmar, Prof. G. J. Bhimani, Dr. R. K. Patel, Dr. J. H. Rathod</li> <li>Prof. G. J. Bhimani, Dr. H. C. Parmar, Dr. J. H. Rathod</li> <li>Prof. G. J. Bhimani, Dr. J. H. Rathod</li> </ul>	1000 1000 1000 1000
Others (Pl. specify)			
<b>TOTAL</b>			<b>4000</b>

#### C. Details of Electronic Media Produced

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

#### D. Details of Social Media Platforms Created / Used

S. No.	Type of social media platform	No of events (uploaded video/post/story etc.	Title of social media	Number of Followers/ Subscribers
1	YouTube Channel (no of video uploaded)	5	1	21
2	Facebook page/ Account (no of Post)	1	1	
3	Mobile Apps	--	--	--
4	WhatsApp groups	More than 100 documents	57	7500
5	Twitter Account	20	1	25 / 554 impressions
6	Any other (Pl. Specify)	11	Telegram (2) Instagram	848 37

#### 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).

##### Success Story of Medicinal Mushroom Cultivation

Name of Farmer	Ravi R Saliya (Pramukh Foods)
Age	32
Education	M.B.A.
Occupation	Mushroom Farming
Address	Survey no. 220, Near Bhakti International School, Kathodra, Surat 394326
Agriculture land	0.23 hector

##### About Mushroom Farming:

Mr. Ravi Saliya has completed his education in MBA marketing and he is having experience in many company like Sheela foam pvt. Ltd, TATA Clashedge and others. But as he wanted to do something new and wanted to start his own business he did researching in Google for new business and decided to venture into mushroom business, after doing more research in mushroom he started mushroom business. To further increase knowledge he went to Uttarakhand for Mushroom training for 12 days where he learned about spawn making process, cultivation process, and little bit about medicinal mushroom.

In 2019 he starts construction of his mushroom plant, he started taking production from January 2020. Till the time he searches out the best quality raw material for Ganoderma mushroom, initial he was using teak wood sawdust but somehow he failed, costing more than 20000 bag and surmounting loss of around 10 lakhs. He remained in touch with some farmer, DMR Solan Scientist but they have some limited information because no one is doing large production on Ganoderma in India. After trial, error and experimenting he started bring culture from Canada.

After that he started production in batch of 100 bag where he got success. Taking in account he increased their production and got success in production, in 2020-21 he got around 900 kg dry material of Ganoderma mushroom. Through self-hard work for marketing and they found the buyers who took all his stock in just 3 months. Next year he increased capacity of plant from 100 to 200 kg month production and which he is successfully running right now.

His company "Pramukh Foods" is always reedy to share knowledge of mushroom to students and mushroom. They have client all our India right now, having good reputation in Indian medicinal mushroom farming. Due to Limited market of Ganoderma mushroom in India, 50% of clients are using Pramukh Food's Ganoderma Mushroom. Right now capacity is 200 kg dry material production per month. Asides, Pramukh foods is also successfully growing Oyster Mushroom, Lions-mane Mushroom, King Oyster mushroom.

Whenever they have any problem they get guidance from Waghai College of Agriculture, Navsari Krushi university and Krishi Vigyan Kendra, Surat. They also help other college students and mushroom farmer to visit their farm. Anand University and Waghai college students all visited their farm. Among these students 2 students are doing research in their farm for projects. They always help mushroom lover who want to start business.

##### Year Wise Production

Year	Production (KG)	Total income(Rs.)	Total cost (Rs.)	Net profit (Rs.)
2019-2020	210	1106137	648986	457151
2020-2021	686	2174842	1246074	928768
2021-2022	960	3575775	2505599	1070176



## Success Story: 2

Name of Farmer: Pratibhaben Mansinh Gohil

Village: Mouvachhi

Taluka: Bardoli

District: Surat

Education: B.Sc. (microbiology)

Mobile No: 9558757537

### Introduction:

- Adopted natural farming since 2014.
- Cultivated sugarcane and turmeric during Rabi season for value added Products by Natural farming.
- Prepared and used Beejamrit for seed treatment and Jivamrit for nutrition management.
- Prepared and used Dusparni ark, Brahmastra, Neemastra and Agniastra for controlling Pests.

### Training and guidance of KVK

- Used ICT mechanism (WhatsApp and face book).
- Participated in exhibitions / workshops and forums regularly.
- Regular trainings to the farmers

### Practices adopted

- Practiced natural farming and cultivated sugarcane and turmeric
- Used Beejamrit for seed treatment.
- Used various types of natural inputs like Jivamrit and Ghanjivamrit
- Used various types of natural pesticides like Neemastra, Agniastra, Brahmastra, Dusparni ark etc.
- Used various types of natural methods of insect-pest controller like Pheromone traps,
- Cultivated mixed crops and used border crops for managing insects.
- Used live mulch and dead mulch.
- Participated in district and state level natural farming trainings

### Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (Area in ha)	Conventional Farming (Area in ha)
Name of Crop		
Sugarcane	0.5	1.0
Turmeric	0.5	0
Cost of cultivation (Rs)	320000	175000
Production (q)	Sugarcane: 70 ton Turmeric: 19 ton	Sugarcane: 100 ton
Gross return (₹)	1060000	300000
Net return (₹)	740000	125000
BC ratio	3.31	1.71

### Benefits and achievements

- Reduced input cost.
- Reduced cost of cultivation.
- Resulted in higher yields with good turmeric quality, size and increased shelf life.
- Increased net income with the use of natural fertilizers and insecticides.
- Consumed and sold chemical-free food to the community.
- Improved soil health with high earthworm count.

### Impact of the Technology

- Cost of Cultivation reduced
- Net Profit Increased
- Soil health improved.
- Quality of produce improved
- Many farmers visited his farm and started Natural Farming

### **Fig: Turmeric Production through Natural Farming**



### **Success Story: 3**

Name of Farmer: Manharbhai Ishvarbhai Lad

Village: Karanj

Taluka: Olpad

District: Surat

Education: M.com

Mobile No: 9925242049

### **Introduction:**

- Adopted natural farming since 2018.
- Earlier he was doing cotton and Pointed Gourd by chemical farming.
- He has 0.68 ha land under Natural farming.
- Adopted natural farming and used Beejamrit, Jivamrit and Ghanjivamrit for managing nutrients. He also follows mulching practice.
- Used Neemastra and Brahmastra for controlling pests and diseases.

### **Training and guidance of KVK**

- Used ICT mechanism (WhatsApp and face book).
- Participated in exhibitions / workshops and forums regularly.
- Regular trainings & visit by KVK scientists.

### **Practices adopted**

- Adopted natural farming since 2018.
- Cultivated Greengram, Carrot & Maize crop under Natural farming.
- Cultivated Banana ,Guava , Moringa etc. in jungle model of Natural Farming
- Prepared and used Beejamrit and Jivamrit.
- Prepared and used Dusparni ark, Brahmastra, Neemastra and Agniastra for controlling pests & diseases

### **Comparison between Natural Farming and Conventional Farming**

Parameters	Natural Farming	Conventional Farming
Name of Crop (Five Layer Model)	Mango, Lemon, Drumstick, Guava, Banana, Jamun, Pomegranate, Ryan, Mulberry, Aonla, Litchi, Fig, Apple, Turmeric Pointed Gourd, Papaya, Custard apple, Fenugreek, Palak, Coriander, Brinjal, Tomato etc...	Cotton and Pointed Gourd
(Area in ha)	0.68	0.68
Cost of cultivation (Rs)	70000	80000
Production (q)	--	Cotton: 12 Qtl. Pointed Gourd: 25 Qtl.
Gross return (₹)	200000	35000+50000=85000
Net return (₹)	130000	50000
BC ratio	2.86	1.06

### **Benefits and achievements**

- Utilized crop residues for mulching.
- Improved soil health.
- Value addition by making Jiggery from natural farming.

- Consulted by many famers for natural farming.

#### **Impact of the Technology:**

- Cost of Cultivation reduced
- Net Profit Increased
- Soil health improved.
- Quality of produce improved
- Many farmers visited his farm and started Natural Farming

**Fig: Mango, Banana, Guava etc. Production through Natural Farming**



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

**Technology transfer** – OLN-Novel, Novel plus, Novel prime, Bio-fertilizers

**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	Caster	Soak seed with sour butter milk overnight to control the catterpillar in caster crop and may be used in other crops too.	Plant Protection
2	Paddy	Removed of tips in Paddy and other seedlings to enhance drought tolerance and also sustained to water logging/ flowing condition.	Agronomy

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

#### **A. Practicing Farmers**

- Group discussion
- Power point presentation
- Method demonstration
- Film show

#### **B. Rural Youth**

- Group discussion
- Power point presentation
- Method demonstration
- Film show

#### **C. In-service personnel**

- Group discussion
- Power point presentation
- Method demonstration
- Film show

**5.2. Indicate the methodology for identifying OFTs/FLDs: As per methodology mentioned in Table No. 2.7**

**5.3. Field activities: As mentioned in Table No. 2.7 and 3.1 B**

## 6. LINKAGES

### A. Functional linkage with different organizations

Name of organization	Nature of linkage
ATMA	Training, Exhibitions, Best ATMA Award Participation, Meeting
Line departments (Horticulture & Agriculture)	Training, Seminar, Exhibition and Shibir
Animal Husbandry	Pasupalan Shibir
NABARD	Trainings, FLD distribution, Exhibition
Ambuja Cement Foundation	Meeting, Special Day Celebration
Forest	Shibir
Care India	Trainings, Special Day Celebration, Shibir
KVSVS	Trainings, Special Day Celebration
ICDS	Training, Exhibition, Millets Recipe Competition

### 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(State Govt./Other Agencies)	Amount (Rs.)
Training and Capacity building programme for women in dairy farming sector in Surat district	December-2022 to March-2023	National Commission for women Government of India New Delhi	480000

### C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes/No

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	No of Farmers attending
01	Meetings	4	3	--	--
02	Research projects	--	--	--	--
		--	--	--	--
03	Training programmes				
04	Demonstrations	--	--	--	--
		--	--	--	--
05	Extension Programmes	--	--	--	--
	KisanMela	3	5	0	2350
	Technology Week	--	--	--	--
	Exposure visit	1	1	1	100
	Exhibition	3	3	1	1178
	Soil health camps				
	Animal Health Campaigns	--	--	--	--

	Others (Pl. specify)	--	--	--	--
<b>06</b>	<b>Publications</b>				
	Video Films	--	--	--	--
	Books				
	Book chapter	--	--	--	--
	Extension Literature	--	--	--	--
	Pamphlets	--	--	--	--
	Others (Pl. specify)	--	--	--	--
<b>07</b>	<b>Other Activities</b> (Pl. specify)				
	Watershed approach				
	Integrated Farm Development				
	Agri-preneurs development				
	BAFA award verification	15	3	0	35

#### **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
-	-	-	-	-	-

#### **G. Details of linkage with PKVY (Paramparagat Krishi Vikas Yojana)**

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

#### **H. Details of linkage with NFSM**

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

#### **I. Details of linkage with SMAF (Sub-mission on Agroforestry)**

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:**

**8. Innovative Farmers Meet**

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

**9. Farmers Field School (FFS)**

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

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

S.N.	Crop	Technology demonstrated	Feed back
1	Paddy	GNRH -2	1. Medium slender grain rice 2. It is moderately resistant against bacterial leaf blight, leaf blast, grain discoloration and sheath rot. 3. Tolerant to insect pest like BPH, WBPH, leaf folder and stem borer. 4. Suitable for rice growing areas of South Gujarat
2	Paddy	GR -17(Sardar)	1. Early maturing, Long bold grain 2. Moderately resistant against bacterial leaf blight, leaf blast, grain discoloration, sheath rot, WBPH and leaf folder.. 1. Suitable for transplanted rice growing areas.
3	Paddy	GNR -9(Lal-Kada Gold)	1. Red Kernel 2. Bio-fortified variety
4	Paddy	GR – 24(Navsari Parimal)	1. Long Slender 2. Early maturing 3. Non-Lodging
5	Paddy	GR-18(Devli Kolam)	1. Medium Slender 2. Medium Resistant to Pest & diseases 3. Early maturing & Non-lodging
6	Paddy	GR – 16 (Tapi)	1. Early maturing upland rice variety 2. Long bold variety with good grain quality, 3. Moderately resistant reaction against leaf blast and insect pest like stem borer and sheath mite. Suitable for upland rice growing areas.
7	Sorghum	GNJ-1	1. High yielding 2. Less incidence of smut, shoot borer and grain mould
8	Sorghum	Phule Revati	1. Higher yield with less incidence of pest & diseases 2. Suitable for Rabi season
9	Soybean	NRC-37	1. Moderate yield 2. Early maturing 3. Moderately Resistant to Pest & disease
10	Green gram	GM-6	1. Moderate Yield 2. Moderately Resistance to YMD
11	Sesame	GT-5	1. Moderate yield 2. Moderately Resistant to Helicoverpa
12	Groundnut	GG-34	1. Higher yield with bold grain 2. Tolerant to rust and late tikka disease 3. Lower infestation of trips and jassids
13	Cotton	G.Cot.Hy-10(Bt)	1. Higher yield 2. medium maturing 3. Suitable for rainfed and irrigated area 4. Resistant to pest & diseases
14	Pigeonpea	GNP-2	1. Seed is round, Pods are of light green colour 2. Tolerant to wilt & SMD
15	Pigeonpea	GT-104	1. Resistant to wilt and sterility 2. Red flowers & Pods set in clusters
16	Pigeonpea	GT-105	1. Resistant to sterility, early maturing 2. Yellow flowers
17	Paddy	IPDM	Lower infestation of stem borer, leaf folder in paddy field; lower intensity of Bacterial Leaf Blight, blast, grain discoloration and other diseases, increase yield of paddy
18	Sugarcane	IPDM	Lower infestation of borers and sucking pests in sugarcane, less incidence of soil borne diseases, increase yield of sugarcane
19	Banana	IPDM	Less incidence of wilt, nematodes, less infestation of weevil in banana field, increase yield of banana
20	Pointed gourd	IPDM	Less incidence of soil borne and other diseases, less infestation of pests, improve quality and production of pointed gourd fruits
21	Brinjal	IPDM	Lower infestation of fruit & shoot borer and sucking pests in

			brinjal, decrease use of chemical fertilizers and pesticides; increase quality and yield of brinjal fruits
22	Okra	IPDM	Less infestation of insect pests, decrease use of chemical fertilizers and pesticides; increase in yield and quality of fruits in okra
23	Mango	IPDM	Less infestation of fruitfly and incidence of diseases, increase in yield and quality of mango fruits
24	Kitchen Garden	Nutrition Management	Kitchen gardening gives continuous supply of fresh vegetables. Income is generated by selling extra vegetables grown in kitchen garden. Farm women are not applying any pesticides in kitchen garden so they get organic vegetables.
25	Twin wheel hoe	Drudgery Reduction	Twin wheel hoe weeder reduces women drudgery in terms of time and physical hazards (finger injuries, wrist pain, muscle stress etc.) During weeding, field capacity is increased by using twin wheel hoe weeder as compared to local sickle.
26	Rake for collecting garbage	Drudgery Reduction	Rake for collecting garbage/ harvesting increases working efficiency as compared to traditional method. Reduces fatigue, backache, muscle stress, wrist pain and pain in shoulders as compared to traditional method.
27	Stalk puller	Drudgery Reduction	Stalk puller increases working efficiency as compared to traditional method. Stalk puller reduces fatigue, backache, muscle stress, wrist pain and pain in shoulders as compared to traditional method.

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

## 11. Technology Week celebration during 2023: No

### Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	-	-	-
Lectures organized	-	-	-
Exhibition	-	-	-
Film show	-	-	-
Fair	-	-	-
Farm Visit	-	-	-
Diagnostic Practical's	-	-	-
Supply of Literature (No.)	-	-	-
Supply of Seed (q)	-	-	-
Supply of Planting materials (No.)	-	-	-
Bio Product supply (Kg)	-	-	-
Bio Fertilizers (q)	-	-	-
Supply of fingerlings	-	-	-
Supply of Livestock specimen (No.)	-	-	-
Total number of farmers visited the technology week	-	-	-



## 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 (Seed distribution/sold by KVK)

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)
Paddy Var- Sardar	200	60	60940	83110
Paddy Var-Devli Kolam	300	75	60980	81900
Cotton Var- G. Cot Hy. 10 Bt	150	60	78660	105900
Pigeonpea GT-105	275	68	87690	113670
Soybean NRC-37	435	70	13360	23500
NOVEL OLN in Vegetables	410	71	222520	283600
IPDM in Paddy	110	67	38893	47511
IPDM in Sugarcane	105	65	168166	191637
IPDM in Banana	125	75	519135	570197



**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.	Cost of inputs	Gross income	
Cereals	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	-	-	-
Oilseeds	-	-	-	-	-	-	-	-	-
Fibers	-	-	-	-	-	-	-	-	-
Spices & Plantation crops									
	-	-	-	-	-	-	-	-	-
Floriculture	-	-	-	-	-	-	-	-	-
Fruits	-	-	-	-	-	-	-	-	-
Vegetables	-	-	-	-	-	-	-	-	-
Others (specify)									
-	-	-	-	-	-	-	-	-	-

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

Sl. No.	Bio Products	Name of the Product	Qty (kg/lit)	Amount (Rs.)		Remarks
				Cost of inputs	Gross income	
1.	Bio-Fertilizers	-	-	-	-	-
2.	Bio-Fungicides	-	-	-	-	-
3.	Bio-pesticides	-	-	-	-	-
4.	Bio-Agents	-	-	-	-	-

**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	
-	-	-	-	-	-	-	-

**E. Utilization of hostel facilities**

Accommodation available (No. of beds):

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January 2023	-	-	-
February 2023	-	-	-
March 2023	-	-	-
April 2023	-	-	-
May 2023	-	-	-
June 2023	-	-	-
July 2023	-	-	-
August 2023	-	-	-
September 2023	-	-	-
October 2023	-	-	-
November 2023	-	-	-
December 2023	-	-	-

**F. Database management**

S. No	Database target	Database created
-	-	-

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

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

**H. Performance of Nutritional Garden at KVK farm****If Nutritional Garden developed at KVK farm/Village Level? No****Nutritional Garden developed at KVK farm**

Area under nutritional garden (ha)	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers visited
	Vegetable crops	-	-
	Fruit crops	-	-
	Others if any	-	-

**Nutritional Garden developed at Village Level (Area under nutritional garden)**

No. of Villages covered	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers covered
	Vegetable crops	-	-
	Fruit crops	-	-
	Others if any	-	-

**H. Details of Skill Development Trainings organized**

S.No.	Name of KVKs/SAUs/ICAR Institutes	Name of QP/Job role	Duration (hrs)	No. of participants					
				SCs/STs		Others		Total	
				Male	Female	Male	Female	Male	Female
-	-	-	-	-	-	-	-	-	-

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

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank Of India	SBI, NAU, Campus ,Navsari	003889	Comptroller, NAU, Navsari, Gujarat	10389373215	396002062	SBIN003889
With KVK	State Bank Of India	Prakash Society Surat	009166	NAU Krishi Vigyan Kendra, Athwa Farm Surat	32212880883	395002022	SBIN0009166

**B. Utilization of KVK funds during the year 2023-24 (Rs. in lakh) (Till Dec, 2023)**

S. No.	Particulars	Sanctioned	Released	Expenditure
<b>A. Recurring Contingencies</b>				
1	<b>Pay &amp; Allowances</b>	136	136	140
2	<b>Traveling allowances</b>			
3	<b>Contingencies</b>			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)			
B	POL, repair of vehicles, tractor and Equipments			

<i>C</i>	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			
<i>D</i>	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
<i>E</i>	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
<i>F</i>	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
<i>G</i>	Training of extension functionaries			
<i>H</i>	Maintenance of buildings			
<i>I</i>	Establishment of Soil, Plant & Water Testing Laboratory			
<i>J</i>	Library			
		1353500	1353500	16.95
<b>TOTAL (A)</b>				
<b>B. Non-Recurring Contingencies</b>				
1	<b>Works</b>			
2	<b>Equipments including SWTL &amp; Furniture</b>			
3	<b>Vehicle</b> (Four wheeler/Two wheeler, please specify)			
4	<b>Library</b> (Purchase of assets like books & journals)			
<b>TOTAL (B)</b>				
<b>C. REVOLVING FUND</b>				
<b>GRAND TOTAL (A+B+C)</b>				

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

<b>Year</b>	<b>Opening balance as on 1<sup>st</sup> April</b>	<b>Income during the year</b>	<b>Expenditure during the year</b>	<b>Net balance in hand as on 1<sup>st</sup> April of each year</b>
April 2018 to March 2019	295591	1024057	603330.8	716317.2
April 2019 to March 2020	716317.2	231061.50	324172.36	737079.00
April 2020 to March 2021	737079	198210	715629	469660
April 2021 to March, 2022	469660	1561876	1222598	808938
April 2022 to March 2023	808938	1643010	1009001	1432121
April 2023 to March 2024	1432121	1464750	1995656	901215

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

<b>S. N.</b>	<b>Name of the staff</b>	<b>Designation</b>	<b>Title of the training programme</b>	<b>Institute where attended</b>	<b>Mode (Online/ Offline)</b>	<b>Dates</b>
1	Dr. R. K. Patel	Scientist (Plant Protection)	Workshop on Natural Farming & Millets organized by Agricultural Technology Application Research Institute	ATARI, Pune, Maharashtra	Offline	19/01/2023
2	Dr. R. K. Patel	Scientist (Plant Protection)	Training of Natural Farming organized by ATMA Directorate and SAMETI, Gandhinagar, Gujarat and Joint Director of Agriculture (Extension), Surat	APMC, Surat, Gujarat	Offline	10/03/2023

3	Prof. G. J. Bhimani,	Scientist (Home Science)	Attend the online training on the food use of soybean	KVK, Surat (CIAE, Bhopal, MP)	Online	25/04/202 3
4	Prof. G. J. Bhimani,	Scientist (Home Science)	Participatory Extension Management Skills in Agriculture & allied Fields	EEL, AAU, Anand, Gujarat	Offline	05- 10/06/202 3
5	Mr. S. Trivedi	Scientist (Crop Production)	Master trainers training programme on Glyphosate by NIPHM-Hyderabad	KVK, Surat	Online	28/06/23
6	Dr. R. K. Patel	Scientist (Plant Protection)	Training on "Human Resource Development Skills for Professional Excellence" organized by Extension Education Institute, Anand	EEL, AAU, Anand, Gujarat	Offline	10- 15/07/202 3
7	Prof. G. J. Bhimani,	Scientist (Home Science) and Scientist (Horticulture)	Awareness workshop on "Intellectual Property Rights- GI Tag and Patenting"	Natural Resource Management, ACH, NAU, Navsari	Offline	19/07/202 3
	Prof. B. B. Panchal,					
8	Dr. R. K. Patel	Scientist (Plant Protection)	Training on "Mushroom Cultivation" jointly organized by College of Agriculture, NAU, Waghai and EEL, AAU, Anand	CoA, NAU, Waghai, Gujarat	Offline	20- 22/07/202 3
9	Prof. B. B. Panchal	Scientist (Horticulture)	Gender mainstreaming and leadership skills in agriculture and allied sectors	EEL, AAU, Anand, Gujarat	Offline	31/07/202 3 to 05/08/202 3
10	Mr. S .J .Trivedi	Scientist (Crop Production)	Training programme on Agricultural Marketing for officers	SSK, NAU, Navsari (Gujarat)	Offline	8/08/23
11	Prof. B. B. Panchal	Scientist (Horticulture)	International conference on recent advances and technological advancements in agriculture, horticulture, Agricultural engineering, sericulture, food science, biotechnology and rural entrepreneurship 2023	The Indian Agriculture college, Tamil Nadu	Offline	11- 12/08/202 3

12	Dr. R. K. Patel	Scientist (Plant Protection)	State level workshop: “Pak Sanrakshan ane Bazar Vyavsthapan: Samasya ane Samadhan” organized by Plant Protection Association of Gujarat	AAU, Anand, Gujarat	Offline	30/09/2023
13	Prof. G. J. Bhimani,	Scientist (Home Science)	Training session of Kisan Sarathi Farmers App for KVK Experts	ICAR, New Delhi	Online	02/11/2023
14	Dr. J. H. Rathod, Senior Scientist & Head	All Technical Staff	"Video Production and Dissemination Skills for Agricultural Extension Functionaries"	KVK, Surat	Offline	29-31/05/2023
	Dr. R. K. Patel, Scientist (Plant Protection)					
	Shri. S. J. Trivedi, Scientist (Agronomy)					
	Prof. G. J. Bhimani, Scientist (Home Science)					
	Prof. B. B. Panchal, Scientist (Horticulture)					
	Mr. Abhinav N. Patel (SMS, Agrometeorology)					
15	Mr. S. Trivedi	Scientist (Crop Production)	Training of Master trainers on Natural Farming	Anaval (Mahuva), Surat(Gujarat)	Offline	7-8/11/23
16	Mr. S. Trivedi	Scientist (Crop Production)	Training programme on Agro-tourism	KVK, NAU, Navsari(Gujarat)	Offline	11-13/12/23
17	Dr. J. H. Rathod, Senior Scientist & Head	All Technical Staff	Technological brainstorming workshop for technical staff of KVKs	NAU, Navsari, Gujarat	Offline	06/04/2023
	Dr. R. K. Patel, Scientist (Plant Protection)					
	Shri. S. J. Trivedi, Scientist (Agronomy)					
	Prof. G. J. Bhimani, Scientist (Home Science)					
	Prof. B. B. Panchal, Scientist (Horticulture)					
	Mr. Abhinav N. Patel (SMS, Agrometeorology)					

#### 18. Details of progress in Doubling Farmers Income (DFI) villages adopted by KVKs

Name of the village	Total No. of families surveyed	Key interventions implemented	No. of farmers covered in each intervention	Change in income (Rs/unit)	
				Before (base year)	After (current year)
Vadia	125	Crops + Horticulture + Animal Husbandry	23	48000	59800
		Crops + Horticulture	21	42000	52200
		Any other model (Crop + AH)	20	32800	44100
Parvat	160	Crops + Horticulture + Animal Husbandry	25	45000	51600
		Crops + Horticulture	21	32000	44000
		Any other model Crops + Animal Husbandry	24	28000	33200

#### 19. Details of activities planned under NARI /PKVY / TSP / KKA, etc.

S. No.	Name of the programme	No. of villages adopted	Key activities performed	No. of activities carried out	No. of families covered
-	-	-	-	-	-

#### 20. Details of Progress of ARYA Project

Name of Enterprise	No of Training Conducted	No of Beneficiaries	No of Extension Activities	No of Beneficiaries	No of Unit established	Change in income		No. Of Groups Formed
						Before	After	
-	-	-	-	-	-	-	-	-

#### 21. Details of SAP

S. No.	Types of major Activity conducted- Swachhta Pakhwada, Cleaning, Awareness Workshop, Microbial based Agricultural Waste Management by Vermicomposting etc.	No. of Programmes conducted	No. of Participants
1	Celebration of Swachhata Campaign during 02-31 October,2023	7	411
2	Vermicompost demonstration reg. Microbial-based Agricultural Waste Management using vermicomposting under SAP	3	56
	<b>Total</b>	<b>10</b>	<b>467</b>

Sr. No	Name of KVK	Date	Activity	No of VIPs	No of Farmers	Others	Total
1	KVK, Surat	16/12/2023	Display of banner at prominent places, taking Swachhata pledge, Stock taking & briefing of the activities to be organized during the Pakhwada, plantation of trees.	0	10	0	10
2		20/12/2023	Massive community mobilization for Plastic Waste Shramdaan: Awareness on waste management & other activities including utilization of organic wastes/ generation of wealth from waste, polythene free status. Curb the use of Single Use plastic (SUP) and discourage the use of plastic in the office. Composting of kitchen and home waste materials, promoting clean & green technologies and organic farming practices in new area.	0	87	0	87
3		21/12/2023	Sanitation and SWM	0	44	0	44



4		22/12/2023	Organizing Workshops, exhibitions, technology demonstrations on agricultural technologies for conversion of waste to wealth, safe disposal of all kinds of wastes. Debate on Swachhata at the DARE/ICAR establishments, Seminars, awareness camps, rallies, street plays and expert talks	0	34	0	34
5		23/12/2023	Celebration of Special Day- Kisan Diwas (Farmer's Day)-23 December inviting farmers. Experience sharing on Swachhata initiatives by farmers and civil society officials. Felicitating farmers/ civil society officials for exemplary initiatives on Swachhata.	0	56	0	56
6		28/12/2023	Campaign on cleaning of sewerage & water lines, awareness on recycling of waste water, water harvesting for agriculture/ horticulture application/kitchen gardens in residential colonies. Outside campuses/ nearby villages with the involvement of local/ village communities.	0	25	0	25
7		29/12/2023	Visits of community waste disposal sites/ compost pits, cleaning and creating awareness on treatment & safe disposal of bio-degradable/ non-bio-degradable wastes by involving civil/ farming community.	0	20	0	20
8		30/12/2023	Involvement of VIP/VVIPs (Union Ministers, MPS and other dignitaries) in the Swachhata activities, Involvement of print and electronic media may be ensured so that adequate publicity is given to the SwachhataPakhwada.	1	145	1	145

## 21. Books published 2023-24

Title of the Book	Authors	ISBN No	Publisher	Pages No	Description/review of the book (one paragraph/sentence)
Dairy Farming- <i>Margdarshika</i>	Dr. H. C. Parmar, Prof. Gita J. bhimani, Dr. R. K. Patel, Dr. J. H. Rathod	978-93-5777-685-1	KVK, NAU, Surat	110	Dairying enterprise is main component for integrated farming system, particularly suited to women. Rural agro-based enterprises such as dairying play significant role in empowerment of rural women with social, economic and psychological aspects. It also plays a key role in entrepreneurship development among rural women by engaged in dairying activities. Women's involvement in dairying will not only provide them employment but also bring in social change.

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

## 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	52	1096	956	2052
Rural youths	3	0	84	84
Extension functionaries	6	198	82	280
Sponsored Training	10	359	179	538
Vocational Training	8	20	179	199
<b>Total</b>	<b>79</b>	<b>1673</b>	<b>1480</b>	<b>3153</b>

### 2. Frontline demonstrations

Crops/Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	154	62	-
Pulses	186	75	-
Cereals	99	44	-
Fiber Crops	10	4	-
Vegetables	20	8	-
Other crops	80	17	-
Hybrid crops	-	-	-
<b>Total</b>	<b>549</b>	<b>210</b>	-
Livestock & Fisheries	-	-	-
Other enterprises	300	2	300
<b>Total</b>	<b>300</b>	<b>2</b>	<b>300</b>
<b>Grand Total</b>	<b>849</b>	<b>212</b>	<b>300</b>

### 3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
<b>Technology Assessed</b>			
Crops	4	4	30
Livestock			
Various enterprises			
<b>Total</b>	<b>4</b>	<b>4</b>	<b>30</b>
<b>Technology Refined</b>			
Crops			
Livestock			
Various enterprises			
<b>Total</b>			
<b>Grand Total</b>			

### 4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	675	45343
Other extension activities	51	24350
<b>Total</b>	<b>726</b>	<b>69693</b>

## 5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	--	--	101	--	--	--	--
	Voice only	--	--	--	--	--	--	--
	Voice & Text both	--	--	--	--	--	--	--
	<b>Total Messages</b>	--	--	101	--	--	--	--
	<b>Total farmers Benefitted</b>	--	--	26950	--	--	--	--

## 6. Seed & Planting Material Production

	Quintal/Number	Value (Rs.)
Seed (q)	328.75	1025700
Planting material (No.)	0	0
Bio-Products (kg)	0	0
Livestock Production (No.)	0	0
Fishery production (No.)	0	0

## 7. Soil, water & plant Analysis

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

## 8. HRD and Publications

Sr. No.	Category	Number
1	Abstract	0
2	Workshops	4
3	Conferences	1
4	Meetings	51
5	Trainings for KVK officials	12
6	Visits of KVK officials	7
7	Book published	1
8	Training Manual	0
9	Book chapters	0
10	Booklet	0
11	Leaflets/ Folder/ Pamphlet	0
12	Research papers	2
13	Technical Bulletin	0
14	Popular article	0
15	Lead papers	0
16	Seminar papers	0
17	Extension folder	4
18	Proceedings	7
19	Award & recognition	4
20	On-going research projects	3
21	Other	-