

ICAR-ATARI, Pune
DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2024
(January 2024 to December 2024)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra, Junagadh Agricultural University, Targhadia-360 023, Rajkot-I, Dist.: Rajkot, Gujarat State	(0281) 2784170	(0281) 2784170	kvkrajkot@gmail.com kvktarghadia@jau.in	www.jau.in

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

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

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. M. M. Talpada	(0281) 2784170	7984475025	mmtalpada@jau.in

1.4. Date and Year of sanction: September – 2004

1.5. Staff Position (as on December, 2024)

Sl. No.	Sanctioned post	Name of the incumbent	Mobile No.	Discipline	If Permanent, please indicate		Date of joining	If Temporary, pl. indicates the consolidated amount paid (Rs. /month)
					Current Pay Band	Current Grade Pay		
1.	Senior Scientist and Head	Dr. M. M. Talpada	7984475025	Genetics & Plant Breeding	131400-217100 (UL-13A)	147900/-	5-3-2025	
2.	Subject Matter Specialist	Dr. M. M. Tajpara	9427667135	Animal Science	68900-205500 (UL-11)	101200/-	4-8-2015	

3.	Subject Matter Specialist	Dr. J. H. Chaudhary	9978303111	Agronomy	57700-182400 (UL-10)	70900/-	1-8-2017	
4.	Subject Matter Specialist	Vacant	-	Plant Protection	-	-	-	
5.	Subject Matter Specialist	Dr. J. N. Thaker	9824224247	Horti-culture	79800-211500 (UL-12)	104100/-	1-04-2023	
6.	Subject Matter Specialist	Shri D. P. Sanepara	9426449712	Agril. Engg.	68900-205500 (UL-11)	110500/-	1-11-2016	
7.	Subject Matter Specialist	Smt. H. H. Padsumbiya	9979673732	Home Science	68900-205500 (UL-11)	101200/-	17-2-2022	
8.	Programme Assistant	A.B.Dabhi	7990446090	B.Sc. Agri	39900-126600 (L-7)	49000/-	1-5-2024	
9.	Computer Programmer	Miss. R. T. Padaliya	9979027064	Computer	44900-142400 (L-8)	55200/-	3-1-2009	
10.	Farm Manager	S. R. Rathva	9712313538	Plant Breeding	39900-126600 (L-7)	41100/-	30-7-2018	
11.	Accountant/ Superintendent	M. D. Vachhani	9825066876	-	-	-	-	
12.	Stenographer	Vacant	-	-	-	-	-	
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	2.87
2.	Under Demonstration Units	0.50
3.	Under Crops	13.80
4.	Horticulture	0.50
5.	Pond	0.48
6.	Others if any (Specify)	1.85
Total		20.00

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	KVK	23-11-2012	550	4092414	-	-	-
2.	Farmers Hostel	KVK	23-11-2012	305	2314032	-	-	-
3.	Staff Quarters (6)	KVK	23-11-2012	400.27	3264497	-	-	-
4.	Fencing/ Farm wall					-	-	-
5.	Rain Water harvesting system: (5)							
	Farm pond-1	KVK	2012	9000 cu.m capacity	105000	Runoff is collecting from 12 ha agricultural land		
	Farm pond-2	KVK	2010	850 cu.m capacity	-	Runoff is collecting from 2 ha agricultural land and 3 ha building area		
	Roof water harvesting tank	KVK	2017	Size: L: 6.10 m W: 3.10 m H: 2.50 m	204285	Rain water harvesting in underground tank (Cap: 50000 lt.) from 300 sq.m office roof area		
	Open well recharging structure	KVK	2013	Size: L: 2.0 m W: 2.0 m H: 1.5 m	9500	Runoff from 5 ha area for open well recharging		
	Bore well recharging structure	KVK	2018	Size: L: 1.5 m W: 1.0 m H: 1.0 m	12500	Rain water harvesting from 190 sq.m roof area for bore well recharging		
6.	Threshing floor	-	-	-	-	-	-	-
7.	Farm godown	KVK	2012	-	400000	-	-	-
8.	Soil and water testing lab	KVK	Under Administrative Building					
9.	Mini soil testing Kit	KVK	1 (No.)					
10.	Sell Contour	-	-	-	-	-	-	-
11.	Demonstration Units: (8)							
	Solar water pumping system	ATIC	2019	7.5 HP	262500	-	-	-
	Bio gas plant	RKVY	2007	10 cu.m	42000	-	-	-
	Farm implement demo.	RKVY	2009	Diff. farm implements	-	-	-	-

	Vermi-compost unit	KVK	2018	-	-	-	-	-
	Farm waste composting	KVK	2019	7 m x 5 m	-	-	-	-
	Entomophagous park	KVK	2018	0.10 ha	-	-	-	-
	Crop cafeteria	KVK	2012	0.10 ha	-	-	-	-
	Kitchen garden	KVK	2018	0.05 ha	-	-	-	-
12.	Seed hub godown	ICAR	2019	196.80	3500000	-	-	-
13.	ICT lab	-	-	-	-	-	-	-
14.	Solar Panel							
15.	Counter seal	-	-	-	-	-	-	-
16.	Other							
	Store room	RKVY	9-2-10	70.61	454500	-	-	-
	Training hall	RKVY	11-2-10	190.99	1395800	-	-	-
	Processing unit	RKVY	11-2-10	197.31	1536400	-	-	-
	Implement shed	RKVY	9-2-10	77.33	297800	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Running	Present status
Jeep (Bolero Neo) (GJ-3GA-1805)	2022	830000	76670	Working
Motorcycle (GJ-3DF-5781)	2010	50000	58539	Working
Tractor (Mahindra 39 HP) (GJ-3CL-7668)	2011	440000	-	Working

C) Equipment & AV aids

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Generator set	2002	24900	Working
Color TV (Akai)	2002	13850	Working
LCD Project (Panasonic PT LC 50)	2002	164368	Working
PA Audio Vision System	2002	20000	Working
Computer System (Intel Pentium IV)	2003	32000	Working
Computer Genius Desktop (Wipro Super)	2006	-	Working
Refrigerator (Electronic Kelvinator)	2006	10,500	Working
Solar steel digital water plant	2006	45000	Working
Balaji Bio Gas Plant	2007	32000	Working
Tractor Mounted Sprayer (Aspee)	2007	32000	Working
Laptop Computer (HCL)	2008	47500	Working
Air Assisted Blower type Sprayer	2009	98750	Working
Photo Copier Machine (Richo)	2009	115300	Working
LCD Projector (PT-CB50NTE-2GA - Panasonic)	2009	92155	Working
DVD Home theater system with Speaker (HCL)	2009	28000	Working

LCD TV 22” (Model- 22LG30 - L. G.)	2009	27287	Working
Cotton Stalk Shredder	2009	121000	Working
Groundnut Digger-Tractor Operated	2009	78500	Working
Cultivator cum Rotavator	2009	90000	Working
Groundnut Decorticator	2009	95850	Working
Multi Crop Thresher	2009	114000	Working
Processing Unit	2009	1685000	Working
Plantar – Tractor operator	2009	44000	Working
Digital Camera (Nikon) P- 90 12.1	2010	24300	Working
Desktop Veriten PC (Acer)	2016	46032	Working
Digital Xerox Machine with Printer	2016	144391	Working
K-yan Pro standerd	2016	110644	Working
Home UPS inverters system	2016	79000	Working
Smart Television (LG)	2021	189975	Working
Portable Sound System (AHUJA)	2022	17000	Working
Desktop computer (Dell)	2022	25000	Working
Laptop (HP)	2022	40000	Working
Air Conditioner -1.5 ton (Haier)	2022	37500	Working
Air Conditioner -1.5 ton (Haier)	2022	37500	Working
Air Conditioner -1.5 ton (Haier)	2022	37500	Working
Air Conditioner -1.5 ton (Haier)	2022	37500	Working
Desktop computer (Lenovo)	2022	63690	Working
Desktop computer (Lenovo)	2022	63690	Working
Desktop computer (Lenovo)	2022	63690	Working
Power Generator DG set of 45 kVA	2023	485000	Working
Tokary type Multi-crop Thresher	2023	300000	Working
Erecting 15 kW Solar Roof Top System (2 No.)	2023	1294431	Working

1.8. Details of SAC meeting conducted in the year: 2024

Date	Name and Designation of Participants	Salient Recommendations	Action taken
31/01/ 2024	Dr. V. P. Chovatia, Hon'ble Vice Chancellor, JAU, Junagadh.	<ol style="list-style-type: none"> Mention the number of participants in other extension activities carried out at the centre. Efforts should be made to increase the number of press release of different event organized at KVK. To carried out baseline survey and identify thrust area of newly selected village. Seed production should be planned for other pulse crop in summer along with chickpea under Seed-hub project. 	All Suggestion Accepted & implemented
	Dr. N. B. Jadav, Director of Extension Education JAU, Junagadh		
	Dr. D. S. Hirpara, ADR & Research Scientist (DF), MDFRS, JAU, Targhadia		
	Dr. R. M. Satasiya, Principal, Polytechnic in Agril. Engg., JAU, Targhadia		
	Dr. A. J. Bhatt, Senior Scientist & Head, KVK, JAU, Pipalia (Dhoraji)		

Prof. M. F. Bhorania, Senior Scientist & Head, KVK, Gorkhijadiya, (Morbi)	<p>5. Dragon fruit and custard apple should be included in “Value addition in Guava” training.</p> <p>6. Provide <i>Trichoderma</i> as critical input along with Mencozeb in FLD on cumin (GC-4) for IDM.</p> <p>7. Include lure as critical inputs along with pheromone trap in FLD on IPM in cotton for pink boll worm management.</p> <p>8. Conduct FLD on MDP for eco-friendly management of pink boll worm in cotton instead of OFT and frame a new OFT in plant protection discipline. 9. Total number of trainings should be increased in Animal Science discipline.</p> <p>10. Prepare one new OFT in Animal Science discipline.</p> <p>11. Mentioned check variety, state and district average yield in FLD results.</p> <p>12. Emphasis on “Natural Farming” in every training programmes organize by KVK.</p> <p>13. In presentation of Senior Scientist and Head, include overall general activities of KVK and SMS have strictly followed the common Performa of presentation.</p> <p>14. Document more number of success stories and prepare video/documentary film of success stories of KVK progressive farmers with the help of AGRISNET Studio.</p> <p>15. Impact study should be carried out of completion of three years of cluster villages.</p> <p>16. Every presentation of scientist, include last year <i>Rabi</i> season result and current year <i>summer</i> and <i>kharif</i> season results as well current year Rabi season result as awaiting in the presentation.</p> <p>17. Pooled statistical analysis should be made of completion of three years of OFT and presented in the meeting.</p>
Dr. K. P. Baraiya, Senior Scientist & Head, KVK, Jamnagar	
Shri N. G. Ramoliya, Asstt. Director of Agriculture, District Panchayat, Rajkot	
Shri H. T. Bhimani, Asstt. Director of Horticulture, Horti., Rajkot	
Shri Ramesh M. Dangar, Field Executive, GGRC, Rajkot	
Shri Hardik B. Dobariya, GGRC, Rajkot	
Dr. H. C. Chhodvadia, Associate Extension Educationist, JAU, Junagadh	
Dr. Amit H. Tilala, Dy. Manager, Rajkot Dairy (Gopal Dairy), Rajkot	
Shri Sudhir Datta, AIR (Akashwani), Rajkot	
Dr. R. B. Singh, Deputy Director, NHRDF, Naranka, Rajkot	
Shri. S. K. Tiwari, Technical Officer, NHRDF, Naranka, Rajkot	
Kajalben S. Zala, Centre for Environment Education, Jasdan, Dist: Rajkot	
Hiteshbhai P. Kiyada, Village: Rafala, Ta: Rajkot, Dist: Rajkot	
Vipulbhai B. Kiyada, Village: Rafala, Ta: Rajkot, Dist: Rajkot	
Sureshbhai B. Makwana, Village: Bhoira, Ta: Vinchhiya, Dist: Rajkot	
Lilaben Chhaganbhai Lakhatariya, Village: Lalavadar, Ta: Vinchhiya, Dist: Rajkot	
Jamnaben Mohanbhai Dabhi, Village: Barvala, Ta: Jasdan, Dist: Rajkot	
Dr. G. V. Marviya, Senior Scientist & Head, KVK, JAU, Targhadia, Dist: Rajkot	

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

2.1. Major farming systems/enterprises

S. No	Farming system/enterprise
1	Groundnut – Wheat/ Cumin/ Chick pea, Cotton – Summer Groundnut/ Sesame/ Pulses
2	Dairy product

3	Farm waste management specially for cotton stalk
4	Fruit and vegetable preservation
5	Value addition in groundnut, sesame, gram, etc.

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

S. No.	Agro-climatic Zone (Planning Commission)	Characteristics
1	North Saurashtra Agro Climatic Zone (VI)	The total geographical area of North Saurashtra Agro Climatic Zone is 35.2 Lacs ha. Out of total area, 73.40 per cent area falls under arid and semi-arid region. The soils of this zone are shallow to moderately deep. The soils of Rajkot district are low in their availability of nitrogen while medium in phosphorus and high in available potash except the available phosphorus and potash is in medium category in adopted villages. Monsoon commences usually by the end of June and withdraws by middle of September. Average annual rainfall of district is 648 mm while 1318.5 mm during 2024.

a) Topography

S. No.	Agro ecological situation	Characteristics
1	Situation No. 4	Shallow black soil with 500-600 mm Rainfall
2	Situation No. 14	Hilly Soils with 500-600 mm Rainfall

2.3 Soil Types

S. No	Soil type	Characteristics
1	Clay to clay loam	Medium black calcareous soil
2	Sandy Clay Loam to Clayey	Well drained soil with rapid permeability
3	Sandy to Sandy loam 10 cm, Calcareous	Well drained soils

2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2023-24)

S. No	Crop	Area (ha)	Production (000 T)	Productivity (Kg/ha)
	Major Field crops			
1	Groundnut	226066	586975	2596
2	Cotton	244803	391800	1600
3	Sesamum	1152	1007	874
4	Castor	6029	16712	2772
5	Pearl millet	437	760	1738
6	Green gram	1672	1612	964
7	Black gram	892	932	1045
8	Pigeon pea	3277	5865	1790
9	Wheat	85784	370242	4316
10	Chick pea	59743	135892	2275

11	Cumin	41748	35758	857
12	Groundnut (Summer)	1801	4300	2388
13	Pearl millet (Summer)	1006	3417	3396
14	Green gram (Summer)	1775	2457	1384
15	Sesamum (Summer)	4995	7612	1524

Source: District agriculture department

2.5. Weather data (2024)

Month	Average RF (mm)	Normal RF (mm)	Normal Rainy days (number)	Temperature (° C)		Relative Humidity (%)	
				Maximum	Minimum	Maximum	Minimum
January	0.0	0.0	0	28.1	11.8	68	33
February	0.0	0.0	0	31.0	14.8	63	32
March	0.2	7.4	0	35.2	16.8	63	30
April	0.0	0.0	0	38.5	21.7	72	29
May	0.0	0.0	0	41.5	25.8	70	28
June	2.5	75.3	3	39.1	27.2	78	50
July	8.2	254.5	15	32.8	25.8	87	71
August	27.3	847.7	14	30.8	24.3	90	77
September	2.8	82.6	7	32.1	23.9	88	65
October	1.6	51.0	4	34.4	23.5	84	53
November	0.0	0.0	0	33.2	17.1	64	34
December	0.0	0.0	0	27.4	11.4	65	36
Total/Ave.		1318.5	43	33.7	20.3	74.3	44.8

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

Category	Population (No)	Production (tonne)	Productivity
Cattle			
Crossbred	4,52,000	33,26,900 (Milk)	-
Indigenous	-	-	-
Buffalo	3,62,000	52,84,700 (Milk)	-
Sheep	2,63,400	2,66,810 (Wool)	-
Goats	1,97,000	2,31,240 (Milk)	-
Pigs	1,000	-	-
Crossbred	-	-	-
Indigenous	-	-	-
Poultry Production of eggs (No.)			
Hens (Crossbred)	13,400	32,52,000 (Egg)	-
Desi	7,800	3,92,000 (Egg)	-

Category		Production (Q.)	Productivity
Fish (Reservoir)	-	-	-

2.7. Details of Operational area / Villages

Taluka / Block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Rajkot	Gunda	Groundnut, Cotton, Sesame,	Pink ball worm in cotton, Heavy infestation of sucking pest in cotton, Phytophthora disease in sesame and White grub infestation in groundnut, long inter-calving period in buffalo, Nutritional deficiency in animal feed and fodder, Less area under horticultural crops, Anemia problem in adolescent girls	<ul style="list-style-type: none"> • IPM and INM in major crops of this area • Increase drainage of soil • Reducing the inter-calving period in buffalo • Motivate the farmers for arid horticultural crops • Efficient use of irrigation water • To create the awareness for grading, processing and marketing (value addition)
	Maliyasan	Wheat, Cumin, Chickpea, Garlic,		
	Sanosara	Onion.		
	Kuvadava	* Enterprises are dairy business,		
	Lakhapar	Vermi composting, Preparation of		
Jasdan	Madava	roasted groundnut and chikki from		
	Sitaliya	groundnut and sesame		
	Kanesara			
	Kothi			
	Rajavadla Jam			
Vinchhiya	Sanali			
	Kandhevaliya			
	Revaniya			
	Thoriyali			
	Hathsani			

2.8. Priority thrust areas:

Sl. No	Crop/ Enterprise	Thrust area
1	Groundnut, Sesame etc.	Increasing the productivity of the major crops by adopting the recommended dry farming technologies and to create awareness for value addition.
2	Water conservation	<i>In situ</i> soil moisture conservation and rainwater harvesting. Use of cotton stalk for organic manure.
3	Cotton	Motivating cotton growers to adopt IPM and INM practices for reducing the cost of production.
4	Arid Fruits	Promoting the arid horticulture.
5	Micro irrigation	Efficient use of water by MIS, water harvesting structure and water conservation techniques.
6	Organic farming	Enhancement of organic farming through improved technologies.
7	Livestock production	Enhancing productivity of milch animals by proper feeding and breeding management.
8	Women empowerment	Providing self-employment through skill-oriented income generating activities
9	Agriculture	Developing interest among youth for agriculture as a profession.
10	Horticulture	Value addition in agriculture produces through proper grading, processing, marketing and information technology.

11	PHT	Minimizing the post-harvest losses and to create the awareness for proper storage.
12	Income generating activities	Self-employment among rural youth and skill-oriented income generating activities.
13	Nutrition management	Care and importance of nutrition in children & pregnant women.

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
8	7	20	17	15	15	185	161

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
80	85	2000	2273	-	1119	-	12760

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
-	220	-	10

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

3.1. B. Operational areas details during 2024

S.No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Extent of area (ha/No.) affected by the problem in the district	Names of Cluster Villages identified for intervention	Intervention (OFT, FLD, Training, extension activity etc.) *
1	Cotton	Low yield of cotton	-	All cluster	OFT, FLD, Training
		Pink bollworm	-	All cluster	FLD and Training
2	Groundnut	Variety	-	All cluster	FLD
		White grub	-	All cluster	Training
		Rust and Tikka	-	All cluster	FLD and Training

3	Cumin	Wilt in cumin	-	All cluster	FLD, OFT and Training
		Sowing method and over irrigation	-	All cluster	FLD and Training
4	Gram	Variety	-	All cluster	FLD and Training
5	Tomato	Variety & Leaf curl	-	All cluster	OFT
6	Brinjal	Variety	-	All cluster	FLD and Training
7	Pearl millet	Variety	-	All cluster	FLD and Training
8	Farm women	Concept of nutritional gardening to combat nutritional issues	-	All cluster	FLD and Training

3.2. Technology Assessment/ refined (Kharif 2024, Rabi 2023-24, Summer 2024)

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	Other	TOTAL
Integrated Nutrient Management											
Varietal Evaluation					1						1
Integrated Pest Management											
Integrated Crop Management											
Integrated Disease Management				1							1
Small Scale Income Generation Enterprises											
Weed Management											
Resource Conservation Technology				1							1
Farm Machineries											
Integrated Farming System				1							1
Seed / Plant production											
Value addition											
Drudgery Reduction											
Storage Technique											
Mushroom cultivation											
Natural Farming		1									1
Total		1		3	1						5

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management	1					1
Disease of Management						
Value Addition						
Production and Management	1					1
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL	2					2

B. Achievements on technologies Assessed/ refined

B.1. Technologies Assessed/ refined 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	Tomato	Response of new release variety of Tomato GT-6 on leaf curl occurrence and yield	1	3	0.4
Integrated Disease Management	Cumin	Use of <i>Trichoderma</i> for wilt disease management in cumin	1	3	0.4
Small Scale Income Generation Enterprises					
Resource Conservation Technology	Cumin	Performance of drip irrigation with line sowing method in cumin	1	3	0.4
Integrated Farming System	Cotton	De-topping in Cotton	1	3	0.4
Natural Farming	Groundnut	Natural farming in <i>Kharif</i> Groundnut	1	1	0.4
Total			5	13	2.0

B. 2. Technologies assessed/ refined under Livestock & fishery assessment

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 ²				
Nutrition management	Buffalo	Chelated Mineral mixture, By pass protein, & By pass fat for enhancing milk production in buffalo	2	2
Disease management				
Feed and fodder management				
Processing & Value addition				
Production and management	Crossbreed	Effect of health management on performance of crossbreed cow	2	2
Composting fish culture				
Small scale income generating enterprises				
Fish production				
Other				
Total			4	4

B.3 Technologies assessed under other enterprises: Nil

B 4. Technologies assessed under Women empowerment assessment: Nil

C. 1. Results of Technologies Assessed/ refined

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed/Refined	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>
Groundnut	Rainfed	Deteriorate in yield and quality of groundnut	Natural farming in	1	T1: Seed treatment through fungicides, Use of chemical fertilizers, Use of Insecticides-Pesticides (Farmers Practices)	Yield (Kg/ha), Cost of cultivation					

		due to higher use of chemical fertilizers & Pesticides	<i>Kharif</i> Groundnut		<p>T2: FYM@ 10 t/ha, Use of PSB @ 8g/kg seeds, Use of <i>Trichoderma viride</i> @ 2.5 kg/ha, Use of <i>Beauveria bassiana</i> @ 80 ml per pump, <i>Metarhizium anisopliae</i> @ 5 kg/ha, <i>Pseudomonas fluorescens</i> @ 2.5 kg/ha (Recommended Practices)</p> <p>T3: Bijamrut @ 20 lit./100 kg seeds, Ghan Jivamrut @ 800 kg/acre in basal dose and 400 kg at flowering stage, Jivamrut @ 200 lit./acre, Use of Dasparni Ark @ Agniastra and Brahmastra @ 6 to 8 lit. dissolved in 100 to 200 lit. of water and spray in 1 acre, Nimastra @ 200 lit. spray in 1 acre without water (Interventions)</p>	and pest infestation (%)					
Cotton	Rainfed	Low Yield of Cotton	De-topping in Cotton	3	T1: Farmers practices	Seed cotton yield (kg/ha) and No. of bolls/plant					
					T2: De-topping at 75 DAS						
					T3: De-topping of monopodial branches at 75 DAS & 90 DAS						
Tomato	Irrigated	To increase yield of Tomato by decreasing sucking pest infestation	Response of New Release Variety of Tomato GT-6 on leaf curl occurrence and yield	3	T1: Sowing of Local Variety + any Pesticides	Yield Kg/ha and infestation (%)					
					T2: Sowing of GT-6 Variety + foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15-liter 40 DAT						

		by sowing tolerant variety			T3: Sowing of Local variety and foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT						
Cumin	Irrigated	Heavy incidence of wilt disease in cumin	Use of <i>Trichoderma</i> for wilt disease management in cumin	3	T1: No use of Trichoderma or fungicide at the time of sowing	Yield Kg/ha and infestation (%)					
					T2: Trichoderma @ 5 kg /ha with organic manure @ 500 kg / ha at the time of sowing						
					T3: Application of Trichoderma @ 5 kg /ha along with organic manure @ 500 kg / ha at the time of sowing and second application of Trichoderma @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination				Very effective against the wilt disease. Germination percentage was increased.		
Cumin	Irrigated	Low yield due to sowing method and over irrigation	Performance of drip irrigation with line sowing method in cumin	3	T1: Broad casting method without drip irrigation (Farmer's practices)	Yield Kg/ha and B:C Ratio					
					T2: Line sowing (20 cm) with drip irrigation (Recommended technology)						
Buffalo		Low milk production & infertility problems in dairy Buffalo	Chelated Mineral mixture, By pass protein, & By pass fat for	2	T1: Farmers practices (Control)	Milk Yield (Lit/day), Milk fat (%) and Estrus after					
					T2: Buffalo Fed with 50 gm/day chelated mineral mixture supplementation						
					T3: T2 + by pass protein (5 kg/day)						

			enhancing milk production in buffalo		T4: T3 + by pass fat (100 gm/day)	calving (days)					
Crossbreed cow		Low milk production & infertility problems in crossbreed cow	Effect of health management on performance of crossbreed cow	2	T1: Farmers practices (Control)	Milk Yield (Lit/day), Milk fat (%) and Estrus after calving (days)					
					T2: Crossbreed cow give anthelmintic 10 mg/kg						
					T3: T2+ Vaccination FMD & HS						
					T4: T3 + Chelated mineral mixture 50 gm/day						

Contd...

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / Unit	BC Ratio
13	14	15	16	17	18
Natural farming in Kharif Groundnut					
T1: Seed treatment through fungicides, Use of chemical fertilizers, Use of Insecticides-Pesticides (Farmers Practices)	<i>Prakrutik Krushi</i> Book by Acharya Devvrat, Hon'ble Governor of Gujarat and Junagadh Agricultural University	1900 (20)	Kg/ha (% Infestation of white grub)	87250	3.13
T2: FYM @ 10 ton/ha, Use of PSB @ 8g/kg seeds, Use of <i>Trichoderma viride</i> @ 2.5 kg/ha, Use of <i>Beauveria bassiana</i> @ 80 mi per pump, <i>Metarhizium anisopliae</i> @ 5 kg/ha, <i>Pseudomonas fluorescens</i> @ 2.5 kg/ha (Recommended Practices)		1600 (33)	Kg/ha (% Infestation of white grub)	73480	3.09
T3: Bijamrut @ 20 lit./100 kg seeds, Ghan Jivamrut @ 800 kg/acre in basal dose and 400 kg at flowering stage, Jivamrut @ 200 lit./acre, Use of Dasparni Ark @ Agniastra and Brahmastra @ 6 to 8 lit. dissolved in 100 to 200 lit. of water and spray in 1 acre, Nimastra @ 200 lit. spray in 1 acre without water (Interventions)		1225 (45)	Kg/ha (% Infestation of white grub)	52687	2.75
De-topping in Cotton					

T1: Farmers Practices	Junagadh Agricultural University, Junagadh	3450 (33.00)	Kg/ha (No. of bolls/plant (10 plants))	174174	3.43
T2: De-topping at 75 DAS		3700 (37.00)	Kg/ha (No. of bolls/plant (10 plants))	190477	3.60
T3: De-topping of monopodial branches at 75 DAS & 90 DAS		3950 (40.00)	Kg/ha (No. of bolls/plant (10 plants))	205279	3.70
Response of New Release Variety of Tomato GT-6 on leaf curl occurrence and yield					
T1: Sowing of Local Variety + any Pesticides.	Junagadh Agricultural University, Junagadh	21813 (12 to 15)	Kg/ha (% plant infestation)	100007	2.34
T2: Sowing of GT-6 Variety + foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after		25840 (3 to 5)		129487	2.68
T3: Sowing of Local Variety and foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT		24157 (7 to 8)		114253	2.45
Use of <i>Trichoderma</i> for wilt disease management in cumin					
T1: No use of <i>Trichoderma</i> or fungicide at the time of sowing	Junagadh Agricultural University, Junagadh	905.3 (12 to 17)	Kg/ha (% plant infestation)	90,300	2.98
T2: Application of <i>Trichoderma</i> @ 5 kg /ha with organic manure @ 500 kg / ha at the time of sowing		980.0 (9 to 12)	Kg/ha (% plant infestation)	1,03,333	3.37
T3: Application of <i>Trichoderma</i> @ 5 kg /ha along with organic manure @ 500 kg / ha at the time of sowing and second application of <i>Trichoderma</i> @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination.		1008.0 (6 to 10)	Kg/ha (% plant infestation)	1,06,633	3.39
Performance of drip irrigation with line sowing method in cumin					
T1: Broad casting method without drip irrigation (Farmer's practices)	RTTC, JAU, Junagadh	980	Kg/ha	180500	4.51
T2: Line sowing (20 cm) with drip irrigation (Recommended technology)		1240	Kg/ha	234000	5.20

Chelated Mineral mixture, By pass protein, & By pass fat for enhancing milk production in buffalo					
T1: Farmers practices (Control)	NDRI, Kernal, Hariyana	8.0lit, 6.6% and 140 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
T2: Buffalo fed with 50 gm/day chelated mineral mixture supplementation		9.8 lit, 7.1% and 118 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
T3: T2 + By pass protein (5 kg/day)		10.9 lit,8.0% and 99 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
T4: T3 + By pass fat (100 gm/day)		11.8 lit, 8.9% and 90 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
Effect of health management on performance of crossbreed cow					
T1: Farmers practices (Control)	IVRI, Izzatnagar	11.9lit, 3.8% and 136 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
T2: Crossbreed cow give anthelmintic 10 mg/kg		12.8 lit, 4.2% and 121 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
T3: T2+ Vaccination FMD & HS		13.9 lit,4.9% and 109 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-
T4: T3 + Chelated mineral mixture 50 gm/day		15.6 lit, 5.3% and 97 days	Milk yield (Lit/day), Milk fat (%) and Estrus after calving (days)	-	-

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

OFT-1

1. Title of Technology Assessed: **Natural farming in Kharif Groundnut**
2. Problem Definition: Deteriorate in yield and quality of groundnut
3. Details of technologies selected for assessment:
 1. Seed treatment through fungicides, Use of chemical fertilizers, Use of

Insecticides-Pesticides (Farmers Practices)

2. FYM@ 10 t/ha, Use of PSB @ 8g/kg seeds, Use of *Trichoderma viride* @ 2.5 kg/ha, Use of *Beauveria bassiana* @ 80 ml per pump, *Metarhizium anisopliae* @ 5 kg/ha, *Pseudomonas fluorescens* @ 2.5 kg/ha (**Recommended Practices**)
3. Bijamrut @ 20 lit./100 kg seeds, Ghan Jivamrut @ 800 kg/acre in basal dose and 400 kg at flowering stage, Jivamrut @ 200 lit./acre, Use of Dasparni Ark @ Agniastra and Brahmastra @ 6 to 8 lit. dissolved in 100 to 200 lit. of water and spray in 1 acre, Nimastra @ 200 lit. spray in 1 acre without water (**Interventions**)
4. Source of technology: *Prakrutik Krushi* Book by Acharya Devvrat, Hon'ble Governor of Gujarat and JAU, Junagadh
5. Production system and thematic area: NRM
6. Performance of the Technology with performance indicators:

Treatments	Source of Technology	3 rd Year Result			Pooled of 3 Years		
		Production (kg/ha)	Net Return (Profit) in Rs./ha	B:C Ratio (3 rd Year)	Production (kg/ha)	Net Return (Rs./ha)	B:C Ratio
T1 Farmers Practices	Junagadh Agricultural University and H.E. Governor of Gujarat's NF Book	1900	87250	3.13	1675	46616	3.07
T2 Recommended Practices		1600	73480	3.09	1483	39926	2.73
T3 Intervention		1225	52687	2.75	1258	31229	2.35

Conclusion: Data Collected During Last 3 Years Shows that **T1** Treatment Shows Better Result than **T2 & T3** Treatments

7. Feedback, matrix scoring of various technology parameters recorded through farmer's participation / other scoring techniques: Farmers practices has given higher production as compare to recommended practices and interventions.
8. Final recommendation for micro level situation: Yield can be increased and stem rot infestation can be reduced with use of *Trichoderma* in mixture with castor cake.
9. Constraints identified and feedback for research: - White grub infestation was observed more in recommended practices and interventions treatment.
10. Process of farmers participation and their reaction: The farmers participation in natural farming awareness and training programme enhanced day by day and they are adopting natural farming on their fields also.

OFT-2

1. Title of Technology Assessed: **De-topping in Cotton**
2. Problem Definition: Low Yield of Cotton
3. Details of technologies selected for assessment:
 1. Farmers Practices
 2. De-topping at 75 DAS
 3. De-topping of monopodial branches at 75 DAS & 90 DAS
4. Source of technology: JAU
5. Production system and thematic area: NCM
6. Performance of the Technology with performance indicators:

Treatments	Source of Technology	3 rd Year Result			Pooled of 3 Years		
		Seed cotton yield (kg/ha)	Net Return (Rs./ha)	B:C Ratio (3 rd Year)	Seed cotton yield (kg/ha)	Net Return (Rs./ha)	B:C Ratio
T1 Farmers Practices	Junagadh Agricultural University, Junagadh	3450	174174	3.43	3450	241951	3.49
T2 De-topping at 75 DAS		3700	190477	3.60	3617	276562	4.10
T3 De-topping at 75 DAS & 90 DAS		3950	205279	3.70	3883	294346	4.33

Conclusion: Data Collected During Last 3 Years Shows that **T3** Treatment Shows Better Result than **T1 & T2** Treatments

7. Feedback, matrix scoring of various technology parameters recorded through farmer's participation / other scoring techniques: Interventions treatment has given higher production as compare to farmers practice and recommended treatment.
8. Final recommendation for micro level situation: Yield can be increased through De-topping of monopodial branches at 75 DAS & 90 DAS
9. Constraints identified and feedback for research: - De-topping is much laborious work and taking time for operation.
10. Process of farmers participation and their reaction: Farmers are aware about de-topping in cotton and adopting this technology in their fields.

OFT-3

1. Title of Technology Assessed: **Response of new release variety of Tomato GT-6 on leaf curl occurrence and yield**
2. Problem Definition: Low yield of Tomato and Heavy Infestation of leaf Curl Virus
3. Details of technologies selected for assessment:
 - T1: Sowing of Local Variety + any Pesticides.
 - T2: Sowing of GT-6 Variety + foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT
 - T3: Sowing of Local variety and foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT
4. Source of technology: JAU
5. Production system and thematic area: IPM
- 6 Performance of the Technology with performance indicators:

No	Name of the farmer	Name of the Village	Unit	Result		
				T1	T2	T3
1	Devrajibhai Laljibhai Kakadiya	Lilapur	Yield (Kg/ha)	21470	24990	23860
2	Damjibhai Velabhai Ramani	Lilapur		21750	26800	24610
3	Rajeshbhai Vallabhbhai Kakadiya	Lilapur		22220	25730	24000
Average yield				21813	25840	24157
(% plant infestation)				12 to 15	3 to 5	7 to 8

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Interventions (GT-6 variety) has given higher production as compare to Farmers practices and recommended practices.
8. Final recommendation for micro level situation: Farmers should grow latest variety of Tomato GT-6 and carried out foliar sprayings of Acephate 75 WP @ 1.5 g / liter 10 days after transplanting, Fipronil 5 SC @ 1.5 ml / liter 20 DAT, and Imidacloprid 70 WG @ 2g / 15 liter 40 DAT
9. Constraints identified and feedback for research: Farmers are less aware about latest technologies.
10. Process of farmers participation and their reaction: Farmers getting trainings and knowledge for latest technologies for better production in tomato.

OFT-4

1. Title of Technology Assessed: **Use of *Trichoderma* for wilt disease management in cumin**
2. Problem Definition: Heavy incidence of wilt disease in cumin
3. Details of technologies selected for assessment:
 - T1: No use of *Trichoderma* or fungicide at the time of sowing
 - T2: Application of *Trichoderma* @ 5 kg /ha with organic manure @500 kg / ha at the time of sowing.
 - T3: Application of *Trichoderma* @ 5 kg /ha along with organic manure @500 kg / ha at the time of sowing and second application of *Trichoderma* @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination.
4. Source of technology: JAU
5. Production system and thematic area: IDM
6. Performance of the Technology with performance indicators:

No	Name of the farmer	Name of the Village	Unit	Result		
				T1	T2	T3
1	Jentibhai Dhanjibhai Jatapara	Madava	Yield (Kg/ha)	901	965	997
2	Ashwinbhai Ranchhodhbhai Berani			918	1000	1018
3	Mansukhbhai Karamsibhai Berani			897	975	1009
Average yield				905.3	980.0	1008.0
(% plant infestation)				12-17	9-12	6-10

Pooled of 3 Years

Technology options	Yield (Kg/ha)	% Plant infestation	Yield (q/ha)	B:C Ratio (3 rd year)	B:C Ratio (1 st year)	B:C Ratio (2 nd year)
Farmers Practice (T1)	905.3	12 to 17	90.53	2.98	2.72	3.90
Assessed Practice (T2)	980	9 to 12	98.0	3.37	3.37	4.66
Assessed Practice (T3)	1008	6 to 10	100.8	3.39	3.80	4.79

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: T3 has given higher production as compare to T1 & T2
8. Final recommendation for micro level situation: Application of *Trichoderma* @ 5 kg /ha along with organic manure @500 kg / ha at the time of sowing and second application of *Trichoderma* @ 5 kg /ha along with organic manure by broadcasting method at 15 days after germination gave higher yield and lower plant infestation % as compared to T1 and T2.
9. Constraints identified and feedback for research: T3 has given higher production as compare to T1& T2

10. Process of farmers participation and their reaction: From the selected villages of KVK, Rajkot-I, progressive farmers who willing to adopt the new technologies were identified and selected to perform the OFT on their field. During the season guidance provided to them and data collected by the KVK scientist. Farmers are happy and agreed with the result found after completion of the OFT and ready to adopt the technology in whole farm in next season.

OFT-5

1. Title of Technology Assessed: **Performance of drip irrigation with line sowing method in cumin**
2. Problem Definition: Low yield due to sowing method and over irrigation
3. Details of technologies selected for assessment:
 - T1: Broad casting method without drip irrigation (Farmer's practices)
 - T2: Line sowing (20 cm) with drip irrigation (Recommended technology)
4. Source of technology: RTTC, JAU, Junagadh
5. Production system and thematic area: Resource Conservation Technology
6. Performance of the Technology with performance indicators:

Treatments	Source of Technology	3 rd Year Result			Pooled of 3 Years		
		Production (kg/ha)	Net Return (Profit) in Rs./ha	B:C Ratio (3 rd Year)	Production (kg/ha)	Net Return (Rs./ha)	B:C Ratio
T1 Farmers Practices	RTTC, Junagadh Agricultural University Junagadh	980	180500	4.51	958	175550	4.39
T2 Recommended Practices		1240	234000	5.20	1180	220500	4.90

Conclusion: Data Collected During Last 3 Years Shows that **T2** Treatment Shows Better Result than **T1**

Rabi, 2023-24 (Third year result)

No	Name of the farmer	Name of the Village	Yield (kg/ha)	
			T1	T2
1	Parshotambhai Harjibhai Kagadiya	Kanesara (Ta: Jasdan)	900	1180
2	Mansukhbhai Popatbhai Handa	Kanesara (Ta: Jasdan)	1025	1265
3	Babubhai Devabhai Ramani	Khorana (Ta: Rajkot)	1015	1275
Average			980	1240

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Line sowing with drip irrigation gave higher production of cumin as compare to broad casting method with flood irrigation.
8. Final recommendation for micro level situation: Yield can be increased and disease infestation can be reduced with use of drip irrigation in line sowing of cumin.
9. Constraints identified and feedback for research: -
10. Process of farmers participation and their reaction: Low disease infestation and increased yield in line sowing cumin crop with controlled irrigation (i.e. drip irrigation)

OFT-6

1. Title of Technology Assessed: **Chelated mineral mixture, by pass protein and by pass fat for enhancing milk production in dairy buffalo**
2. Problem Definition: Low milk production & infertility problems in dairy cow
3. Details of technologies selected for assessment:
 1. Farmers practices (Control)
 2. Buffalo Fed with 50 gms/day chelated mineral mixture supplementation
 3. Buffalo fed with 50 gms/day chelated mineral mixture, 5 kg by pass protein
 4. Buffalo fed with 50 gms/day chelated mineral mixture, 5 kg by pass protein, 100 gm by pass fat
4. Source of technology: NDRI, Kernal, Hariyana
5. Production system and thematic area: Nutrition Management
6. Performance of the Technology with performance indicators:

No	Name of the farmer	Name of the Village	Unit	Result			
				T1	T2	T3	T4
1	Jigneshbhai Karsanbhai Kakdiya	Kuvadva	Milk Yield (Lit/day)	8.0	9.8	10.9	11.8
2	Bhupatbhai Narsibhai Kisala	Kuvadva	Milk Fat (%)	6.6	7.1	8.0	8.9
			Estrus after calving (days)	140	118	99	90

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: T4 treatment has given higher production as compare to T1, T2& T3
8. Final recommendation for micro level situation: This is second year of trial, final result will be obtained after three-year trial

9. Constraints identified and feedback for research: - Milk Yield, Milk fat can be increased and estrus after calving can be reduced with use of chelated mineral mixture, bypass protein and bypass fat
10. Process of farmers participation and their reaction: This was second year of trial for experimentation and it will be improved and repeated next year.

OFT-7

1. Title of Technology Assessed: **Effect of health management on performance of crossbred cow**
2. Problem Definition: Low milk production & infertility problems in crossbred cow
3. Details of technologies selected for assessment:
 - T1: Farmers practices (Control)
 - T2: Crossbred cow give anthelmintic 10mg/kg body wt
 - T3: Crossbred cow give anthelmintic 10mg/kg body wt + Vaccination FMD & HS
 - T4: Crossbred cow give anthelmintic 10mg/kg body wt + Vaccination FMD & HS + Chelated Mineral Mix 50 gm/day
4. Source of technology: IVRI, Izzatnagar
5. Production system and thematic area: Health Management
6. Performance of the Technology with performance indicators:

No	Name of the farmer	Name of the Village	Unit	Result			
				T1	T2	T3	T4
1	Arjanbhai Narsibhai kisala	Maliyasan	Milk Yield (Lit/day)	11.9	12.8	13.9	15.6
2	Bhaveshbhai Hanshrajbhai Parsana	Sanosara	Milk Fat (%)	3.8	4.2	4.9	5.3
			Estrus after calving (days)	136	121	109	97

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: T4 treatment has given higher production as compare to T1, T2& T3
8. Final recommendation for micro level situation: This is first year of trial, final result will be obtained after two-year trial
9. Constraints identified and feedback for research: - Milk Yield, Milk fat can be increased and estrus after calving can be reduced with use of anthelmintic, vaccination of FMD & HS and Chelated Mineral Mixture
10. Process of farmers participation and their reaction: This was first year of trial for experimentation and it will be improved and repeated next year.

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 2024 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
1	Groundnut	ICM	Varietal + INM+IDM + IPM	To test yield potentiality of newly released groundnut variety	22	210	230
2	Groundnut	ICM	Varietal evaluation+ IDM through Hexaconazole	Management of rust and tikka through spraying of Hexaconazole	25	160	125
3	Cotton	IPM	IPM through Pheromone Trap	Management of Pink bollworm through Pheromone Trap	10	155	100
4	Cotton	IPM	IPM through Mating Disruption Paste (MDP)	Management of Pink bollworm through MDP	10	59	52
5	Chickpea	ICM	Varietal+ INM+IDM+IPM	To test yield potentiality of newly released gram variety	23	203	375
6	Cumin	ICM	IPM	Bio control in pest management	10	68	70
7	Cumin	ICM	Line sowing	Management of pest & disease	12	95	138
8	Seasonal Vegetables	Nutritional Security	Nutritional garden	-	17	95	-
9	Pear millet	ICM	Varietal evaluation	To test yield potentiality of newly released variety	7	50	
10	Brinjal	ICM	Varietal evaluation	To test yield potentiality of newly released variety	16	35	20
11	Buffalo	Nutrient Management	Bypass Protein (22%)	Increased milk production	17	40	-
12	Buffalo	Nutrient Management	By Pass Fat	Increased milk production	20	49	-
13	Cow	Nutrient Management	Chelated Mineral Mixture	Increased milk fat %	19	41	-
14	Fodder	Fodder Management	Fodder management	Increased milk production	18	39	-

B. Details of FLDs implemented during 2024 (**Kharif 2024, Rabi 2023-24, Summer 2024**) (Information is to be furnished in the following **three tables** for **each category** i.e. **cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.**)

Oilseeds:

Sl. No.	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	
1	Groundnut	NRM	Varietal + INM + IDM + IPM	<i>Kharif 2024</i>	4.0	4.0	1	9	10	-
2	Groundnut	ICM	IDM Hexaconazole	<i>Kharif 2024</i>	4.0	4.0	2	8	10	-

Pulses:

Sl. No.	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	
1	Chickpea	ICM	Varietal+ INM+IDM+IPM	<i>Rabi</i> 2023-24	4.0	4.0	2	8	10	-

Cereals:

Sl. No.	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	
1	Pearl millet	ICM	Varietal evaluation	Summer 2024	2.0	2.0	1	4	5	-

Vegetable:

Sl. No.	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	
1	Brinjal	ICM	Varietal evaluation	<i>Rabi</i> 2023-24	4.0	4.0	1	9	10	--

Others:

Sl. No.	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	
1	Cumin	ICM	IPM	<i>Rabi</i> 2023-24	4.0	4.0	0	10	10	-
2	Cumin	ICM	Line sowing	<i>Rabi</i> 2023-24	2.0	2.0	0	5	5	-
3	Cotton	IPM	IPM through Pheromone Trap	<i>Kharif</i> 2024	4.0	4.0	0	10	10	-
4	Cotton	I IPM	IPM through MDP	<i>Kharif</i> 2024	2.0	2.0	0	5	5	-

5	Buffalo	Nutrient management	Bypass Protein (22%)	2024	-	-	2	18	20	-
6	Buffalo	Nutrient management	By Pass Fat	2024	-	-	3	17	20	-
7	Cow	Nutrient management	Chelated Mineral Mixture	2024	-	-	2	18	20	-
8	Fodder	Fodder management	Fodder management	-	-	-	1	4	5	-

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					
Groundnut	<i>Kharif</i>	RF	M. B.	L	M	H	Wheat/ Cumin	02/7/2024	16/10/2024	1318.5mm	-
Groundnut	<i>Kharif</i>	RF	M. B.	L	M	H	Wheat/ Cumin	04/7/2024	12/10/2024	1318.5mm	-
Cotton	<i>Kharif</i>	RF	M. B.	L	M	H	Wheat/ Cumin	03/7/2024	10/01/2025	1318.5mm	-
Brinjal	<i>Rabi</i>	Irrigated	M. B.	L	M	H	G'nut / Cotton	2/11/2023	15/2/2024	-	-
Chickpea	<i>Rabi</i>	Irrigated	M. B.	L	M	H	G'nut / Cotton	16/11/2023	21/2/2024	-	-
Cumin	<i>Rabi</i>	Irrigated	M. B.	L	M	H	G'nut / Cotton	20/11/2023	15/2/2024	-	-
Cumin	<i>Rabi</i>	Irrigated	M. B.	L	M	H	G'nut / Cotton	16/11/2023	21/2/2024	-	-
Pear millet	Summer	Irrigated	M. B.	L	M	H	Chickpea/ Wheat	15/02/2023	25/05/2024	1318.5mm	-

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	De-topping of cotton gave higher yield as compare to control.
2	Application of <i>Trichoderma</i> found the most efficient for control of stem rot in groundnut.
3	Spraying of Hexaconazole found the most efficient for control of tikka disease at later stage in groundnut.
4	Sawaj pheromone trap for pink bollworm was very effective to control pink bollworm damage.
5	Cotton (MDP tube): Less infestation of pink bollworm and give higher yield.
6	Application of <i>Trichoderma</i> reduce wilt disease in cumin.
7	Balancing dairy ration with Bypass protein gave maximum milk production and Bypass fat increased fat per cent.
8	Chickpea variety GG-5 is high yielding as well as disease resistant compared to old varieties
9	Line sowing in cumin crop is very effective to reduce disease infestation

Groundnut	NRM	Varietal + INM+IDM + IPM	GJG-32	10	4.0	25.00	21.00	23.00	20.00	15.00	44500	155940	111440	3.50	42000	135600	93600	3.22
Groundnut	IPM	IPM through Hexaconazole	GJG-32	10	4.0	28.75	22.50	25.75	22.75	13.37	42200	174585	132385	4.14	41200	154245	113045	3.74

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

** BCR= GROSS RETURN/GROSS COST

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)				
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)	
						High	Low	Average											
Chickpea																			
Chickpea	Varietal evaluation	Varietal+ INM+IDM+IPM	GG-5	10	4.0	28.00	20.00	24.00	21.00	14.28	29000	128040	99040	4.41	26000	112035	86035	4.30	

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Brinjal	Varietal	GRB-7	10	4	327.50	285.00	307.50	255.00	20.59			80100	276750	196650	3.46	78620	223125	144505	2.84
Turmeric																			
Any other (Pl. specify)																			
Cumin	IPM	GC-4 + Beauveria	10	4	12.50	10.63	11.44	10.51	8.80	5%	15%	40870	171563	130693	4.20	42750	152431	109681	3.57
Cumin	IDM	Line sowing for minimizing the disease intensities	5	2	12.50	11.13	11.80	10.38	13.73	7%	18%	41200	177000	135800	4.30	42300	150438	108138	3.56
Cotton	IPM	IPM through Pheromone Trap	10	4.0	32.50	26.25	29.63	26.00	14.11	-	-	70300	210930	140630	3.00	71850	185120	113270	2.58
Cotton	IPM	IPM through MDP	5	2.0	35.00	27.50	30.75	25.50	20.75	-	-	69600	218940	149340	3.15	72200	181560	109360	2.51
Fodder (Jinivo)	Fodder Management		5	1			81	72	12.50			83600	182000	98400	2.18	74000	109000	35000	1.47

Frontline Demonstration on Nutri cereals:

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										

Pear millet	ICM	Varietal (Bio fortified)	GHB 1129	5	2.0	32.00	27.00	29.50	25.25	16.83	23500	77438	53938	3.30	23000	66281	43281	2.88
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FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)					
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)		
Cattle																			
Buffalo																			
Buffalo	Nutrient Management	Bypass Protein (22%)	20	20 animals	1884 kg/lactation	1676 kg/lactation	12.41			38700	86800	48100	2.24	36200	73700	37600	2.03		
Buffalo	Nutrient Management	By Pass Fat	20	20 animals	8.0% Fat	6.9% Fat	15.94			36000	93530	57530	2.60	31000	72600	41600	2.34		
Buffalo	Nutrient Management	Chelated Mineral mixture	20	20 animals	1659 kg/lactation	1497 kg/lactation	10.82			30900	68451	37551	2.22	28600	60195	31595	2.10		

* 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 Fisheries : Nil

FLD on Other enterprises : Nil

FLD on Women Empowerment : Nil

FLD on Farm Implements and Machinery

Agri-drone demonstration

Season and year	Village Name	Crop	No. of Demo. at farmer's field	Area (Acre)	Critical inputs	No. of farmers participated
Rabi, 2023-24	Ranpur	Chickpea	1	1	Bio-pesticide (i.e. <i>Beauveria bassiana</i>)	31 Farmers
		Cumin	1	1		
	Magharwada	Chickpea	1	1		40 Farmers
		Cumin	1	1		

	Gunda	Chickpea	2	2		44 Farmers
	Maliyasan	Chickpea	2	2		25 Farmers & 35 Students
Kharif, 2024	Kherdi	Pigeon pea	1	2	Pesticide	28 Farmers
		Chilli	1	2		
	Hadmatiya	Cotton	1	2		25 Farmers
Total			11	14		193 Farmers & 35 Students

Farmers actively participated to see the Agri-drone demonstration and gave positive feedback about agri drone and interested to adopt the technology. The farmers have expressed their consent to spray pesticide using agri drone in their field.

By using agri drone technology, large area can be covered in short period of time as well as uniform spraying can be done and pesticide use efficiently is increased. Pesticide can be easily sprayed in standing crop like, cotton, chickpea, cumin, Pigeon pea, chilli etc.

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)
Different vegetables	Nutritive & fresh healthy vegetables	1000	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-

Farm women reaction

-Kitchen gardening gives continues supply of fresh vegetables at lower cost which gives daily nutritious diet
-In kitchen gardening farm women are not applying any agrochemicals so they produce organic vegetables
-Before demonstration, farm women were growing only three to four vegetable crops in their backyard but after demonstration they said that they will grow different vegetable crops through kitchen gardening in scientific way
-They gave extra vegetables to their neighbors
-Farm women said that now we will generate income by selling of extra vegetables because now they are aware about precious organic vegetables
- Due to kitchen gardening children learned to about plant cognization and bio diversity.

FLD On Demonstration details on crop hybrids: Nil

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

3.4. Training Programmes (Online programmes if any should be included under On Campus category)

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	1	30	10	40	10	5	15	40	15	55
Resource Conservation Technologies	1	19	0	19	0	0	0	19	0	19
Production of organic inputs	2	30	6	36	0	0	0	30	6	36
Others (pl. specify)	1	15	0	15	0	0	0	15	0	15
Total	5	94	16	110	10	5	15	104	21	125
Others (pl specify)	1	20	0	20	0	0	0	20	0	20
Total (a)	1	20	0	20	0	0	0	20	0	20
Cultivation of Fruit	1	20	1	20	0	0	0	20	1	21
Total (b)	1	20	1	21	0	0	0	20	1	21
Grand Total (a to g)	2	40	1	41	0	0	0	40	1	41
Dairy Management	4	55	32	87	11	4	15	66	36	102
Animal Nutrition Management	2	23	0	23	7	0	7	30	0	30
Disease Management	2	29	0	29	4	0	4	33	0	33
Feed & fodder technology	1	0	16	16	0	5	5	0	21	21
Total	9	107	48	155	22	9	31	129	57	186
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1		19	19		3	3	0	22	22
Design and development of low/minimum cost diet	1		10	10			0	0	10	10
Designing and development for high nutrient efficiency diet	1		12	12			0	0	12	12
Minimization of nutrient loss in processing				0			0	0	0	0
Processing and cooking	1		25	25			0	0	25	25
Gender mainstreaming through SHGs				0			0	0	0	0
Storage loss minimization techniques				0			0	0	0	0
Value addition	1		24	24		1	1	0	25	25
Women empowerment				0			0	0	0	0
Location specific drudgery reduction technologies	1	6	10	16		2	2	6	12	18
Rural Crafts				0			0	0	0	0
Women and child care				0			0	0	0	0
Others (pl specify)				0			0	0	0	0
Total	6	6	100	106	0	6	6	6	106	112
VI Agril. Engineering										
Farm Machinery and its maintenance	1	25	0	25	0	0	0	25	0	25
Installation and maintenance of micro irrigation systems	2	41	0	41	2	0	2	43	0	44
Repair and maintenance of farm machinery and implements	1	19	4	23	3	0	3	22	4	26
Small scale processing and value addition	1	21	0	21	0	0	0	21	0	21
Post Harvest Technology	1	22	0	22	0	0	0	22	0	22
Others: Rain water harvesting	1	12	0	12	3	0	3	15	0	15
Total	7	140	4	144	8	0	8	148	4	152
VII Plant Protection										
Integrated Pest Management	1	15	0	15	0	0	0	15	0	15
Integrated Disease Management	1	21	0	21	0	0	0	21	0	21
Bio-control of pests and diseases	1	20	0	20	0	0	0	20	0	20
Total	3	56	0	56	0	0	0	56	0	56
GRAND TOTAL	32	443	169	612	40	20	60	483	189	672

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	1	25	6	31	0	0	0	25	6	31
Resource Conservation Technologies	1	30	0	30	0	0	0	30	0	30
Production of organic inputs	1	20	0	20	5	0	5	25	0	25
Others (pl specify)	2	30	5	35	10	4	14	40	9	49
Total	5	105	11	116	15	4	19	120	15	135
Others (pl specify)	1	23	0	23	0	0	0	23	0	23

Production of quality animal products										
Dairying	1	28	27	55	2	3	5	30	30	60
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)										
TOTAL	3	30	78	108	2	3	5	32	81	113

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										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	1	0	30	30	0	4	4	0	34	34
Livestock feed and fodder production										
Household food security										
Natural Farming	02	90	10	100	20	02	22	110	12	122
Importance and Efficient use of MIS in agriculture										
Any other (Rural Development and Climate Action in the Rural Economy)	1	49	6	55	0	0	0	49	6	55
TOTAL	4	139	46	185	20	6	26	159	52	211

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										
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										
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	1	24		24	3		3		27	27

Others (pl. specify)										
Total	1	23	0	23	3	0	3	26	0	26
Home Science										
Household nutritional security	1		30	30					30	30
Economic empowerment of women										
Drudgery reduction of women										
Others (pl. specify)										
Total	1		30	30					30	30
Agricultural Extension										
Capacity Building and Group Dynamics										
Others (Awareness raising workshop for farmers on “PM-KUSUM Component-A”)	1	30	0	30	0	0	0	30	0	30
Total	1	30	0	30	0	0	0	30	0	30
GRAND TOTAL	9	200	99	299	23	8	31	223	107	330

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services (Other than KMAS)	945	1500	5	1505
Diagnostic visits	7	52	7	59
Field Day	9	245	5	250
Group discussions	12	78	0	78
Kisan Ghosthi	3	42	0	42
Film Show	5	236	6	242
Self -help groups	-	-	-	-
Kisan Mela (Participant)	2	-	-	-
Exhibition	1	393	12	405
Scientists' visit to farmers field	17	73	7	80
Plant/animal health camps	1	58	3	61
Farm Science Club	-	-	-	-
Ex-trainees Sammelan	-	-	-	-
Farmers' seminar/workshop	1	90	6	96
Method Demonstrations	7	213	3	216
Extension Literature Published	11	-	-	-
PM Kisan Samman Sammelan	2	178	1	179
Different activities under SHS	5	189	0	189
Celebration of international women day	1	239	5	244
Celebration of International Yoga Day	1	31	0	31
Celebration of 78th Independent day	1	111	0	111
Celebration of Technology Week and Krishak Swarn Samruddhi Week	1	393	4	397
Awareness raising workshop for farmers on “PM-KUSUM Component-A”	1	38	3	41
Celebration of World soil health day	1	30	0	30
Celebration of Kishan Diwas	1	28	0	28
Celebration of Poshan Mah	1	67	3	70
Awareness program under celebration of international year of millets	8	350	4	354
ICAR team visited at KVK, Targhadia	-	-	-	-
Agri-drone Demonstration at farmers field	11	228	0	228
Rabi Krushi Mahotsav (7 Scientists)	-	-	-	-
Participant in Viksit Bharat Sankalp Yatra	16	7478	32	7510
One day workshop on “Rural Development and climate Action in Rural Economy” collaboration with CEE at KVK, Targhadia	1	90	3	93
Live telecast programme on release of 109 Climate Resilient and Biofortified Crop Varieties by Hon’ble Prime Minister at KVK, Targhadia	1	60	2	62
NPSS live screening at KVK	1	56	1	57

Note- Advisory services includes social media, website, telephonic calls etc.

Details of other extension programmes:

Particulars	Number
Electronic Media (CD./DVD)	-
Extension Literature	11
Newspaper coverage	13
Popular articles	-
Radio Talks	12
TV Talks	1
Animal health camps (Number of animals treated)	1(58)
Social Media (No. of platforms Used)	7
Others (pl. specify)	-
Total	45

3.6 Online activities during year 2024

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	-	-	-	-
	Total				
B	Farmers scientist's interaction programme	Audio conf.	INM & Natural farming	5	302
	Total			5	302
C	Farmers seminars	-	-	-	-
D	Expert lectures				
1		Audio conferencing	Natural farming	2	123
	Total			2	123
E	Any other (Pl. specify)	-	-	-	-
	Grand Total (A+B+C+D+E)			7	425

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						
Oilseeds	Groundnut (Breeder)	GJG-32	-	10500 kg Expected	1795000	-
	Groundnut (Breeder)	GG-35	-	6000 kg Expected	1025000	-
	Groundnut (TF)	GJG-32		5500 kg Expected	380000	

Production of planting materials by the KVK : Nil

Production of Bio-Products : Nil

Production of livestock materials : Nil

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	Name & Number
Research papers/ Abstract	Optimization of Ultrasound-Assisted Microwave Encapsulation of Peanut Oil in Protein-Polysaccharide Complex.	Sachin S. Bhuva, Navnit K. Dhamsaniya and Gopal V. Marviya	<i>Food Technology and Biotechnology</i> , 62 (1):78-88. https://doi.org/10.17113/ftb.62.01.24.8206 , ISSN:1330-9862
	System-wide analysis of groundnut's salinity resilience: Integrating plant-cell interactions with environmental stress dynamics through cutting-edge transcriptomics.	Meera K. Joshi, Gopal V. Marviya, Feba Jacob, Umesh K. Kandoliya, Priyanka M. Pandya, Ashish G. Vala	<i>Journal of Biotechnology</i> , 394:1-14.
	Self-confidence and self-reliance impact of women through self-help group with special reference to Gujarat	H.H. Padsumbia, Dr. J.H. Chaudhry, Sonal V. Baria and D.S. Thakar	International journal of advanced biochemistry research, 2024; 8(12):934-938
	Impact of training programme on livelihood of rural women of Rajkot district	Manvar H.A., Kathiriyia J.B., Sanepara D. P. and Hirapara D. S	International Journal of Science, Environment and Technology, Vol. 13, No 5, 2024, 314 – 317
	Field screening of varieties/genotypes against mite infesting okra	R.B. Vadher, D.K. Ravaliya, Gadhiya VC, Thaker JN, P.S. Gorfad and M.K. Kanani	International Journal of Advanced Biochemistry Research 2024: 8(8): 1028-1031
	Farmer's perception of groundnut production technology	P.S. Gorfad, R.B. Vadher, N.B. Jadav, J.V. Chovatia and Dr. JN Thaker	International Journal of Advanced Biochemistry Research 2024: 8(8): 510-511
	Empowerment of Women by Self Help Groups	Manvar H. A. and Rajpura M. R.	SEEG National Seminar- Souvenir, 6-7 January 2024 at Sardarkrushinagar
	Awareness and Adoption of Agricultural Drudgery Reducing Tools by Farm Women in Saurashtra Region of Gujarat	Dr. D.S. Thakar, Dr. N. B Jadav, H. H. Padasumbiya	Souvenir-cum-Abstracts 2024, 3 rd International Conference on "Climate-Smart Nutri Sensitive Integrated Farming System for Gender-Equitable Sustainable Agriculture:
	Women's Role in Livestock Production and their Impact on Livestock Income	Smt. H.H. Padsumbiya, Dr. J. B. Kathiriyia and Dr. D. S. Thakar	

			Prospects and Challenges (ICNSFS-2024)" during November 06-08, 2024 at ICAR-Central Institute for Women in Agriculture, Bhubaneswar, Odisha, India
Book chapter	Molecular Docking: Advance Bioinformatics strategy for Structure Based Drug Designing, IIP Series, Volume 3, Book 4, Part 2, Chapter 2, Pp. 184-196	Poojaben M Prajapati, Komal G Lakhani, Bharat Maitreya, G. V. Marviya	Futuristic Trends in Biotechnology, eISBN:978-93-6252-751-6
	Iraq: A Proteomic Approach for Quantification of Protein and Data Analysis, IIP Series, Volume 3, Book 4, Part 2, Chapter 4, Pp. 223-243	Poojaben M Prajapati, Komal G Lakhani, Bharat Maitreya, G. V. Marviya	Futuristic Trends in Biotechnology, eISBN:978-93-6252-751-6
Technical reports	Monthly, quart, Six monthly and Annual	Junagadh Agri. University	19
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	Prakrutik krushima nitrogen, phosphorus ane potash ni agatyata _ 2023-24 (પ્રાકૃતિક કૃષિમાં નાઈટ્રોજન, ફોસ્ફરસ અને પોટાશની અગત્યતા _ ૨૦૨૩-૨૪)		1000 copies (3-1-71)
	Prakrutik krushini vyakhya ane siddhanto _ 2023-24 (પ્રાકૃતિક કૃષિની વ્યાખ્યા અને સિદ્ધાંતો _ ૨૦૨૩-૨૪)		1000 copies (3-1-70)
	Prakrutik krushi dwara sakbhajini aadhunik kheti paddhti _ 2023-24 (પ્રાકૃતિક કૃષિ દ્વારા શાકભાજીની આધુનિક ખેતી પદ્ધતિ _ ૨૦૨૩-૨૪)		1000 copies (3-1-74)
	Prakritik khetinu kalpvruksh: Limdo _ 2023-24 (પ્રાકૃતિક ખેતીનું કલ્પવૃક્ષ: લીમડો_ ૨૦૨૩-૨૪)		1000 copies (3-1-72)
	Kapasni khetima ek navo abhigam: sankda gale vavetar paddhti _ 2023-24 (કપાસની ખેતીમાં એક નવો અભિગમ: સંકડા ગાળે વાવેતર પદ્ધતિ_ ૨૦૨૩-૨૪)	Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Smt. H. H. Padsumbiya	1000 copies (3-1-79)
Kapasma aavti jivato ane tenu niyantran _ 2023-24 (કપાસમાં આવતી જીવતો અને તેનું નિયંત્રણ_ ૨૦૨૩-૨૪)	Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Dr. M. M. Tajpara	1000 copies (3-1-76)	
Kapas ni santhi mathi sendriy khatar _ 2023-24 (કપાસની સાંથીમાંથી સેન્દ્રીય ખાતર_ ૨૦૨૩-૨૪)	Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Dr. J. N. Thakar	1000 copies (3-1-75)	
Kapasma gulabi iyalnu sanklit niyantran _ 2023-24	Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya,	1000 copies (3-1-78)	

	(કપાસમાં ગુલાબી ઈયળનું સંકલિત નિયંત્રણ_ ૨૦૨૩-૨૪)	Shri S. R. Rathva	
	Kapasna rog ane tenu sanklit niyantran _ 2023-24 (કપાસના રોગ અને તેનું સંકલિત નિયંત્રણ _ ૨૦૨૩-૨૪)	Dr. J. H. Chaudhry, Miss. Payal Tank, Shree Arvind Berani, Dr. G. V. Marviya, Shri D. P. Sanepara	1000 copies (3-1-77)
Others			

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)	-	JAU Junagadh	41.4 K
2	Facebook page/ Account (no of Post)	-	Junagadh Agricultural University	7.6 K
3	Mobile Apps	-	JAU iKrushi Sanhita	
4	WhatsApp groups	-	12	1285
5	Twitter Account	12	@krishi_i94206	8
6	Any other (Pl. Specify)	-	-	-

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).

1. Introducing new horticulture crop (Dragon fruit) in regular cropping system to overcome agricultural challenges and to increase allover agricultural income”

Name: **Ranchhodbhai Gordhanbhai Karsariya**

Village: Ranjitgadh, Block: Jasdan, District: Rajkot, State: Gujarat

Mobile No.: +91 7874089404

Age: 56 Year

Education: 7th Standard

Land holding: Total: 1.28 ha (Irrigated: 1.28 ha, Non-irrigated: Nil)

Source of Irrigation: Well-2 No. and Bore-1 No.

Farming Experience: 35 Year

Crops grown:

Kharif: Groundnut (0.8 ha)

Rabi: Wheat (0.4 ha) and Coriander (0.4 ha)

Summer: Nil

Horticulture crop: Dragon Fruit (0.4 ha)

Other horticulture crops: Anola (5 trees) and Sweet Lime/Mousambi (2 trees) since last 2 years and Avocado (20 plants), Mango (70 plants), Lichee (15 plants), Banana (300 plants), Apple (2 plants), Gauva (5 plants), and Custard Apple (5 plants) planted during Jun-2023.

Livestock: 3 Cows (2 Gir and 1 Deshi breed)



Shri Ranchhodbhai Gordhanbhai Karsaria is a progressive farmer residing at Ranjitgadh village of Jasdan block of Rajkot district. He is holding very less agricultural land for farming and with these limited sources initially he practiced regularly in his field like other farmers. He actively participated in various programs organized by Krishi Vigyan Kendra, Targhadia (Rajkot) regularly and also visited Junagadh Agricultural University Junagadh. Financial crisis is always a major issue for purchasing various agricultural inputs like seeds, fertilizers, pesticides/insecticides etc. for them. To mitigate or overcome such problems he finally made him

decides to divert from his traditional agricultural practices and to planting a new horticulture crop which was new to those region i.e. "Dragon Fruit".

Before adopting the GAPs, he grows regular major oilseed crop like groundnut in kharif season while wheat and coriander in rabi season, in total 1.28 ha field. During the year he produced average 35.2 Qt/ha groundnut while wheat and coriander @ of 28.8 Qt/ha and 12.37 Qt/ha respectively. With these practices he earned net average of Rs. 2,26,000 per year from his total 1.28 ha land. After adoption of GAPs he planted Dragon fruit plants in 0.40 ha out of total 1.28 ha land and in 0.8 ha land he grow regular kharif and rabi crops as mention earlier and in remaining 0.08 ha he planted other valuable horticulture crops. With these practices he earned net average of Rs. 9,35,000 per year from his total 1.28 ha land in which net Rs. 850000/year from Dragon fruit crops while net Rs. 85000/year from other regular seasonal crops. So, with adopted GAPs he earned net Rs. 7,09,000 per year more from his total 1.28 ha land with compare to previous practices. Moreover, in future he can earn more income from other horticulture crops planted recently. In addition to it he gets cow milk regularly for his family and other byproducts like cow dung and cow urine for his field around the year.

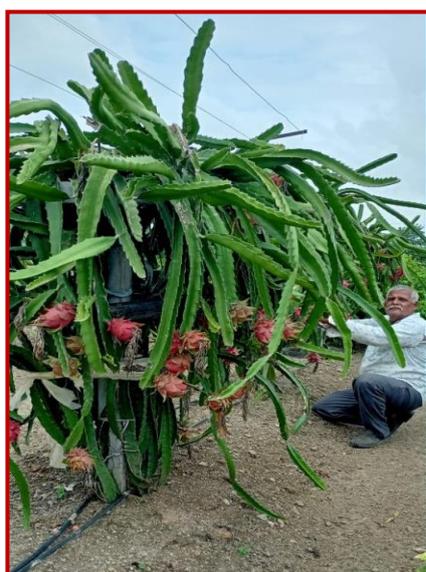
Table-1: Economical evaluation of two agricultural practices

Crop Pattern	Before GAP					After GAP					Income increases after adoption of GAPs (Rs./year)
	Area (ha)	Quantity (Kg.)	Gross Income (Rs.)	Cost of cultivation (Rs.)	Net Income (Rs.)	Area (ha)	Quantity (Kg.)	Gross Income (Rs.)	Cost of cultivation (Rs.)	Net Income (Rs.)	
Groundnut	1.28	3520	176000	80000	96000	0.80	2200	110000	80000	30000	7,09,000
Wheat	0.64	2800	140000	55000	85000	0.40	1750	87500	55000	32500	
Coriander	0.64	1200	60000	15000	45000	0.40	750	37500	15000	22500	
Dragon Fruit	-	-	-	-	-	0.40	10000	1000000	150000	850000	

Note: Table showing average values of last five years.

Considering environmental benefits of these GAPs due to minimum or no use of chemical fertilizers or insecticides/pesticides, the soil deteriorations can be minimized and soil fertility increase over time period and hence the quality as well as quantity is also increased. According to natural farming theme, various natural preparations like, Jivamrut, Cow dung, Cow urine, Buttermilk etc. use during farming practices along with authentic bio fertilizer and bio pesticides available in market.

After seeing the successful attempts of Dragon fruit farming by Shri Ranchhodbhai Karsariya, many other farmers of surrounding regions adopted this new practice in their field and currently 10 to 15 farmers are successfully doing of dragon fruit cultivation in about 12 to 15 acres of land.



“Dragon fruit farm” field

2. Natural Farming

Name of Farmer : Jadeja Shaktisinh Vanrajsinh

Village : Khokhari (Ghanshyamgadhd)

Taluka : Paddhari

District : Rajkot (Gujarat)

Education : M.A., B.Ed.



Introduction:

- Mentor in Natural farming & Input Preparation
- Developing Master Trainers at Village level for Natural farming
- Awarded Best ATMA Farmer Award at District Level
- Developed various inputs to control pest and diseases in Farming

Training and guidance of KVK:

- He initiated Organic Farming in 2015 and then converted into Natural Farming in 2017 under the guidance of KVK, Rajkot-1.
- He had started to take training at KVK, after that he created farmers group for Natural Farming and guided them with the support of KVK.
- Under the guidance of KVK, he has participated in trainings and workshops of Natural Farming at State and National Level.

Practices adopted:

- Practiced in-situ crop residue management with zero burning.
- He also using stubble mulch for weed management and moisture conservation.
- Use of digital media tools like WhatsApp, Facebook, Instagram and YouTube for dissemination of information.
- He created WhatsApp group for selling own products directly.
- He adopted the use of Bijamrut as seed treatment, Use of Jivamrut and Ghan Jivamrut as nutrient management, use of Dasparni Ark, Agniastra, Brahmastra, Nimastra as Insect-Pest and Disease management in Natural Farming.

Comparison between Natural Farming and Conventional Farming

Parameters	Natural Farming (Area in ha)		Conventional Farming (Area in ha)	
	Groundnut (1.62ha)	Wheat (0.81 ha)	Groundnut (1.62ha)	Wheat (0.81 ha)
Cost of cultivation (Rs)	68,000	32,500	58,000	27,500
Production (q)	34	38	28	35
Gross return (₹)	1,78,500	80750	1,19,000	61,250
Net return (₹)	1,10,500	48250	61,000	33,750
B:C ratio	2.63	2.48	2.05	2.22

Benefits and achievements:

- Input Cost Reduction
- Labour Cost Saving
- Time Saving in Farming
- Quality Seed Availability
- Utilized crop residues for mulching.
- Improved Soil Health.
- Created employment.
- Created higher income through value addition of produce.
- Consulted by many farmers for natural farming
- Increased net income with the use of natural fertilizers and insecticides.

Impact of the Technology:

- Benefitted more than 100 farmers in the Rajkot district and provided quality seeds to farmers.
- Formed FPO (Siddhagiri Natural Farmer Producer Company) with 500 members and disseminated information about various technologies through seminars with the help of KVK Scientists.
- Created awareness by participating in kisan melas, kisan club meetings organized by KVK and Department of Agriculture and Farmers Welfare, Gujarat.
- Provided guidance of natural farming to farmers of other states also.



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

- Use of cow urine, butter milk, bajra flour, etc. for insect pest and disease management.
- Use of small or wrinkle seeds of groundnut for sowing purpose.
- Farmers grow maize as a mixed crop in groundnut and inter crop in cotton is best Practices for sucking pest management by attracting the natural enemies.
- Cotton Stalk Shredder
- Tractor mounted sprayer
- Chaff cutter for minimizing the animal fodder waste
- IPM in cotton-Use of Trap crop, Pheromone trap, etc.
- Minimizing the chemical fertilizer and maximizing organic manure.
- Value addition in different agriculture crops like groundnut, guava, onala etc.

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	Groundnut	Farmers maintain a set furrow system and apply manure and fertilizers every year in the same furrow.	To get residual effect of manure and fertilizers in succeeding crop
	Groundnut	Some farmers near the river bed, apply sand in the set furrow for increasing infiltration rate of the soil	To reduce the water Logging condition in the field
	Groundnut	Farmers grow maize as mix crop in groundnut	To increase natural enemies & fodder purpose
2	Kharif crops	Farmer apply lifesaving supplementary irrigation to the crops during moisture stress condition	For life saving irrigation to minimize the risk of crop failure
3	Cotton	Farmers grow maize after 3-4 rows of cotton	To increase the natural enemies and fodder purpose
4	Cotton	After heavy rain, farmer apply irrigation to balance the salt concentration at top of soil	To balance the salt concentration
5	Livestock (Cow, Buffalo)	Use of salt in cotton seed cake	Increase milk production
		Use of calcium carbonate in water tank	For control of bacterial infection and calcium deficiency
		Use of petrol and diesel in wound	For control of maggot wound

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

- a) Survey
- b) Field survey
- c) Group discussion

B. Rural Youth

- a) Survey
- b) Field survey
- c) Group discussion

C. In-service personnel

- a) Survey
- b) Field survey
- c) Group discussion

5.2. Indicate the methodology for identifying OFTs/FLDs

- For OFT:**
- i) Field level observations
 - ii) Farmer group discussions

- For FLD:**
- i) New variety/technology
 - ii) Poor yield at farmer's level
 - iii) Existing cropping system

5.3. Field activities

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

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
Dy. Director of Agriculture.	Most of the Organizations are members of Scientific Advisory Committee (SAC) of KVK and have linkage with different activities of KVK viz., Training Programme, Khedut Sibir, Farmers Day, Animal treatment Camp, Farmers fair, Film Show, Ex-training meeting and Soil health card etc.
Dy. Director of Agril. Extension (FTC)	
Dy. Director of Horticulture	
Dy. Director of Animal Husbandry	
Dy. Director of Social Forestry	
Jilla Udhyong Kendra	
Milk Co-Operative Society (Gopal Dairy)	
Bank of Baroda	
National Bank for Agriculture & Rural Development (NABARD)	
NHRDF	
Doordarshan Kendra	
All India Radio	
WALMI	
District Rural Development Agency (DRDA)	
ATMA	
GLDC	
District Watershed Development Agency (DWDA)	
GGRC	
Reliance foundation	
GSFC, GNFC, IFFCCO, KRIBHCO	
Center for Environment Education, Jasdan	

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Agricultural Technology Information Center (ATIC)	2004	Govt. of Gujarat	16,10,000/-
Cluster Frontline Demonstrations on Rabi Pulses under NFSM	2015-16	ICAR-New Delhi	-
Cluster Frontline Demonstrations on Oilseeds under NFSM (NMOOP)	2015-16	ICAR-New Delhi	4,89,375/-
Attracting and Retaining Youth in Agriculture (ARYA)	2015-16	ICAR-New Delhi	2,52,750/-
Creation of Seed Hubs for Increasing Indigenous Production of Pulses in India	2016-17	ICAR-New Delhi	-
Swachhta Action Plan	2020-21	ICAR-New Delhi	11,585/-
Out scaling of Natural Farming through KVKs	2022-23	ICAR-New Delhi	31,116/-/-
Targeting Technology to agro ecological zones large scale demonstrations of best practices to enhance cotton productivity	2023-24	ICAR-New Delhi	14,39,670/-

C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

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

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	Meetings	Staff meeting	3	-	-

02	Research Projects				-
03	Training Programmes	Farmer training	5	3	-
04	Demonstrations	Technology demonstration	2	2	
05	Extension Programmes				
	KisanMela		-	-	-
	Technology Week		1	1	-
	Exposure visit		-	-	-
	Exhibition		1	1	
	Soil health camps		-	-	-
	Animal Health Campaigns		-	-	-
	Others		-	-	-
06	Publications				-
	Video Films		-	-	-
	Books		-	-	-
	Books chapter		-	-	
	Extension Literature		-	-	-
	Pamphlets		-	-	-
	Others (Pl. specify)		-	-	-
07	Other Activities (Pl. specify)				
	Watershed Approach		-	-	-
	Integrated Farm Development		-	-	

D. Give details of programmes implemented under National Horticultural Mission : Nil

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 : Nil

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 : Nil

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) : Nil

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

1	Oilseeds: CFLDs, Training, Agro Advisory and Literature distribute	District Agri. Department , Rajkot	-	-	-
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I. Details of linkage with SMAF (Sub-mission on Agroforestry) : Nil

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: Yes

8. Innovative Farmers Meet

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

9. Farmers Field School (FFS) : Nil

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

S. No.	Feed Back
1	De-topping of cotton gave higher yield as compare to control.
2	Application of <i>Trichoderma</i> found the most efficient for control of stem rot in groundnut.
3	Spraying of Hexaconazole found the most efficient for control of tikka disease at later stage in groundnut.
4	Sawaj pheromone trap for pink bollworm was very effective to control pink bollworm damage.
5	Cotton (MDP tube): Less infestation of pink bollworm and give higher yield.
6	Application of <i>Trichoderma</i> reduce wilt disease in cumin.
7	Balancing dairy ration with Bypass protein gave maximum milk production and Bypass fat increased fat per cent.
8	Chickpea variety GG-5 is high yielding as well as disease resistant compared to old varieties
9	Line sowing in cumin crop is very effective to reduce disease infestation

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

S.N.	Feed Back
1	Yield loss in cotton observed due to late season rainfall in monsoon.
2	Crop failure of chilli was found in large area due to late season rainfall in monsoon.
3	Research needed for control of white grub and stem rot in groundnut growing under natural farming.
4	Heavy infestation of sucking pest in chilli and cotton.
5	Sowing area of GJG-32 variety of groundnut increased as it is high yielding and resistant to tikka and rust disease.
6	Sowing area of groundnut increased and reduction in cotton area.
7	Less Infestation of white grub in groundnut as compared to previous year.
8	Fresh vegetable available at doorstep and at a time with minimum cost in kitchen gardening
9	Heavy infestation of white grub in natural farming
10	Collar rot disease in groundnut in natural farming
11	Research needed for control of insect-pests and diseases in natural farming
12	Pink bollworm and para wilt was found in cotton
13	Wilt disease was found in chickpea
14	Thrips and wilt were found in cumin crop

11. Technology Week celebration during 2024: Yes

Period of observing Technology Week: From to 23rd to 27th September 2024

Online / Offline: Offline

Total number of farmers visited: 393

Total number of agencies involved: 5

Number of demonstrations visited by the farmers within KVK campus: 8

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	-	-	
Lectures organized	13	393	Farm mechanization – A prime need and Importance of value addition in different crop produces, Scientific dairy development Technologies., Horticultural Crops- Importance and futures and Plant protection Technologies in major crops., Natural and Organic Farming
Exhibition	1	185	Agri equipment and demo unit
Film show	2	175	Crop and livestock technology
Fair	-	-	-
Farm Visit	2	175	Field and Demo unit visit
Diagnostic Practical's	3	25	Groundnut and chilly
Supply of Literature (No.)	-	300	Pamphlet of Agriculture and Natural Farming
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	-	393	

12. Interventions on drought mitigation (if the KVK included in this special programme) : Nil

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		
Total		

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No. of participants
Total			

D. Animal health camps organized

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

E. Seed distribution in drought hit states (Seed distribution/sold by KVK)

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

F. Large scale adoption of resource conservation technologies

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

G. Awareness campaign

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

13. IMPACT

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)
Improved variety of Cumin (GC-4)	265	85	35000	52000
Improved variety of Gram (GJG-6)	198	75	32500	43000
New variety of Groundnut (GJG-32)	355	60	45000	63000
Wheat variety (GW-496, 366)	210	80	32500	38000
Use of <i>Trichoderma</i> for the control of stem rot in groundnut	425	75	30200	35000
Use of mineral mixture in buffalo	235	65	39000	44000

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

B. Cases of large-scale adoption

- Adoption of *Trichoderma* for the management of stem rot disease in groundnut.
- Adoption of *Bt.* cotton varieties with INM and IPM concepts.
- Farmers prefer to sow high yielding variety of groundnut i.e. semi spreading variety GG-20 & GJG-22 and bunch variety GJG-32.
- Most of the farmers adopt variety of cumin (GC-4) which is resistant to wilt disease
- Intercropping/mix cropping in groundnut and cotton was adopted for minimize the risk factor in dry land agriculture with preservation of natural enemies.
- Farmers prefer to sow bold seeded variety of chickpea GJG-3
- Farmers are ready to use of rotavator/ cotton shredder/ mobile chopper for increasing the organic matter in soil particularly in *Bt.* Cotton cropping system

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

14. Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
Jan 2024	0	0	0
Feb 2024	0	0	0
March 2024	0	0	0
April 2024	0	0	0
May 2024	0	0	0
Jun 2024	0	0	0
Jul 2024	0	0	0
Aug 2024	0	0	0
Sept 2024	0	0	0

Oct 2024	0	0	0
Nov. 2024	0	0	0
Dec. 2024	0	0	0

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only							
	farmers Benefited							
	Voice only							
	farmers Benefited							
	Voice & Text both							
	farmers Benefited							
	Total Messages							
	Grant total of farmers Benefited							

15. PERFORMANCE OF INFRASTRUCTURE IN KVK

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

Sl. No.	Demo Unit	Year of establishment	Area (ha)	Details of production			Amount (Rs.)		Remarks
				Variety	Produce	Qty.	Cost of inputs	Gross income	
1	Vermi composting unit	2018	0.05						
2	Nadep composting	2019	7 x 5 m						
3	Crop cafeteria	2012	0.10	Latest variety of different crops					
4	Kitchen garden	2018	0.05	Different vegetable crops					
5	Organic farming unit	2016	1.00						
6	Natural farming	2022	1.00						
7	Millet's cafeteria	2023	1.00						

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									
Gram									
Oilseeds									
Groundnut	02-7-24	14-11-24	5.42	GJG-32	Breeder	105	-	-	
Groundnut	04-7-24	24-10-24	3.73	GG-35	Breeder	60	-	-	
Groundnut	05-7-24	23-11-24	4.65	GJG-32	TF	55	-	-	
Fibers									
Spices & Plantation crops									
Floriculture									
Fruits									
Vegetables									
Others (specify)									

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

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

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

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 2024	-	-	-
February 2024	-	-	-
March 2024	-	-	-
April 2024	-	-	-
May 2024	-	-	-
June 2024	-	-	-
July 2024	-	-	-
August 2024	-	-	-
September 2024	-	-	-
October 2024	-	-	-
November 2024	-	-	-
December 2024	-	-	-

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.)		
-	-	-	3	3	-	215	2	-	2.00

H. Performance of Nutritional Garden at KVK farm

If Nutritional Garden developed at KVK farm/Village Level? Yes

If yes,

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
0.1	Vegetable crops	10	332
	Fruit crops	3	
	Others if any	3	

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
10	Vegetable crops	15	10
	Fruit crops	3	
	Others if any	-	

H. Details of Skill Development Trainings organized : Nil

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	SBI	Junagadh					
With KVK	SBI	Rajkot	463	TRAINING ORG.KVK.JAU. TARGHADIA	10353003175	360002002	SBIN0000463

B. Utilization of KVK funds during the year 2024-25 (Rs. in lakh) (Till Feb. 2025)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	Pay & Allowances		165.16	160.58
2	Traveling allowances			
3	Contingencies		10.90	10.24
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			
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			
G	Training of extension functionaries			
H	Maintenance of buildings			
I	Establishment of Soil, Plant & Water Testing Laboratory			
J	Library			
	TOTAL (A)		10.90	10.24
B. Non-Recurring Contingencies				
1	Works			
2	Equipments including SWTL & Furniture			
3	Vehicle (Four wheeler/Two wheeler, please specify)			
4	Library (Purchase of assets like books & journals)			
	TOTAL (B)			
C. REVOLVING FUND				
	GRAND TOTAL (A+B+C)		176.06	170.82

C. Status of revolving fund (Rs.) for the Five years

Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2020 to March 2021	26,54,648	23,54,367	17,89,147	32,19,868
April 2021 to March, 2022	32,19,868	19,58,910	22,27,738	29,51,040
April 2022 to March 2023	29,51,040	23,75,522	14,39,322	38,87,240
April 2023 to March 2024	38,87,240	11,45,605	23,95,052	26,37,793
April 2024 to Feb. 2025	26,37,793	6,30,329	13,93,569	18,74,553

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

Name of the staff	Designation	Title of the training programme	Institute were attended	Mode (Online/Offline)	Dates
Dr. G. V. Marviya	Senior Sci. & Head	ARYA Annual Workshop-2024	Gaya, Bihar, India	Offline	22/23-02-2024
Dr. J.N.Thaker Dr. M. M. Tajpara Dr. J. H. Chaudhary	Scientist	Training on "Research Methodology in Social Science and Management Skills"	DEE, JAU, Junagadh	Offline	19/21-03-2024
Dr. J. H. Chaudhary	Scientist	Regional Consultation on Natural Farming	Pune, Maharashtra, India	Offline	16-05-2024
Dr. G. V. Marviya	Senior Scientist and Head	Annual Action Plan Workshop on KVKs of Gujarat & Goa	AAU, Anand	Offline	16-17/05/2024
Smt. Hetal H. Padsumbiya Shri D. P. Sanepara Dr. M. M. Tajpara	Scientist	Training on "HRD Skill Enhancement and Up-gradation for Peak Performance"	DEE, JAU, Junagadh	Offline	15-18/07/2024
Dr. G. V. Marviya Dr. J. H. Chaudhary	Senior Sci. & Head Scientist	Training on "Digital Transformation in Agriculture: Strategies for Technology Transfer Excellence"	DEE, JAU, Junagadh	Offline	18-20/07/2024
Dr. J. H. Chaudhary	Scientist	Prakrutik Krushi Karyshala at Gandhinagar	Gandhinagar, Gujarat, India	Offline	07/08/2024
Dr. G. V. Marviya Dr. J. H. Chaudhary Shri D. P. Sanepara	Senior Scientist and Head Scientist	Annual Zonal Workshop-2024 of KVKs of Zone VIII	JAU, Junagadh	Offline	04/06-09-2024
Smt. Hetal H. Padsumbiya	Scientist	National seminar on Innovations and Solutions for Global Sustainability: Breaking the Barriers in Home Science and Empowering the Change - Vision 2030	Hariyana	Online	13-11-2024

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

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

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	
PHT and Value addition	2	44	-	-	-	-	-	-
Nursery management	1	23	-	-	-	-	-	-

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	Sapath taking and lunching of Swachh monitoring system by KVK staff, Cleaning and Sweeping of entire office premises / cleaning of KVK campus, Swachhta Awareness at local level, Cleaning and beautification of surrounding areas, Vermicomposting/Composting of biodegradable waste management& other activities on generate of wealth for waste.	5	189

Sr. No	Name of KVK	Date	Activity	No of VIPs	No of Farmers	Others	Total
1	Rajkot-I	23-09-2024	Sapath taking by KVK staff, Cleaning and Sweeping of entire office premises / cleaning of KVK campus, Swachhta Awareness at local level, Cleaning and beautification of surrounding areas, vermicomposting /Composting of biodegradable waste management& other activities on generate of wealth for waste.	-	35		
2		25-09-2024		-	26		
3		27-09-2024		-	47		
4		Oct.2024		-	57		
5		Nov.2024		-	24		

21. Books published 2023-24: Nil

Title of the Book	Authors	ISBN No (Optional) / Pages No	Description/review of the book (one paragraph/sentence)

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

APR SUMMARY

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	68	1173	419	1592
Rural youths	3	32	81	113
Extension functionaries	5	159	79	238
Sponsored Training	9	223	107	330
Vocational Training	0	0	0	0
Total	85	1587	686	2273

2. Frontline demonstrations

Crops/Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	20	8	-
Pulses	10	4	-
Cereals	-	-	-
Vegetables	10	4	-
Other crops	35	14	-
Hybrid crops	-	-	-
Total	75	30	-
Livestock & Fisheries	65	-	60
Other enterprises	21	14	-
Total	86	14	60
Grand Total	161	44	60

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	1	3	3
Livestock			
Various enterprises			
Total	1	3	3
Technology Refined			
Crops	4	10	10
Livestock	2	4	4
Various enterprises			
Total	6	14	14
Grand Total	7	17	17

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	1074	12658
Other extension activities	45	102
Total	1119	12760

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awar e-ness	Other enterprise	
Rajkot-I	Text only	-	-	-	-	-	-	-
	Voice only	-	-	-	-	-	-	-
	Voice & Text both	-	-	-	-	-	-	-
	Total Messages	-	-	-	-	-	-	-
	Total farmers Benefitted	-	-	-	-	-	-	-

6. Seed & Planting Material Production

	Quintal/Number	Value (Rs.)
Seed (q)	220.0	-
Planting material (No.)	-	-
Bio-Products (kg)	-	-
Livestock Production (No.)	-	-
Fishery production (No.)	-	-

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value (Rs.)
Soil	93	-
Water	93	-
Plant	-	-
Total	186	-

8. HRD and Publications

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