ICAR-ATARI, Pune

DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2023

(January 2023 to December 2023)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra, AMBHETI Ta. Kaparada Di. Valsad Via. Vapi **Gujarat Pin. 396 191**	--	--	kvkvalsad@gmail.com	www.kvkvalsad.org

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

Address	Telephone		E mail	Website address
	Office	FAX		
Gujarat Vidyapith Ashram road AHMEDABAD Pin. 380 014	(1) 079 2754 5044 (2) 079 2754 1148	079 2754 25 47	registrar@gujaratvidyapith.org	www.gujaratvidyapith.org

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. R. F. Thakor	--	**94271 29451**	**rthakor1965@yahoo.co.in**

1.4. Date and Year of sanction: Sanction letter F. No. 5 (108) / 90 - KVK 28th March 1991
Year of Establishment : 21th Sept., 1992

1.5. Staff Position (as on December, 2023)

					If Permanent, Please indicate			If Temporary, pl. indicate the consolidated amount paid (Rs./month)
Sl. No.	Sanctioned post	Name of the incumbent	Mobile No.	Discipline	Basic Pay	Current Basic	Date of joining	
1	Senior Scientist and Head	Dr. R.F.Thakor	9427129451	Ext . Edu.	144200	218200	19/05/01	

2	Subject Matter Specialist	Sh. K.A.Patel	9426889148	Pl. Prot.	78800	130400	28/02/94	
3	Subject Matter Specialist	Sh. A.R.Patel	9428381449	Ext . Edu.	78800	130400	23/01/96	
4	Subject Matter Specialist	Sh. L.T.Kapur	8980619497	Soil Science	78800	99800	16/12/06	
5	Subject Matter Specialist	Sh. M.M.Gajjar	9909761181	Agronomy	67700	76200	17/09/13	
6	Subject Matter Specialist	--		Horti.	--	--	--	
7	Subject Matter Specialist	Smt. P.R.Ahir	9429450875	Home Sci.	56100	80000	01/05/01	
8	Programme Assistant	Sh. B.M.Patel	9427141759	Ani .Sci.	56100	75400	02/12/02	
9	Computer Programmer	Sh. P.J.Joshi	9426816616	Agri. Engg.	56100	80000	23/12/02	
10	Farm Manager	Sh. P.R.Patel	9687636758	Farm manager	56100	77700	01/05/01	
11	Accountant/Superintendent	Sh. C.D.Patel	9727928272	Accountant	35400	47600	27/09/13	
12	Stenographer	Sh.V.B.Patel	9429118438	Stenographer	35400	53600	01/11/99	
13	Driver 1	Sh. R.D.Rohit	9726925033	Driver	29200	39200	16/06/08	
14	Driver 2	Sh. H.G.Valand	7990870661	Driver	29200	37000	01/08/09	
15	Supporting staff 1	Sh. A.R.Patel	9537558272	Attendant	21700	35000	01/11/99	
16	Supporting staff 2	--		Farm Attendant	--	--	--	

1.6. Total land with KVK (in ha): 20 ha.

S. No.	Item	Area (ha)
1	Under Buildings	2.0 ha.
2.	Under Demonstration Units	1.0 ha
3.	Under Crops	8.0 ha
4.	Horticulture	6.0 ha
5.	Pond	--
6.	Others if any (Specify)	3.0 ha.

1.7. Infrastructural Development:

A) Buildings

Sr. No.	Name of building	Source of Funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR /GVP	1998	720 Sq.mt	2874422	--	--	--
2.	Farmers Hostel	ICAR		138 Sq.mt		--	--	--
3.	Staff Quarter	ICAR	1999	154 Sq.mt	1585055	--	--	--
4.	Demonstration Units -- Dairy Demo. Unit	ICAR , TSP ,Valsad	2006	100 Sq.mt	204312	--	--	--
5	Fencing	--		--		--	--	--
6	Bore well	ICAR	2012	300 ft	497095	--	--	--
7	Threshing floor	ICAR	2006	100 Sq.mt	123818	--	--	--
8	Farm godown	ICAR	2010	100 Sq.mt	373168	--	--	--
9	Implement shed	ICAR	2011	140 Sq.mt	300000	--	--	--
10	Soil-water testing lab.	ICAR	2007	--	612387	--	--	--
11	Plant Health Clinic	ICAR	2012	--	999953	--	--	--

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Running	Present status
Tractor	2019	6,50,000	1551 hrs.	Working condition.
Tractor Trolley	2019	1,50,000	--	Working condition.
Jeep (Bolero)	2022-23	8,31,291	10152	Working condition
Power tiller	2010	1,55,500	--	Working condition.
Motor Cycle	2011	49995	22655	Working condition.

C) Equipment & AV aids

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Computer -2	2007 & 2010	1,02,270 +50,000	Working condition.
L C D	2007	75,400	Working condition.
Lap Top -2	2007 & 2012	51,750	Not working. Needs replacement/ Later in Working condition.
P A S system	2009	28057	Working condition.

Handicam	2009	12990	Working condition.
Generator set	2009	37972	Working condition.
LED –Sony TV	2015	52000	Working condition.

1.8. Details of SAC meeting conducted in the year:

Proceedings of the 33rd Scientific Advisory Committee meeting of Krishi Vigyan Kendra, Ambheti-Valsad- Gujarat

The 33rd Scientific Advisory Committee meeting of Krishi Vigyan Kendra, Ambheti-Valsad- Gujarat was held on 24th March, 2023 at 11.00 AM at Krishi Vigyan Kendra, Ambheti. The list of the members who attended the meeting is attached herewith separately.

Dr. Bharat Joshi, hon'ble vice chancellor, Gujarat Vidyapith welcomed the members of the committee. Agenda wise items were than taken for discussion.

Item No. 1 Approval of the minutes of the previous SAC meeting

The minutes of the previous 32th SAC meeting held on 09/09/2022 was circulated earlier to all the members. As no comments received from any of the members, the minutes was approved unanimously.

Action taken report based on the suggestions given by the members of previous meeting was presented before the house.

The report on various activities carried out by the Kendra during the period Jan.2022 to Dec, 2022 was presented by Dr R. F. Thakor, Sr. Scientist and Head as well as the SMSs of the Kendra. During the discussion some of the members suggested following …

1. Establishment of nano urea production unit at KVK under the guidance of Head, microbiology department, Gujarat Vidyapith.
2. Link of digital library of KVK should be shared with GVP website.
3. While presentation all the Photographs must be with geo tag.
4. Farmers cultivating Safed Musli should be advised and guide to get benefit of subsidy schemes of state department of horticulture .

Item No. 2 Review of the progress report

Following suggestions were given by the members during presentation of the progress report.

1. Farmers connected with business of mass production of seedling through plug nursery should be inspired for online application to get benefit of subsidy schemes of state department of horticulture.
2. Entrepreneurs of value addition should be guided for online application to get benefit of subsidy schemes of state department of horticulture.
3. No. of demonstration on Depog method of paddy nursery should increase.

4. More number of trainings should be organized on Integrated farming system.

Item No. 3 Presentation of the action plan

1. In dairy Unit H F Cows should replaced with Deshi cows for Natural farming.
2. Training on soil water conservation practices should organize.
3. Crop damage data may be collected and presented while presenting results of demonstrations related to plant protection.
4. In nutritional garden demonstrations only natural farming inputs should be used.
5. On farm testing of nano urea applications in paddy should be conducted.
6. Front line demonstrations on bio fortified varieties of paddy and finger millet may be organized on large scale.

Item No. 4 From the chair

1. Natural farming demonstrations units must develop at KVK farm.
2. Proposal for Natural farming demonstrations unit development at KVK farm should submit to GVP.
3. Develop close coordination between home science activities of KVK and rural management department of GVP.

The meeting was ended with the thanks to the chair.

List of the Members who attended the 31st SAC Meeting of KVK- Dist.-Valsad

Sr. No.	Name of Member	Designation
1	Dr. Bharat Joshi	VC, G.V. Ahmedabad- Chairman
2	Dr. Nikhilbhaibhatt	Registrar, G.V. Ahmedabad
3	Dr. S. N Gajjar	Representative of DEE, NAU, Navsari
4	Dr. N.B.Patel	Asso. Res.Sci. Livestok Res. Station NAU, Navsari
5	Dr. L.K Arvadiya	Asso. Res.Sci. Agronomy NAU, Navsari
	Dr. Jigar Gohil	Asso. Res.Sci. Paria, NAU.
6	Dr. A.N.Vohra	Asst. Director (Horti.) Valsad
7	Dr. A.B. Patel	Representative (AH), Valsad
8	Shri. K.M.Korat	Asst. Director (Agril.) Valsad
9	Shri Divyesh Patel	Deputy project director, ATMA, Valsad
10	Shri. Veljibhai M Patel	Farmers Representative (Prog. farmer)
11	Shri Hareshbhai B Patel	Farmers Rep. (Entrepreneur farmer)
12	Mrs.Punamben Y Patel	Farm women Rep.(Entre. farm women)
13	Shri Ramesh S. Bhoya	J.N.Trust, Kaparada

14	Shri Mohanbhai	Representative, Gramshilpi, GVP
15	Shri Pradipbhai Sonar	Coordinator, Gram Seva Kendra- Ambheti
16	Dr. R.F.Thakor	Senior Scientist& Head, KVK- Member Secretary

Beside this, All SMS and technical personnel of KVK attended the meeting.

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

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

S. No	Farming system/enterprise
1	Agriculture farming systems
2	Agri - Horti farming systems
3	Agri – Horti -Dairy farming systems
4	Agri - Silviculture farming systems

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	South Gujarat Heavy Rainfall Zone -I	Annual Average rainfall 2000-2200 mm
2		Black to medium black soil.
3		Sticky and Heavy soil.
4		Stip slopes cause heavy runoff of rain water resulting into soil erosion.

a) Topography

S. No.	Agro ecological situation	Characteristics
1	Agro-ecological situation – I & II	Costal belt - Western part
2		Medium black to black soil
3		Hilly ,Shallow ,Undulating land – Eastern part

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Shallow soil	- Poor fertility & water holding capacity.	--
2	Medium black to black soil	- Sticky and Heavy in nature.	--
3	Hilly ,Shallow ,Undulating land	- Non fertile and mostly non agril land	--
4			2,94,412 ha.

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

S. No	Crop	Area (ha)	Production (000 T)	Productivity (Kg/ha)
	Major Field crops			
1	Paddy Kharif	75689	293907	3883
2	Paddy summer	840	3965	4720
3	Total Paddy	76529	297871	3892
4	Ragi (Finger millet)	1929	1307	677
5	Vari	25	16.25	650
6	Pigeon Pea	6042	5740	950
7	Urid	3560	1947	547
8	Mung	82	41	500
9	Gram	3168	2527	798
10	Other pulses - kharif	865	519	600
11	Other pulses -rabi	5145	3361	653
12	Total other pulses	6010	3880	1253
13	Groundnut	7	5.6	800
14	Niger	385	270	700
15	Sugarcane	5929	429358	72417
16	Vegetables (Rabi)	5563	113161	20342
17	Fodder(Rabi)	4604	92310	20050
	Major Horticultural crops			
	(a) Fruit crops			
1	Mango	26.250	157.50	6000
2	Chiku	3.345	32.513	9720
3	Banana	0.770	43.274	56200
4	Papaya	0.145	6.254	43130
5	Cashewnut	5.590	18.11	3240
6	Coconut	2.930	29.30	10000
	Total	**39030**	**286.94**	
	(b) Vegetable crops			
1	Brinjal	1.625	26.00	16000
2	Okra	1.620	16.20	10000
3	Tomato	1.405	29.50	21000
4	Cucurbits	2.831	62.28	22000
5	Chilly	0.1	1.14	11400
	Total	**7.575**	**135.12**	

Source: District agriculture department

2.5. Weather data (2023)

Month	Normal RF(mm)	Normal Rainy days (number)	Temperature (^{0} C)		Relative Humidity (%)	
			Maximum	Minimum	Maximum	Minimum
January	0	0	31.21	10.31	100	33.39
February	0	0	36.25	11.14	98.75	17.36
March	0	0	35.43	17.12	96.65	27.03
April	11.50	1	36.78	20.12	97.43	30.67
May	1.5	0	37.29	23.89	99.16	38.71
June	476	08	35.09	25.96	97.47	56.83
July	1313	30	30.02	25.38	100	89.65
August	137.50	16	31.14	25.22	100	81.32
September	280.50	14	32.19	24.46	100	81.73
October	0	00	35.85	21.36	100	49.06
November	19.50	02	34.94	18.05	100	39.60
December	0	00	33.29	16.00	100	39.48
Total	**2239.5**	**71**	**-**	**-**	**-**	**-**

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

Category	Population (No)	Production	Productivity
Cattle			
Crossbred	38869	26.31	6.137
Indigenous	208732	43.62	1.884
Buffalo	96487	35.45	3.014
Sheep	3433	--	--
Goats	105094	--	--
Poultry	773599	--	--

Source: District Panchayat,Valsad

2.7. Details of Operational area / Villages

Taluka / Block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Kaparada	Dhodhadkuva, Kakadkopar, Sukhala, Veribhavada, Amdha, Chavshala, Ambheti, Varoli, Chepa, Moti Palsan, Shahuda, Chandvegan, Dixal, Ghotan, Khuntali, Panas, Vajvad, Jogvel, Arnai, Kaprada, Karjun, Manala, Motapondha, Ozar	Paddy ,Fingermillet, Pulses, Mango, Cashewnut Vegetables , Micro irrigation & Dairy.	Low productivity in all crops. Non availability of improved seeds. Shortage of labour. Heavy infestation of weeds. Water scarcity. Poor milk production	ICM ,INM, IPM, IWM Feed & fodder mgt. Integrated livestock mgt.
Dharampur	Nanivahiyal, Mamabhacha, Singartati, Kakadkuva, Sadadvera, Samarsingi, Lakadmal, Bhensdara	Paddy , Mango, Pulses, Cashewnut Vegetables & Dairy .	Low productivity in all crops. Non availability of improved seeds.Heavy infestation of weeds. Water scarcityPoor milk production	ICM ,INM, IPM, IWM Feed & fodder mgt. Integrated livestock mgt.
Pardi-Vapi	Samarpada, Pati, Chival, Asma, Nimakhal, Arnala, Panchlai, Goima, Motikachaval, Rabadi, Rabadi, Nevari, Sondhalwada, Tarmaliya, Barai, Ambach, Lakhmapor, Sarodhi, Sonwada	Paddy ,Sugarcane, Pulses, Vegetables , Mango & Dairy.	Low productivity in all crops. Non availability of improved seeds.. Heavy infestation of weeds. Poor milk production	ICM ,INM, IPM, IWM Feed & fodder mgt. Integrated livestock mgt.
Umargam	Saronda, Borigam, Valvada, Biliya	Paddy ,Mango, Sugarcane & Vegetable.	Low productivity in all crops Shortage of labour. Water scarcity, Soil salinity.	ICM ,INM, IPM, IWM
Valsad	Ozar, Kachigam, Jujva, Parnera Pardi, Kochvada, Dulsad, Dhamdachi	Paddy ,Mango, Sugarcane, Pulses & Vegetable.	Low productivity in all crops. Heavy infestation of weeds. Shortage of labour.Soil salinity, Poor milk production	ICM ,INM, IPM, IWM Feed & fodder mgt. Integrated livestock mgt.

2.8. Priority thrust areas:

Crop/Enterprise	Thrust area
Paddy	Varietal evaluation ,ICM, IWM, INM, IPM
Fingermillet	Varietal evaluation ,ICM, IWM, INM, IPM
Greengram, Chickpea, Indianbean, Pigeonpea	Varietal evaluation ,ICM, IWM, INM, IPM
Cucurbits	Varietal evaluation, Integrated Pest & Disease Management, INM.
Sugarcane	Varietal evaluation ,ICM, IWM, INM, IPM
Brinjal, Chilli	Varietal evaluation ,ICM, IWM, INM, IPM

Fodder crops	Varietal evaluation ICM, IWM, INM, IPM
Livestock	Feed & fodder mgt., Integrated livestock mgt.
Women Empowerment	Income generation activities
Household Nutrition Security	Nutrigarden
Farm machinery	Care and maintenance of farm implements

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
07	07	90	90	69.5 ha	93.1 ha.	475	547

Training					Extension Programmes				
3					4				
	Number of Courses		Number of Participants			Number of Programmes		Number of participants	
Targets		Achievement	Targets	Achievement	Activity	Targets	Achievement	Targets	Achievement
Farmers/ farm women	76	67	2120	2089	Field day	05	4	250	197
Rural Youth	04	02	95	50	Kisan mela	01	1	400	545
Extension Functionaries	07	06	175	203	Kisan gosthi	06	6	360	252
Sponsored Trainings	08	19	305	493	Exhibition	02	8	1000	4874
					Film show	05	14	100	1965
Total	95	94	2695	2835	Farmers Seminar	05	6	600	2632
					Group meetings	20	10	300	2094
					Celebration of important days	04	08	250	1851
					Lectures in Other programme	15	264	1800	86177

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
Paddy- 60 q	67.52	Vegetable seedlings- 140000	158500
Sugarcane- 200 q	139	Fodder- 5000	25000

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
0	0	Fruitfly trap (Mango) - 1000 no	1168
		Vermicompost -20000kg	19700
		Vermiculture- 100 kg	199
		Ghan Jivamrut - 0	10420
		Agniyastra - 0	563

3.1. B. Operational areas details during 2023

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	Paddy	Non availability of improved variety, INM, Infestation of pest-diseases	--	Sadadvera, Samarsingi, Nimkhal, Chival, Arnala, Goima, Kachval, Dhadhadkuva, Motipalsan, Karjun, Nanivahiyal, Kakadkuva	FLD, OFT, Training, Field day
2	Finger millet	Non availability of improved variety. INM, Infestation of pest-diseases	--	Chandvegan, Veribhavada, Chepa, Motipalsan, Kaprada	FLD, Training, Field day
3	Gram	Non availability of improved variety,Heavy infestation of weeds	--	Samarsingi, Sadadvera, Dhodhadkuva	FLD, Training
4	Greengram, Blackgram	Non availability of improved variety	--	Sukhala, Chival	OFT, Training
5	Pigeon pea	Non availability of improved variety,Heavy infestation of weeds	--	Panchlai, Arnala, Khuntali	FLD, OFT, Training
6	Indianbean	Non availability of improved variety, Heavy infestation of weeds	--	Dhamanvegan, Vadset, Ozar, Ambheti, Asma	FLD, Training
7	Mango	Heavy infestation of hoppers & fruit fly	--	Nanivahiyal, Sarodhi	OFT, Training, Shibir
8	Bittergourd	Non availability of good variety, Infestation of pest-diseases	--	Chandvegan	FLD, Training
9	Livestock production	Low milk yield Mastitis disease Shortage of green fodder	--	Sukhala, Khuntli, Amdha ,Chival, Panas, Pati	OFT, Training,

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

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Varietal Evaluation	01	--	02	--	--	--	--	--	--	03
Integrated Nutrient Management	02	--	--	--	--	--	--	--	--	02
Integrated Pest Management	--	--	--	--	--	01	--	--	--	01
TOTAL	**03**	--	**02**	--	--	**01**	--	--	--	**06**

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Nutrition Management	1	0	0	0	0	1
TOTAL	**1**	**0**	**0**	**0**	**0**	**1**

B. Achievements on technologies Assessed

B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	Number of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management	Paddy	Assessment of Nanourea on yield of Kharif paddy	20	20	4.00
	Paddy	Assessment of Silicon application in Kharif paddy	20	20	4.00
Varietal Evaluation	Paddy	Assessment of paddy variety for Kharif cultivation	10	10	3.00
	Green gram	Assessment of Green gram variety for summer cultivation	10	10	3.00
	Blackgram	Assessment of black gram variety for summer cultivation	10	10	3.00
Integrated Pest Management	Mango	Assessment of biopesticides for mgt. of hoppers in mango	10	10	3.00
Total	6		**80**	**80**	**20.00**

B. 2. Technologies assessed under Livestock & fishery assessment

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Nutrition Management	Cattle	Assessment of cost effectiveness calf starter feed feeding in	10	10

		crossbred calves.		
Total			10	10

B.3 Technologies assessed under other enterprises - Nil

B 4.Technologies assessed under Women empowerment assessment - Nil

C. 1. Results of Technologies Assessed
Results of On Farm Trial

Results of On Farm Trial – 01

Technology Assessment - Assessment of paddy variety for Kharif cultivation .

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessed	Data on the parameter			Results of assessed	Feedback from the farmer
1	**2**	**3**	**4**	**5**	**6**	**7**	T_1	T_2	T_3	**9**	**10**
Paddy	Rainfed	Low yield of Kharif Paddy	Assessment of paddy variety for Kharif cultivation.	10	T_1 -Use of Hybrid variety (US-312) with local practices T_2 - Use of GAR-13 Variety with improved practices T_3 - Use of GRH-2 Variety with improved practices	1. Productive tillers/hill	*9.70*	9.58	10.7	The results of the trial indicated that Hybrid variety of paddy GRH-2 earned the maximum net returns (Rs 52457/- yielding 4648 kg/ha with B:C ratio 2.30) as compare to T_1 (Rs 44327/- yielding 4381 kg/ha with B:C ratio 2.05).	Paddy variety GAR-13 with potash culture reduces fertilizer cost, mature early (7-10 days than check) ,lodging resistant with good cooking quality and GRH-2 earned the maximum yield.
						2. Days of 50% flowering	*93.90*	90.40	91.70		
						3. Grain Yield (kg/ha)	*4381*	4248	4648		
						4. B:C ratio	*2.05*	2.26	2.30		

Cont…

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha,)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15	16
T_1 -Use of Hybrid variety (US-312) with local practices	Private company	Grain Yield– 4381	kg/ha	44327	2.05
T_2 - Use of GAR-13 Variety with improved practices	NAU, Navsari	Grain Yield – 4248	kg/ha	46916	2.26
T_3 - Use of GRH-2 Variety with improved practices	NAU, Navsari	Grain Yield– 4648	kg/ha	52457	2.30

C2. Details of On Farm Trial for assessment –

1	Title of Technology Assessed	:	Assessment of paddy variety for Kharif cultivation .
2	Problem Definition	:	Low yield of Kharif paddy
3	Details of technologies selected for assessment	:	**T1 -** Use of Hybrid variety (US-312) with local practices **T2 -** Use of GAR-13 Variety with improved practices **T3-** Use of GRH-2 Variety with improved practices
4	Source of technology	:	NAU, Navsari.
5	Production system	:	Rain fed cereal based system (paddy-pulse cropping system)
6	Thematic area	:	Varietal evolution
7	Performance of the Technology with performance indicators	:	
8	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Paddy variety GAR-13with potash culture reduces fertilizer cost, mature early (7-10 days than check) ,lodging resistant with good cooking quality and GRH-2 earned the maximum yield.
9	Final recommendation for micro level situation	:	-
10	Constraints identified and feedback for research	:	- Availability of seed - Continuous heavy rain and dry spell effect the crop
11	Process of farmers participation and their reaction	:	Farmers were involved and actively participated at every level i.e. PRA and Group discussion ,planning, execution, monitoring, evaluation of the trial. Farmers evaluated that paddy variety US-312, GAR-13 and GRH-2 less problem of pest and disease, bold size, good cooking quality and more yield.

Treatment	Productive tillers/hill	Days of 50% flowering	Grain Yield (kg/ha)	Straw Yield (kg/ha)	Income Grain (Rs./ha)	Income Straw (Rs./ha)	Expenditure (Rs/ha)	Gross Income (Rs/ha)	Net Profit (Rs/ha	B:C Ratio
T_1	9.70	93.90	4381	4900	74477	12250	42400	86727	44327	2.05
T_2	9.58	90.40	4248	4720	72216	11800	37100	84016	46916	2.26
T_3	10.7	91.70	4648	5534	79016	13835	40400	92857	52457	2.30

Results of On Farm Trial – 02

Technology Assessment - Assessment of Green gram variety for Summer cultivation

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology assessed	Parameters of assessed	Data on the parameter	Results of assessed	Feedback from the farmer

1	2	3	4	5	6	7	T_1	T_2	T_3	9	10
Green gram	Irrigated	Low yield of Summer Green gram.	Assessment of Green gram variety for Summer cultivation	10	T_1 -Use of local variety with local practices T_2 - Use of GAM-5 Variety with improved practices T_3 - Use of GM-7 Variety with improved practices	1. Plant height at harvest 2. No of branches per plant 3. Number of pod s per plant 4. Grain yield (q/ha) 5. B:C ratio	*47.01* *3.19* *35.37* *6.11* *2.34*	57.2 3.94 40.71 7.95 2.84	61.29 4.41 46.45 8.54 3.05	The results of the trial indicated that improved variety of Green gram GM-7 earned the maximum net returns (Rs 40180/- yielding 8.54 q/ha with B:C ratio 3.05) as compare to T_1 (Rs 24490/- yielding 6.11q/ha with B:C ratio 2.34).	Green gram variety GM-7 has resistant to YMV and more number of pod with good cooking quality and earned the maximum yield.

Cont…

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha,)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15	16
T_1 - Use of local variety with local practices	Local	Grain Yield– 6.11	q/ha	24490	2.34
T_2 - Use of GAM-5 Variety with improved practices	AAU, Anand	Grain Yield –7.95	q/ha	36050	2.84
T_3 - Use of GM-7 Variety with improved practices	NAU, Navsari	Grain Yield– 8.54	q/ha	40180	3.05

C2. Details of On Farm Trial for assessment –

1	Title of Technology Assessed	:	Assessment of Green gram variety for Summer cultivation.
2	Problem Definition	:	Low yield of Summer Green gram
3	Details of technologies selected for	:	**T1 -** Use of local variety with local practices **T2 -** Use of GAM-5 Variety with improved practices

	assessment		**T3-** Use of GM-7 Variety with improved practices
4	Source of technology	**:**	AAU, Anand and NAU, Navsari.
5	Production system	**:**	Rain fed cereal based system (paddy-pulse cropping system)
6	Thematic area	**:**	Varietal evolution
7	Performance of the Technology with performance indicators	**:**	

Treatment	**Plant height at harvest(cm)**	**No. of branches**	**No.of pods/palnt**	**Grain Yield (q/ha)**	**Expenditure (Rs/ha)**	**Gross Income (Rs/ha)**	**Net Profit (Rs/ha**	**B:C Ratio**
T_1	47.01	3.19	35.37	6.11	18280	42770	24490	2.34
T_2	57.2	3.94	40.71	7.95	19600	55650	36050	2.84
T_3	61.29	4.41	46.45	8.54	19600	59780	40180	3.05

8	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	**:**	Green gram variety GM-7 has resistant to YMV and more number of pod with good cooking quality and earned the maximum yield.
9	Final recommendation for micro level situation	**:**	-
10	Constraints identified and feedback for research	**:**	- Availability of seed - Peacock our national bird damaged crop at early stage.
11	Process of farmers participation and their reaction	**:**	Farmers were involved and actively participated at every level i.e. PRA and Group discussion ,planning, execution, monitoring, evaluation of the trial. Farmers evaluated that green gram variety Local, GAM-5 and GM-7.GAM-5 and GM-7 variety resistant to YMV, less problem of pest and disease, bold size, good cooking quality and more yield.

Results of On Farm Trial – 03

Technology Assessment - Assessment of Black gram variety for Summer cultivation

Crop/ enterprise	**Farming situation**	**Problem definition**	**Title of OFT**	**No. of trials**	**Technology assessed**	**Parameters of assessed**	**Data on the parameter**			**Results of assessed**	**Feedback from the farmer**
1	**2**	**3**	**4**	**5**	**6**	**7**	T_1	T_2	T_3	**9**	**10**

Black gram	Irrigated	Low yield of Summer Black gram.	Assessment of Black gram variety for Summer cultivation	10	T_1 -Use of local variety with local practices T_2 - Use of G.U.-1 Variety with improved practices T_3 - Use of G.U.-3 Variety with improved practices	1. Plant height 2. No of branches per plant 3. Number of pod per plant 4. Grain yield (q/ha) 5. B:C ratio	*48.32* *3.23* *19.78* *5.45* *2.09*	58 3.9 24.24 6.24 2.23	62.02 4.33 36.27 7.73 2.76	The results of the trial indicated that improved variety of Black gram GU-3 earned the maximum net returns (Rs 34510/- yielding 7.73 q/ha with B:C ratio 2.76) as compare to T_1 (Rs 19870/- yielding 5.45 q/ha with B:C ratio 2.09).	Black gram variety GU-3 has resistant to YMV, bold size and more number of pod with good cooking quality and earned the maximum yield.

Cont…

Technology Assessed	**Source of Technology**	**Production**	**Please give the unit (kg/ha, t/ha,)**	**Net Return (Profit) in Rs. / unit**	**BC Ratio**
11	12	13	14	15	16
T_1 - Use of local variety with local practices	Local	Grain Yield– 5.45	q/ha	19870	2.09
T_2 - Use of G.U.-1 Variety with improved practices	NAU, Navsari	Grain Yield – 6.24	q/ha	24080	2.23
T_3 - Use of G.U.-3 Variety with improved practices	NAU, Navsari	Grain Yield– 7.73	q/ha	34510	2.76

C2. Details of On Farm Trial for assessment –

<table>
<tr><td>1</td><td>Title of Technology Assessed</td><td>:</td><td>Assessment of Black gram variety for Summer cultivation.</td></tr>
<tr><td>2</td><td>Problem Definition</td><td>:</td><td>Low yield of Summer Black gram</td></tr>
<tr><td>3</td><td>Details of technologies selected for assessment</td><td>:</td><td>T1 - Use of local variety with local practices
T2 - Use of G.U.-1 Variety with improved practices
T3- Use of G.U.-3 Variety with improved practices</td></tr>
<tr><td>4</td><td>Source of technology</td><td>:</td><td>NAU, Navsari.</td></tr>
<tr><td>5</td><td>Production system</td><td>:</td><td>Rain fed cereal based system (paddy-pulse cropping system)</td></tr>
<tr><td>6</td><td>Thematic area</td><td>:</td><td>Varietal evolution</td></tr>
<tr><td>7</td><td>Performance of the Technology with performance indicators</td><td>:</td><td>
<table>
<tr><th>Treatment</th><th>Plant height at harvest(cm)</th><th>No. of branches</th><th>No.of pods/palnt</th><th>Grain Yield (q/ha)</th><th>Expenditure (Rs/ha)</th><th>Gross Income (Rs/ha)</th><th>Net Profit (Rs/ha</th><th>B:C Ratio</th></tr>
<tr><td>T 1</td><td>48.32</td><td>3.23</td><td>19.78</td><td>5.45</td><td>18280</td><td>38150</td><td>19870</td><td>2.09</td></tr>
<tr><td>T 2</td><td>58</td><td>3.9</td><td>24.24</td><td>6.24</td><td>19600</td><td>43680</td><td>24080</td><td>2.23</td></tr>
<tr><td>T 3</td><td>62.02</td><td>4.33</td><td>36.27</td><td>7.73</td><td>19600</td><td>54110</td><td>34510</td><td>2.76</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td>:</td><td>Black gram variety GU-3 has resistant to YMV, bold size and more number of pod with good cooking quality and earned the maximum yield.</td></tr>
<tr><td>9</td><td>Final recommendation for micro level situation</td><td>:</td><td>-</td></tr>
<tr><td>10</td><td>Constraints identified and feedback for research</td><td>:</td><td>- Availability of seed
- Peacock our national bird damaged crop at early stage</td></tr>
<tr><td>11</td><td>Process of farmers participation and their reaction</td><td>:</td><td>Farmers were involved and actively participated at every level i.e. PRA and Group discussion ,planning, execution, monitoring, evaluation of the trial. Farmers evaluated that Black gram variety Local, GU-1 and GU-3.GU-1 have less problem of YMV and GU-3 variety resistant to YMV, less problem of pest and disease, bold size, good cooking quality and more yield.</td></tr>
</table>

Results of On Farm Trial - 04

A. Technology Assessment - Assessment of application of IFFCO nano urea in Kharif paddy

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Paddy	Rainfed	Low yield of kharif paddy	Assessment of application of IFFCO nano urea in Kharif paddy	20	T_1-Farmer practice (No use of nano urea) (177:86:00 kg NPK/ha) T_2 -Recommended Dose of Fertiliser(100:30:00 kg NPK/ha) T_3- 00:30:00 + spraying of IFFCOnano urea @ 4ml /lit at active tillering or 20-25 Days after Transplanting) and 2nd spray at 45 to 50 DAT or before flowering in the crop.	1 Productive tillers/hill 2 Grain yield (kg/ha) 3 Straw yield (kg/ha) 1 Productive tillers/hill 2 Grain yield (kg/ha) 3 Straw yield (kg/ha) 1 Productive tillers/hill 2 Grain yield (kg/ha) 3 Straw yield (kg/ha)	7.2 3430 3910 9.4 3674 4078 9.6 3740 4189	KVK-Valsad conducted on farm testing to assesapplication of IFFCO nano urea in Kharif paddy. The result of trials revealed that foliar application of nano urea gave higher yield compare to farmer practice. B:C ratio also found higher(2.15 - T_3) as compare to local check (1.76 - T_1).	- Reduce the cost of fertiliser - Improve growth and development of crop - It increases yield

Technology Assessed	Source of Technology	Production (kg/ha)	Please give the unit (kg/ha, t/ha, lit/animal,)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15	16
T1 - Farmer's practices (177:86:00 kg NPK/ha)	-	Grain Yield– 3430 Straw Yield - 3910	Kg/ha	29935	1.76
T_2 -Recommended Dose of Fertiliser(100:30:00 kg NPK/ha)	N.A.U., Navsari	Grain Yield– 3674 Straw Yield – 4078	Kg/ha	37953	2.04
T_3- 00:30:00 + spraying of IFFCOnano urea @ 4ml /lit at active tillering or 20-25 Days after Transplanting) and 2nd spray at 45 to 50 DAT or before flowering in the crop.	N.A.U., Navsari	Grain Yield– 3740 Straw Yield - 4189	Kg/ha	40465	2.15

C2. Details of On Farm Trial for assessment –

<table>
<tr><td>1</td><td>Title of Technology Assessed</td><td>:</td><td>Assessment of application of IFFCO nano urea in Kharif paddy</td></tr>
<tr><td>2</td><td>Problem Definition</td><td>:</td><td>Low yield of kharif paddy</td></tr>
<tr><td>3</td><td>Details of technologies selected for assessment</td><td>:</td><td>T_1-Farmer practice (No use of Nano urea) (177:86:00 kg NPK/ha)
T_2 -Recommended Dose of Fertiliser(100:30:00 kg NPK/ha)
T_3- 00:30:00 + spraying of IFFCOnano urea @ 4ml /lit at active tillering or 20-25 Days after Transplanting) and 2nd spray at 45 to 50 DAT or before flowering in the crop.</td></tr>
<tr><td>4</td><td>Source of technology</td><td>:</td><td>IFFCO and SAU</td></tr>
<tr><td>5</td><td>Production system</td><td>:</td><td>Rain fed cereal based system (paddy based cropping system)</td></tr>
<tr><td>6</td><td>Thematic area</td><td>:</td><td>Integrated Nutrient management</td></tr>
<tr><td>7</td><td>Performance of the Technology with performance indicators</td><td>:</td><td>
<table>
<tr><th>Treatments</th><th>No. of Tillers/hill</th><th>Grain yield (kg/ha)</th><th>Straw yield (kg/ha)</th><th>Gross Income (Rs./ha)</th><th>Cost of cultivation (Rs./ha)</th><th>Net Return(Rs./ha)</th><th>Increase in seed yield (%)</th><th>BCR</th></tr>
<tr><td>T_1</td><td>7.2</td><td>3430</td><td>3910</td><td>69560</td><td>39625</td><td>29935</td><td>0</td><td>1.76</td></tr>
<tr><td>T_2</td><td>9.4</td><td>3674</td><td>4078</td><td>74288</td><td>36335</td><td>37953</td><td>7.11</td><td>2.04</td></tr>
<tr><td>T_3</td><td>9.6</td><td>3740</td><td>4189</td><td>75698</td><td>35233</td><td>40465</td><td>9.04</td><td>2.15</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td>:</td><td>- Reduce the cost of fertiliser
- Improve growth and development of crop
- It increases yield</td></tr>
<tr><td>9</td><td>Final recommendation for micro level situation</td><td>:</td><td>Need to be continue on next year</td></tr>
<tr><td>10</td><td>Constraints identified and feedback for research</td><td>:</td><td>- Lack of awareness</td></tr>
<tr><td>11</td><td>Process of farmers participation and their reaction</td><td>:</td><td>KVK scientist selects a village and farmers who cultivate paddy crop. Information pertaining to cultivation of paddy followed by farmers was collected. The problems faced by them was also discussed and prioritized by them. Then problem-causes analysis also has done with their active participation. Treatments were thoroughly discussed with them and lastly according to their suggestions treatments were finalized. From among these farmers twenty farmers were selected for testing the technology on their farm. The technological backstopping were provided by the KVK scientist as a facilitator as when required by the farmers. Farmers were involved and actively participated at every level i.e. planning, execution, monitoring, evaluation of the trial. PRA and Group Discussion.</td></tr>
</table>

Results of On Farm Trial - 05

A. Technology Assessment - Assessment of application of silicon in Kharif paddy

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer
1	2	3	4	5	6	7	8	9	10
Paddy	Rainfed	Low yield of kharif paddy	Assessment of application of silicon in Kharif paddy	20	T_1-Farmer practice (177:86:00 kg NPK/ha) T_2 - Recommended Dose of Fertiliser(100:30:00 kg NPK/ha) T_3 - RDF + Spraying of 1.5 % potassium silicate at 20-25 Days DAT and at 45 to 50 DAT	1 Productive tillers/hill 2 Grain yield (kg/ha) 3 Straw yield (kg/ha) 1 Productive tillers/hill 2 Grain yield (kg/ha) 3 Straw yield (kg/ha) 1 Productive tillers/hill 2 Grain yield (kg/ha) 3 Straw yield (kg/ha)	7.4 3470 3886 9.3 3685 4090 9.3 3725 4284	KVK-Valsad conducted on farm testing to assess silicon on yield of kharif paddy. The result of trials revealed that Spraying of 1.5 % potassium silicate at 20-25 Days DAT and at 45 to 50 DAT gave higher yield compare to farmer practice. B:C ratio also found higher (2.06 - T_3) as compare to local check (1.76 - T_1).	- It improves stress capacity of plant - Silicon increases yield

Technology Assessed	Source of Technology	Production (kg/ha)	Please give the unit (kg/ha, t/ha, lit/animal,)	Net Return (Profit) in Rs. / unit	BC Ratio
11	12	13	14	15	16
T1 - Farmer's practices (177:86:00 kg NPK/ha)	Private co.	Grain Yield– 3470 Straw Yield - 3886	Kg/ha	30358	1.76
T_2 -Recommended Dose of Fertiliser(100:30:00 kg NPK/ha)	N.A.U., Navsari	Grain Yield– 3685 Straw Yield – 4090	Kg/ha	37926	2.04
T_3 - RDF + Spraying of 1.5 % potassium silicate at 20-25 Days DAT and at 45 to 50 DAT	N.A.U., Navsari	Grain Yield– 3725 Straw Yield - 4284	Kg/ha	38878	2.06

C2. Details of On Farm Trial for assessment –

<table>
<tr><td>1</td><td>Title of Technology Assessed</td><td>:</td><td>Assessment of application of IFFCO nano urea in Kharif paddy</td></tr>
<tr><td>2</td><td>Problem Definition</td><td>:</td><td>Low yield of kharif paddy</td></tr>
<tr><td>3</td><td>Details of technologies selected for assessment</td><td>:</td><td>T_1- Farmer's practices (177:86:00 kg NPK/ha)
T_2 -Recommended Dose of Fertiliser(100:30:00 kg NPK/ha)
T_3 - RDF + Spraying of 1.5 % potassium silicate at 20-25 Days DAT and at 45 to 50 DAT</td></tr>
<tr><td>4</td><td>Source of technology</td><td>:</td><td>NAU</td></tr>
<tr><td>5</td><td>Production system</td><td>:</td><td>Rain fed cereal based system (paddy based cropping system)</td></tr>
<tr><td>6</td><td>Thematic area</td><td>:</td><td>Integrated Nutrient management</td></tr>
<tr><td>7</td><td>Performance of the Technology with performance indicators</td><td>:</td><td>
<table>
<tr><th>Treatments</th><th>No. of Tillers/hill</th><th>Grain yield (kg/ha)</th><th>Straw yield (kg/ha)</th><th>Gross Income (Rs./ha)</th><th>Cost of cultivation (Rs./ha)</th><th>Net Return (Rs./ha)</th><th>Increase in grain yield (%)</th><th>BCR</th></tr>
<tr><td>T_1</td><td>7.4</td><td>3470</td><td>3886</td><td>70233</td><td>39875</td><td>30358</td><td>--</td><td>1.76</td></tr>
<tr><td>T_2</td><td>9.3</td><td>3685</td><td>4090</td><td>74511</td><td>36585</td><td>37926</td><td>6.20</td><td>2.04</td></tr>
<tr><td>T_3</td><td>9.3</td><td>3725</td><td>4284</td><td>75618</td><td>36740</td><td>38878</td><td>7.35</td><td>2.06</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td>:</td><td>- It improves stress capacity of plant
- Silicon increases yield</td></tr>
<tr><td>9</td><td>Final recommendation for micro level situation</td><td>:</td><td>Need to be continue on next year</td></tr>
<tr><td>10</td><td>Constraints identified and feedback for research</td><td>:</td><td>- Lack of awareness</td></tr>
<tr><td>11</td><td>Process of farmers participation and their reaction</td><td>:</td><td>KVK scientist selects a village and farmers who cultivate paddy crop. Information pertaining to cultivation of paddy followed by farmers was collected. The problems faced by them was also discussed and prioritized by them. Then problem-causes analysis also has done with their active participation. Treatments were thoroughly discussed with them and lastly according to their suggestions treatments were finalized. From among these farmers twenty farmers were selected for testing the technology on their farm. The technological backstopping were provided by the KVK scientist as a facilitator as when required by the farmers. Farmers were involved and actively participated at every level i.e. planning, execution, monitoring, evaluation of the trial. PRA and Group Discussion.</td></tr>
</table>

Results of On Farm Trial - 06

A. Technology Assessment : Assessment of biopesticides for management of hoppers in mango

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Mango	Irrigated	low yield in mango	Assessment of biopesticides for management of hoppers in mango	10	**T1** : Arbitrary use of pesticides i.e. Imidachloprid 17.8 SL@ 3 ml/10 (Farmers practices) **T2** : Spray of *Verticillium lecanii* @ 50 g/ 10 lit as first spray at panicle initiation stage followed by second and third spray at 7 days interval, fourth spray at pea stage and fifth at marble stage **T3** : Spraying of Beuvaria basiana @ 40 g/10 lit	Damage due to infestation of pest (%), Yield	T1 : 18% T2 : 9 % T3 : 11 % T1 : 6910 kg/ha T2 : 7845 kg/ha T3 : 7570 kg/ha	Damage due to infestation of hoppers reduced from 18 to 9% and yield increased by 13.53% in T2 and 9.55% in T3. .	- Improved quality of fruit -Increase in market value -Increase in yield	--	--

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Technology Assessed	Source of Technology	Production	Unit	Net Return in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 : Arbitrary use of pesticides i.e. Imidachloprid 17.8 SL@ 3 ml/10 (Farmers practices)	--	6910	Kg/ha	162640 Rs/ha	3.25
Technology option 2 : Spray of *Verticillium lecanii* @ 50 g/ 10 lit as first spray at panicle initiation stage followed by second and third spray at 7 days interval, fourth spray at pea stage and fifth at marble stage	Recommended by : AES, NAU, Paria, 2019	7845	Kg/ha	203685 Rs/ha	3.87

Technology option 3 : Spraying of Beuvaria basiana @ 40 g/10 lit	Recommended by NAU, Navsari, 2014	7570	Kg/ha	194270 Rs/ha	3.75

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

1	Technology Assessed	:	Assessment of biopesticides for management of hoppers in mango
2	Problem Definition	:	Low yield in mango
3	Details of technologies selected for assessment	:	**T1** : Arbitrary use of pesticides i.e. Imidachloprid 17.8 SL@ 3 ml/10 (Farmers practices) **T2** : Spray of *Verticillium lecanii* @ 50 g/ 10 lit as first spray at panicle initiation stage followed by second and third spray at 7 days interval, fourth spray at pea stage and fifth at marble stage **T3** : Spraying of Beuvaria basiana @ 40 g/10 lit
4	Source of technology	:	AES, NAU, Paria, 2019
5	Production system	:	Rain fed cereal based system (paddy-vegetable system)
6	Thematic area	:	Integrated Pest Management
7	Performance of the Technology with performance indicators	:	

Technology options	**Percentage of damage**	**Yield (kg/ha)**	**Increase in Yield (%)**	**Gross return (Rs./ha)**	**Cost of cultivation (Rs./ha)**	**Net profit (Rs./ha)**	**B:C Ratio**
T1 : Arbitrary use of pesticides i.e. Imidachloprid 17.8 SL@ 3 ml/10 (Farmers practices)	18	6910	0	234940	72300	162640	3.25
T2 : Spraying of *Verticillium lecanii* @ 50 g/ 10 lit water	9	7845	13.53	274575	70890	203685	3.87
T3 : Spraying of Beuvaria basiana @ 40 g/10 lit water	11	7570	9.55	264950	70680	194270	3.75

8	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Yield increased due to reduction in damage of mango hoppers and also improved the quality of fruit.
9	Final recommendation for micro level situation	:	Need to be continue on next year
10	Constraints identified and feedback for research	:	Nil

11	Process of farmers participation and their reaction	:	Farmers were involved and actively participated at every level i.e. planning, execution, monitoring, evaluation of the trial. PRA and Group Discussion

Results of On Farm Trial -07

Technology Assessment : Assessment of cost effectiveness calf starter feed feeding in crossbred calves.

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refine ment needed	Justification for refine ment
1	2	3	4	5	6	7	8	9	10	11	12
Calf Starter Feed	Stall feeding	Higher cost of calf rearing	Assessment of cost effectiveness calf starter feed feeding in crossbred calves.	10 crossb red calves	T1:Farmers practices – Milk feed to calf 2 Liters per Day from 1 day to 24 week of calf age :T2 : Uni. Reco – Milk feed to calf above 10 % of body weight for 1 day to 12 week of calf age T3: Calf starter feed feeding start from second week to 12 week of calf age	Reduction in cost of calf rearing	Cost of calf rearing (Rs./calf) T1 :11950 Rs T2 :9030 Rs T3 : 4365 Rs	Reduction in cost of calf rearing in T2 was 24.43% And in T3 was 63.47% as compared to T1.	Availabilit y of feed, acceptabilit y and applicabilit y of technology.	--	--

Contd..

Technology Assessed	Source of Technology	Cost of calf rearing (Rs./calf)	Unit
13	14	15	16
Technology option 1 :Farmers practices – Milk feed to calf 2 Liters per Day from 1 day to 24 week of calf age	--	11950	Rs/calf
Technology option 2 :UniReco – Milk feed to calf above 10 % of body weight for 1 day to 12 week of calf age	GAU recommendation	9030	Rs/calf
Technology option 3 : calf starter feed feeding start from second week to 12 week of calf age	Prof. and Head, Dept. of LPM, Vanbandhu College, Navsari, Year : 2012)	4365	Rs/calf

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

<table>
<tr><td>1</td><td>Technology Assessed</td><td>:</td><td>Assessment of cost effectiveness calf start feed feeding in crossbred calves.</td></tr>
<tr><td>2</td><td>Problem Definition</td><td>:</td><td>Higher cost of calf Rearing</td></tr>
<tr><td>3</td><td>Details of technologies selected for assessment</td><td>:</td><td>T1 : Farmers practices – Milk feed to calf 2 Liters per Day from 1 day to 24 week of calf age
T2 : Uni Reco – Milk feed to calf above 10 % of body weight for 1 day to 12 week of calf age.
T3 : Calf starter feed feeding start from second week to 12 week of calf age</td></tr>
<tr><td>4</td><td>Source of technology</td><td>:</td><td>Prof. and Head, Dept. of LPM, Vanbandhu College, Navsari, Year : 2012)</td></tr>
<tr><td>5</td><td>Production system</td><td>:</td><td>Rearing of cross breed calf</td></tr>
<tr><td>6</td><td>Thematic area</td><td>:</td><td>Management of nutritious food.</td></tr>
<tr><td>7</td><td>Performance of the Technology with performance indicators</td><td>:</td><td>
<table>
<tr><th>Technology Assessed</th><th>Source of Technology</th><th>Cost of calf rearing (Rs./calf)</th><th>Unit</th><th>Reduction in Cost of calf rearing (%)</th></tr>
<tr><td>13</td><td>14</td><td>15</td><td>16</td><td></td></tr>
<tr><td>Technology option 1 : Farmers practices – Milk feed to calf 2 Liters per Day from 1 day to 24 week of calf age</td><td>--</td><td>11950</td><td>Rs/calf</td><td>--</td></tr>
<tr><td>Technology option 2 :– Milk feed to calf above 10 % of body weight for 1 day to 12 week of calf age(Uni Reco)</td><td>GAU recommendation</td><td>9030</td><td>Rs/calf</td><td>24.43%</td></tr>
<tr><td>Technology option 3 : calf starter feed feeding start from second week to 12 week of calf age</td><td>Prof. and Head, Dept. of LPM, Vanbandhu College, Navsari, Year : 2012)</td><td>4365</td><td>Rs/calf</td><td>63.47%</td></tr>
</table>
</td></tr>
<tr><td>8</td><td>Feedback, matrix scoring of various technology parameters done through farmer’s participation / other scoring techniques</td><td>:</td><td>Availability of feed, acceptability and applicability of technology.</td></tr>
<tr><td>9</td><td>Final recommendation for micro level situation</td><td>:</td><td>Nil</td></tr>
<tr><td>10</td><td>Constraints identified and feedback for research</td><td>:</td><td>Nil</td></tr>
<tr><td>11</td><td>Process of farmers participation and their reaction</td><td>:</td><td>Farmers were involved and actively participated at every level i.e. planning, execution, monitoring, evaluation of the trial. PRA and Group Discussion</td></tr>
</table>

3.3. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2023 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Paddy	Varietal evaluation, INM, IPM	HYVs of Paddy, Line sowing, Seed treatment, INM, IPM	Demo. of improved variety seeds	22	560	220
2	Fingermillet	Varietal Evaluation,IPM	HYVs of Fingermillet, IPM	Demo. of improved variety seeds	05	50	50
3	Sugarcane	Varietal Evaluation,INM	HYVs of Sugarcane, INM	Demo. of improved variety planting material	05	25	50
4	Brinjal	Varietal Evaluation, INM	HYVs of Brinjal, INM	Demo. of improved variety seedlings	10	55	15
5	Sweetpotato	Varietal Evaluation	HYVs of Sweetpotato, turning of veins	Demo. of improved variety seeds	05	80	40
6	Greengram	Varietal Evaluation, IPM	HYVs of Greengram, line sowing	Demo. of improved variety seeds	05	55	20
7	Green fodder	Varietal Evaluation	HYVs of Perennial grass	Demo. of improved variety planting material	08	40	10

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

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	Paddy	ICM	HYV Sardar	Kharif	20	25	125	--	125	--
2	Paddy	ICM	HYV GNR-9	Kharif	05	05	25	--	25	
3	Paddy	ICM	Depog method of seedling raising	Kharif	05	04	20	--	20	--
4	Paddy	ICM	Natural Farming	Kharif	02	04	20	--	20	
5	Finger millet	ICM	HYV, INM, IPM	Kharif	15	40	120	--	120	--
6	Bittergourd	ICM	HYV, IPM, LBF	Kharif	2.5	2.5	25	--	25	--

7	Chickpea	ICM	HYV GJG-6, IPM, LBF	Rabi	10	3.0	40	--	40	--
8	Indian bean	ICM	HYV, IPM	Rabi-22-23	05	4.5	30	--	30	
9	Pigeonpea	ICM	HYV, IPM	Kharif	05	5.1	50	--	50	
10	Mushroom	ICM	Improved variety Seed	--	25 unit	22 unit	22	--	22	--
11	Kitchen garden	ICM	Improved seeds & seedlings	Rabi	0.25	0.69	69	--	69	--

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Paddy	Kharif	Rainfed	Medium black	Low	Medium	High	Pulses	June-23	Oct-23	2239	71
Paddy	Kharif	Rainfed	Medium black	Low	Medium	High	Pulses	June-23	Oct-23	2239	71
Paddy	Kharif	Rainfed	Medium black	Low	Medium	High	Pulses	June-23	Oct-23	2239	71
Paddy	Kharif	Rainfed	Medium black	Low	Medium	High	Pulses	June-23	Oct-23	2239	71
Finger millet	Kharif	Rainfed	Hilly, Laterite	Low	Medium	High	Finger millet	June-23	Oct-23	2239	71
Bittergourd	Kharif	Rainfed	Medium black	Low	Medium	High	Paddy	June-23	Oct-23	2239	71
Chickpea	Rabi	Rainfed	Medium black	Low	Medium	High	Paddy	Nov-22	March-23	--	--
Indian bean	Rabi	Irrigated	Medium black	Low	Medium	High	Paddy	Oct-22	March-23	--	--
Pigeonpea	Kharif	Rainfed	Medium black	Low	Medium	High	Paddy	June-23	Dec-23	2239	71

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Chickpea variety GJG-6- Early maturity, Bold size, more number of pod per plant
2	Paddy variety Sardar have more tillers , non lodging, Mid late and small seeded
3	GT 105 variety - Early (140-160 Days) , Dual purpose, bold size with white colour, good for Dal making, good cooking quality, less problem of wilt and sterility mosaic virus.
4	Indianbean variety Guj.Val-2 errect flowering habit , flowering starts from each internode.
5	Paddy variety GNR-9 have Deep Red colour, Bio fortified, more tillers , non lodging, Mid late , higher production potential
6	Fingermillet (Guj Nagli-9) variety gives good yield in longer rainy season .
7	Demonstrated variety of Bittergourd gave good yield. The variety also fetched good market price. Mosaic disease incidence was found less

8	Dapog method seedlings requre one week less time for ready to TP
9	Ghan Jivamrut improved the soil health

Farmers' reactions on specific technologies

S. No		Feed Back
1	Paddy	Mid late variety with small grain size, non lodging, seed rate as well as seedling rate has been reduced to 20-30 %. Grain quality is better for culinary purpose compared to hybrid varieties. Red bio fortified variety good for rotla making and sented variety for rice making.
2	Fingermillet	Variety had less incidence of pest- disease compare to local variety.
3	Chickpea	Gram variety GJG-6- early maturity, bold size with good attractive yellow colour,more number of pod per plant , good yield in rainfed condition
4	Pigeon pea	GT 105 variety – Early (140-160 Days) , bold size with white colour, good for Dal making, good cooking quality, less problem of wilt and sterility mosaic virus.
5	Indianbean	Indianbean variety Guj.Val-2 errect flowering habit , flowering starts from each internode.
6	Bittergourd	Management of fruit fly increased the yield. Size, Shape and quality of fruit preferred by local market

Extension and Training activities under FLD

Sl. No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	Field days	04	03/02/23 27/07/23 13/10/23 16/10/23	41 50 50 56	
2	Farmers Training	18	10/02/23 13/02/23 30/05/23 01/06/23 03/06/23 05/06/23 06/06/23 07/06/23 08/06/23 09/06/23 10/06/23 10/06/23 20/06/23 17/07/23 18/07/23	27 25 39 76 50 26 32 41 44 30 44 30 30 20 27	

			04/10/23 09/10/23 16/10/23	32 20 29	
3	Media coverage	06	--	--	
4	Training for extension functionaries	00	--	--	

C. Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops : Nil

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)
						H	L	Av.										
Chickpea	ICM	Improved variety +Seed treatment + Line sowing + IPM	GJG-6	40	3	13.6	10.1	11.84	8.27	43.16	21900	61568	39668	2.81	20520	43004	22484	2.10
Indianbean	ICM	Improved variety + IPM	Guj. Val.- 2	30	4.5	11.8	8.2	10.58	8.08	30.69	17547	52800	35253	3.01	15300	40400	25100	2.64
Pigeonpea	ICM	Improved variety + Line sowing + INM + IPM	GT- 105	51	5.1	10.3	7.3	8.33	6.12	36.11	24200	54154	29954	2.24	21300	39752	18452	1.87

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

FLD on Other crops

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Change 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	Av.										
Cereals																		
Paddy	ICM	Improved variety + Seed treatment	Sardar	125	25	46.75	35.50	39.95	32.88	21.50	37100	77661	40561	2.09	39800	63385	23585	1.59
Paddy	ICM	Biofortified varity	GNR-9	25	5	39.00	32.00	35.35	26.80	31.90	37100	113784	76684	3.07	36800	86510	49710	2.35
Paddy	ICM	Depog method of seedling raising	Sardar	20	4	38.60	33.40	37.70	34.55	9.12	36128	76531	40403	2.12	39967	70275	30308	1.76
Paddy	ICM	Natural Farming	Sardar	20	4	39.20	34.50	37.15	36.52	1.73	33210	71700	38490	2.16	39625	70411	30786	1.78
Millets																		
Finger millet	ICM	Improved variety, Vermicompost	Guj. Nagli – 9	120	40	10.2	7.6	9.73	8.07	20.57	18775	38340	19565	2.04	17620	32730	15110	1.86

* Economics to be worked out based total cost of production per unit area and not on critical inputs alone.
** BCR= GROSS RETURN/GROSS COST

Frontline Demonstration on Nutri cereals : Nil

FLD on Livestock : Nil

FLD on Other enterprises

Category	Name of the technology demonstrated	No. of Farmer	No.of units	Major parameters		% change in major parameter	Other parameter		Economics of demonstration (Rs.) or Rs./unit				Economics of check (Rs.) or Rs./unit			
				Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Oyster Mushroom	Pleurotusspp	22	22	--	--	--	--	--	2700	15000	12300	5.55	--	-	-	-

FLD on Women Empowerment : Nil

FLD on Farm Implements and Machinery : Nil

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Kitchen gardening	Nutritional security	Improved seeds and seedlings of vegetables	69	69	10212	7500	36.16	--	--	850	3500	2650	4.11	640	2260	1620	3.53

FLD on Demonstration details on crop hybrids

Crop	Technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				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										
Vegetable crops																	
Bittergourd	Improved variety, IPM	F1 (Akash)	25	2.5	218	202	210.64	175.76	19.85	71230	195318	124088	2.74	68225	157240	89015	2.30

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	0	0	0	16	25	41	16	25	41
Irrigation management	1	0	0	0	1	43	44	1	43	44
Integrated Crop Management	7	0	0	0	138	96	234	138	96	234
Total	**9**	**0**	**0**	**0**	**155**	**164**	**319**	**155**	**164**	**319**
II Horticulture	0	0	0	0	0	0	0	0	0	0
III Soil Health and Fertility Management										
Soil fertility management	2	0	0	0	29	22	51	29	22	51
Integrated Nutrient Management	3	7	22	29	40	9	49	47	31	78
Total	**5**	**7**	**22**	**29**	**69**	**31**	**100**	**76**	**53**	**129**
IV Livestock Production and Management										
Dairy Management	5	0	0	0	78	131	209	78	131	209
Feed & fodder technology	3	0	0	0	63	81	144	63	81	144
Total	**8**	**0**	**0**	**0**	**141**	**212**	**353**	**141**	**212**	**353**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	3	0	0	0	1	68	69	1	68	69
Women empowerment	2	0	0	0	0	54	54	0	54	54
Mushroom Production	1	0	0	0	15	20	35	15	20	35
Total	**6**	**0**	**0**	**0**	**16**	**142**	**158**	**16**	**142**	**158**
VI Agril. Engineering										
Farm Machinery and its maintenance	2	1	0	1	48	24	72	49	24	73
Soil & water conservation	4	0	0	0	119	24	143	119	24	143
Total	**6**	**1**	**0**	**1**	**167**	**48**	**215**	**168**	**48**	**216**
VII Plant Protection										
Integrated Pest Management	1	0	0	0	28	2	30	28	2	30
Bio-control of pests and diseases	1	0	0	0	20	0	20	20	0	20
Total	**2**	**0**	**0**	**0**	**48**	**2**	**50**	**48**	**2**	**50**
VIII Fisheries	0	0	0	0	0	0	0	0	0	0
IX Production of Inputs at site	0	0	0	0	0	0	0	0	0	0
X CapacityBuilding and Group Dynamics										
Group dynamics	2	0	0	0	98	17	115	98	17	115
Total	**2**	**0**	**0**	**0**	**98**	**17**	**115**	**98**	**17**	**115**
XI Agro-forestry										
GRAND TOTAL	**38**	**8**	**22**	**30**	**694**	**616**	**1310**	**702**	**638**	**1340**

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										
Irrigation management	1	0	0	0	13	6	19	13	6	19
Integrated Crop Management	3	0	0	0	45	24	69	45	24	69
Total	**4**	**0**	**0**	**0**	**58**	**30**	**88**	**58**	**30**	**88**
II Horticulture										
III Soil Health and Fertility Management										
Soil fertility management	2	0	0	0	39	2	41	39	2	41

Integrated Nutrient Management	2	0	0	0	36	12	48	36	12	48
Production and use of organic inputs	1	0	0	0	0	20	20	0	20	20
Soil and Water Testing	1	0	0	0	10	8	18	10	8	18
Total	**6**	**0**	**0**	**0**	**85**	**42**	**127**	**85**	**42**	**127**
IV Livestock Production and Management										
Dairy Management	1	0	0	0	38	14	52	38	14	52
Production of quality animal products	1	0	0	0	27	9	36	27	9	36
Total	**2**	**0**	**0**	**0**	**65**	**23**	**88**	**65**	**23**	**88**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	3	0	0	0	4	91	95	4	91	95
Value addition	1	0	0	0	0	21	21	0	21	21
Women empowerment	1	0	0	0	2	26	28	2	26	28
Total	**5**	**0**	**0**	**0**	**6**	**138**	**144**	**6**	**138**	**144**
VI Agril. Engineering										
Farm Machinery and its maintenance	5	1	0	1	69	54	123	70	54	124
Soil & water conservation	1	0	0	0	18	5	23	18	5	23
Total	**6**	**1**	**0**	**1**	**87**	**59**	**146**	**88**	**59**	**147**
VII Plant Protection										
Integrated Pest Management	1	0	0	0	24	8	32	24	8	32
Integrated Disease Management	2	0	0	0	36	14	50	36	14	50
Bio-control of pests and diseases	1	0	0	0	14	0	14	14	0	14
Total	**4**	**0**	**0**	**0**	**74**	**22**	**96**	**74**	**22**	**96**
VIII Fisheries										
IX Production of Inputs at site										
X Capacity Building and Group Dynamics										
Leadership development	2	0	0	0	44	15	59	44	15	59
Total	**2**	**0**	**0**	**0**	**44**	**15**	**59**	**44**	**15**	**59**
XI Agro-forestry										
Total										
GRAND TOTAL	**29**	**1**	**0**	**1**	**419**	**329**	**748**	**420**	**329**	**749**

Farmers' Training including sponsored training programmes – CONSOLIDATED (On + 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	0	0	0	16	25	41	16	25	41
Irrigation management	2	0	0	0	14	49	63	14	49	63
Integrated Crop Management	10	0	0	0	183	120	303	183	120	303
Total	**13**	**0**	**0**	**0**	**213**	**194**	**407**	**213**	**194**	**407**
II Horticulture										
III Soil Health and Fertility Management										
Soil fertility management	4	0	0	0	68	24	92	68	24	92
Integrated Nutrient Management	5	7	22	29	76	21	97	83	43	126
Production and use of organic inputs	1	0	0	0	0	20	20	0	20	20
Balance use of fertilizers										
Soil and Water Testing	1	0	0	0	10	8	18	10	8	18

Total	**11**	**7**	**22**	**29**	**154**	**73**	**227**	**161**	**95**	**256**
IV Livestock Production and Management										
Dairy Management	6	0	0	0	116	145	261	116	145	261
Feed & fodder technology	3	0	0	0	63	81	144	63	81	144
Production of quality animal products	1	0	0	0	27	9	36	27	9	36
Total	**10**	**0**	**0**	**0**	**206**	**235**	**441**	**206**	**235**	**441**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	6	0	0	0	5	159	164	5	159	164
Value addition	1	0	0	0	0	21	21	0	21	21
Women empowerment	3	0	0	0	2	80	82	2	80	82
Mushroom Production	1	0	0	0	15	20	35	15	20	35
Total	**11**	**0**	**0**	**0**	**22**	**280**	**302**	**22**	**280**	**302**
VI Agril. Engineering										
Farm Machinery and its maintenance	7	2	0	2	117	78	195	119	78	197
Soil & water conservation	5	0	0	0	137	29	166	137	29	166
Total	**12**	**2**	**0**	**2**	**254**	**107**	**361**	**256**	**107**	**363**
VII Plant Protection										
Integrated Pest Management	2	0	0	0	52	10	62	52	10	62
Integrated Disease Management	2	0	0	0	36	14	50	36	14	50
Bio-control of pests and diseases	2	0	0	0	34	0	34	34	0	34
Total	**6**	**0**	**0**	**0**	**122**	**24**	**146**	**122**	**24**	**146**
VIII Fisheries										
IX Production of Inputs at site										
Total										
X Capacity Building and Group Dynamics										
Leadership development	2	0	0	0	44	15	59	44	15	59
Group dynamics	2	0	0	0	98	17	115	98	17	115
Total	**4**	**0**	**0**	**0**	**142**	**32**	**174**	**142**	**32**	**174**
XI Agro-forestry										
GRAND TOTAL	**67**	**9**	**22**	**31**	**1113**	**945**	**2058**	**1122**	**967**	**2089**

Training for Rural Youths including sponsored training programmes (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
Repair and maintenance of farm machinery and implements	1	1	0	1	24	0	24	25	0	25
Income Generation Activities	1	0	0	0	0	25	25	0	25	25
TOTAL	**2**	**1**	**0**	**1**	**24**	**25**	**49**	**25**	**25**	**50**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Repair and maintenance of farm machinery and implements	0	0	0	0	0	0	0	0	0	0
Rural Crafts	0	0	0	0	0	0	0	0	0	0

TOTAL	0	0	0	0	0	0	0	0	0	0

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Repair and maintenance of farm machinery and implements	1	1	0	1	24	0	24	25	0	25
Rural Crafts	1	0	0	0	0	25	25	0	25	25
TOTAL	**2**	**1**	**0**	**1**	**24**	**25**	**49**	**25**	**25**	**50**

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	2	46	6	52	0	0	0	46	6	52
Integrated Pest Management	3	0	0	0	68	7	75	68	7	75
Integrated Nutrient management	3	38	2	40	16	4	20	54	6	60
Production and use of organic inputs	1	26	2	28	0	0	0	26	2	28
Capacity Building and Group Dynamics	2	0	0	0	47	8	55	47	8	55
Management in farm animals	2	0	0	0	49	3	52	49	3	52
Livestock feed and fodder production	2	0	0	0	46	12	58	46	12	58
Household food security	2	5	3	8	38	11	49	43	14	57
Water management	2	13	7	20	24	12	36	37	19	56
TOTAL	**19**	**128**	**20**	**148**	**288**	**57**	**345**	**416**	**77**	**493**

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	1	40	10	50	0	0	0	40	10	50
Integrated Pest Management	2	0	0	0	39	5	44	39	5	44
Management in farm animals	2	0	0	0	43	29	72	43	29	72
Water management	1	0	0	0	35	2	37	35	2	37
TOTAL	**6**	**40**	**10**	**50**	**117**	**36**	**153**	**157**	**46**	**203**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops	**3**	**86**	**16**	**102**	**0**	**0**	**0**	**86**	**16**	**102**
Integrated Pest Management	**5**	**0**	**0**	**0**	**107**	**12**	**119**	**107**	**12**	**119**
Integrated Nutrient management	3	38	2	40	16	4	20	54	6	60
Production and use of organic inputs	1	26	2	28	0	0	0	26	2	28
Capacity Building and Group Dynamics	2	0	0	0	47	8	55	47	8	55
Management in farm animals	**4**	**0**	**0**	**0**	**92**	**32**	**124**	**92**	**32**	**124**
Livestock feed and fodder production	2	0	0	0	46	12	58	46	12	58
Household food security	2	5	3	8	38	11	49	43	14	57
Water management	**3**	**13**	**7**	**20**	**59**	**14**	**73**	**72**	**21**	**93**
TOTAL	**25**	**168**	**30**	**198**	**405**	**93**	**498**	**573**	**123**	**696**

Sponsored training programmes

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Increasing production and productivity of crops	3	72	8	80	0	0	0	72	8	80
Soil health and fertility management	3	38	2	40	16	4	20	54	6	60
Plant Protection in natural farming	3	0	0	0	68	7	75	68	7	75
Water Management	2	13	7	20	24	12	36	37	19	56
Total										
Livestock production and management	4	0	0	0	95	15	110	95	15	110
Total										
Home Science										
Household nutritional security	2	5	3	8	38	11	49	43	14	57
Total										
Agricultural Extension										
CapacityBuilding and Group Dynamics	2	0	0	0	47	8	55	47	8	55
Total										
GRAND TOTAL	**19**	**128**	**20**	**148**	**288**	**57**	**345**	**416**	**77**	**493**

Details of vocational training programmes carried out by KVKs for rural youth (4 or more days)

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Repair and maintenance of farm machinery	1	1	0	1	24	0	24	25	0	25
Rural Crafts	1	0	0	0	0	25	25	0	25	25
Grand Total	2	1	0	1	24	25	49	25	25	50

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services (Other than KMAS)	35	11185	35	11220
Diagnostic visits	0	0	0	0
Field Day	4	197	3	200
Group discussions	5	236	0	236
Kisan Ghosthi	6	252	0	252
Film Show	14	1965	29	1994
Self -help groups	0	0	0	0
Kisan Mela	1	545	33	578
Exhibition	8	4874	92	4966
Scientists' visit to farmers field	13	97	0	97
Plant/animal health camps	0	0	0	0
Farm Science Club	0	0	0	0
Ex-trainees Sammelan	0	0	0	0
Farmers' seminar/workshop	6	2632	43	2675
Method Demonstrations	36	1254	84	1338
Celebration of important days	8	1839	12	1851
Special day celebration	0	0	0	0
Exposure visits	4	135	0	135
Lecture delivered in other programmes	18	5511	344	5855
Webcast Programmes(PM)	5	1858	29	1887
Soil testing compaign	1	138	0	138

Viksit Bharat Sankalp Yatra	246	80666	970	81636
Others (pl.specify)				
Total	**410**	**113384**	**1674**	**115058**

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

Details of other extension programmes:

Particulars	Number
Electronic Media (CD./DVD)	2
Extension Literature	3
Newspaper coverage	22
Popular articles	2
Radio Talks	0
TV Talks	0
Animal health camps (Number of animals treated)	0
Social Media (No. of platforms Used)	4
Others (pl. specify)	
Total	

3.6 Online activities during year 2023

S. No.	Activity Type	Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webex etc.)	Title of Program	No. of Programmes	No. of Participants/ Views
A	Farmers training				
B	Farmers scientist's interaction programme	Live Webcast	PM Kisan Samman Nidhi Yojna	05	1857
C	Farmers seminars				
D	Expert lectures				
E	Any other (Pl. specify)				
	Grand Total (A+B+C+D+E)			**05**	**1857**

3.7. PRODUCTION OF SEED/PLANTING MATERIAL AND BIO-PRODUCTS

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Paddy	Sardar	--	67.52	202560	560
Pulses	Greengram	GM-6	--	0.1	1100	5
Commercial crops	Sugarcane	Co-N-13073	--	139	45870	12
Total				**206.62**	**248430**	**577**

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Vegetable seedlings	Brinjal	Mukta round	--	102600	102600	635
	Chilli	--	Eagle	28000	42000	223
	Tomato	--	Hybrid	27900	41850	215
Fodder crop saplings	Para Grass	Co-4	--	25000	12500	6
Total				**183500**	**198950**	**1079**

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg/Lit	Value (Rs.)	No. of Farmers
Bio Fertilizers	Vermicompost	19700 kg	118200	285
	Ghan Jivamrut	10420 kg	62520	303
Bio-pesticide	Agniyastra	563 lit	19705	263
Bio Agents	Vermiculture	199 kg	49750	123
	Fruitfly Traps (Mango)	1168 No.	52610	45
Total			**302785**	**1019**

Production of livestock materials - Nil

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

A. KVK News Letter : - Date of start :January – 2012 , Half Yearly, Number of copies to be published : 400

B. Literature developed/published

Item	Citation/ Title	Authors name	Number
Research papers (Give Citation)	Impact of FLD on SRI method in rice productivity and profitability	L.T. Kapur, M.M Gajjar & R.F. Thakor	01
Technical reports	APR & Action Plan	--	02
News letters	Newsletter	R.F.Thakor et.al	02
Technical bulletins	--	--	--
Popular articles	1. Value Addition in mango (in Gujarati)	P. R. Ahir, R. F. Thakor	02

	2. Gangama Mandal- A promising nutrigarden model to enhance nutrition security	P. R. Ahir, R. F. Thakor, L. T. Kapur	
Extension literature	1. Cultivation of Finger millet (in Gujarati) 2. Natural Farming 3. Natural Farming in major crops (in Gujarati)	A. R. Patel, K. A. Patel B. M. Patel, L.T. Kapur, et al. B. M. Patel, L.T. Kapur, et al.	1000 3000 2000
Others (Pl. specify)			
TOTAL			

C. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1	Video Clips	Seminar on Natural Farming	02
2	Digital Library	Digitalization of KVK publications	01

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)	12	KVK Valsad	404
2	Facebook page/ Account (no of Post)	15	KVK- Ambheti-Valsad	1000
3	Mobile Apps	--	--	--
4	WhatsApp groups	322	KVK Farmers Groups-06	879
5	Twitter Account	--	KVK Valsad	27
6	Website	06	www.kvkvalsad.org	

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).
Case study:

Title : Empowerment through french bean (*Phaseolus vulgaris*) cultivation in hilly area

Mr. Raghunath Janubhai Bhoya

Village - Karjun , **Block -** Kaprada, **Dist.** Valsad (Gujarat)
Mob. No. -09978207566, **Email-** rjbhoya@gmail.com

Introduction:

Majority of small holder tribal farmers of Valsad district grow paddy and finger millet under rain fed condition for their consumption**.** Mr. Raghunath Janubhai Bhoya, is one of them. A 37 year old mechanical engineer from Karjun village of Kaparada block of Valsad, Gujarat owns 2.5 acres of land in hilly area. He is having well but the water is not suffice to irrigate 2 acres of land. He use to grow brinjal and chilli during Rabi and earn considerable income. In his words “” what he realize from vegetable crops compensate with the income from paddy and finger millet crops.

Higher cost of production / inputs is one of the main reasons for low income." While visit of nearby market for sale of his vegetable produce he came to know about French bean.

Role of KVK

He contacted KVK to know about scientific cultivation french bean. Under the guidance of KVK, he started growing french bean under mulching with drip irrigation. During second year KVK suggest him to go for wide distance between row i.e.4.5 ft and grow the seeds alongside. This technology help him to save the water with optimum plant population and also make the harvesting operation easy. To mitigate the initial investment, KVK guide him to go for organic preparation like vermicompost, Jivamrut and use of the bio pesticides and liquid bio fertilizer instead chemicals.

Technological input

- Selection of variety
- Drip irrigation system
- Mulching
- Production and use of vermicompost
- Sowing technique
- Use of bio product

Output

During last three years, he is producing french bean. He expand the area from one to 1.5 acres. First year, he tried Moralera cultivar and during last year he tried Falguni variety of french bean. He is able to produce average 8,000 to 10,000 kg of French bean from 1.5 acres of land and get gross return to the tune of Rs. 2.5 lac from 1.5 acres of land (Average market price Rs. 25/- per kg). Adoption of IPM, INM technologies enabled him to reduce the cost of cultivation to the great extent. He earned net profit of Rs.1.23 lacs from 1.5 acres of land.

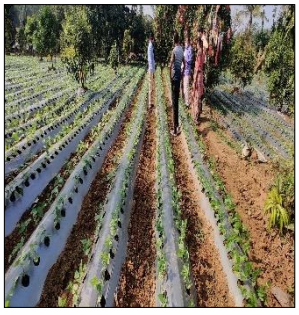
Outcome

- As many as 23 farmers has started growing french bean under the guidance of Mr. Raghunath Bhoya .
- The crop was introduced by Mr. Bhoya during 2018, has now occupied more than 10 ha. of land.
- The introduction of this crop play significant role in changing the cropping system from Paddy-Pulse to Paddy-French bean.

AWARD:

Looking to his innovativeness and his contribution to increase the income of fallow farmers, he was awarded with Best ATMA farmers award at district level.(2019-20)






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

- Use of QR codes and digital library for extension literature published by KVK

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	Bittergourd	use of veins cuttings for planting of bittergourd instead of sowing of seeds.	To reduce the cost of seed

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

A. Practicing Farmers

a. Participatory Rural Appraisal
b. Farmer group discussions
c. Diagnostic services
d. Existing cropping system

B. Rural Youth

a Participatory Rural Appraisal
b. Farmer group discussions

C. In-service personnel

a. Existing cropping system
b. Feed back from state departments as well as NGOs

5.2. Indicate the methodology for identifying OFTs/FLDs

For OFT:

i) PRA
ii) Problem identified from Matrix
iii) Field level observations
iv) Farmer group discussions

For FLD:

i) New variety/technology
ii) Poor yield at farmers level
iii) Existing cropping system

5.3. Field activities

i. Name of villages identified/adopted with block name (from which year) -

Block	Village	Year
Kaparada	Khuntli, Amdha, Pans, Ozarada	2012
	Kakadkopar, Dhodhadkuva, Varoli, Ozar	2015
Dharampur	Sadadvera, Samarsingi, Nanivahival	2015
	Mamabhacha, Lakadmal, Kakadkuva	2017
Pardi	Asma, Arnala, Pati, Panchalai, Goima	2014
	Lakhmapor, Chival, Samarpada	2015
Valsad	Ozar,	2015
Umargam	Borigam, Saronda	2015

ii. No. of farm families selected per village : 25

iii. No. of survey/PRA conducted : 02

iv. No. of technologies taken to the adopted villages- 18

v. Name of the technologies found suitable by the farmers of the adopted villages:

a) Improved varietyand IPM in Paddy and Fingr millet crops for cereals.

b) Vermi compost preparation at farm level

c) IPM and use of methyl eugenol trap in Mango

d) Use of plastic tray for vegetable seedling raising

e) Mushroom production

f) Improved variety and IPM in Pulse crops-Indianbean, Greengram, Pigeonpea,Chickpea

g) Dapog nursery in paddy

h) Improved variety of Bittergourd for cucurbit crops

i) Perennial fodder grass variety

j) Jivamrut, Gan Jivamrut preparation at farm level.

k) Custom hiring centre for farm machinery

l) Soil moisture indicator for efficient water management

m) Nutritional garden for household nutritional security

vi. Impact (production, income, employment, area/technological– horizontal/vertical):

Please see results item no.13

vii. Constraints if any in the continued application of these improved technologies :

a) Non availability of spawn of mushroom
b) Unavailability of seeds of improved variety.
c) High cost of inputs.

6. LINKAGES

A. Functional linkage with different organizations

Sr. No.	Name of organization	Nature of linkage
1	Navsari. Agril. University	Provides expertise for latest technology and supply of improved seeds of paddy ,greengram, pigeonpea, sugarcane, Indian bean and bio product etc., RAWE Programme
2	ATMA Project, Valsad	Training of farmers and extension functionaries and lectures of KVK experts in organizing farmers shibir.
3	Dept. of Agril. Valsad.	Involvement of KVK experts for delivering lectures, farmers seminars and extension functionaries' trainings.
4	Dept. of Animal husbandry, Valsad	Joint organization of pashupalan shibir
5	DRDA, Valsad	Joint implementation of farmers, farm women training.
6	Vasudhara dairy	Joint implementation of farmers, farm women training.
7	J. N. Trust, Kaparada	Joint implementation of farmers & ext. functionaries training & seminars.
8	Dept. Social forestry	Farmers shibir, Soil water testing
9	Zandu foundation, Ambach	Biotech Kishan hub project, Soil water testing
10	ICDS	Joint implementation of farm women training and Shibir.
11	Sidhdhi Development Foundation & CED Gujarat Ltd	Joint implementation of farm women/ entrepreneurship development training
12	Mushroom training centre, Vapi	Joint implementation of mushroom training.

13	Watershed Development Agency, Valsad	Farmers training on water conservation
14	Shrimad RamvhandraTrust, Dharampur	Soil and water samples testing
15	Welspun Foundation, Vapi	FPO and CHC

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

Name of the scheme	Date/ Month of initiation	Funding agency(State Govt./Other Agencies)	Amount (Rs.)
Training on Natural Farming for TMT/FMT	May-2023	ATMA SAMETI	7,13,000
Farmers Shibir on Millet	15/03/2023	NABARD, Valsad	20,000

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? : Yes, KVK participate in AGB and AMC meeting.

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	No of Farmers attending
01	**Meetings**	AGB, AMC, Review meeting on NF	16	0	36
02	**Research projects**	0	0	0	0
					0
03	**Training programmes**	Natural Farming	5	19	565
04	**Demonstrations**	0	0	0	0
05	**Extension Programmes**				
	KisanMela	Natural Farming	01	0	525
	Exhibition	Natural Farming	01	01	2610
	Exposure visit	BAFA	01	0	11
06	**Publications**	0	0	0	0
07	**Other Activities** (Pl.specify)	0	0	0	0

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 : Nil

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

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

Sr. No.	Name of agencies and departments	Nature of convergence
1	District Collector and admin. departments	Planning and organizing Seminar on Natural Farming in presence of Hon. Governor, Hon. CM and other VIPs.
2	ATMA Project & SAMETI	Training programmes on Natural Farming
3	NABARD, Valsad	Organizing Farmers Shibir on Millet Awareness
4	Dept. of Agril. Valsad.	Involvement for delivering lectures, farmers seminars and extension functionaries trainings.
5	Dept. Social forestry	Soil water samples testing
6	Harshal Agro, Pardi	Soil water samples testing
7	Netafim Irrigation	Soil water samples testing

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

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

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

S. No	Feed Back
1	Chickpea variety GJG-6- Early maturity, Bold size, more number of pod per plant
2	Paddy variety Sardar have more tillers , non lodging, Mid late and small seeded
3	GT 105 variety - Early (140-160 Days) , Dual purpose, bold size with white colour, good for Dal making, good cooking quality, less problem of wilt and sterility mosaic virus.
4	Indianbean variety Guj.Val-2 errect flowering habit , flowering starts from each internode.
5	Paddy variety GNR-9 have Deep Red colour, Bio fortified, more tillers , non lodging, Mid late , higher production potential

6	Fingermillet (Guj Nagli-9) variety gives good yield in longer rainy season .
7	Demonstrated variety of Bittergourd gave good yield. The variety also fetched good market price. Mosaic disease incidence was found less
8	Dapog method seedlings requre one week less time for ready to TP
9	Ghan Jivamrut improved the soil health

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

- Bold seeded early matured, lodging resistant, red coloured biofortified variety in paddy should be developed
- Pigeonpea variety which mature early on conserve moisture needed for sloppy muram type soil.
- Chickpea variety White coloured (Kabuli) should be developed on conserve moisture for South Gujarat condition.
- Early to midlate lodging resistant variety for finger millet should developed for heavy rainfall area of south Gujarat
- Indian bean variety with red colour seeds needs to be developed

11. Technology Week celebration during 2023: No, If Yes

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

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)
HYVs of Paddy	150	82	24000 Rs/ha.	45000 Rs/ha.
HYVs of Fingermillet	75	70	15,000 Rs/ha.	19600 Rs./ha.
HYVs of greengram	100	84	18900 Rs/ha	33800 Rs/ha
HYVs of pigeonpea	80	76	12700 Rs/ha	28700 Rs/ha
HYVs of blackgram	50	65	16900 Rs/ha	27000 Rs/ha
HYVs of Sugarcane	25	62	123000 Rs. / ha.	153000 Rs/ha.
INM in Brinjal	105	55	84,500Rs./ha.	124,400 Rs/ha.
HYV s of Green fodder	47	90	31,400 Rs/ha.	46,800 Rs./ha.
IPM,Fruit fly traps in mango	55	90	1,25,000 Rs./ha.	1,74,000 Rs./ha.
Mushroom Production	29	55	--	11500 Rs/farmer

C. Cases of large scale adoption

Colocasia (*Colocasia esculenta* L.) : A profitable intercrop in Mango Orchard

Situation analysis

Valsad district is located in South-Eastern part of Gujarat. Paddy and sugarcane are the important crops of district. Brinjal, Chilli, Okra, and Cucurbits are also important vegetable crops. Amongst fruit crops Mango covered large area. "*Alphanso"* variety of mango popularly known as **"VALSADI HAFUS"** is world famous for their unique taste. The return from mango plantation declined due to old and senile mango plants grown at wide distance i.e 10 m X 10 m. Only 40 trees can be grown in one acre of land and alternate bearing habit of *Alphanso* mango rendered mango cultivation less remunerative to the resource poor tribal farmers. In South Gujarat, leaf of Colocasia esculanta L. locally known as "arvi" (or "alvi") is used to prepare delicious snacks called "Patra". It is grown by farmer during kharif on the back yard under wet condition and harvest fresh leaves for six months.

Plan, Implement, Support

Looking to the increasing demand of fresh *Colocassia* leaves in local market, Mr. Hrishibhai Patel a 52 years old mango orchard owner (2.0 ha) of Kharedi village of Dharampur block of Valsad district desires to grow it on commercial basis utilizing the space under mango orchard because it is perennial in nature . Since the crop required partial shade for good growth, Mr. Patel thought intercropping under large trees of mango will be more suitable.

For technical guidance, Mr. Patel was contact to KVK. Under the guidance of KVK scientist he ploughed the land (0.20 ha.) and mixed 3 tones of FYM. Then form ridges and furrow at 45 cm x 60 cms and planted cormels (root bulb) of about 25 gms at the depth of 5-6 cms with the onset of monsoon (June-July). He choose local cultivar i.e *Konkan hartiparni*, having broad leaves with dark green colour. Based on soil analysis data he applied 45-20-00 kg NPK/ ha as basal dose. After 60 days again he applied 40 kg N/ha. as top dressing. Earthing up was done when plants attend the height of about 1-1.5 ft. Mr. Patel was maintained moisture in the field by supplementary irrigation. No any pest and diseases were observed during first two years. Mr. Patel started harvesting of leaves after two months of planting and graded according to size makes bunches of average 50 to 60 leaves and covered it in polyethylene bags to maintain moisture until reach to the market.

Output

Colocassia crop found more remunerative as intercrop in the wide spaced orchard of mango because, it is a tuber crop, which needs less fertilizers and pesticide also it is perennial crop, farmers can harvests leaves and tubers up to 3 years from same field where as old senile mango plant due to alternate bearing habit gave very less annual average return. Although, intercropping of *Colocassia* with mango, maintained micro climatic condition in the orchard. Mr. Hrishibhai Patel said that one can harvest leaves 2-3 times in a month with good management practices. Mr. Patel earned Rs. 3000 to 5000 per month regularly from selling of leaves and Rs. 10,000 to 12,000 from selling of root tubers as seed among other farmers of his nearby villages. Annually, he gets additional income of around Rs. 50, 000 other than mango orchard.

The analysis of pooled data of three years showed that cultivation of *Colocassia* gave higher monetary return to the tune of Rs.45,000 per annum. However, from sole mango cultivation in orchard of 0.20 ha. Mr. Patel earned about 25,000 to 30,000 Rs. / annum. He got about 30 per cent higher net return from with intercrop of *Colocassia* in mango from the same piece of the land. Thus, intercropping of *Colocassia* in mango orchard become a best technology for farmers to raise income.

Outcome

Based on the impressive results that emerged from the success of Mr. Patel has inspired as many as 90 farmers of 18 villages of the district has started cultivation of *Colocassia* crop on large scale under the dynamic leadership of Mr. Patel. The technology has covered about 05 ha. of land. Farmers could earn sizable additional income by growing this crop either as a sole crop or intercrop in mango orchard. It has improved economical status of the small farmers. The village is famous for quality *Colocassia* leaves and tubers.

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

- High yielding varieties were promoted in Paddy - Sardar, GNR-9, Green gram- GM-6,GM-7 Black gram – GU-3, Chickpea- GJG-6, Pigeon pea- GT-105, Finger millet- Guj. Nagli-9, Indian bean – Guj. Val-2, Green fodder Co4
- Women entrepreneur development : Mushroom, Vegetable nursery
- Nutritional Security – Kitchen garden (Gangama circle)

- Production and Supply of technological inputs- – Paddy (67.52 qt HYVs variety produced and supplied to 560 farmers), Sugarcane 139.5qt HYVs variety produced and supplied to 12 farmers), Vegetable seedlings (158500 HYVs variety produced and supplied to 1073 farmers)
- More than 1250 farmers have adopted HYVs of perennial fodder variety CO-4.
- Bio agent production – Fruit fly traps (About 117 ha. Mango crop area covered.)
- Soil Testing Campaign. (More than 360 farmers were covered for soil test and provided soil health cards.)
- Adoption of bio pesticides like Neem oil, Pseudomonas, Beuvaria, Verticillium, fruit fly traps, etc.
- Promoting organic farming- More than 408 farmers were promoted for use of vermicompost.
- Promotion of natural farming – About 566 farmers were provided Ghan Jivamrut and Agniyastra,

KVK organised about 21 training of 2-3 days duration for TMT/FMT and farmers of 7 districts of South Gujarat in collaboration with ATMA project. KVK also give lectures in about 246 programmes of VBSY covering more than 80000 farmers

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 2023	02	1157	--
Feb 2023	01	5690	--
Mar 2023	04	22760	--
Sept 2023	01	521	--

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
Valsad	Text only	4	2	0	0	1	1	8
	Voice only	0	0	0	0	0	0	0
	Voice & Text both	0	0	0	0	0	0	0
	Total Messages	**4**	**2**	**0**	**0**	**1**	**1**	**8**
	Total farmers Benefitted	**22760**	**5692**	**0**	**0**	**1155**	**521**	**30128**

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 compost	2003-04	0.02	Eudriluseugeniae	Vermicompost	197 q	34,000	118200	285 farmers
				Eudriluseugeniae	Vermiculture	199 kg		49750	123 farmers
2	Dairy	2003-04	0.2	H.F., Gir	Milk	2016 lit	117000	65000	
					FYM	40 tone	--	16000	Farm use
3	Veg. Nursery	2002-03	0.2	Hy seedling of Brinjal, Chilli, Tomato	Seedling	158500	85750	186450	1073 farmers

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									
Paddy	10/06/23	25/10/23	1.50	Sardar	Seed production	6752 kg	85850	270080	560 farmers
Spices & Plantation crops									
Fruits									
Mango	1999	-	3.0	Kesar, Alphanso	Commercial	125 kg	22000	82000	
Others (specify)									
Sugarcane	18/12/2021	10/1/2023	0.50	Co.N.-13073	Seed production	139 qt	45000	54627	12 farmers
				Co.N.- 13073	Commercial	150 qt		49500	
Fodder	24/11/2021	Multicut	0.20	Co.-4	Seed production	25000 tussecks	3500	25000	
Eucalyptus	2015	--	0.25	JK-413	Commercial	--	standing	standing	
Casurina	2021 2022	--	3.00 4.00	Clonal CPM-C-5	Commercial	--	standing	standing	

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

Sl. No.	Name of the Product	Qty	Amount (Rs.)		Remarks
			Cost of inputs	Gross income	
1	Fruitfly trap (Mango)	1168 no.	19000	52610	45 farmers
2	Jivamrut	10420 kg	104000	156300	303 farmers
3	Agniystra	563 lit	15000	19705	263 farmers

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	
1	Cow	H.F., Gir	Milk	2016 lit	117000	65000	
			FYM	40 tone	--	16000	Farm use
			Sale- Purchase of animals (Cow)	10	101500 (Purchase of cows)	198853 (Sale of cows)	

E. Utilization of hostel facilities

Accommodation available (No. of beds): 30 beds

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January **2023**	100	3	
February **2023**	153	5	
March **2023**	0	0	
April **2023**	0	0	
May **2023**	158	12	
June **2023**	181	14	
July **2023**	100	8	
August **2023**	0	0	
September **2023**	148	4	
October **2023**	171	5	
November **2023**	25	1	
December **2023**	141	4	

F. Database management

S. No	Database target	Database created
1	Farmers database for Kisan Sarthi- 5000	5693

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

H. Performance of Nutritional Garden at KVK farm

If Nutritional Garden developed at KVK farm/Village Level? No

If yes,

Nutritional Garden developed at KVK farm - Nil

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

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

No. of Villages covered	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers covered
Amdha, Panas, Sukhala, Khuntali, Nanivahiyal	Vegetable crops	Brinjal, Tomato, Chilli, Fenugreek, Spinach, Coriander, Carrot, Raddish, Cowpea, Pigeon Pea	69
	Fruit crops		
	Others if any		

H. Details of Skill Development Trainings organized - Nil

2. FINANCIAL PERFORMANCE

A. Details of KVK Bank accounts

Bank Account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute	State Bank of India	Ahmedabad	2628	Gujarat Vidyapith	10295506650	380002006	SBIN0002628
With KVK	1) State Bank of India 2) State Bank of India 3) Bank of Baroda	Dehgam Dehgam Motapondha	07811 07811 DBMPON	Gujarat Vidyapith, Krishi Vigyan Kendra Gujarat Vidyapith, Krishi Vigyan Kendra Krushi Vigyan Kendra, Ambheti	35719395798 40636744564 92900100003644	396002026 396002026 396012575	SBIN0007811 SBIN0007811 BARBODBMPON

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

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	25100000	18236371	22917848
2	**Traveling allowances**	1523500	1170248	1278873
3	**Contingencies**			
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)		**26623500**	**19406619**	**24196721**
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)		0	0	0
C. REVOLVING FUND		0	0	0
GRAND TOTAL (A+B+C)		**26623500**	**19406619**	**24196721**

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2018 to March 2019	8699572	2098996	1502101	9296467
April 2019 to March 2020	9296467	1965956	1465292	9797131
April 2020 to March 2021	9797131	1812959	1233826	10376264
April 2021 to March, 2022	10376264	2862049	1442348	11795965
April 2022 to March 2023	11795965	2290677	3041565	11045077
April 2023 to March 2024	11045077	2014712	2789560	10270229

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

Name of the staff	Designation	Title of the training programme	Institute where attended	Mode (Online/Offline)	Dates
R.F.Thakor, K.A. Patel, A.R. Patel, L.T.Kapur, M.M.Gajjar, B.M.Patel, P.J. Joshi, P.R.Ahir, P.R.Patel	Senior Scientist & Head and all technical staff	Natural Farming	Gurukul, Kurukshetra, Hariyana	Offline	20-22/04/23
R.F.Thakor, K.A. Patel, A.R. Patel, L.T.Kapur, M.M.Gajjar, B.M.Patel, P.J. Joshi, P.R.Ahir, P.R.Patel	Senior Scientist & Head and all technical staff	Natural Farming	KVK-Gandhinagar	Offline	10/03/23 29/04/23
K.A. Patel, L.T.Kapur, M.M.Gajjar, B.M.Patel, P.R.Patel	SMS, Programme Assistant, Farm Manager	Capacity building and brain storming on NF	NAU, Navsari	Offline	06/04/23
P. R. Ahir	Programme Assistant (Home Science)	Capacity building of Agriculture Extension profesionels to promote Agro processing	ICAR, CIPHET, Ludhiana	Offline	07-11/08/23
A. R. Patel, L.T.Kapur, P.J.Joshi, P.R.Ahir	SMS, Programme Assistant	Awareness programme on millet	KVK-Dang, NAU	Offline	04/02/23 03/10/23
M. M. Gajjar	SMS(Agro)	Safe and judicious use of glyphosate	NIPHM, Hyderabad	Online	28/06/23

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.

S. No.	Name of the programme	No. of villages adopted	Key activities performed	No. of activities carried out	No. of families covered
1	NARI	05	Training	11	302
			Nari compain	01	646
			Method demonstration	03	81
			Shibir	02	149
			Group meeting	05	76

20. Details of Progress of ARYA Project : Nil

21. Details of SAP

S. No.	Types of major Activity conducted	No. of Programmes conducted	No. of Participants
1	Swachchta Hi Seva(15 Sep to 2 Oct,23) and Swachhta Pakhwada (16 to 31, Dec., 2023) - , Cleaning, Awareness, Microbial based Agricultural Waste Management by Vermicomposting etc	11	363

Sr. No	Name of KVK	Date	*Activity*	No of VIPs	No of Farmers	Others	Total
1	Valsad	15/09/23	Microbial waste mgt.	0	24	0	24
		18/09/23	Cleaning of kvk premise	0	12	0	12
		21/09/23	Awareness on Swachchta	0	0	53 students	53
		26/09/23	Awareness on Swachchta	0	54	0	54
		29/09/23	Awareness on Swachchta	0	37	0	37
		01/10/23	Cleaning of kvk premise	0	14	0	14
		02/10/23	Cleanining at village level	0	32	0	32
		18/12/23	Cleaning	0	22	0	22
		22/12/23	Awareness	0	64	0	64
		23/12/23	Kisan Divas	0	30	0	30
		28/12/23	Awareness programme	0	21	0	21

22. Books published 2023-24 : Nil

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

Honorable Governor of Gujarat and Chief Minister of Gujarat Attends Natural Farming Seminar at KVK Valsad, Gujarat.

A seminar on Natural Farming has been organized by Gujarat Vidyapith Krishi Vigyan Kendra, Valsad on 14th August,2023. On this occasion Hon'ble Governor of Gujarat Shri Acharya Devvratji, Hon'ble Chief Minister of Gujarat Shri Bhupendra Patel along with Minister of finance, Member of parliament, MLA and District collector visited Krishi Vigyan Kendra and observed Natural Farming unit.

Hon'ble Chief Minister of Gujarat in his key note address urged farmers to revive already depleted natural resources by propagating natural farming to save the soil, water, environment, animal and human health and ultimately overall agro eco systems.

In his presidential address Hon'ble Governor stressed upon the preserving of Natural biodiversity and climate resilient technologies for sustainable agriculture. He emphasized that cow based natural farming is the most important way and alternate of agro ecological sustainability to mitigate and address the climate change as well as chemical free agriculture.

Shri Jatinbhai Patel and Shri Rohitbhai Patel, both farmers practicing natural farming shared their experiences with participating farmers and highlighted the importance of Jeevamrut, Bijamrit, Dashaparni Ark, Agniastra, Bramhastra, etc. in natural farming.

All the dignitaries visited the stalls exhibiting natural farming products and millet base value added products. More than 1800 farmers along with the officials of Krishi Vigyan Kendra's and Line departments attended the programme.

APR SUMMARY

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	67	1122	967	2089
Rural youths	0	0	0	0
Extension functionaries	06	157	46	203
Sponsored Training	19	416	77	493
Vocational Training	02	25	25	50
Total	94	1720	1115	2835

2. Frontline demonstrations

Crops/Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	0	0	
Pulses	121	12.6	
Cereals	310	78	
Vegetables	0	0	
Other crops	0	0	
Hybrid crops	25	2.5	
Total	456	93.10	
Livestock & Fisheries	0	0	
Other enterprises	91	91	Number
Total	91	91	Number
Grand Total	**547**	93.10	

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	06	80	80
Livestock	01	10	10
Various enterprises	0	0	0
Total	07	90	90
Technology Refined			
Crops	0	0	0
Livestock	0	0	0
Various enterprises	0	0	0
Total	0	0	0
Grand Total	**07**	**90**	**90**

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	410	113384
Other extension activities	28	-
Total	**438**	**113384**

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Awar e-ness	Other enterprise	Total
Valsad	Text only	4	2	0	0	1	1	8
	Voice only	0	0	0	0	0	0	0
	Voice & Text both	0	0	0	0	0	0	0
	Total Messages	**4**	**2**	**0**	**0**	**1**	**1**	**8**
	Total farmers Benefitted	**22760**	**5692**	**0**	**0**	**1155**	**521**	**30128**

6. Seed & Planting Material Production

	Quintal/Number	Value (Rs.)
Seed (q)	206.62 q	248430
Planting material (No.)	183500 no.	198950
Bio-Products (kg)	30882 Kg + 1168 No.	302785
Livestock Production (No.)	0	0
Fishery production (No.)	0	0

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value (Rs.)
Soil- 361	361	22230
Water- 194	194	9700
Plant - 64	69	0
Total- 619	**624**	**31930**

8. HRD and Publications

Sr. No.	Category	Number
1	Abstract	**0**
2	Workshops	0
3	Conferences	0
4	Meetings	16
5	Trainings for KVK officials	06
6	Visits of KVK officials	8
7	Book published	0
8	Training Manual	1
9	Book chapters	0
10	Booklet	0
11	Leaflets/ Folder/ Pamphlet	03
12	Research papers	01
13	Technical Bulletin	0
14	Popular article	02
15	Lead papers	0
16	Seminar papers	0
17	Extension folder	0
18	Proceedings	1
19	Award & recognition	0
20	On-going research projects	0
21	Other (Newsletter)	02