ANNUAL PROGRESS REPORT

(JANUARY-2022 TO DECEMBER, 2022)

SUBMITTED TO

ICAR-ATARI,

ZONE-VIII, PUNE

SUMITTED BY

KRISHI VIGYAN KENDRA

SAMODA-GANWADA

TA.SIDHPUR, DIST.PATAN (GUJARAT)

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)
Krishi Vigyan Kendra	**Office**	**FAX**	kvksamoda@yahoo.com	www.kvkpatan.in
Saraswati Gram Vidhyapith Samoda-Ganwada Ta.Sidhpur, Di. Patan Gujarat, Pin. 384 151	02767 285528			

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

Address with PIN code	E mail	Website
Saraswati Gram Vidyapeeth,Samoda-Ganwada, Ta.Sidhpur, Di. Patan, Gujarat, Pin. 384 151 (Gujarat)	kvksamoda@yahoo.com	www.sgvpngo.org

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

Name	Telephone / Contact		
Dr. Upesh Kumar	**Mobile**	**Email**	**Website**
Senior Scientist and Head Krishi Vigyan Kendra, Samoda-Ganwada Ta.Sidhpur, Di.Patan Gujarat, Pincode-384151	7974415593	kvksamoda@yahoo.com	www.kvkpatan.in

1.4. Date and Year of sanction: 1993

1.5. Staff Position (as on December, 2021)

					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	Current Pay Band	Current Grade Pay	Date of joining	
1.	Senior Scientist and Head	Dr.Upesh Kumar	9425661514	Plant Pathology	Level-13A	-	01/10/2016	
2.	Subject Matter Specialist	Shri G.A.Patel	9879924655	Plant Pathology	Level-10	-	06/05/1993	
3.	Subject Matter Specialist	Vacant	-	Extension Education	Level-10	-	-	
4.	Subject Matter Specialist	Smt. H.M.Patel	9909497009	Home Science	Level-10	-	19/08/2002	
5.	Subject Matter Specialist	Shri S.S. Darji	9909941995	Horticulture	Level-10	-	02/04/2012	
6.	Subject Matter Specialist	Shri R.P.Chaudhari	9574620447	Agronomy	Level-10	-	16/04/2015	
7.	Subject Matter Specialist	Shri S.J.Patel	9662654302	Animal Science	Level-10	-	01/09/2016	
8.	Programme Assistant	Smt. J.S.Patel	9909847367	-	Level-6	-	27/07/1996	
9.	Computer Programmer	Shri D.R.Patel	9979161440	-	Level-6	-	06/05/1993	
10.	Farm Manager	Shri D.N.Patel	9825703608	-	Level-6	-	22/02/1996	
11.	Accountant/ Superintendent	Shri N.B.Patel	9714325839	-	Level-6	-	25/01/1996	
12.	Stenographer	Shri J.K.Patel	9909301273	-	Level-4	-	25/01/1996	
13.	Driver 1	Shri R.A.Patel	9727016216	-	Level-3	-	14/08/2010	
14.	Supporting staff 1	Shri R.H.Desai	9879536469	-	Level-2	-	14/05/1993	
15.	Supporting staff 2	Shri R.D.Thakor	9586532371	-	Level-2	-	25/01/1996	
16.	Supporting staff 3	Shri P.V.Senma	9913298630		Level-2	-	25/01/1996	

1.6. Total land with KVK (in ha):

S. No.	Item	Area (ha)
1	Under Buildings	1.00
2.	Under Demonstration Units	2.00
3.	Under Crops	9.00
4.	Horticulture	5.00
5.	Pond	-
6.	Others if any (Specify)	3.00
	Total	**20.00**

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	1993	694	21,87,250=00	-	-	-
2.	Farmers Hostel	ICAR	1999-2000	308.82	12,37,848=11	-	-	-
3.	Staff Quarters (9)	ICAR	1996-97	731	16,89,512=74	-	-	-
4.	Demonstration Units (2)	RKVY	2012-13	4,000	5,45,000=00	-	-	-
5	Fencing	ICAR	2001-02	-	2,99,902=00	-	-	-
6	Rain Water harvesting system	-	-	-	-	-	-	-
7	Threshing floor	ICAR	2006-07	262.89	2,68,039=00	-	-	-
8	Farm Godown	ICAR	2006-07	44.89		-	-	-
9.	Implement shed	ICAR	2011-12	-	285640=00	-	-	-
10.	Other	-	-	-	-	-	-	-

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Running	Present status
Tractor	2019-20	6,13,417.00	1026.3 Hr	New tractor
Jeep	2009-10	7,60,236.00	257717 Km	Working
Motorcycle	2010-11	49,695.00	56520 Km	Working

C) Equipments & AV aids

Name of the equipment / Implements	Year of purchase	Cost (Rs.)	Present status
Slide Projector/ O.H.P.	1994	23,969=00	Working
Mega Phone	1994	2,140=00	Working
Computer + Printer	2006	66,530=00	Working
Stabilizer	2006	1,750=00	Working
LCD Projector	2007	54,326=92	Working
DVD Player	2007	3,846=16	Working

Laptop	2007	39,423=08	Working
P.A. System	2009	28,600=00	Working
Computer	2009	49,500=00	Working
Generator	2009	98,500=00	Working
Fax machine	2009	19,800=00	Working
Multicrop thresher	2011	1,46,000=00	Working
Rotary weeder	2011	51,450=00	Working
Power sprayer	2011	15,855=00	Working
Seed cum fertilizer drill	2011	27,250=00	Working
K-YAN	2013	76,650=00	Working
Oven	2014	7200=00	Working
Sewing Machine	2014	8700=00	Working
Computer (Dell inspiron 3250) (No.2)	2017	68000=00	Working
Epson –M-200 printer (No.1)	2017	12000=00	Working
AC (No.2)	2017	98000=00	Working
Podium –PD-900	2017	40000=00	Working
Promax audio trally	2017	16000=00	Working
Interactive white board-IR80	2017	32000=00	Working
Double sided pinup board	2017	17050=00	Working
Folding banner stand	2017	2000=00	Working
Projection screen	2017	3200=00	Working
Camera (No.3) Canon DLSR Sony digital Sony Handy cam	 2017 2017 2017	 43495=00 8390=00 31990=00	 Working Working Not working (Destroy)
Philips 55’ digital signage display	2017	99800=00	Working
Magazin display stand (No.2)	2017	7640=00	Working
Motorized scroller	2017	17300=00	Working
Acrylic charts (57)	2017	79800=00	Working
Rolling charts (27)	2017	8910=00	Working
Standy with flex banner (No.4)	2017	3680=00	Working
GPS-Navigator	2017	8000=00	Working
Sprayers No.4) -Aspee durotekic battery sprayer	2017 2017	 14650=00	

-Aspee Bolo motorized knapsack sprayer -Aspee duroteck hitech sprayer -Aspee (Marut sprayer)	2017 2017		Working
Nursery tools	2017	35965=00	Working
Water cooler with purifier	2017	52100=00	Working
Soil testing lab kit (No.2)	2017	172000=00	Working
Chaff cutter	2017	26964=00	Working
Grinder	2017	16065=00	Working
BP monitor	2017	1200=00	Working
Weighting scale	2017	1000=00	Working
Acrylic specimen box (30)	2017	10500=00	Working
Agrimedia video film (125)	2017	13125=00	Working
Double sided pinup board (No.2)	2017	34100=00	Working

1.8. Details of SAC meeting conducted in the year: 17-02-2022

Name and Designation of Participants

- Sri A. K. Patel, Campus Director, SGVP, Samoda-Ganwada, District – Patan
- Dr. P. T. Patel, DEE, Directorate Extension Education, SDAU, S.K. Nagar
- Dr. P. J. Patel, Research Scientist (Spices), S.D.A.U., Jagudan
- Dr. K. S. Patel, Asstt. Professor, ATIC D.E.E., SDAU, S.K. Nagar
- Dr. R. A. Patel, Senior Scientist & Head, KVK, District- Mehsana
- Mr M. S. Patel, Project Director (ATMA), ATMA, Patan
- Mr D. D. Patel, Deputy Director of Agril. (Exten.), Deputy Director of Agril. (Exten.), Patan
- Shri Rakesh K. Verma, D.D.M., NABARD, Patan
- Shri M. J. Patel, L.D.M., Patan
- Shri S.K. Momin, Deputy Director of Horti., Horticulture, Patan
- Shri Hiteshkumar D. Ninama, Deputy Director of Agril., S.S.N.N.L., Patan
- Shri A. J. Patel, Manager , G.G.R.C., Patan
- Smt Payal Jani, C.D.P.O., Sidhpur
- Shri Bharatbhai P. Patel, Range Forest Officer,Forest Department, Patan
- Dr. Ketal N. Desai, Veterinary Officer ,Department of Animal Husbandry, District - Patan

- Shri A.N. Shrimali, Representative N.Y.K., Nehru Yuwa Kendra, Patan
- Shri L.K. Balani, Representative N.Y.K., Nehru Yuwa Kendra, Patan
- Shri Nirpat Singh Kirar, Manager, Reliance Foundation, Patan
- ShriMukesh A Desai, Project Manager, Reliance Foundation, Patan
- Shri Jatin Hirapara, In charge, Kribhaco, Patan
- Shri A.G. Mangukiya, Depo In charge , G.N.F.C., Sidhapur
- Shri Bhupesh Vasoya, District Manager, IFFCO, Patan
- Shri Vipul Parmar, Depo In charge, G.S.F.C., Sidhapur
- Shri Karsanji G. Jadeja, Chairman, Banas FPO, Radhanpur
- Smt Bhikhiben Jayantibhai Patel, Progressive Farm women, Village- Madhupra, Taluka- Siddhpur
- Smt Lilaben Harshadbhai Chaudhary, Progressive Farm women, Nagvasan, Taluka- Siddhpur
- Smt Rajiben Shamalbhai Chaudhary, Progressive Farm women, Nagvasan, Taluka- Siddhpur
- Shri Dinesh Harjibhai Chaudhary, Progressive farmer, Village- Nagvasan, Taluka- Siddhpur
- Shri Dahyabhai Laxmanbhai Patel, Progressive farmer, Village-Matpur, Taluka- Patan
- Shri Jayantibhai Revabhai Patel, Progressive farmer, Village- Madhupra, Taluka- Siddhpur
- Dr Upesh Kumar, Member Secretary, Krishi Vigyan Kendra, Samoda-Ganwada

Recommendation of SAC Members	**Action against suggestion**
Promote location specific latest variety	KVK promote latest variety of field crops ➢ Pearl millet- GHB-1129 (Bio fortified variety)- 20 ha/ 50 Demo ➢ Cumin- GC-5 & CZC-94 (Organic farming)-15.4 ha/51 Demo ➢ Chickpea- GJ-5, Kak-250 ha/143 Demo
To conduct awareness programme on Residual effect of Pesticide	Input dealers Training ❖ Training - 05 No ❖ 182 No of participants ❖ Certificate distribution- 182 No Farmers Training ❖ No of training- 03 No

	❖ Participants-68 No
To Promote Natural farming for eco-friendly crop production	❖ Training- 29 No /760 Participant ❖ Demo-10 ❖ Awareness programme- 19 No/1808 Participants ❖ Established Demo unit at KVK
Conduct awareness programme on importance & use of Nano urea	❖ 01 Awareness programme- 172 ❖ Demo- sparing of Nano urea in 06 village- 120 ha ❖ 02 Training-48
To motivate M.I.S. in fruits & Vegetable crops	❖ Conduct 02 No of training programme ❖ Develop 01 Model village (90 % farmers adopt in MIS system)
KVK Scientist should be present in Board meeting of F.P.O. as a expert member & Technical support to FPOs for adoption of diversified agriculture	❖ KVK regularly provide the technical support to FPOs & focus on seed production, organic farming ❖ KVK work as a member of advisory committee of FPOs ❖ KVK regularly provide the technical support to FPOs & focus on seed production, organic farming
To organize awareness programme on Self Seed Production	❖ KVK promote seed production of self pollinated crops- Wheat, Chickpea & cumin through FPOs
To motivate the farmers for green manuring practices for maintaining soil health	❖ 01 No of training, Demo- 05 ha/ 20 Demo
To organize training programme for using bio-pesticide & bio fungicide for organic farming	❖ No of training 07 No(200 Participants) ❖ Demo- 04 No (80 ha/ 200 Demo) ❖ Other extension activities like- Field day, Group meeting, Gosthi etc)
To promote kitchen gardening among the farming community.	❖ Training- 05 (134 Participants) ❖ Demo-01 (80 Demo) ❖ Field day- 03 No (109 Participants) ❖ Group meeting- 03 (42 participants)
To impart the training on value addition in fruits &	❖ Conduct Poshan Mah- 03 No of activities (169 Participants)

vegetables for Anganwadi Workers	
Awareness about feed management in milch animal	❖ Conduct Demo- 280 Demo (112 Ha)

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

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

S. No	Farming system/enterprise
1.	Crop production – Dairy
2.	Crop Production – Horticulture – Dairy
3.	Poultry Farming.
4.	Cropping system predominant in district - Castor - Cotton - Green gram/ Black gram/ Cluster bean – Wheat/ Mustard/ Chickpea/ Cumin / Funnel – Pearl millet

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

a) Soil type

S. No.	Agro-climatic Zone	Characteristics
1	Zone No.4 (Patan, Saraswati, Sidhpur and Chansama taluka)	- Average rainfall is 610 mm. - Soil type is loamy, sandy, saline & medium black. - Main crops- Cotton, Wheat, Castor, Cumin, Bajara, Mustard, Fennel, Chilli, Carrot
2	Zone No.8 (Harij, Sami, Shankheswar, Radhanpur and Santalpur taluka)	- Average rainfall is 500mm. - Soil type is loamy, sandy, saline and medium black. - Main Crops - Rainfed Cotton, Wheat, Gram, Dill seed, Mustard & Cumin.

B) Topography

S. No.	Agro ecological situation	Characteristics
1	Alluvial sandy soil with low rainfall	Low rainfall dry climate
2	Saline soil with low rainfall	Low rainfall, dry climate, and absence of vegetative cover
3	Salt affected soil	Low rainfall dry climate and absence of vegetative cover

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1.	Heavy black soil	- High Water holding capacity - Low permeability - Water logging condition - Fertile soil	30400
2.	Medium black soil	- Medium WHC - Medium permeability - Fertile soil	334400
3.	Loamy soil	- More retain water and nutrient than sandy soil and low retain water and nutrient than black soil	213220
4.	Sandy soil	- Low WHC - High permeability	165424
5.	Saline soil	- Salts accumulation on the soil surface - Water logging condition - Crack formation during Summer Season	109535

2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2021)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (Qt./ha)
A	**Field Crop**			
	Bajra-Kharif	1065	577	5.42
	Bajra-Summer	5745	15190	26.44
	Cotton- Desi	18290	12157	6.64
	Hybrid	34900	31375.1	8.99
	Castor	111980	180960	16.16

	Mustard	29262	44420	15.18
	Wheat	40180	137355	34.18
	Pulses Gram	7180	3698	5.15
	Green-gram	894	407	4.55
	Black-gram	1789	850	4.75
	Cluster bean (Seed)	42085	25335	6.02
	Moth bean & cowpea	321	157	4.88
B	**Fruit crops (Area- Ha, Production in M.T. & Productivity in M.T./Ha)- 2018-19**			
	Citrus	850	10200.4	12.00
	Mango	103	515.00	5.00
	Ber	369	3070.80	10.49
	Guava	31	279.00	9.00
	Pomegranate	662	7480.60	11.30
	Date Palm	188	1314.00	6.99
	Papaya	151	6267.00	41.50
	Aonla	161	1376.55	8.55
	Total/ Average	**2620**	**31303.36**	**12.02**
C	**Vegetable crops (Area- Ha, Production in M.T. & Productivity in M.T./Ha)- 2018-19**			
	Potato	767	18247	23.79
	Brinjal	349	6491	18.60
	Cabbage	228	4150	18.20
	Tomato	174	4289	24.64
	Cauliflower	310	5766	18.60
	Cucurbits	496	8839	17.82
	Total/ Average	**3748**	**80656**	**21.50**
D	**Spice crops (Area- Ha, Production in M.T. & Productivity in M.T./Ha)- 2018-19**			
	Cumin	6421	32749	0.51
	Fennel	2357	4243	1.80
	Coriander	100	168	1.68
	Fenugreek	850	1641	1.93
	Isangul	521	511	0.98
	Ajwain	180	166	0.92
	Suwa	3600	5256	1.46
	Total/ Average	**71821**	**44734**	**0.82**

E	Flower crops (Area- Ha, Production in M.T. & Productivity in M.T./Ha)- 2018-19			
	Rose	49	427	8.71
	Marigold	57	523	9.18
	Mogra	03	22	7.33
	Total/ Average	**109**	**972**	**8.92**

Source: District agriculture/ Horticulture/ Animal Husbandry department.

2.5. Weather data (2022)

Month	Rainfall (mm)	Temperature (^{0} C)		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
January	-	22.60	10.63	-	-
February	-	28.91	15.02	-	-
March	-	37.41	23.63	-	-
April	-	40.02	25.17	-	-
May	-	43.37	28.60	-	-
June	48	38.23	28.57	-	-
July	223	32.46	25.93	-	-
August	268	31.69	25.25	-	-
September	66	32.88	24.50	-	-
October	-	33.81	24.20	-	-
November	-	32.22	17.36	-	-
December	-	27.13	17.35	-	-
Total	**605**	-	-	-	-

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

Category	Population	Production	Productivity
Cattle			
Crossbred	123530	1104	3.68 kg./day
Indigenous	7493	2520	8.40 kg./day
Buffalo	363514	1350	4.50 kg./day
Sheep			

Crossbred	53750	-	-
Indigenous	-	-	-
Goats	102937	-	-
Pigs	131	-	-
Crossbred	-	-	-
Indigenous	-	-	-
Rabbits	185	-	-
Poultry			
Hens	26210	7207750 egg./yr.	275 egg./bird/yr.

2.7. Details of Operational area / Villages

Taluka / Block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Siddhpur	Mamvada, Ganeshpura, Madhupura, Khali	Blackgram Green gram Castor Cotton Mustard Wheat Chickpea Bajra Cumin Fennel Tobacco Carrot Potato Chilli Pomegranate Kagzi lime	-Average productivity is low in major crop. -Leaf curl infestation in chilli -Low ground water table. -Soil productivity status is low -Problematic soil- Saline & Alkaline soil -Flower dropping in cotton -Pest & diseases intensity high-para wilt in cotton, termite in wheat, Blight in Cumin, Mealybug in Cotton, Semi-looper & prodenia in castor, and citrus canker & dieback in lime -Pink ball worm infestation in BT Cotton -Less adoption of horticultural crops -Loss of food grains due to poor knowledge and storage facility -Average milk production per animal is low	-Average productivity of major crops is low -Micro irrigation system -Reclamation of problematic soil -Area under fruit & vegetable crop is very low -Scope & Importance of secondary agriculture -Average milk production per animal is low -Farm mechanization -Women empowerment through income generation activities -No use of micronutrient in fruits & vegetable crop
Patan	Matpur			
Chanasma	Jakhana, Dhanodharda			
Saraswati	Kanosan			
Harij	Adiya, Boratwada & kalana			
Sami	Nayka & Sonar			
Sankeshwar	Dhanora, Manvarpura, Datisana			
Radhanpur	Kalyanpura, Bhilot, Sultanpura, Vadlara			

2.8. Priority thrust areas:

Crop/ Enterprise	Thrust area	Crop/ Enterprise	Thrust area
Green gram/ Black gram	Improved variety, INM, IWM, MIS, IPM & IDM	Chili	Nursery Management INM MIS IDM IPM Value Addition
Castor	Hybrid variety, INM, MIS, IWM, IPM & IDM	Pomegranate and Lime	Plant propagation technique Training & Pruning Rejuvenation of old orchards Micro Nutrient Application MIS IDM & IPM Value Addition
Cotton	Hybrid variety, INM, MIS, IWM, IPM & IDM	Cumin/ Fennel/ Ajwain	Production & management technology Nutrient & Water management Integrated Pest & Disease management & Value addition
Chickpea	Improved variety, INM, MIS, IWM, IPM & IDM	Live-stock	Dairy Management Feed Management Disease Management Breeding Management Production of livestock feed and fodder Animal nutrition management
Mustard	Improved/ Hybrid variety, INM, MIS, IWM, IPM & IDM	Fodder Bajra and Sorghum	Integrated Crop Management Integrated Nutrient Management Fodder production
Wheat	Hybrid variety, INM, MIS, IWM, IPM & IDM	Home Science	Use of solar cooker Fruits & veg. preservation Farm women empowerment through income generation activity Drudgery reduction House hold Food Security by kitchen gardening Income generating activity Low cost & high nutrition diet Women & child care

3. TECHNICAL ACHIEVEMENTS

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

OFT				FLD			
1				2			
Number of OFTs		Number of farmers		Number of FLDs		Number of farmers	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
8	8	55	60	21	21	560	570

Training				Extension Programmes			
3				4			
Number of Courses		Number of Participants		Number of Programmes		Number of participants	
Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
87	114	1810	3791	110	111	4125	13183

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
53	37.45	22700	57393

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
-	-		5825 Kg & 2100 Lit

Abstract of intervention under taken

S.No.	Major crops & enterprises being practiced in cluster villages	Prioritized problems in these crops/ enterprise	Extent of area (ha/No.) affected by the problem in the district	Names of Cluster Villages identified for intervention	Intervention (OFT, FLD, Training, extension activity etc.)*
1	Cotton	Imbalance use of nutrient Heavy infestation of pest- pink boll worm Heavy incidence of disease- Wilt	11,000 ha	Chansama	Training, FLD, Field Day, Field visit etc
2	Black gram	Use of old/ local variety Imbalance use of nutrient Heavy infestation of pest Heavy incidence of disease	1000 ha	Sankeshwar & Sami	Training, FLD, Field Day, Field visit etc
3	Castor	Imbalance use of nutrient Scarcity of irrigation water Heavy infestation of pest Heavy incidence of disease	75000 ha	Saraswati, Siddhapur	Training, FLD, Field Day, Field visit etc
4	Chickpea	Use of old/ local variety Imbalance use of nutrient Scarcity of irrigation water Heavy infestation of pest- Heliothis Heavy incidence of disease- Wilt	5000 ha	Sankeshwar & Sami	Training, FLD, Field Day, Field visit etc
5	Mustard	Use of old/ local variety Imbalance use of nutrient Scarcity of irrigation water Heavy infestation of pest- Aphid Heavy incidence of disease-blight	20000 ha	Chanasma & Patan	Training, OFT, FLD, Field Day, Field visit etc
6	Wheat	Imbalance use of nutrient Scarcity of irrigation water Heavy infestation of pest- termite	25000 ha	Siddhapur	Training, OFT, FLD, Field Day, Field visit etc
7	Chilli	Imbalance use of major nutrient& no use of micro nutrient Scarcity of irrigation water Heavy infestation of pest- sucking pest	75 ha	Chansma, Radhanpur	Training, FLD, Field Day, Field visit etc

		Heavy incidence of disease – leaf curl			
8	Fennel, Ajwain & Cumin	Use of old/ local variety Imbalance use of nutrient Scarcity of irrigation water Heavy incidence of disease-blight	25000 ha	Chanasma,Radhanpur,Santalpur Patan	Training, FLD, Field Day, Field visit etc
9	Milch animal-Cow & Buffalo	Heavy infestation of endo & ecto parasite No use of by pass fat and bypass protein feed No or improper use of mineral mixture Not availability of green fodder in round the year	675 % animal are affected	Siddhpur, Saraswati	Training, OFT, FLD, Field Day, Field visit etc

3.2. Technology Assessment (Kharif 2022, Rabi 2021-22, Summer 2022)

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Spices crop	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation	01		01				01			03
Integrated Pest Management				01						01
Integrated Crop Management					01					01
Integrated Disease Management							01			01
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Storage Technique										
Mushroom cultivation										
Total	**01**		**01**	**01**	**01**		**02**			**06**

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

Thematic areas	Cattle	Poultry	Piggery	Rabbitry	Fisheries	TOTAL
Evaluation of Breeds						
Nutrition Management	01					01
Disease of Management	01					01
Value Addition						
Production and Management						
Feed and Fodder						
Small Scale income generating enterprises						
TOTAL	**02**					**02**

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
Varietal Evaluation	Castor	Assessment of Hybrid varieties in castor **T1** - GCH-7 (Hybrid Variety) **T2** - GCH-8 (Hybrid Variety) **T3** - GCH-9 (Hybrid Variety)	10	10	0.25
	Ajwain	Assessment of variety of Ajwain **T1:-** Local **T2:-**G.A-2 **T3:-** A.A-93	04	04	0.25
Integrated Nutrient Management	Wheat	Assessment of nutrient management in wheat **T1** - 200: 100: 00KG/ ha N,P & K **T2** - 120:60:00 Kg/ha N,P & k (as per STV) **T3** - T2+ 2% foliar spray of urea at milking stage	10	10	0.25
Integrated Pest Management	Cotton	Assessment of pesticides for management of Pink boll worm **T1 ;** spraying of Quinalphos 25 EC @ 3 ml./ lit. water **T2 ;** Spraying of *Beauvaria basiana* @ 8 gm./ lit. water at initiation of flowering & repeated by 10 days interval (5 sprays) **T3 :** use of MDP paste , apply about 1000 drops / ha. between the upper two tiny branches of plant at initiation of flowering & repeat it by 30 days interval (3 times)	10	10	2.5
Integrated disease management	Cumin	Assessment of IDM module for the management of blight in cumin **T1:-** No seed treatment – spray mancozeb 75 wp @ 2 to 2.5 gm./ lit. of water **T2:-** Seed treatment y mancozeb 75 wp @ 3 gm./ kg. seed & spray of mancozeb 75 wp @ 3.5. gm./ lit. water along with solution 2.5 ml/lit. at 35-45 DAS respected by 10-12 days interval (4 sprays) **T3:-** At initiation of disease spray of krisoxim methyl 50 SC @ 1 ml / 1 lit. water, followed by second spray at 15 days of first spray.	10	10	2.5
Integrated Crop Management	Watermelon+ Cucumber	Assessment of Cropping system **T1:-** Chilli- Fallow **T2:-** Chilli- Watermelon **T3:-** Chilli- Cucumber	04	04	0.25
Total			**48**	**48**	**6.0**

B.2. Technologies assessed under Livestock and other enterprises

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Nutrition management	Crossbreed cows	Assessment of mineral and deworming effect on anestrous condition in crossbreed cows **T1:** Use of green fodder, dry fodder, concentrate **T2:** Use of green fodder, dry fodder, concentrate + Chelated mineral mixtures @ 40 gm + trace minerals bolus **T3:** T2+ Deworming of animals	05	05
Disease management	Kankrej cow	Assessment of ectoparasite to control tick infestation in Kankrej Cow **T1:**Application of deltamethrine (1.25%) solution @ 3 ml/lit of water, spray and repeat 21 days **T2:** Application of amitraz 1%+cypermethrin 1% + piperonylbutoxide 5% solution @ 1ml/10 kg b wt topically along the midline and repeat after 21 days **T3:** Use of soap permethrin 5% + cetrimide 1% + aloevera 1% apply and massage the leather on every part of body and wash after 1 hour	05	05
Total			10	10

C. 1.Results of Technologies Assessed- **Year- 2021-22**

OFT-1

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
Castor	Irrigated	Low yield of castor due to high male flower & incidence of wilt disease in GCH-7	Assessment of Hybrid varieties in castor	10	T1 - GCH-7 (Hybrid Variety) T2 - GCH-8 (Hybrid Variety) T3-GCH-9 (Hybrid Variety)	No of Spikelet/ Plant & Yield Qtl/ha)	T1-17.2 No T2-18.6 No T3-16.3 No	T1-27.5 q/ha T2-29.2 q/ha T3-26.2 q/ha	✓ 8.14 more no of spikelet found under T_2 as on T1 ✓ 6.18 % yield enhancement in T_2 as on T_1	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	27.5	Qtl/ha	151278	5.5
Technology option 2	SDAU, S K Nagar	29.2	Qtl/ha	161940	5.6
Technology option 3	JAU, Junagadh	26.2	Qtl/ha	142353	5.1

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of hybrid variety in castor

2 **Problem Definition -** Low yield of castor due to high male flower & incidence of wilt disease in GCH-7

3 **Details of technologies selected for assessment-** T1 - GCH-7 (Hybrid Variety)
T2 - GCH-8 (Hybrid Variety)
T3 - GCH-9 (Hybrid Variety)

4 **Source of technology-** SDAU, S K Nagar & JAU, Juagadhh

5 **Production system and thematic area-** Varietal evaluation

6 **Performance of the Technology with performance indicators-**

No of spikelet/ Plant- T_1- 17.2, **T_2-** 18.6, **T3-**16.3

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques -** Farmers are convinced with the technology of T2 because under technology they found 6.18 % higher yield over own practice.

8 **Final recommendation for micro level situation –** The technology T-2 was found more effective over farmers practice & technology T2 is recommended for large scale dessimination

9 **Constraints identified and feedback for research-** No any Constraints

10 **Process of farmer's participation and their reaction**- Farmers are involved each & every activity during technology assessment. They are convinced with the technology & agreed for future adoption

OFT-2

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Wheat	Irrigated	Low yield of wheat due to imbalance use of plant nutrient	Assessment of nutrient management in wheat	10	T1 - 200: 100: 00KG/ ha N,P & K T2 - 120:60:00 Kg/ha N,P & k (as per STV) T3 - T2+ 2% foliar spray of urea at milking stage	No of effective tillers & Yield (qtl/ha) & Yield Qtl/ha)	T1- 3.26 No T2- 4.38 No T3- 4.46 No	T1-36.3 q/ha T2-42.1 q/ha T3-43.6 q/ha	✓34.35% more effective tillers in T_2 & 36.81% in T_3 as compare to T_1. ✓15.98 % more yield in T_2 & 20.11% in T_3 as compare to T_1	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	36.3	Qtl/ha	60529	3.4
Technology option 2	SDAU, S K Nagar	42.1	Qtl/ha	75189	4.0
Technology option 3		43.6	Qtl/ha	78556	4.1

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of nutrient management in wheat

2 **Problem Definition -** Low yield of wheat due to imbalance use of plant nutrient

3 **Details of technologies selected for assessment-** T1 -200: 100: 00 Kg/ ha N,P & K
T2 - 120:60:00 Kg/ha N,P & k
T3 - T2+ 2% foliar spray of urea at milking stage

4 **Source of technology-** SDAU, S K Nagar

5 Production system and thematic area- INM

6 Performance of the Technology with performance indicators-

No of effective tillers / Plant- T_1- 3.93 , **T_2-** 4.65, **T3-**4.72

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques - Farmers are convinced with the technology of T3 because under technology they found 20.11 % higher yield over own practice.

8 Final recommendation for micro level situation – – The technology T-3 was found more effective over farmers practice & technology T3 is recommended for large scale dessimination

9 Constraints identified and feedback for research- No any Constraints

10 Process of farmers participation and their reaction- Farmers are involved each & every activity during technology assessment. They are convinced with the technology & agreed for future adoption

OFT-3

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
Ajwain (2021)	Irrigated	Low yield of existing variety of Ajwain	Assessment of high yielding variety of Ajwain (G.A-2 & A.A-93)	04	T_1- Local Variety T_2- G.A.-2 T_3- A.A.-93	No.of umbels per plant Yield	T1-140.2No T2-150.8 No T3-153.3 No	T1-13.60 q/ha T2-14.10 q/ha T3-14.40 q/ha	✓ 7.56% more umbel in T_2 & 9.34% in T_3 as compare to T_1. ✓ 3.68% more yield in T_2 & 5.88% in T_3 as compare to T_1		

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	B:C Ratio
13	14	15	16	17	18
T_1- (Farmer's practice)	-	13.60	Qtl/ha	89400	4.02
T_2 - G.A.- 2	SRS,Jagudan,S.D.A.U	14.10	Qtl/ha	93450	4.12
T_3 – A.A.- 93	NRCSS,Ajmer	14.40	Qtl/ha	95675	4.15

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

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of high yielding variety of Ajwain GA-2 & AA-93

2 **Problem Definition -** Low yield of existing variety of Ajwain

3 **Details of technologies selected for assessment-** variety of Ajwain GA-2 & AA-93

4 **Source of technology-** NRCSS,Ajmer and SRS,SDAU,Jagudan

5 **Production system and thematic area-** ICM

6 **Performance of the Technology with performance indicators- Net Return (Rs/ha)- T_1**:- 89400 **T_2:- 93450 T_3:- 9**5675

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques – 7.56** % higher umbel in T2 & 9.34 % more umbel are found in T3 as compared to T-1 resulted enhance 3.68 % higher yield in T2 & 5.88 % higher yield in T-3 as compared to T1. Farmers are seen the impact of technology & motivate for future adoption.

8 **Final recommendation for micro level situation – –** The technology T-3 was found more effective over farmers practice & technology T3 is recommended for large scale dessimination

9 **Constraints identified and feedback for research-** Required early maturity and powdery mildew resistant variety.

10 **Process of farmers participation and their reaction**- Farmers are involved in each & every activity during identification of problem, execution of technology & data collection. Farmers are seen more profit in recommended technology over own practice (farmers Practice) resulted farmers are appreciate the technology and agreed for future adoption.

OFT-4

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Cotton	Irrigated	Low yield of cotton due to infestation of pink boll worm	Assessment of IPM module for the management of Pink boll worm	10	**T1**- Spraying quinolphos 25EC @ 3 ml/ Lit of water **T2** –Spray *B basiana* @ 5 gm/ Lit of water at initiation of flowering & repeated by 10 Days interval (5 spray) **T3**- Use MDP paste- keep about 1000 drops/ ha between the upper two tiny branches of plant at initiation of flowering & repeatedly by 30 days interval (3 times)	% infestation of pink ball worm Yield (qtl/ha)	T1-24.9 % infestation of pink ball worm T2-20.6 % infestation of pink ball worm T3-18.7 % infestation of pink ball worm	T1-19.1 q/ha T2-22.8 q/ha T3-23.6 q/ha	✓ Reduce the wilt incidence- 17.3% in T_2 & 24.9 % in T_3 in comparison of T_1 ✓ Enhance the yield – 19.4 % in T_2 & 23.6 % in T_3 as comparison of T_1	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	19.1	Qtl/ha	107125	3.61
Technology option 2	JAU, Junagadh	22.8	Qtl/ha	134850	4.22
Technology option 3		23.6	Qtl/ha	140500	4.31

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

1 Title of Technology Assessed :- Assessment of IPM module for the management of Pink boll worm

2 Problem Definition :- Low yield of cotton due to infestation of pink boll worm

3 Details of technologies selected for assessment:-

T1- Spraying quinolphos 25EC @ 3 ml/ Lit of water

T2 –Spray *B basiana* @ 5 gm/ Lit of water at initiation of flowering & repeated by 10 Days interval (5 spray)

T3- Use MDP paste- keep about 1000 drops/ ha between the upper two tiny branches of plant at initiation of flowering & repeatedly by 30 days interval (3 times)

4 Source of technology:- JAU, Junagadh

5 Production system and thematic area :- IPM

6 Performance of the Technology with performance indicators:- Under assessed technology reduce the % infestation of pink ball worm – 17.3 % in T_2 & 24.9 % in T_3 in comparison of T_1 resulted enhance the yield – 19.4 % in T_2 & 23.6% in T_3 as comparison of T_1

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :- Farmers are ready to adopt the seed treatment by either chemical or bio-fungicide before the sowing of seeds owing to they found less disease incidence.

8 Final recommendation for micro level situation: - Assessed technologies T-3 were found more effective over farmers practice & recommended after compilation of third year data.

9 Constraints identified and feedback for research and developmental departments: - Evaluate wilt resistant variety

10 Process of farmers participation and their reaction: - Group meeting with farmers for selection of the problem solving models of chick pea production technology.

OFT-5

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
Cumin	Irrigated	Low yield of cumin due to incidence of blight disease	Assessment of fungicide for the management of blight disease in cumin	10	T1- Farmers practice (No Seed treatment & spray of Mancozeb 75%WP @ 2.0-2.55 gm/ Lit of water T2-Seed treatment by Mancozeb 75% WP@3 gm/ Kg Seed & spray of Manzozeb 75% WP@3.5gm/ Lit of water along with soap solution (2.5 ml) at 35-40 DAS repeatedly by 10 days interval (4 spray) T3- Initiation of disease first spray of Kresoxim methyl 50 SC @ 1 ml/ Lit of water & second spray of 15 Days after first spray	Disease incidence (%) Yield (qtl/ha)	T1-21.4 % T2- 11.3 % T3- 10.9 %	T1-7.40 q/ha T2-9.15 q/ha T3-9.30 q/ha	✓ Reduce blight disease incidence 47.20 % in T2 & 49.07% in T3 as compaired to T1 ✓ Enhance the yield – 23.65 % in T2 &25.68% in T3 as compaired to T1	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	7.40	Qtl/ha	94900	3.74
Technology option 2	SDAU, S.K. Nagar	9.15	Qtl/ha	123625	4.39
Technology option 3		9.30	Qtl/ha	125900	4.42

Details of On Farm Trial

1 **Title of Technology Assessed** :- Management of blight disease in cumin

2 **Problem Definition:** - Low yield of cumin due to incidence of blight disease

3 **Details of technologies selected for assessment:-**

T1- Farmers practice (No Seed treatment & spray of Mancozeb 75%WP @ 2.0-2.55 gm/ Lit of water
T2-Seed treatment by Mancozeb 75% WP@3 gm/ Kg Seed & spray of Manzozeb 75% WP@3.5gm/ Lit of water along with soap solution (2.5 ml) at 35-40 DAS repeatedly by 10 days interval (4 spray)
T3- Initiation of disease first spray of Kresoxim methyl 50 SC @ 1 ml/ Lit of water & second spray of 15 Days after first spray

4 **Source of technology** :- SDAU,S.K.Nagar

5 **Production system and thematic area** :- IDM

6 **Performance of the Technology with performance indicators:-** Spraying fungicide reduse the blight incidence in cumin- 47.20 % in T2 & 49.07% in T3 as compaired to T1

7 **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :**-Very less infestation found in assessed technologies, so farmers where realized that proper time application of fungicide is effective manage the disease.

8 **Final recommendation for micro level situation**: - Assessed technologies T-3 were found more effective over farmers practice & recommended after compilation of third year data.

9 **Constraints identified and feedback for research and developmental departments**:- To develop resistant variety against blight disease.

10 **Process of farmers participation and their reaction** :- Group meeting with farmers for selection of the problem solving models of blight disease management in cumin.

OFT- 06

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
Livestock	-	Anestrus in crossbreed cows	Assessment of mineral and deworming effect on anestrus condition in crossbreed cows	05	T1- Green fodder+ Dry Fodder+ Concentrate feed T2- T1 + Chelated mineral mixture @ 30 Gm/ Day/ Animal + Trace mineral bolus @ 1 bolus/ day/ animal upto 21 Days T3- T2+ Deworming of animal with fenbendazol@3gm/ animal	Signs of heat shown by animals, No. of animal in heat, Conception rate	Signs of heat shown by animals, No. of animal in heat, Conception rate	40 and 60 percent increase conception rate over T1 and T2 respectively	Use of this technology increase conception rate		

Technology Assessed	Source of Technology	Conception (%)	No. of Animals show sign of estrus	No.of animal in heat
13	14	15	16	17
Use of green fodder, dry fodder, concentrate feed	Farmer practices	20	1	1
T1 +Chelated mineral mixtures @ 30 gms + copper and cobalt bolus	SDAU, S K nagar	60	3	3
T2 + Deworming of animals	IVRI, Izzatnagar	80	4	4

Contd..

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

1.	Title of Technology Assessed	:	Assessment of mineral and deworming effect on anestrus condition in crossbreed cows
2.	Problem Definition	:	Anestrus in crossbreed cows
3.	Details of technologies selected for assessment	:	T1- Green fodder+ Dry Fodder+ Concentrate feed T2- T1 + Chelated mineral mixture @ 30 Gm/ Day/ Animal + Trace mineral bolus @ 1 bolus/ day/ animal upto 21 Days T3- T2+ Deworming of animal with fenbendazol@3gm/ animal
4.	Source of technology	:	IVRI, Izzatnagar
5.	Production system and thematic area	:	Nutrient management
6.	Performance of the Technology with performance indicators	:	Signs of heat shown by animals, No. of animal in heat, Conception rate
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Increase conception rate
8.	Final recommendation for micro level situation	:	First year result, Second year trial
9.	Constraints identified and feedback for research	:	-
10.	Process of farmers participation and their reaction		Group meeting and field visit

C1.Results of Technologies Assessed **Results of On Farm Trial** **Year- 2022**

OFT-1

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	refinement	refinement for
1	2	3	4	5	6	7	8	9	10	11	12
Blackgram	Irrigated	Low yield of castor due to use of old variety	Assessment of Improved varieties in Blackgram	10	T1 - T9 (Local Variety) T2 – GU -1 (Improved Variety) T3-GU-2 (Improved Variety)	No of Pods/ Plant Yield Qtl/ha)	T1-6.2 T2- 6.6 T3- 6.8	T1-6.8 q/ha T2-8.0 q/ha T3-8.5 q/ha	✓ 6.45 % increase pod in T2 & 9.68% increase pod in T3 as compaired to T1 resulted 17.64 % enhance the yield in T2 & 25 % enhancement in T3 as compaired to T1		

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	6.8	Qtl/ha	30178	3.0
Technology option 2	SDAU, S K Nagar	8.0	Qtl/ha	37364	3.4
Technology option 3	JAU, Junagadh	8.5	Qtl/ha	40482	3.6

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of improved variety of balckgram

2 **Problem Definition -** Low yield of black gram due to use of old variety- T-9

3 **Details of technologies selected for assessment-** T1 - Local Variety T2 – GU-1(Improved Variety) T3 – GU-2(Improved Variety)

4 **Source of technology-** SDAU, S K Nagar, JAU, Juagadhh

5 Production system and thematic area- Varietal evaluation

6 Performance of the Technology with performance indicators-

No of pods/ Plant- T_1- 6.2, **T_2-** 6.6, **T3-**6.8

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques - Farmers are convinced with the technology of T3 because under technology they found 25 % higher yield over own practice.

8 Final recommendation for micro level situation – – The technology T3 was found more effective over farmers practice & recommendation after compilation of third year data

9 Constraints identified and feedback for research- No any Constraints

10 Process of farmers participation and their reaction- Farmers are involved each & every activity during technology assessment. They are convinced with the technology & agreed for future adoption

OFT-2

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Wheat	Irrigated	Low yield of wheat due to use of old variety	Assessment of Improved varieties of Wheat	10	T1 –GW-496 T2 –GW-451 T3 – GW-513	No of effective tillers & Yield Qtl/ha)	Result awaited	Result awaited	Result awaited	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	Result awaited	Qtl/ha	Result awaited	
Technology option 2	SDAU, S K Nagar	Result awaited	Qtl/ha	Result awaited	
Technology option 3		Result awaited	Qtl/ha	Result awaited	

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of imrproved variety of wheat

2 **Problem Definition -** Low yield of wheat due to use of old variety- GW-496

3 **Details of technologies selected for assessment-** **T1**-GW-496 **T2-**GW-451 **T3**-GW-513

4 **Source of technology-** SDAU, S K Nagar

5 **Production system and thematic area-** Varietal assessment

6 **Performance of the Technology with performance indicators-** Result awaited

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques -** Result awaited

8 **Final recommendations for micro level situation –** Result awaited

9 **Constraints identified and feedback for research-** Result awaited

10 **Process of farmers participation and their reaction**- Result awaited

OFT-3

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
Cumin	Irrigated	Low yield of Cumin due to use of local variety	Assessment of improved variety of Cumin	06	T1 – Local T2 – G.C-4 T3 – G.C-5	No of umbel/Plant & Yield (qtl/ha)	Result awaited	Result awaited	Result awaited	-	-

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	Result awaited	Qtl/ha	Result awaited	
Technology option 2	SDAU, S K Nagar	Result awaited	Qtl/ha	Result awaited	
Technology option 3	NRC, Seed Spices, Ajmer	Result awaited	Qtl/ha	Result awaited	

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of high yielding variety of Cumin G.C-4 & G.C-5

2 **Problem Definition -** Low yield of existing variety of Cumin

3 **Details of technologies selected for assessment-** variety of Cumin G.C-4 & G.C-5

4 **Source of technology-** SDAU,Jagudan

5 **Production system and thematic area-** ICM

6 **Performance of the Technology with performance indicators-** Result awaited

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques –** Result awaited

8 **Final recommendation for micro level situation –** Result awaited

9 **Constraints identified and feedback for research-** Result awaited.

10 **Process of farmers participation and their reaction**- Result awaited

OFT-4

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
watermelon cucumber	irrigated	low net profit of present cropping system chilli-fallow	Assessment of cropping system chilli-cucurbits for enhancing the net profit	04	T_1 –Chilli-Fallow T_2 –Chilli-Watermelon T_3-Chilli-Cucumber	Cropping intensity % & Net Income	T1:- 100%.	$T_{1.}$- Rs 190950/ ha	Chilli-watermelon cropping system is more profitable because 122.75 % enhance the profitability under T-2 as compared to T-1	-	-
							T2:- 200%	T2- Rs 361563/ ha			
							T3:- 200%	T3- Rs 338938/ ha			

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Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	B:C Ratio
13	14	15	16	17	18
Technology 1 Chilli-Fallow	IIHR,Banglore	Chilli- 201	Qtl/ha.	111700	2.41
Technology 2 Chilli-Watermelon		Chilli- 197 Watermelon- 206	Qtl/ha.	248813	3.21
Technology 3 Chilli-Cucumber		Chilli- 196 Cucumber- 211	Qtl/ha.	222688	2.92

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

Details of On Farm Trial

1 **Title of Technology Assessed** - Assessment of cropping system chilli-cucurbits for enhancing the net profit

2 **Problem Definition -** low net profit of present cropping system chilli-fallow

3 **Details of technologies selected for assessment-** Cropping system Chilli- Watermelon and Chilli- Cucumber

4 **Source of technology- IIHR, Banglore**

5 **Production system and thematic area-** ICM

6 **Performance of the Technology with performance indicators- Net Return (Rs/ha)- T_1**:- Rs. 111700 **T_2:- Rs. 248813 T_3:- Rs. 222688**

7. **Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques –** Average cropping intensity was found 200% in T_2 & T_3 as compare to technology T_1 . Resulting in 19700 kg/ha (Chilli) & 20600 kg/ha (watermelon) & 19600kg/ha (Chilli) & 21100 Kg/ha (Cucumber) yield respectively. **100.12** % more yield in technology T_2 & 102.36 % in technology T_3 as compare to technology T_1.

8 **Final recommendation for micro level situation –** The technology (T-2) were found more effective over farmers practices & recommendation for large scale dissemination.

9 **Constraints identified and feedback for research-** Fruit fly & Powdery mildew is the major problem, so farmers need fruit fly & powdery mildew resistant variety.

10 **Process of farmers participation and their reaction**- Farmers are seen more profit in recommended technology over own practices (farmers practices) resulted farmers are appreciate the technology and agreed for future adoption.

OFT-5

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
Cotton	Irrigated	Low yield of cotton due to infestation of pink boll worm	Assessment of IPM module for the management of Pink boll worm	10	**T1**- Spraying quinolphos 25EC @ 3 ml/ Lit of water **T2** –Spray *B basiana* @ 5 gm/ Lit of water at initiation of flowering & repeated by 10 Days interval (5 spray) **T3**- Use MDP paste- keep about 1000 drops/ ha between the upper two tiny branches of plant at initiation of flowering & repeatedly by 30 days interval (3 times)	% infestation of pink ball worm & Yield (qtl/ha)	Result awaited Result awaited Result awaited	Result awaited Result awaited Result awaited	Result awaited	-	-

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	Result awaited	Qtl/ha	Result awaited	
Technology option 2	JAU, Junagadh	Result awaited	Qtl/ha	Result awaited	
Technology option 3		Result awaited	Qtl/ha	Result awaited	

Contd..

Details of On Farm Trial

1 Title of Technology Assessed :- IPM module for the management of Pink boll worm

2 Problem Definition :- Low yield of cotton due to infestation of pink boll worm

3 Details of technologies selected for assessment:-

T1- Spraying quinolphos 25EC @ 3 ml/ Lit of water

T2 –Spray *B basiana* @ 5 gm/ Lit of water at initiation of flowering & repeated by 10 Days interval (5 spray)

T3- Use MDP paste- keep about 1000 drops/ ha between the upper two tiny branches of plant at initiation of flowering & repeatedly by 30 days interval (3 times)

4 Source of technology :- JAU,Junagadh

5 Production system and thematic area :- IPM

6 Performance of the Technology with performance indicators:- Results Awaited

7. Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :- Results Awaited.

8 Final recommendation for micro level situation :- Results Awaited

9 Constraints identified and feedback for research and developmental departments:- Results Awaited

10 Process of farmers participation and their reaction :- Results Awaited.

OFT-6

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
Cumin	Irrigated	Low yield of cumin due to incidence of blight disease	Assessment of fungicide for the management of blight disease in cumin	10	T1- Farmers practice (No Seed treatment & spray of Mancozeb 75%WP @ 2.0-2.55 gm/ Lit of water T2-Seed treatment by Mancozeb 75% WP@3 gm/ Kg Seed & spray of Manzozeb 75% WP@3.5gm/ Lit of water along with soap solution (2.5 ml) at 35-40 DAS repeatedly by 10 days interval (4 spray) T3- Seed treatment by Mancozeb 75%WP @ 3 g/ Kg of seed & spray propiconazol 25 EC @ 1 ml/ Lit of water at 35-40 DAS repeatedly 10 Days interval (4 spray)	Disease incidence (%) Yield (qtl/ha)	Results Awaited Results Awaited Results Awaited	Results Awaited Results Awaited Results Awaited	Results Awaited	-	-

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Technology option 1 (Farmer's practice)	-	Results Awaited	Qtl/ha	Results Awaited	
Technology option 2	SDAU, S.K. Nagar	Results Awaited	Qtl/ha	Results Awaited	
Technology option 3		Results Awaited	Qtl/ha	Results Awaited	

Details of On Farm Trial

1 Title of Technology Assessed :- management of blight disease in cumin

2 Problem Definition Low yield of cumin due to incidence of blight disease

3 Details of technologies selected for assessment:-

T1- Farmers practice (No Seed treatment & spray of Mancozeb 75%WP @ 2.0-2.55 gm/ Lit of water

T2-Seed treatment by Mancozeb 75% WP@3 gm/ Kg Seed & spray of Manzozeb 75% WP@3.5gm/ Lit of water along with soap solution (2.5 ml) at 35-40 DAS repeatedly by 10 days interval (4 spray)

T3- Seed treatment by Mancozeb 75%WP @ 3 g/ Kg of seed & spray propiconazol 25 EC @ 1 ml/ Lit of water at 35-40 DAS repeatedly 10 Days (4 spray)

4 Source of technology :- SDAU,S.K.Nagar

5 Production system and thematic area :- IDM

6 Performance of the Technology with performance indicators:- Results Awaited.

7 Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques :- Results Awaited.

8 Final recommendation for micro level situation :- Results Awaited.

9 Constraints identified and feedback for research and developmental departments:- Results Awaited.

10 Process of farmers participation and their reaction :- Results Awaited..

OFT- 07

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
Livestock	-	Anestrus in crossbreed cows	Assessment of mineral and deworming effect on anestrus condition in crossbreed cows	05	T1- Green fodder+ Dry Fodder+ Concentrate feed T2- T1 + Chelated mineral mixture @ 30 Gm/ Day/ Animal + Trace mineral bolus @ 1 bolus/ day/ animal upto 21 Days T3- T2+ Deworming of animal with fenbendazol@3gm/ animal	Signs of heat shown by animals, No. of animal in heat, Conception rate	Signs of heat shown by animals, No. of animal in heat, Conception rate	Result awaited	Result awaited		

Technology Assessed	Source of Technology	Conception (%)	No. of Animals show sign of estrus	No.of animal in heat
13	14	15	16	17
Use of green fodder, dry fodder, concentrate feed	Farmer practices	Result awaited		
T1 + Chelated mineral mixture @ 30 Gm/ Day/ Animal + Trace mineral bolus @ 1 bolus/ day/ animal upto 21 Days	SDAU, S K nagar	Result awaited		
T2+ Deworming of animal with fenbendazol@3gm/ animal	IVRI, Izzatnagar	Result awaited		

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

1.	Title of Technology Assessed	:	Assessment of mineral and deworming effect on anestrus condition in crossbreed cows
2.	Problem Definition	:	Anestrus in crossbreed cows
3.	Details of technologies selected for assessment	:	T1- Green fodder+ Dry Fodder+ Concentrate feed T2- T1 + Chelated mineral mixture @ 30 Gm/ Day/ Animal + Trace mineral bolus @ 1 bolus/ day/ animal upto 21 Days T3- T2+ Deworming of animal with fenbendazol@3gm/ animal
4.	Source of technology	:	IVRI, Izzatnagar
5.	Production system and thematic area	:	Nutrient management
6.	Performance of the Technology with performance indicators	:	Result awaited
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	Result awaited
8.	Final recommendation for micro level situation	:	Result awaited
9.	Constraints identified and feedback for research	:	-
10.	Process of farmers participation and their reaction		Result awaited

OFT -8

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
Mehsani buffaloes	-	Tick infestation leading to reduced milk production	Assessment of ectoparasiticides to control tick infestation in Mehsani buffaloes	05	Given below	Signs of heat shown by animals, No. of animal in heat, Conception rate	Signs of heat shown by animals, No. of animal in heat, Conception rate	Results Awaited	Results Awaited		

Technology detail:-

T1: Application of deltamethrin (1.25%) solution @3 ml/lit of water, spray and repeat after 21 days,

T2 : Application of amitraj 1% + cypermethrin 1% + piperonylbutoxide 5% solution @ 1 ml/10 kg body weight topically along the midline and repeat after 21 days

T3: Use of soap permethrin 5% + cetrimide 1% + Aloevera (1%) apply and massage the leather on every part of body and wash after 1 hour

Contd..

Technology Assessed	Source of Technology	Conception (%)	No. of Animals show sign of estrus	No.of animal in heat
13	14	15	16	17
T1: Application of deltamethrin (1.25%) solution @3 ml/lit of water, spray and repeat after 21 days	Farmer practices	Results Awaited		
T2 : Application of amitraj 1% + cypermethrin 1% + piperonylbutoxide 5% solution @ 1 ml/10 kg body weight topically along the midline and repeat after 21 days	SDAU, S K nagar	Results Awaited		
T3: Use of soap permethrin 5% + cetrimide 1% + Aloevera (1%) apply and massage the leather on every part of body and wash after 1 hour	IVRI, Izzatnagar	Results Awaited		

.Results of Technologies Assessed - Result awaited

1.	Title of Technology Assessed	:	Assessment of ectoparasiticides to control tick infestation in Mehsani buffaloes
2.	Problem Definition	:	Tick infestation leading to reduced milk production
3.	Details of technologies selected for assessment	:	T1: Application of deltamethrin (1.25%) solution @3 ml/lit of water, spray and repeat after 21 days, T2 : Application of amitraj 1% + cypermethrin 1% + piperonylbutoxide 5% solution @ 1 ml/10 kg body weight topically along the midline and repeat after 21 days T3: Use of soap permethrin 5% + cetrimide 1% + Aloevera (1%) apply and massage the leather on every part of body and wash after 1 hour
4.	Source of technology	:	IVRI, Izzatnagar and TANUVAS, Chennai
5.	Production system and thematic area	:	Disease Management
6.	Performance of the Technology with performance indicators	:	Ectoparasitic infestation (%), milk production, BCR
7.	Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques	:	-
8.	Final recommendation for micro level situation	:	1st Year trial, result awaited
9.	Constraints identified and feedback for research	:	-
10.	Process of farmers participation and their reaction		Group meeting and field visit

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 2022 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	Cotton	INM	Nitrogen 240 kg/ha + phosphorous 40 kg/ha + spray 3% potassium nitrate (13-0-45) at the time of flowering stage, ball formation stage, ball development	Training, Demo., Field visit, Field day, Group meeting etc	95	1925	1500
1	Castor	ICM & Variety	Hybrid Variety of castor -GCH-7	Training, Demo., Field visit, Field day, Group meeting etc	250	1050	15000
3	Mustard	ICM	Improved variety (GDM-4) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	Training, Demo., Field visit, Field day, Group meeting etc	100	1950	1800
4	Wheat-Variety	Varietal Demo	Improved variety of wheat - GW-451	Training, Demo., Field visit, Field day, Group meeting etc	150	950	750
5	Kitchen garden	Nutrition food security	Seasonal vegetable in backyard for supplementing additional vegetable in daily diet	Training, Demo., Field visit, Field day, Group meeting etc	80	750	-
6	Castor	Drudgery reduction	Harvestingbof castor spick (secaitier)	Traning ,Demo,Field visit,Field day,etc	25	100	-
7	Vermi compost	Production of vermi compost	Production technology of Vermi compost	Traning,Field day , Field visit, Demo,etc	10	50	
8	Cotton	IPM	IPM module – Pheromone trap @ 40/ha + One spray of neem oil 1500 ppm@ 1.25 Lit/ha + one spray of spinosed 45 SC 2 0.25 Lit/ha	Training, Demo., Field visit, Field day, Group meeting etc	125	2200	1850

7	Black gram	ICM	Improved variety of black gram (GU-1), seed treatment by fungicide, Seed inoculation with bio fertilizer, RDF, timely application of IPM module	Training, Demo., Field visit, Field day, Group meeting etc	90	1500	750
8	Chickpea	ICM	Improved variety (GJG-3) +Soil inoculation of *Trichoderma viridae* @ 2.5 kg/ha + Pheroman trap @ 40/ha + RDF + Bio-fertilizer + Profenophos 50 EC	Training, Demo., Field visit, Field day, Group meeting etc	100	2200	1850
9	Chilli	INM	Balance of major plant nutrient along with five foliar application of Arka Vegetable Special @3ml/lit of water (each spray on 25 days interval	Training, Demo., Field visit, Field day, Group meeting etc	50	150	50
10	Fennel-Variety	Varietal Demo & IDM	Improved variety of fennel – Gujarat Fennel – 12	Training, Demo., Field visit, Field day, Group meeting etc	179	4200	2050
11	Cumin + Ajwain	Varietal demon	Intercropping of Cumin + Ajwain (4:1)	Training, Demo., Field visit, Field day, Group meeting etc	80	900	700
12	Lime	INM	Balance of major plant nutrient along with five foliar application of Arka Citrus Special @5 ml/lit of water (each spray on 25 days interval	Training, Demo., Field visit, Field day, Group meeting etc	30	200	80
13	Milch animal	Feed management	Chelated mineral mixture @ 40 Gm / day/ animal (Cow/ Buffalo)	Training, Demo., Field visit, Field day, Group meeting etc	25	250	-
14	Milch animal	Feed management	Probiotic @20 gm/day in Mehsani buffalo	Training, Demo., Field visit, Field day, Group meeting etc	10	50	-
15	Milch animal	Feed management	By pass protein @ 1 Kg/ Day per Animal in Buffalo	Training, Demo., Field visit, Field day, Group meeting etc	10	45	-
16	Milch animal	Feed management	By pass fat @ 100 gm/ Day per Animal in Buffalo	Training, Demo., Field visit, Field day, Group meeting etc	15	80	-

B. Details of FLDs implemented during 2022**(Kharif 2022, Rabi 2021-22, Summer 2022)** (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	Black gram	ICM	Improved variety of black gram (GU-1), seed treatment by fungicide, Seed inoculation with bio fertilizer, RDF, timely application of IPM module	Kharif 2022	20	20	04	46	50	
2	Cotton	INM	Nitrogen 240 kg/ha + phosphorous 40 kg/ha + spray 3% potassium nitrate (13-0-45) at the time of flowering stage, ball formation stage, ball development	Kharif 2021	10	10	02	23	25	
3	Cotton	INM	Nitrogen 240 kg/ha + phosphorous 40 kg/ha + spray 3% potassium nitrate (13-0-45) at the time of flowering stage, ball formation stage, ball development	Kharif 2022	10	10	00	25	25	
4	Castor	ICM	Hybrid variety (GCH-7) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	Kharif 2021	10	10	00	25	25	
5	Castor	ICM	Hybrid variety (GCH-7) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	Kharif 2022	20	20	03	47	50	
6	Sun hemp-Castor	INM	Green manuring of sunhemp crop. Seed rate@60 kg/ha	Kharif 2021	5	5	00	20	20	
7	Sun hemp-Castor	INM	Green manuring of sunhemp crop. Seed rate@60 kg/ha	Kharif 2022	5	5	00	20	20	
8	Mustard	ICM	Improved variety (GDM-4) + Seed	Rabi, 2021	10	10	00	25	25	

			treatment with fungicide + RDF + Timely irrigation + IPM module for pest management							
9	Mustard	ICM	Improved variety (GDM-4) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	Rabi, 2022	20	20	04	46	50	
10	Wheat	Varietal Demo	Improved Variety –GW-451	Rabi 2021	10	10	00	25	25	
11	Wheat	Varietal Demo	Improved Variety –GW-451	Rabi 2022	10	10	00	25	25	
12	Wheat	IPM	Seed treatment by fipronil 5 sc @ 6 ml/kg seed & soil application @ 2.5 lit./ha with irrigation water.	Rabi 2021	05	05	-	20	20	
13	Wheat	IPM	Seed treatment by fipronil 5 sc @ 6 ml/kg seed & soil application @ 2.5 lit./ha with irrigation water.	Rabi 2022	05	05	-	20	20	
	Chick Pea	ICM	Improved variety (GJG-5) +Soil inoculation of *Trichoderma viridae* @ 2.5 kg/ha + RDF + Bio-fertilizer + Pheroman trap @ 40/ha + Profenophos 50 EC	Rabi-2021	20	20	4	46	50	
14	Chick Pea	ICM	Improved variety (GJG-5) +Soil inoculation of *Trichoderma viridae* @ 2.5 kg/ha + RDF + Bio-fertilizer + Pheroman trap @ 40/ha + Profenophos 50 EC	Rabi-2022	20	20	2	48	50	
15	Chilli	ICM	Balance of major plant nutrient along with five foliar application of Arka Vegetable Special @3ml/lit of water (each spray on 25 days interval)	Kharif-2021	5	5	0	20	20	
16	Cauliflower	ICM	Balance of major plant nutrient along with five foliar application of Arka Vegetable Special @3ml/lit of water (each spray on 25 days interval)	Kharif-2022	5	5	0	20	20	

17	Fennel	Varietal Demo	Improved variety of GF-12	Rabi-2021	5	5	0	20	20	
18	Fennel	Varietal Demo	Improved variety of GF-12	Rabi-2022	5	5	0	20	20	
19	Cumin + Ajwain	ICM	Intercropping Cumin+Ajwain (4:1)	Rabi-2021	5	5	0	25	25	
20	Cumin +Ajwain	ICM	intercropping Cumin+Ajwain (4:1)	Rabi-2022	5	5	0	20	20	
21	Fennel	IDM	Foliar spay of carbendazim 12% + Mancozeb 63% @ 1.5 Kg/ha at 45,60 & 75 DAS	Rabi-2021	10	10	-	25	25	
22	Fennel	IDM	Foliar spay of carbendazim 12% + Mancozeb 63% @ 1.5 Kg/ha at 45,60 & 75 DAS	Rabi-2022	10	10	-	25	25	
23	Potato	IDM	Tuber treatment by Boric acid (IP grade) @ 3% (30 gm per lit of water)	Rabi-2022	2	2	0	10	10	
24	Kagzi line	INM	Balance of major plant nutrient along with five foliar application of Arka Vegetable Special @3ml/lit of water (each spray on 25 days interval	Rabi-2021	2	2	0	20	20	
25	Ajwain	ICM	Improved variety of AA-93	Rabi-2022	5	5	2	18	20	
26	Kagzi lime	IDM	Gummosis Management - Cutting of dried & diseased twigs after completion of rainy season + Bordeaux paste @ 1% + Spraying of Fosetyl AL 80% WG @ 20gm./15 lit water immediately after the cutting of dry / disease twigs of the plants (3 sprays in 12-15 days interval) for management of gummosis disease management	Rabi-2021	1	1	-	10	10	
27	Kitchen garden, 2021	house food security	cultivation of seasonal vegetable in backard for supplementing additional vegetable in daily diet	Kharif, 2021	-	-	0	80	80	

28.	Kitchen garden, 2022	house food security	cultivation of seasonal vegetable in backard for supplementing additional vegetable in daily diet	Kharif, 2022	-	-	0	80	80	
29	Vemi compost	Production of organic input	Vermi compost production technology	2021	-	-	0	5	5	
30	Vemi compost	Production of organic input	Vermi compost production technology	2022	-	-	0	5	5	
31	Castor	Drudgery reduction	Drudgery reduction of farm women during harvesting of castor spike though secaitear	2021	4	4	0	20	20	
32	Castor	Drudgery reduction		2022	4	4	0	20	20	

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					
Black gram	Kharif 2021	Irrigated	Loamy sand to medium black	L	L	M	Mustard,Sorghum and Wheat	2nd fortnight of June	1st Fortnight of September		
Cotton	Kharif 2020	Irrigated	Sandy loam	L	L	M	Fallow	First Week of June	Last week to February		
Cotton	Kharif 2021	Irrigated	Sandy loam	L	L	M	Fallow	First Week of June	Last week to February		
Cotton	Kharif-2020	Irrigated	Sandy loam	L	L	M	Fallow	First Week of June	Last week to February		
Castor	Kharif 2020	Irrigated	Sandy loam to sandy soil	L	L	M	Fallow	IInd Fortnight of August	Ist fortnight of April		
Castor	Kharif 2021	Irrigated	Sandy loam to sandy soil	L	L	M	Fallow	IInd Fortnight of August	Ist fortnight of April		
Sun hemp-Castor	Kharif 2021	Irrigated	Sandy loam to sandy soil	L	L	M	Fallow	IInd Fortnight of August	Ist fortnight of April		

Mustard	Rabi, 2020	Irrigated	Sandy loam to sandy soil	L	L	M	Pulses	IInd Fortnight of October	Last week of February		
Mustard	Rabi, 2021	Irrigated	Sandy loam to sandy soil	L	L	M	Pulses	IInd Fortnight of October	Last week of February		
Mustard+Lucerne	Rabi 2020	Irrigated	Sandy loam to sandy soil	L	L	M	Pulses	IInd Fortnight of October	Mustard Last week of February + Lucerne 2nd Fortnight of May		
Mustard+Lucerne	Rabi 2021	Irrigated	Sandy loam to sandy soil	L	L	M	Pulses	IInd Fortnight of October	Mustard Last week of February + Lucerne 2nd Fortnight of May		
Wheat	Rabi 2020	Irrigated	Sandy loam to sandy soil	L	L	M	Pearl millet	IInd Fortnight of November	Last week of March		
Wheat	Rabi 2021	Irrigated	Sandy loam to sandy soil	L	L	M	Pearl millet	IInd Fortnight of November	Last week of March		
Wheat	Rabi 2021	Irrigated	Sandy loam to sandy soil	L	L	M	Pearl millet	IInd Fortnight of November	Last week of March		
Chick Pea	Rabi-2020	Semi-Irrigated	Medium black to black soil	L	L	M	Cumin, Guar, Desi Cotton	2nd fortnight of October	1st week of February		
Chick Pea	Rabi-2021	Semi-Irrigated	Medium black to black soil	L	L	M	Cumin, Guar, Desi Cotton	2nd fortnight of October	1st week of February		
Chilli	Kharif-2021	Irrigated	sandy loam to sandy	M	M	M	fallow & fodder	1st fortnight of July	up to March		
Cauliflower	Kharif-	Irrigated	sandy	M	M	M	fallow &	1st fortnight of	up to		

	2022		loam to sandy				fodder	Sept	November		
Fennel	Rabi-2021	Irrigated	sandy loam to Medium black	M	M	M	pulses	2nd fortnight of October	1st fortnight of April		
Fennel	Rabi-2022	Irrigated	sandy loam to Medium black	M	M	M	pulses	2nd fortnight of October	1st fortnight of April		
Cumin+ Ajwain	Rabi-2021	Irrigated	saline & sandy loam soil	M	M	M	fallow, pulses, f odder	1st fortnight of November	2nd fortnight of march for cumin & 1st fortnight of may for Ajwain		
Cumin+Ajwain	Rabi-2022	Irrigated	saline & sandy loam soil	M	M	M	fallow, pulses, f odder	1st fortnight of November	2nd fortnight of march for cumin & 1st fortnight of may for Ajwain		
Fennel	Rabi-2020	Irrigated	Sandy loam to medium black	L	L	M	Cotton, Pulses	1st week of November	3rd week of April		
Fennel	Rabi-2021	Irrigated	Sandy loam to medium black	L	L	M	Cotton, Pulses	1st week of November	3rd week of April		
Cumin	Rabi-2020	Semi-Irrigated	Medium black to black soil	L	L	M	Chick pea, Guar, Desi Cotton	1st fortnight of November	2nd fortnight of March		
Kagzi line	Rabi-2021	Irrigated	sandy loam to sandy	M	M	M	Sole	-	Round the year		

Ajwain	Rabi-2022	Irrigated	sandy loam to sandy	M	M	M	Pulses,Fodder	Last week of October to 1st fortnight of November	1st fortnight of april		
Kagzi line	Rabi-2020	Irrigated	sandy loam to sandy	M	M	M	Sole	-	Round the year		
Kagzi line	Rabi-2021	Irrigated	sandy loam to sandy	M	M	M	Sole	-	Round the year		

Technical Feedback on the demonstrated technologies

S. No	Feed Back
1	Need to develop improved/ hybrid variety of wheat, Funnel, Castor, Mustard, Black gram & Chickpea
2	Need to develop climate resilient technologies/ varieties
3	Need to develop of crop based complex fertilizer
4	Need to develop INM module on cropping system
5	Need to develop water soluble complex fertilizer as per crop for foliar spray.
6	Need to develop drought tolerant/ resistant variety.
7	Need to develop IPM module for the management of major insect in vegetable crop.
8	Need to develop to resistant variety against disease & insect.
9	Need to develop early maturity variety of spices crop like Ajwain,Cumin, Fennel

Farmers' reactions on specific technologies

S. No	Feed Back
A	**Cereals**
1.	Farmers observe good growth of plant, no lodging & more no of effective tillers are found in improved variety of wheat (GW-451)
B	**Horticultural crops**
1.	Chilli & Cauliflower : Good growth during the season and good quality of fruits due to spraying of Micronutrient (Zn,Mn,Fe,Cu,B)
2.	Cumin (Var.) :GC-4 variety have less incidence of blight disease & also high yielding
3.	Cumin (IDM) : Seed treatment by Biofungicide viz. Trichoderma viridae @10 gm. per 1 kg.seed as well as soil inoculation of Trichoderma viridae @ 2.5 kg /ha. effective against wilt disease incidence.
4.	Fennel (IDM) : Spraying of fungicide viz. SAAF (Carbendezim 12 % + Mancozeb 63 %) @ 40 gm/15 lit. water along with 25 ml soap solution at 45 ,60 , 75 DAS, Before initiation of blight disease, increase the productivity and improve the quality of seeds.
5.	Fennel (Var.) : GF-12 variety is high yielding,Lodging resistant .
6.	Lime- Cleaning the orchard and cutting the dried and diseased twigs of the plant and spray the plants by fungicide decrease the disease incidence and improve the quality of fruits.
7.	Ajwain (var) : AA-93 is early maturity variety and at par with GA-2 in production.
C	**Oil seeds**
1.	Use Sunhemp as a green manure to reduce the dose of fertilize & enhance FUE in Castor resulted enhance the profitability
2.	Castor : GCH-7 variety having excellent growth & more yield over their own practice
3.	Mustard : GDM-4 variety having excellent growth & more yield over their own practice
D	**Pulses**
1.	Black gram : GU-1 variety found best in production as compared to local varieties sown.IPM module decrease the pest and disease incidence during the crop season
2.	Chickpea : Use of improved & wilt resistant variety GG -5 and seed treatment by Biofungicide T .viridae as well as bio fertilizer enhance the germination and decrease the wilt disease incidence. Installation of pheromone trap with helilure monitored and decrease the infestation of helicovarpa during the crop season.
E	**Cotton**
1	Good growth of plant, more number of bolls per plant obtain under INM in cotton resulted enhance the productivity
2	Sex pheromone trap with pectinophora lure decrease the pinball worm infestation
F	**Animal Science**
1	Proper feed management- Use of Mineral mixture, By Pass Fat, By Pass Protein & Probiotic is not only enhance the milk production but also enhance the profitability.

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organized	Date	Number of participants	Remarks
1	**Black gram**				
A	Farmers Training	02	24-06-2022 & 25-06-2022	50	
B	Field visit	06	During Crop period	64	
C	Field Day	01	11-10-2022	34	
D	Training for extension functionaries	01	30-06-2022	44	
2	**Cotton**				
A	Farmers Training	02	04/06/2022,29/06/2022	48	
B	Field visit	03	During Crop period	20	
C	Field Day	02	28/03/2022, 24/12/2022	96	
D	Training for extension functionaries	01	30/06/2022	44	
3	**Castor**				
A	Farmers Training	03	16/07/2022, 12/08/2022,15/09/2022	86	
B	Field visit	06	During Crop period	37	
C	Field Day	01	16/03/2022	52	
D	Training for extension functionaries	01	30/06/2022	44	
4	**Sun hemp-Castor**				
A	Farmers Training	01	27/06/2022	27	
B	Field visit	03	During Crop period	19	
C	Field Day	01	25/03/2022	44	
D	Training for extension functionaries	01	30/06/2022	44	
5	**Mustard**				
A	Farmers Training	02	06/10/2022, 11/10/2022,	53	
B	Field visit	04	During Crop period	32	
C	Field Day	01	22/01/2022	30	

D	Training for extension functionaries	01	06/12/2022	19	
6	**Wheat**				
A	Farmers Training	03	23/09/2022, 22/11/2022, 24/11/2022	81	
B	Field visit	03	During Crop period	22	
C	Field Day	01	22/03/2022	30	
D	Training for extension functionaries	01	06/12/2022	19	
7	**Wheat**				
A	Farmers Training	01	12/11/2021	20	
B	Field visit	01	During Crop period	04	
C	Training for extension functionaries	01	10/12/2021	31	
8	**Chick Pea**				
A	Farmers Training	02	17-10-2022 & 27-12-2022	71	
B	Field visit	06	During Crop period	76	
C	Field Day	01	10-02-2023	34	
D	Training for extension functionaries	01	06-12-2022	19	
9	**Cauliflower (INM)**				
A	Farmers Training	01	12/09/2022	20	
B	Field visit	05	During crop period	23	
C	Field Day	01	12/11/22	31	
10	**Fennel (Var.)**				
A	Farmers Training	01	28/09/2022	20	
B	Field visit	03	During crop period	45	
C	Field Day	01			
D	Training for extension functionaries	01	19/10/22	30	
11	**Cumin+Ajwain (ICM)**				
A	Farmers Training	01	4/1/22,10/2/22,14/10/22,7/11/22,16/12/22, 31/12/22	300	
B	Field Day	01			
C	Field visit	04	During crop period	33	

D	Training for extension functionaries	01	19/10/22	30	
12	**Fennel**				
A	Farmers Training	01	26/10/2021	25	
B	Field visit	01	During Crop period	06	
C	Field Day	-	-	-	
D	Training for extension functionaries	01	10/12/2021	31	
13	**Ajwain (Var.)**				
A	Farmers Training	01	11/10/22,	20	
B	Field visit	01	During Crop period	32	
C	Field Day	01			
D	Training for extension functionaries	01			
14	**Kagzi line**				
A	Farmers Training	03	23/05/21,27/09/21,28/10/21	67	
B	Field visit	03	During Crop period	27	
15	**Kitchen garden**				
A	Farmers Training	08	08/04/22,13/06/22,23/06/22,27/06/22,30/06/22,01/07/22,21/07/22,14/10/22	160	
B	Field visit	32	During Crop period	207	
C	Field Day	03	04/02/22,07/10/22,28/12/22	109	
D	Training for extension functionaries	01	21/09/22	49	
16	**Castor (spike by secaitier – Drudgery**				
A	Farmers Training	02	11/11/22,06/12/22	37	
B	Field visit	02	During Crop period	11	
C	Field Day	02	13/01/22,24/01/22	69	
17	**Vermi compost**				
A	Farmers Training	01	25/07/22	25	
B	Field visit	23	During demonstration period	93	
	Field day	02	11/03/22,27/12/22	72	
18	**Bypass fat- Nutritional management**				

A	Farmers Training	01	15/09/22	16	
B	Field visit	01	During demonstration period	09	
C	Field Day	01	21/12/22	27	
D	Training for extension functionaries				
19	**Bypass Protein- Nutritional management**				
A	Farmers Training	01	09/09/22	17	
B	Field visit	01	During demonstration period	17	
C	Field Day	01	19/12/22	29	
D	Training for extension functionaries				
20	**Chelated Mineral mixture- Nutritional management**				
A	Farmers Training	01	22/06/22	20	
B	Field visit	01	During demonstration period	09	
C	Field Day	01	13/10/22	44	
D	Training for extension functionaries				
21	**Probiotics- Nutritional management**				
A	Farmers Training	01	16/07/22	22	
B	Field visit	03	During demonstration period	19	
C	Field Day	01	16/12/22	31	
D	Training for extension functionaries				

C. Performance of Frontline demonstrations

Frontline demonstrations on oilseed crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Mustard																		
Mustard (2021-22)	ICM	Improved variety (GDM-4) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	GDM-4	25	10	22.8	17.9	20.1	16.4	23.2	21843	120888	99045	5.5	19528	98136	78608	5.0
Mustard (2022-23)	ICM	Improved variety (GDM-4) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	GDM-4	50	20	Result Awaited												
Castor																		
Castor (2021-22)	ICM	Hybrid variety (GCH-7) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	GCH-7	10	25	30.6	25.8	29.0	23.6	22.9	33730	195788	162057	5.8	30340	159259	128919	5.3
Castor (2022-23)	ICM	Hybrid variety (GCH-7) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	GCH-7	20	50	Result Awaited												

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

** BCR= GROSS RETURN/GROSS COST

Frontline demonstration on pulse crops

Crop	Thematic Area	technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Blackgram 2022	ICM	Improved variety of black gram (GU-1), seed treatment by fungicide, Seed inoculation with bio fertilizer, RDF, timely application of IPM module	GU-1	50	20	8.6	7.6	8.1	6.83	18.59	18350	53434	35084	2.91	16878	45052	28174	2.67
Chickpea-2021	ICM	Improved variety (GG-5) +Soil inoculation of *Trichoderma viridae* @ 2.5 kg/ha + RDF + Bio-fertilizer + Timely plant protection	GG-5	50	20	20.1	14.9	17.2	14.5	18.6	27450	89956	62506	3.28	25800	75835	50035	2.94
Chickpea-2022	ICM	Improved variety (GG-5) +Soil inoculation of *Trichoderma viridae* @ 2.5 kg/ha + RDF + Bio-fertilizer + Timely plant protection	GG-5	50	20	Result awaited												

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

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check											
					High	Low	Average			Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cereals																			
Wheat Timely sown																			
Wheat (2021-2022)	Varietal Evaluation	Improved variety of wheat - GW-451	25	10	45.4	35.2	40.7	34.3	19.3	Effective tillers/plant- 4.36	Effective tillers/plant- 3.95	25700	96691	70991	3.8	25000	81510	56510	3.3
Wheat (2021-22)	IPM	Seed treatment by Fipronil 5 SC@6ml/Kg seed along with soil application @ 2.5 lit/ ha with irrigation water	20	5	43.2	36.4	39.7	34.8	14.1	Termite infestation (%)- 4.64	Termite infestation (%)- 10.51	25900	94288	68388	3.64	25450	82650	57200	3.25
Wheat (2022-23)	Varietal Evaluation	Improved variety of wheat - GW-451	25	10	Result awaited														
Wheat (2021-22)	IPM	Seed treatment by Fipronil 5 SC@6ml/Kg seed along with soil application @ 2.5 lit/ ha with irrigation water	20	5	Result awaited														
Oilseed																			
Sun hemp-Castor (2021-22)	Soil Health Management	`Green manuring with sun hemp in castor crop	20	05	31.3	28.0	29.3	23.9	23.0			37290	198073	160783	5.3	34500	161070	126570	4.6
Sun hemp-Castor (2022-23)	Soil Health Management	`Green manuring with sun hemp in castor crop	20	05	Result awaited														
Fiber crops																			
Cotton, 2021-22	INM	Nitrogen 240 kg/ha + phosphorous 40 kg/ha + spray 3% pottasium nitrate (13-0-45) at the time of flowering stage, ball formation stage, ball development	25	10	25.9	21.7	24.1	20.0	20.8			42006	186992	144986	4.5	40000	155186	115186	3.9
Cotton, 2022-23	INM	Nitrogen 240 kg/ha + phosphorous 40 kg/ha + spray 3% pottasium nitrate (13-0-45) at the time of flowering stage,	25	10	Result Awaited														

		ball formation stage, ball development																
Mixed crop																		
Chilli-2021	ICM	Balance of major plant nutrient along with five foliar application of Arka Vegetable Special @3ml/lit of water (each spray on 25 days interval)	20	5	**215**	**205**	**209.65**	**197.65**	**6.07**	**160.10**	**144.64**	**81075**	**419300**	**338225**	**5.20**	**80425**	**395300**	**314875**	**4.92**
Cauliflower-2022	ICM	Balance of major plant nutrient along with five foliar application of Arka Vegetable Special @3ml/lit of water (each spray on 25 days interval)	20	5	266	251	258	239	7.95			65060	309600	244540	4.76	64175	286800	222625	4.47
Fruit crops																		
Lime-2021	IDM	Gummosis Management	10	2.5	148	135.6	144.5	131.5	10.0	Disease incidence-9.7 %	Disease incidence-19.8 %	68630	361250	292620	5.26	67740	332000	264260	4.9
Lime-2021	INM	Foliar spray of Arka Citrus special @ 5 ml/ lit of water -First on onset of monsoon & next in every 25 days interval	20	2	152	141	146.5	134.7	8.76	1656.98	1523.52	61520	366250	304730	5.96	60860	336750	275890	5.54
Spices & condiments																		
Fennel-2021	IDM	Foliar spay of carbendazim 12% + Mancozeb 63% @ 1.5 Kg/ha at 45,60 & 75 DAS	25	10	19.2	14.8	16.4	13.7	19.71	Blight % 7.7	Blight % 11.9	31200	183375	152175	5.87	30500	154125	123625	5.05
Fennel-2022	IDM	Foliar spay of carbendazim 12% + Mancozeb 63% @ 1.5 Kg/ha at 45,60 & 75 DAS	25	10	Result awaited													
Fennel-2021	ICM	Improved variety of fennel – Gujarat Fennel – 12	20	5	18.30	15.55	16.84	13.81	21.90	No.of umbells/pl 40.02	No.of umbells/pl 33.75	30180	189421.88	159241.88	6.28	30035	155390.63	125355.63	5.18
Fennel-2022	ICM	Improved variety of fennel – Gujarat Fennel – 12	20	5	Results awaited													
Potato, 2022	IDM	Tuber treatment by Boric acid (IP grade) @ 3% (30 gm per lit of water)	10	2.5	Results awaited													

Cumin+Ajwain-2021	**ICM**	Intercropping cumin+ Ajwain (4:1)	25	5	9.2 Cumin+ 3.8 Ajwain	7.0 Cumin+ 2.6 Ajwain	7.9 Cumin+ 3.1 Ajwain	8.2	33.48			34576	164745	130169	4.8	34228	143640	109412	4.2
Cumin+Ajwain-2022	**ICM**	Intercropping cumin+Ajwain (4:1)	20	5	Result awaited														

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

Frontline Demonstration on Nutri cereals

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Sorghum																		

FLD on Livestock

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No.of Units (Animal/ Poultry/ Birds, etc)	Major parameters Milk Production		% change in major parameter	Other parameter Fat %		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Cattle																	
Crossbreed cow, 2021	Feed management	Bypass fat	10	10	**10.2**	**9.4**		**4.5**	**4.0**	12060	26130	14070	2.2	11133	21096	9963	1.9
Crossbreed cow, 2022	Feed management	Bypass fat	10	10	Results awaited												
Buffalo																	
Mehsani Buffalo, 2021	Feed management	Bypass Protein	10	10	7.81	7.34		7.94	7.55	12006	35122	23116	2.93	11178	31351	20173	2.81
Mehsani Buffalo, 2022	Feed management	Bypass Protein	10	10	Results awaited												
Mehsani Buffalo, 2021	Feed management	Chelated Mineral mixture	20	20	6.78	6.31		7.21	7.0	12641	27699	15058	2.19	12227	25181	12955	2.06
Mehsani Buffalo, 2022	Feed management	Chelated Mineral mixture	20	20	Results awaited												
Mehsani Buffalo, 2021	Feed management	Probiotics	20	20	7.13	6.75		7.54	7.40	12429	30468	18039	2.46	11984	28281	16298	2.37
Mehsani Buffalo, 2022	Feed management	Probiotics	20	20	Results awaited												

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

** BCR= GROSS RETURN/GROSS COST

FLD on Fisheries

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

* 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 enterprises

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

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Vermi compost(2021)	Production of vermi compost	05	Production of vermi compost	9000 Kg Vermi compost produce in a year (5 cycle in a year)- Self used	Undecompose FYM production & its use
Vermi compost (2022)	Production of vermin compost	05	Production of vermin compost	1800 Kg Vermi compost produce in a year (1 cycle in a year) - Self used	Undecompose FYM production & its use

FLD on Farm Implements and Machinery

Name of the implement	Crop	Technology demonstrated	No. of Farmer	Area (ha)	Major parameters	Filed observation (output/man hour)		% change in major parameter	Labor reduction (man days)				Cost reduction (Rs./ha or Rs./Unit etc.)			
						Demo	Check		Land preparation	Sowing	Weeding	Total	Land preparation	Labour	Irrigation	Total
Secaitier, 2021	castor	Harvesting of castor spike	20	01	laboure requirement /ha.	20.1 (160.8 hr.)	25.3 (202.4 hr)	20.55 % Enhance the working eff eicency								
Secaitier, 2022	castor	Harvesting of castor spike	20	01	Results awaited											

FLD on Other Enterprise: Kitchen Gardening

Nutrition garden components	Thematic area	Area (sq mt)	No. of Farmer	No. of Units	Yield (Kg)- supply of vegetables, fruits, etc from KG in the year		% change in yield	Household size (number)		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check*		Demo	Check	Gross Cost	Gross Return/ Savings *	Net Return	BCR (R/C)	Gross Cost	Gross Return/ Savings*	Net Return	BCR (R/C)
Kitchen garden, 2021	house food security	cultivation of seasonal vegetable in backyard for supplementing additional vegetable in daily diet	80	80	237Kg/year. Availability-11 month	456 kg /year .Availability-7 month	64.93 85.71	8	8	-	9480/ unit	-	-	18240/ unit	-	-	-
Kitchen garden, 2022	house food security	cultivation of seasonal vegetable in backard for supplementing additional vegetable in daily diet	80	80	Result awaited												

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

FLD on Demonstration details on crop hybrids

Crop	technology demonstrated	Hybrid Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)			
					Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average						
Oilseed crop													
Castor (2021-22)	ICM	Hybrid variety (GCH-7) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	25	10	22.8	17.9	20.1	16.4	23.2	21843	120888	99045	5.5
Castor (2022-23)	ICM	Hybrid variety (GCH-7) + Seed treatment with fungicide + RDF + Timely irrigation + IPM module for pest management	50	20	Result Awaited								

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

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

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	01	22	00	22	04	00	04	26	00	26
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	08	202	38	240	09	00	09	211	38	249
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs	01	20	00	20	00	00	00	20	00	20
Others (pl. specify)										
Total	**10**	**244**	**38**	**282**	**13**	**00**	**13**	**257**	**38**	**295**
II Horticulture										
a) Vegetable Crops										
Production of low value and high value crops										
Off-season vegetables	01	75	00	75	10	00	10	85	00	85
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)										
Total (a)	01	75	00	75	10	00	10	85	00	85
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit										
Management of young										

plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)										
Total (b)										
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (e)										
f) Spices										
Production and Management technology	05	254	00	254	26	00	26	280	00	280
Processing and value addition										
Others (pl specify)										
Total (f)	05	254	00	254	26	00	26	280	00	280
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										

Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
Grand Total (a to g)	**06**	**329**	**00**	**329**	**36**	**00**	**36**	**365**	**00**	**365**
III Soil Health and Fertility Management										
Soil fertility management										
Integrated water management										
Integrated Nutrient Management										
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing										
Others (pl specify)										
Total										
IV Livestock Production and Management										
Dairy Management	02	200	00	200	00	00	00	200	00	200
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	02	06	39	45	00	00	00	06	39	45
Disease Management	03	175	00	175	03	00	03	178	00	178
Feed & fodder technology	01	100	00	100	00	00	00	100	00	100
Production of quality animal products										
Others (pl specify)										
Total	**08**	**481**	**39**	**520**	**03**	**00**	**03**	**484**	**39**	**523**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening										
Design and development of										

low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques										
Value addition	02	00	20	20	00	24	24	00	44	44
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
Others (pl specify)	01	00	02	02	02	18	20	02	20	22
Total	**03**	**00**	**22**	**22**	**02**	**42**	**44**	**02**	**64**	**66**
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management										
Integrated Disease Management	02	69	00	69	11	00	11	80	00	80
Bio-control of pests and diseases										
Production of bio control agents and bio										

pesticides										
Others (pl specify)										
Total	**02**	**69**	**00**	**69**	**11**	**00**	**11**	**80**	**00**	**80**
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										

Apiculture										
Others (pl specify)										
Total										
X CapacityBuilding and Group Dynamics										
Leadership development										
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)NF										
Total										
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**29**	**1123**	**99**	**1222**	**65**	**42**	**107**	**1188**	**141**	**1329**

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	01	21	00	21	00	00	00	21	00	21
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming	01	23	00	23	00	00	00	23	00	23
Micro Irrigation/irrigation	01	22	00	22	02	00	02	24	00	24
Seed production										
Nursery management										
Integrated Crop Management	02	52	00	52	02	00	02	54	00	54
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs										
Organic farming in crop production										
Total	**05**	**118**	**00**	**118**	**04**	**00**	**04**	**122**	**00**	**122**
II Horticulture										
a) Vegetable Crops										
Production of low value and high value crops	01	13	18	31	00	00	00	13	18	31
Off-season vegetables										
Nursery raising	01	19	01	20	00	00	00	19	01	20
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)	01	17	05	22	00	00	00	17	05	22
Total (a)	**03**	**49**	**24**	**73**	**00**	**00**	**00**	**49**	**24**	**73**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	01	18	00	18	02	00	02	20	00	20
Management of young										

plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards	01	29	00	29	00	00	00	29	00	29
Plant propagation techniques										
Others (pl specify)										
Total (b)	**02**	**47**	**00**	**47**	**02**	**00**	**02**	**49**	**00**	**49**
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology	02	43	09	52	00	00	00	43	09	52
Processing and value addition										
Others (pl specify)										
Total (e)	**02**	**43**	**09**	**52**	**00**	**00**	**00**	**43**	**09**	**52**
f) Spices										
Production and Management technology	03	59	00	59	02	00	02	61	00	61
Processing and value addition										
Others (pl specify)										
Total (f)	**03**	**59**	**00**	**59**	**02**	**00**	**02**	**61**	**00**	**61**
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										

Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
Grand Total (a to g)	**10**	**198**	**33**	**231**	**04**	**00**	**04**	**202**	**33**	**235**
III Soil Health and Fertility Management										
Soil fertility management	02	47	03	50	00	00	00	47	03	50
Integrated water management										
Integrated Nutrient Management	01	17	01	18	02	03	05	19	04	23
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing	01	06	15	21	00	00	00	06	15	21
Others (pl specify)										
Total	**04**	**70**	**19**	**89**	**02**	**03**	**05**	**72**	**22**	**94**
IV Livestock Production and Management										
Dairy Management	03	30	20	50	00	21	21	30	41	71
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	01	05	12	17	00	00	00	05	12	17
Disease Management	05	00	104	104	00	15	15	00	119	119
Feed & fodder technology	02	08	38	46	00	00	00	08	38	46
Production of quality animal products										
Others (pl specify)										
Total	**11**	**43**	**174**	**217**	**00**	**36**	**36**	**43**	**210**	**253**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	03	00	57	57	00	23	23	00	80	80
Design and development of										

low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	02	00	14	14	00	32	32	00	46	46
Value addition	01	00	14	14	00	08	08	00	22	22
Women empowerment										
Location specific drudgery reduction technologies	01	00	22	22	00	00	00	00	22	22
Rural Crafts										
Women and child care	01	05	20	25	00	00	00	05	20	25
Others (pl specify)	02	01	38	39	00	07	07	01	45	46
Total	**10**	**06**	**165**	**171**	**00**	**70**	**70**	**06**	**235**	**241**
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	4	79	33	112	01	00	01	80	33	113
Integrated Disease Management	3	65	00	65	01	00	01	66	00	66
Bio-control of pests and diseases	1	22	00	22	00	00	00	22	00	22
Production of bio control agents and bio										

pesticides										
Others (pl specify)										
Total	**08**	**166**	**33**	**199**	**02**	**00**	**02**	**168**	**33**	**201**
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										

Apiculture										
Others (pl specify)										
Total										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics SPNF										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others Natural farming	02	33	15	48	00	00	00	33	15	48
Total	**02**	**33**	**15**	**48**	**00**	**00**	**00**	**33**	**15**	**48**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**50**	**634**	**439**	**1073**	**12**	**109**	**121**	**646**	**548**	**1194**

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	02	43	00	43	04	00	04	47	00	47
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming	01	23	00	23	00	00	00	23	00	23
Micro Irrigation/irrigation	01	22	00	22	02	00	02	24	00	24
Seed production										
Nursery management										
Integrated Crop Management	10	254	38	292	11	00	11	265	38	303
Soil & water conservation										
Integrated nutrient management										
Production of organic inputs	01	20	00	20	00	00	00	20	00	20
Others (Organic farming in crop production)										
Total	**15**	**362**	**38**	**400**	**17**	**00**	**17**	**379**	**38**	**417**
II Horticulture										
a) Vegetable Crops										
Production of low value and high value crops	01	13	18	31	00	00	00	13	18	31
Off-season vegetables	01	75	00	75	10	00	10	85	00	85
Nursery raising	01	19	01	20	00	00	00	19	01	20
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)	01	17	05	22	00	00	00	17	05	22
Total (a)	**04**	**124**	**24**	**148**	**10**	**00**	**10**	**134**	**24**	**158**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	01	18	00	18	02	00	02	20	00	20
Management of young										

plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards	01	29	00	29	00	00	00	29	00	29
Plant propagation techniques										
Others (pl specify)										
Total (b)	**02**	**47**	**00**	**47**	**02**	**00**	**02**	**49**	**00**	**49**
c) Ornamental Plants										
Nursery Management										
Management of potted plants										
Export potential of ornamental plants										
Propagation techniques of Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology										
Processing and value addition										
Others (pl specify)										
Total (d)										
e) Tuber crops										
Production and Management technology	02	43	09	52	00	00	00	43	09	52
Processing and value addition										
Others (pl specify)										
Total (e)	**02**	**43**	**09**	**52**	**00**	**00**	**00**	**43**	**09**	**52**
f) Spices										
Production and Management technology	08	313	00	313	28	00	28	341	00	341
Processing and value addition										
Others (pl specify)										
Total (f)	**08**	**313**	**00**	**313**	**28**	**00**	**28**	**341**	**00**	**341**
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										

Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
Grand Total (a to g)	**16**	**527**	**33**	**560**	**40**	**00**	**40**	**567**	**33**	**600**
III Soil Health and Fertility Management										
Soil fertility management	02	47	03	50	00	00	00	47	03	50
Integrated water management										
Integrated Nutrient Management	01	17	01	18	02	03	05	19	04	23
Production and use of organic inputs										
Management of Problematic soils										
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing	01	06	15	21	00	00	00	06	15	21
Others (pl specify)										
Total	**04**	**70**	**19**	**89**	**02**	**03**	**05**	**72**	**22**	**94**
IV Livestock Production and Management										
Dairy Management	05	230	20	250	00	21	21	230	41	271
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	03	11	51	62	00	00	00	11	51	62
Disease Management	08	175	104	279	03	15	18	178	119	297
Feed & fodder technology	03	108	38	146	00	00	00	108	38	146
Production of quality animal products										
Others (pl specify)										
Total	**19**	**524**	**213**	**737**	**03**	**36**	**39**	**527**	**249**	**776**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	03	00	57	57	00	23	23	00	80	80
Design and development of										

low/minimum cost diet										
Designing and development for high nutrient efficiency diet										
Minimization of nutrient loss in processing										
Processing and cooking										
Gender mainstreaming through SHGs										
Storage loss minimization techniques	02	00	14	14	00	32	32	00	46	46
Value addition	03	00	34	34	00	32	32	00	66	66
Women empowerment										
Location specific drudgery reduction technologies	01	00	22	22	00	00	00	00	22	22
Rural Crafts										
Women and child care	01	05	20	25	00	00	00	05	20	25
Others (pl specify)	03	01	40	41	02	25	27	03	65	68
Total	**13**	**06**	**187**	**193**	**02**	**112**	**114**	**08**	**299**	**307**
VI Agril. Engineering										
Farm Machinery and its maintenance										
Installation and maintenance of micro irrigation systems										
Use of Plastics in farming practices										
Production of small tools and implements										
Repair and maintenance of farm machinery and implements										
Small scale processing and value addition										
Post Harvest Technology										
Others (pl specify)										
Total										
VII Plant Protection										
Integrated Pest Management	04	79	33	112	01	00	01	80	33	113
Integrated Disease Management	05	134	00	134	12	00	12	146	00	146
Bio-control of pests and diseases	01	22	00	22	00	00	00	22	00	22
Production of bio control agents and bio										

pesticides										
Others (pl specify)										
Total	**10**	**235**	**33**	**268**	**13**	**00**	**13**	**248**	**33**	**281**
VIII Fisheries										
Integrated fish farming										
Carp breeding and hatchery management										
Carp fry and fingerling rearing										
Composite fish culture										
Hatchery management and culture of freshwater prawn										
Breeding and culture of ornamental fishes										
Portable plastic carp hatchery										
Pen culture of fish and prawn										
Shrimp farming										
Edible oyster farming										
Pearl culture										
Fish processing and value addition										
Others (pl specify)										
Total										
IX Production of Inputs at site										
Seed Production										
Planting material production										
Bio-agents production										
Bio-pesticides production										
Bio-fertilizer production										
Vermi-compost production										
Organic manures production										
Production of fry and fingerlings										
Production of Bee-colonies and wax sheets										
Small tools and implements										
Production of livestock feed and fodder										
Production of Fish feed										
Mushroom Production										

Apiculture										
Others (pl specify)										
Total										
X Capacity Building and Group Dynamics										
Leadership development										
Group dynamics - SPNF										
Formation and Management of SHGs										
Mobilization of social capital										
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)	02	33	15	48	00	00	00	33	15	48
Total	**02**	**33**	**15**	**48**	**00**	**00**	**00**	**33**	**15**	**48**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**79**	**1757**	**538**	**2295**	**77**	**151**	**228**	**1834**	**689**	**2523**

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
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Value addition	01	00	02	02	00	20	20	00	22	22
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)Household food security	01	00	02	02	02	18	20	02	20	22
TOTAL	**02**	**00**	**04**	**04**	**02**	**38**	**40**	**02**	**42**	**44**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Mushroom Production										
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	01	00	16	16	00	05	05	00	21	21
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	**01**	**00**	**16**	**16**	**00**	**05**	**05**	**00**	**21**	**21**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops										
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture										
Value addition	01	00	02	02	00	20	20	00	22	22
Small scale processing										
Post Harvest Technology										
Tailoring and Stitching										
Rural Crafts	01	00	16	16	00	05	05	00	21	21
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production										
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)Household food security	01	00	02	02	02	18	20	02	20	22
TOTAL	**03**	**00**	**20**	**20**	**02**	**43**	**45**	**02**	**63**	**65**

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

Area of training	No. of Courses	No. of Participants								
		General/ Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management	05	177	02	179	03	00	03	180	02	182
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care										
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals										
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)(spice crop) 1										
Any other – PRA techniques for training need assessment										
TOTAL	**05**	**177**	**02**	**179**	**03**	**00**	**03**	**180**	**02**	**182**

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	01	30	04	34	09	01	10	39	05	44
Integrated Pest Management										
Integrated Nutrient management	01	17	02	19	00	00	00	17	02	19
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	01	08	26	34	00	15	15	08	41	49
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	02	57	00	57	09	00	09	66	00	66
Livestock feed and fodder production										
Household food security	01	00	16	16	00	16	16	00	32	32
Any other (pl.specify)(spice crop & Natural Farming)	02	62	08	70	00	00	00	62	08	70
TOTAL	**8**	**174**	**56**	**230**	**18**	**32**	**50**	**192**	**88**	**280**

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	01	30	04	34	09	01	10	39	05	44
Integrated Pest Management	05	177	02	179	03	00	03	180	02	182
Integrated Nutrient management	01	17	02	19	00	00	00	17	02	19
Rejuvenation of old orchards										
Protected cultivation technology										
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	01	08	26	34	00	15	15	08	41	49
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization										
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	02	57	00	57	09	00	09	66	00	66
Livestock feed and fodder production										
Household food security	01	00	16	16	00	16	16	00	32	32
Any other (pl.specify)	02	62	08	70	-	-	-	62	08	70
TOTAL	**13**	**351**	**58**	**409**	**21**	**32**	**53**	**372**	**90**	**462**

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										
Commercial production of vegetables										
IPM technology										
Production and value addition										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management										
Production of Inputs at site										
Methods of protective cultivation	01	55	35	90	00	00	00	55	35	90
Others (pl. specify)	01	86	10	96	12	00	12	98	10	108
Total	**2**	**141**	**45**	**186**	**12**	**0**	**12**	**153**	**45**	**198**
Post harvest technology and value addition										
Processing and value addition										
Others (pl. specify)										
Total										
Farm machinery										
Farm machinery, tools and implements										
Others (pl. specify)										
Total										
Livestock and fisheries										
Livestock production and management	03	00	74	74	00	06	06	00	80	80
Animal Nutrition Management	02	00	67	67	00	13	13	00	80	80
Animal Disease Management	02	00	40	40	00	00	00	00	40	40
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify)										
Total	**06**	**00**	**181**	**181**	**00**	**19**	**19**	**00**	**200**	**200**
Home Science										
Household nutritional security										
Economic empowerment of women										

Drudgery reduction of women										
Other (value addition)	07	00	215	215	00	53	53	00	268	268
Total	**07**	**00**	**215**	**215**	**00**	**53**	**53**	**00**	**268**	**268**
Agricultural Extension										
CapacityBuilding and Group Dynamics										
Others (pl. specify)										
Total										
GRAND TOTAL	**15**	**141**	**441**	**582**	**12**	**72**	**84**	**153**	**513**	**666**

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
Crop production and management										
Commercial floriculture										
Commercial fruit production										
Commercial vegetable production										
Integrated crop management										
Organic farming										
Others (pl. specify)										
Total										
Post harvest technology and value addition										
Value addition	**01**	**00**	**20**	**20**	**00**	**00**	**00**	**00**	**20**	**20**
Others (pl. specify)										
Total										
Livestock and fisheries										
Dairy farming										
Composite fish culture										
Sheep and goat rearing										
Piggery										
Poultry farming										
Others (Value addition										
Total	**01**	**00**	**20**	**20**	**00**	**00**	**00**	**00**	**20**	**20**
Income generation activities										
Vermicomposting										
Production of bio-agents, bio-pesticides,										
bio-fertilizers etc.										
Repair and maintenance of farm										

machinery										
and implements										
Rural Crafts	01	00	00	00	00	15	15	00	15	15
Seed production										
Sericulture										
Mushroom cultivation										
Nursery, grafting etc.	01	00	15	15	00	5	5	00	20	20
Tailoring, stitching, embroidery, dying etc.	01	00	02	02	00	18	18	00	20	20
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total	**03**	**00**	**17**	**17**	**00**	**38**	**38**	**00**	**55**	**55**
Agricultural Extension										
Capacity building and group dynamics										
Others (pl. specify)										
Total										
Grand Total	**04**	**00**	**37**	**37**	**00**	**38**	**38**	**00**	**75**	**75**

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services (Other than KMAS)	41	291960	0	291960
Diagnostic visits	04	38	04	42
Field Day	25	844	45	889
Group meeting	12	190	00	190
KisanGhosthi	08	1158	68	1226
Film Show	09	253	0	253
Animal Helath camp	01	954 Animal	8	954 Animal
Telephonic healp line	1564	1542	22	1564
KisanMela	01	288	69	357
Exhibition	02	575	99	674
Scientists' visit to farmers field	133	932	-	932
Farmers visit to KVK instructional farm	3239	3117	122	3239
Awareness Programme	01	24	00	24
Ex-trainees Sammelan	01	17	00	17
Method Demonstrations	6	166	00	166
Special programme Har ghar Tiranga Abhiyan Poshan mah Abhiyan PM Live telecast programme ICAR- Foundation Day Parthenium awareness programme LSD awareness programme	 02 01 03 01 01 02	 77 81 662 147 24 88	 00 14 54 00 00 02	 77 95 716 147 24 90
Celebration of important days Special day celebration World women day World water day World Environment Day Mahila diwas **Kisan Diwas**	 01 01 01 01 01	 30 122 98 56 162	 00 08 04 02 10	 30 130 102 58 172
Exposure visits	05	182	15	197
Lectured Delivered	16	1004	52	1056
Others PM Live telecast programme	03	662	54	716
Press note	18	-	-	-
Total				

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

Details of other extension programmes:

Particulars	Number
Electronic Media (CD./DVD)	02
Extension Literature	02
Newspaper coverage	06
Popular articles	21
Animal health camps (Number of animals treated)	954
Social Media (No. of platforms Used)	04
Others (pl. specify)	
Total	**87**

3.6 Online activities during year 2022

S. No.	Activity Type	Title of Program	Date of programme	No. of Participants / Views
1	Natural farming	Natural farming training to Sarpanch as a master trainer	07,07,08, 08,09,09,10 &10 June, 2022	475
2	Audio conference	Plant protection measures in kharif crops	13-09-2022	60 No
		Plant protection measures in kharif crops	16-09-2022	60 No
		Care & Management of dairy animal during winter sason	10-11-2022	100 No
		Feed management of dairy animal	11-11-2022	100 No
		-Infertility problem & its treatment in dairy animals	18-11-2022	100 No
		Vaccination & deworming schedule for dairy animals	19-11-2022	65 No
		Digital farm school in cumin- Agronimic practices	16-12-2022	70 No
		Digital farm school in cumin- nutrient, water & pest management	31-12-2022	70 No
3	Youtube live	Awareness about lumpy skin disease	14-09-2022	482

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	Wheat	GW-513	-	1.65	5775	14
	Wheat	GW-451	-	34.80	121800	65
Oilseeds	Mustard	GDM-4	-	1.00	8000	50
Total				**37.45**	**135575**	**129**

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Commercial	Tobacco	GCT-3	-	40000	-	3
Vegetable seedlings	Cabbage	Syngenta	Hybrid	1200	3000	80
	Cauliflower	Syngenta	Hybrid	1200	3000	80
	Tomato	Abhinav	Hybrid	1200	-	80
	Brinjal	Neelesh	Hybrid	1200	-	80
	Chilli	VNR-108	Hybrid	1200	-	80
	Cucumer	Desi		2800	2800	4
	Watermelon	Mahabali	Hybrid	2800	8960	4
	Onion	Pilipatti		4000	2000	80
Fruits	Drumstick	PKM-1		240	2400	80
	Lime	Kagzi lime	-	1364	20760	111
	Papaya	Madhubindu	-	100	1000	20
Ornamental plants	Rose	Desi	-	89	890	14
Total				**57393**	**44810**	**713**

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg/Lit	Value (Rs.)	No. of Farmers
Bio Fertilisers	Vermi Compost	5325Kg	1625	Sale to farmers(325 kg) & rest use at KVK 4
Bio-pesticide	Neemastra	100 Lit	-	Used at KVK
Bio-Products	Jeevamrut	2000 Lit	-	Used at KVK
Others	Azolla	500 Kg	-	Used in Gaushala & given to farmers for expenson of technology
Total		**5825 Kg & 2100 Lit**	**1625**	

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
Dairy animals				
Cows				
Buffaloes				
Calves				
Others (Pl. specify)				
Poultry				
Broilers				
Layers				
Duals (broiler and layer)				
Japanese Quail				
Turkey				
Emu				
Ducks				
Others (Pl. specify)				
Piggery				
Piglet				
Others (Pl.specify)				
Fisheries				
Indian carp				
Exotic carp				
Others (Pl. specify)				
Total				

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

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

B. Literature developed/published

Item	Title	Authors name	Number
Technical reports	Enhancement of productivity in Castor Crop in District- Patan	Dr Upesh Kumar & Mr R P Chaudhari	05
	Enhancement of productivity in Mustard Crop in District- Patan	Dr Upesh Kumar & Mr R P Chaudhari	05
	Enhancement of productivity in Black Gram Crop in District- Patan	Dr Upesh Kumar & Mr G A Patel	05
	Enhancement of productivity in Chickpea Crop in District- Patan	Dr Upesh Kumar & Mr G A Patel	05
Popular articles	Scientific production technology of Papaya	Mr S S Darji	06
	Improved varieties of papaya-	Mr S S Darji	
	Nursery raising of papaya	Mr S S Darji	
	Metabolic diseases in animals	Dr S J Patel	
	Insect & disease management in wheat	Mr G A Patel & Mr H P Patel	
	Plant protection in potato	Mr G A Patel & Mr H P Patel	
	Care and Management of Dairy animals before and after calving	Dr S J Patel	
	Maintenance of reproductive system during summer season in Buffalo	Dr S J Patel	
	Importance of Chaff cutter in Animal Husbandry	Dr S J Patel	
	Green gram cultivation in summer season	Mr R P Chaudhari & Mr G A Patel	
	Plant protection of okra in summer season	Mr G A Patel & Mr S S Darji	
	Different technology of food grain storage	Smt H M Patel & Smt J S Patel	
	Use of neem leaves & seed for management of pest in crops	Dr Upesh Kuamr & Mr G A Patel	
	Different parasitic weeds & their management	Mr G A Patel & Mr S S Darji	
	Neem based pesticides available in market	Mr G A Patel & Dr Upesh Kumar	
	Value addition of mango foe enhancing profit	Smt H M Patel & Smt J S Patel	
	Scientific production technology of Ashwagandha	Mr S S Darji	
	Infertility problems and its treatment in Diary animals	Dr S J Patel	
	Gypsum benefits for crop production	Mr S S Darji	
	Disease management in Sponge gourd	Mr G A Patel & Mr S S Darji	
	Haemorrhagic Septicaemia disease in Dairy animals	Dr S J Patel	
TOTAL	**25 No**		

C. Details of Electronic Media Produced

S. No.	Type of media (CD / VCD / DVD/ Audio-Cassette)	Title of the programme	Number
1	CD	Kitchen gardening	05
2	CD	Use of secaiter for harvesting of castor spike	05

D. Details of Social Media Platforms Created / Used

S. No.	Type of social media platform	Title of social media	Number of Followers/ Subscribers
1	YouTube Channel	KVK Patan	-
2	Facebook page/ Account	KVK Patan	-
3	Digital farm school	KVK Patan	-
4	WhatsApp groups	KVK, Patan; Crop production, Animal Science, Horticulture, Plant Protection & Home Science	-
5	Twitter Account	@kvkpatan	-
6	Any other (Pl. Specify)- Audio conference	KVK Patan	-
7	Webcite	www.kvkpatan.in	-

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 - 01

A CASE STUDY OF FARMERS PRODUCER ORGANISATIONS (FPOs)

- **Name of the FPC**: Banas Farmers Producer Co Ltd
- **Location**: Radhanpur Block, Patan, Gujarat
- **Established**: April, 2016

PART-A: Case study

1. Initiation and motivation

Banas Farmers Producer Co Ltd (Banas FPC) was established in April, 2016, by farmers who were led by Sh. Karsan Bhai Jadeja, the present chairman of the company. Reliance Foundation has been mentoring the FPC since 2016 &regular technical bachup provided by Krishi Vigyan Kendra, Patan in the form of building governance and business capabilities of its board members, build leadership capacities of the members, helping them access key government schemes as well as linking them to market as well as to financers. Since inception Banas has steadily grown to be a strong support system for its member farmers. Its value chain intervention in Cumin is slowly changing the very paradigm of cumin farming in the region.

Banas Farmers Producer Co Ltd (Banas) is located in the Radhanpur block of Patan District in Gujarat. The region abuts the Rann of Kutch, which lends it a semi-arid climate. Average rainfall is about 500 mm annually, all condensed into a period of 25 days. Hence, the climate can fluctuate between extreme dry spells and periods of inundation. Farmers are pre-dominantly small and marginal, with average land holding being around 1-1.5 acres. Farmers in Radhanpur primarily grow Pearl Millet (Bajra) and Black Gram (Urad) during the Kharif season and Cumin, Castor and Chickpeas during the Rabi period; Cumin and Castor being the main cash crops.

Like many regions in India, farmers in Radhanpur also faced distress on multiple counts. For instance, costs of cultivation (particularly fuel, inputs and labor) were rising, but there wasn't a proportionate increase in incomes. Another problem was their inability to make the most of being located close to Unjha – Asia's largest spice market owing to (i) small land holdings that led to poor economies of scale in transport of cumin and (ii) dependence on local traders for credit, due to inadequate access to credit at Point of Sales from formal sources. Farmers also faced issues like non-standardized grading practices by traders, unfair deductions, delayed payments etc., in addition to stagnant yields due to poor access to quality agri inputs (seeds, fertilizers etc.) and obsolete cultivation practices. It was problems like these that the FPC sought to address for the farmers, when it was formed.

2. Formation and start up

Banas FPC was incorporated in April, 2016, by farmers who were led by Sh. Karsan Bhai Jadeja, the present chairman of the company. Having faced distress despite growing a high value crop, these set of farmers decided to break the circle of exploitation and chart their own path.The FPC started with a membership base of 545 shareholders and an initial share capital of Rs 10.6 Lakhs in FY 2016-17. Since then, the membership base has more than trebled to 1,622 as of FY 2022-23, albeit the FPC services more than 5,000 farmers. Through systematically increasing its member base and re-investing profits, its share capital has also more than doubled to Rs 21.85 Lakhs today.

3. Funding and policy support

The FPC started with a paid-up equity capital of Rs 10.6 Lakhs in 2016-17, contributed by 545 initial members, each one of whom contributed approx. Rs 2,000/-. The membership base has since grown to 1,622 farmers and the equity capital grown to Rs 21.85 lakhs.

In addition to equity, the FPC has funded its activities through a combination of loans and grants and subsidies from various government schemes. Following are some of the funding sources of the FPC.

S No	Name of the Institution	Amount of Funding	Nature of Support	Purpose
1	NABARD	Rs. 35.29 Lakh received till date	1. Grant under FSPF Fund (Rs 22.50 Lakhs) 2. Grant under Rural Mart fund (Rs 5 Lakhs) 3. Grant for formation of two fpo 22.88 lakh	1. Funding for setting up Organic Cumin Seed Park 2. Setting up retail shop in Radhanpur 3. Formation of two FPOs
2	Department of Agriculture	Rs 2.79 Lakhs received till date	Capital Subsidy	Setting up a custom hiring center for farm machinery
3	NABKISAN	Rs. 5.30 Lakh received till date	1. Loan for Plant & machinery 2. Working Capital Loan	1. Loan for setting up Cumin processing plant 2. Financing Working Capital
4	NCDEX	Rs 14.74 Lakh	SEBI Subsidy through commodity trading on NCDEX platform	Received against expanses reimbursement
5	AMI	Rs. 6.09 Lakh sanctioned	For processing plant of cumin and warehouse.	Agricultural marketing infrastructure of integrated scheme for AMI

4. Institutional/organizational set-up

As mentioned above, the FPC is owned by 1,622 farmers from Radhanpur block of Patan district of Gujarat. The FPC is run by a board of 9 farmers, led by Shri Karsan Bhai Jadeja, who is the Chairman. Two directors on the board are women.

The FPC runs the following key businesses.

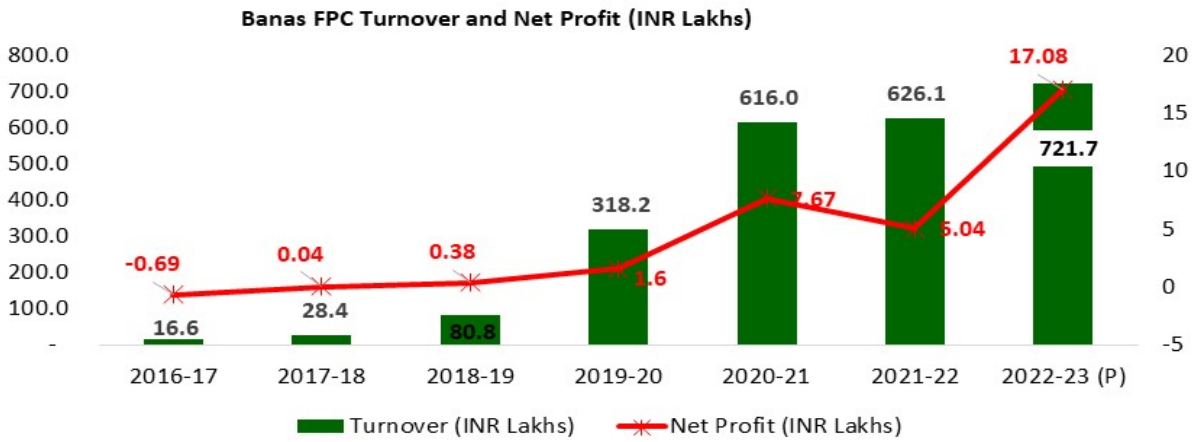
1. Trading of Raw Cumin (Jeera), Chickpeas, Castor, Mustard and Wheat
2. Production and trading of IPM and Organic Cumin. This is specifically grown for export purposes and sold to major export clients such as IFFCO Kisan, Olam Agro and ITC
3. Processing of Cumin, Fennel (Saunf), Fenugreek (Methi)and Carom (Ajwain) and sale as retail ready produce - in bulk as well as in retail packaging
4. Sale of above spices in own brand - Chorad
5. Custom hiring of farm machinery to farmer members
6. Sale of Agri Inputs (Seeds, Fertilizers etc.)
7. Sale of Cattle Feed with own brand Chorad to farmers
8. Sale of branded products of self and other FPOs and SHGs in the district through own retail store in Radhanpur town (set up in 2021).

Following are some of the assets set up by the FPC since inception

1. Seed spices processing plant (cap. 10 MT/day), with financial support from NABARD and NABKISAN
2. Retail store in Radhanpur town for sale FPC's branded food products as well as products made by SHGs in the district.
3. Custom hiring centre of Farm Machinery. The FPC hire's out Tractor and associated implements to its members.
4. At least 20 SHGs are linked to the FPC and sell their products such as pesticide free pulses, spices and homemade products such as soaps, candles etc.
5. Soil testing and water testing facility in collaboration with IFFCO
6. Seed production project on green gram, moth bean and Bajra, in collaboration with Satvik
7. Banas is also planning to set up a cold storage cum pack house for fruits and spices on a 4 acre plot that it owns. A proposal for the same has been submitted under the MIDH scheme to the department of Horticulture.

5. Business driven progress (Outcome and impact)

Since, inception, Banas has grown from strength to strength. Starting small in FY 2016-17, with a revenue of Rs 16 lakhs, the FPC has grown 43 times today and recorded a turnover of Rs 7.21 Cr in FY 2022-23 (provisional). The FPC plans to reach 100 Cr in the next 5 years. The FPC's net profits have charted a similar path, growing from a loss of Rs 69,000 in the first year to INR 17.08 lakhs today.The following graph shows the FPC's growth journey.



Banas's strong performance is further attested by the fact that it is one of the very FPCs in India that has actually started sharing back profits with its shareholders. The FPC announced a patronage bonus of Rs 4.5 Lakhs in FY 2021-22, while it had already distributed Rs 3 Lakhs and Rs 1 Lakhs in preceding two years. FPCs typically avoid distributing profits to members in their early years since they need those surpluses invested back in the business. It is only a self-assured and financially strong FPC that starts re-distributing profits.

The Impact of FPC's activities can be viewed at two levels – on its members and on the other agencies in the region.

- **Impact on Members**
    - **Better Prices**. The most immediate impact has been on the prices. On an average, Banas members have seen an average 8-10% increase in prices offered for raw cumin and other spices.
    - **Patronage Bonus**. Banas started distributing patronage bonus to its members starting FY 2019-20. That year, the FPC allocated Rs 1 lakh from its profit for members who had transacted with the FPC. Since then, this bonus has steadily increased to Rs 4.5 lakhs (FY 2021-22); and with a strong profit in FY 2022-23, is expected to go up further.
    - **Fair grading and weighing**. Often, farmers may be promised a good price for their crops, but the effective price may be only a fraction due to the numerous deductions. Some of the common deductions include overheads like unloading, weighing etc. When trading with Banas, there are no unfair deductions made from the farmer's payments. This ensured that the effective returns for the farmers are much higher than the above-mentioned 8-10% price appreciation.
    - **Savings in Local Transportation**. One of the biggest convenience has been that the Banas plant is located close to the farms. This has significantly reduced transportation costs for farmers. Earlier, a farmer would have to pay up to Rs 100-150 per quintal to transport her cumin to Unjha. Now, Banas's members can transport cumin at Rs 20 per quintal and still get a good price.
    - **Assured and prompt payments**. Farmers are assured of a full and prompt payments with no deductions owing to quality. That is very different reality from the experiences farmers have had with local traders, in the past.
- **On the ecosystem**
    - **Local Employment**. In a small way Banas has started creating employment, giving a boost to the local economy. The FPC currently employs about 18 people directly and indirectly. Banas has hired 10 village youth who manage the processing plant. Additionally, the FPC hires labor (both male and female) from the local villages who are involved in loading, unloading and cleaning tasks. This ensures continuous employment in a safe location and prompt payments. Banas's growing business activities have also ensured increased work for local transporters, local hardware stores (who supply equipment to the plant) etc.
    - **Empowerment**. Farmers in Radhanpur had rarely thought about processing their own cumin. Banas has offered farmers the option to process their own cumin on a job-work basis and then sell on their own into the market. This is a step towards empowering farmers to take charge of their own crop value chains.

- **Support to SHGs**. Banas was awarded a rural mart (a shop for selling products made by rural enterprises) by NABARD in July 2021, with the aim of promoting local products. Banas, today provides a platform to products made by SHGs in Radhanpur and neighboring areas, thus leading to further value creation at the local level.
- **Impact on Local trading practices**. A significant impact of Banas's activities have been on the local trading practices. As Banas's volumes grew, commanding some heft in the market, farmers reported of better rates being offered by local traders for cumin.

- **Impact on Other FPOs:** The FPC has also taken very systematic steps to build a coalition of FPOs in the region. The FPC, over the last four years, has been providing operational, marketing and governance support to 10 other FPCs in the region, in the processing moving towards forming a localized federation of FPCs. The FPC has also been holding network meetings with other FPCs in North Gujarat – particularly those from Banaskantha and Mehsana districts – who share similar agro-ecology and crop profile - to further strengthen this federation.

6. Motivation after exposure to PM Mann Ki Baat

Hon Prime Minister Sh. Narendra Modi's vision for agriculture in India has been motivating factor for the FPC's directors and its members. His vision of transforming Indian Agriculture through use of technology as well as his emphasis on ecology are two messages that the FPC members have not only ingrained but also acted on. Following are some of the initiatives taken by the FPC, which are consistent with the PM's above two visions.

- **Ecology**. High use of pesticides is common in Indian farms, and this leads to not only health issues for the farmer but also high costs and a damage to the helpful microbial life around the plant. At the same time, this is a cost drain for the farmer. Moreover, in the case of high value crops like Cumin, such high pesticide cumin loses value in the international markets since it does not meet the residue limits of many importing countries. Taking cue from the PM, the FPC has systematically started moving towards more natural farming. This is being done in a two-step process, explained as follows.
  - **IPM Cumin**. The FPC first started working on reducing incidence of pesticide use by training farmers on use of Integrated Pest Management (IPM) practices. Cumin thus grown was then sold for export purposes at a slight premium over the market, thus creating a natural set of incentives for farmers.
  - **Organic**. Since the last two years the FPC has also started working on Organic Cumin and other crops. The motivation is to gradually move to completely eco-friendly farming practices.
- **Use of Technology**. Following the PM's vision of 21st century agriculture using latest technologies such as drones, the FPC and its members use the following hi-tech technology resources.
  - **Satellite based crop monitoring**. The FPC has hired a service provider to provide satellite based mapping of crop health of its member's farms and provide real time alerts in case of failing crop health. This helps the FPC provide early warnings to its members and thus save crop losses.
  - **Sound and light based Artificial Scarecrow**. The FPC is conducting pilots of a unique mechanism to prevent invasion of farms by animals. Keeping in mind that no physical harm should come to animals, the FPC has tied up with an agri-tech start-up to pilot a movement sensor based sound and light alarm system that scares any animals that may invade the farm in the night.

7. Pre and post PM Mann Ki Baat process and achievement

We are motivate the thought of Honorable prime minister for your vision as well as policies for betterment of farming community like crop insurance, Soil testing, FPOs strengthening, Agriculture infrastructure fund etc.

8. Feedback/data from members of FPO

FPO member data collected & digitally stored. Regular technical backup provided to FPO members by technical expert of Krishi Vigyan Kendra as well as line departments of the district. We are also provide the agricultural inputs & purchase produce of FPO member for reduce the cost of cultivation & enhance the profitability.

9. Recognitions/awards

1. In 2022, Banas FPC awarded for valuable contribution for excellence in Horticulture by minister of Agriculture in Pune.
2. In the same year, Banas Fpc was received the best practices award from NCDEX at National Level.
3. In 2022 SEBI gave apparitions certificate on the occasion of farmers day.
4. In 2022, a case study on the FPC's cumin processing business – named "Changing the Paradigm of Cumin Farming in North Gujarat - was published by m/s Access Development Services as part of the compendium of case studies of finalists of the Sitaram Rao Case Study Competition.
5. In 2019, the FPC was awarded the Best FPO (Emerging Category) at the Livelihoods India FPO Awards, organized by Access Livelihoods.
6. In the same year, the FPC received a special citation from Sh. Jaidratsinh Parmar, Hon Minister (former) of Roads and Buildings, Govt. of Gujarat

7. Karsanbhai Jadeja, chairman of the FPC, was elected as the Chairman of GUJPRO, a state level federation of FPCs in Gujarat.
8. In July 2021, the Chairman of NABARD, Sh. G R Chintala laid the foundation stone for the FPC's proposed food processing park in Radhanpur.
9. In 2021, the FPC received appreciation letters from the Hon District Collector of Patan and the Regional Office of NABARD.



10. Lessons learned

Banas's success can be traced to the following factors

1. **Strong community development**. The biggest strength for Banas is its visionary and enterprising leadership. It is this leadership, led by Karsanbhai, which is able to galvanize farmers around them.
2. **Developing strategic relationships**. Growing a business needs strategic partnerships. And Banas has benefitted significantly from its partnerships with IFFCO Kisan, Olam, and ITC etc. These organizations have not only helped the FPC stabilize its cumin business, but also contributed to its growth, with IFFCO Kisan also contributing towards setting up the processing plant.
3. **Systematic long term planning**. Banas has bootstrapped and grown its business to its current levels. It received no financial aid from any organization. This success did not come overnight, but was a product of systematic planning and perseverance. Even in 2016, when Banas was established, the BoD was clear that they wanted to eventually enter into processing, and they worked towards it step by step. They also systematically diversified their services to ensure year round connect with the farmers as well as to spread risks. Even today, the FPC has made systematic plans for entering into exports, expanding its basket of spices etc.
4. **Building community trust**. Banas has worked with the single minded objective of improving incomes of their farmers, and all their activities are streamlined to meet this goal. This dedication to purpose is reflected in the way they interact with their farmers, who now trust Banas as a partner and a safety net for their problems. This trust ensures Banas high patronage from its members.

11. Way forward

Banas has very ambitious plans for its future. And as it grows, its impact on the community will keep running deeper. In the near term, following are what Banas envisions for itself.

1. **Exports**. The FPC is aiming to venture into export of Cumin in another 5-7 years' time. The FPC has started its due diligence on the same.
2. **Own Brand**. The FPC launched its own brand – Chorad Jeera – in FY 2019-20. While small at the moment, the FPC hope to eventually sell Chorad through large format retail stores as well as on-line Platforms.
3. **Food processing cluster**. In July 2021, the chairman of NABARD, Sh. G R Chintala, laid the foundation stone for the FPC's proposed food processing park. The FPC has already set up a seed spices processing facility, and plans to set up a cold storage facility, pack house and a plant for Atta and Besan making. Their application for subsidy from the horticulture department is in advanced stages of processing. The FPC hopes to set up these facilities in the next two years.
4. **Formalizing a consortium of FPCs**. The FPC currently supports 10 other FPCs in the region with market linkages and operations, effectively working together as a consortium. In the near future, the FPC will formalize this relationship and form a registered federation.

12.Good quality photographs in JPEG format

PART-B : Preliminary information/data

Sl.No.	Particulars to be furnished	Information/data/details
1	Name of the FPO and year of establishment	BANAS FARMERS PRODUCER COMPANY LIMITED 7 YEAR
2	Correspondence address of FPO	118 UNCHANO Ayarvas, Village – Jamvada, TA-Santalpur, DIST-Patan, Gujarat 385360
3	Contact details of FPO	Karshanji Jadeja, 9586312031
4	Registration Number	U01100GJ2016PTC091636
5	Date of registration/incorporation of FPO	22-04-2016
6	Broad business objective/commodity of FPO	Trading of Agriculture Commodity, Processing, packaging and Marketing of agriculture commodity Cumin (Jeera), Castor, Coriander, Carom (Ajwain), Fennel (Saunf), Fenugreek (Methi) and Mustard
7	Specific objectives of FPO	• To make significant growth in income of farmers • Empowering shareholders (farmers) of company • To promote sustainable agricultural practices • To leverage power of collective bargaining • To provide best quality agriculture produce to customers
8	Bank name in which account is maintained, Branch name & IFSC code	BANK OF BARODA, RADHANPUR BRANCH, BARB0RADHAN
9	Bank Account number (Current/saving)	01750200009677 CURRENT
10	Number of Directors in Board/Members/ Governing Body	6 Men and 2 Women (8 DIRECTOR)
11	Mode of Board formation (election/ nomination)	5 BODs by Nomination and 3 Bods by Election in AGM
12	Date(s) of Board/Governing Body Meetings held in the last year	5TH Jan 2023
13	Roles & Responsibility of Boards/ Governing Body	To run the FPC and take decision on right time To ensure the shareholders participation and resolve the conflicts To monitor and review the business progress of fpc To govern the company
14	Number of functional committees of the FPO	2 Committees (Procurement and Market, Advisory)
15	Number of total Shareholder Members	1622
16	Paid up capital (in Rs.) (FPO has received from shareholders in exchange for shares of stock)	21,85,200
17	Amount of Equity Grant sought (in INR) i.e matching equity grants received/provided (Rs.)	NO
18	Maximum shareholding of an Individual Shareholder Member (Rs.)	3500/- for Director and 2000/- for Shareholders

Case study-02

A case study on scientific Beekeeping : A viable business enterprise for sustainable livelihood security

QUESTIONNAIRE

PART A (i)			
1. Name of the Beekeeper – Patel Tanviben,		Mo No- 7627087875	
2. a. Vill.Patan	b. Block Patan	c. Dist. Patan	d. State Gujarat
3. Age (as on date of interview)		43 years	
4. Gender:		Female	
5. Farming system		i. Vegetable based farming system ii. Fruit based farming system iii. Field crop based farming system	
6. Experience in beekeeping (no. of Years)		4 years	
7. Year of establishment of beekeeping enterprise		2019	
8. At the time of establishment, with how many boxes you started the beekeeping enterprise and what is per box honey production(kg)?		100 Box & 30 Kg Honey per box	
9. Today, how many boxes you have with your beekeeping enterprise and what is per box honey production(kg)?		600 Box & 32 Kg Honey per box	
10. What are the different species are being used for honey bee production ?		Indigenous species	*Apis Melifera*
		Exotic species	
11. Occupation prior to beekeeping		a. Primary occupation: Job b. Secondary occupation: -	
12. Annual income (Rs.) prior to beekeeping		a. Primary source: Job- Rs 1,20,000/- b. Secondary source: Natural farming Rs 2,00,000/-	
PART B			
13. Problems faced in livelihood maintenance before taking up beekeeping practice		i. Not aware the farming community about the technology ii. Shifting of boxes iii. Unavailability of materials iv. Marketing issues v. Pesticides issued spray in crops vi. Financial problem	
14. Factors of motivation for taking up the beekeeping enterprise		i. Potential areas because flora of spices & vegetable are available ii. Enhance the productivity of crops iii. Additional income from secondary agriculture	
15. What is the source of information for Beekeeping?		i. Friends/ Neighbours	√
		ii. State Department	√
		iii. Krishi Vigyan Kendra (KVK)	√
		iv. Research organizations (ICAR/SAU/CAU)	□
		v. NGO	□
		vi. Progressive Farmers	□
		vii. Others (Khadi Gram Uddyog)	√

16. Source(s) of technology?	i. Khadi Gram Uddyog ii. Technical backup through KVK iii. Social media iv. Horticulture Department		
17. How did you acquire the expertise in beekeeping?	i. Vocational training ii. Exposure visit iii. Motivation from farmers		
18. Have you received any assistance/ support from any agency(s) for establishing your beekeeping enterprise? **(Yes / No)** If **yes**, please mention the name and nature of support.	**Agency name**	**Nature of support**	
	i. Horticulture Department	Information & Subsidy	
	ii.Krishi Vigyan Kendra	Technical backup	
	iii.Khadi Gram Uddyog	Technical Support	
19. Factors of uniqueness of your product like licensing, branding, packaging, quality standard, medicinal value etc.	i. Branding ii. Packing iii. Licence- FSSAI		
20. Have you ever been awarded/ recognized by any organization as evidence of your successful performance in beekeeping? **(Yes/No)** If yes, mention the name of the Organization & Year of Award/recognition/success story.	i. District Level appreciation 2022		
21.Economics of beekeeping enterprise			
i. Total production of Honey per annum	20000 Kg		
ii. Annual income from beekeeping (Rs.)	i. Honey		Rs.80,00,000
		TOTAL	Rs.80,00,000
iii. Component wise cost of production (Rs.) per annum	i.Expenditure		Rs.36,00,000
		TOTAL	36,00,000
iv. Net profit per annum (Rs.) per annum	Rs 44,00,000/-		
v. What is the item wise capital cost incurred for establishment of your beekeeping enterprise?	**Items purchased**	**Year**	**Cost (Rs.)**
	i. Tent	2020	Rs.3,00,000
	ii. Tank	2020	Rs.1,50,000
	iii. Honey Box	2020	Rs.24,00,000
	iv. Honey Extractor	2020	Rs.50,000
	v. Glass Bottel	2020	Rs.2,00,000
	vi. Store room	2020	Rs 5,00,000
vi. No. of manpower engaged/employed in your enterprise	i. Regular ii. Contractual √ iii. Any other		
vii. Due to the establishment of beekeeping enterprise, is there is any scope created for employment across the value chain ?	Yes For shifting of boxes, Collection of honey, packing & Marketing		
viii. If yes, how many manpower engaged/employed across the total value chain system of beekeeping enterprise?	5 manpowers per day		
ix. Is there any effect of beekeeping on agricultural crop production in the area where bee boxes are set ?	Yes (Farmers are realize for enhancing the production of crops)		
x. If yes, what is the % increase in crop production?	32-35 % enhance the production		
xi. Have you received any funding support? If yes, from which organization and extent of	**Funding agency**		**Amount (Rs.)**
	i.Horticulture department		Rs.1,10,000

financial support	ii.		Rs.
	iii.		Rs.
	iv.		Rs.
22. What are the channels of marketing of your products and the extent of marketing?	Local market (50 %) Super market (…….. %) Govt. outlet (…….. %) Online market(25 %) Middlemen (25 %) Export (…….. %)		
23. What is the value chain system prevailing in beekeeping enterprise? *(Tick mark the players who are present in your value chain system)*	i. Input suppliers √ ii. Service provider □ iii. Producer □ iv. Transporter □ v. Whole seller √ vi. Retailer √ vii. Consumer √		
24. Whether any horizontal spread has been occurred in beekeeping practice? If **yes**, how many individuals/ groups have been emerged and name these.	Individuals (nos.)	75	Dudhsagar Dairy
	Groups (nos.)	03	ATMA, Patan
25. How your beekeeping enterprise has improved the socio-economic status?	i. Increase in income √ ii. Employment generation √ iii. Opening for opportunity for entrepreneurship √ iv. Increase in productivity √ v. Nutritional improvement √ vi. Any other….. …… □		
26. What kind of problems do you frequently face in Beekeeping? Please mention specifically			
iii. Marketing problem	a. Not organized market		
v. Financial problem	a. Provide subsidy to farming communityb.		
vii. Any other problems…….	a. Insurance is not available		
27. What kind of suggestions / Message you would like to put forward for strengthening the commercialization of honey production?	i. Establishment of organized market		
	ii. Better price of product		
	iii. Insurance facilities		



SUCCESS STORY- 01

Enhancing Castor productivity through adoption of improved technology

Name of KVK	**Krishi Vigyan Kendra, District – Patan (Gujarat)**	
Title of intervention	Enhancing castor productivity through adoption of improved technology	
Crop and Variety	Castor & GCH-8	
Name of farmer & Address	Patel Natvarbhai Bhagvandas, Village:- Norta, Ta. Patan, Di. Patan	
Details of technology demonstrated	• Improved variety : GCH-8 • Seed & soil inoculation by Trichoderma viridae • Soil inoculation of N.P. & K. liquid bio-fertilizer • RDF as per STV • Timely application of IWM & IPM	
Institutional Involvement	• Krishi Vigyan Kendra, Patan • ATMA, Patan • Agriculture Department, Patan • Reliance Foundation, Patan	
Success Point	• GCH-8 – Medium height, triple bloom, Mahogany stem, semi semi-spiny, resistant to wilt-nematode complex and tolerant to root rot diseases • Seed & Soil inoculation by Trichoderma to reduce the fungal incidence at early stage • Soil inoculation by liquid bio fertilizer (N, P & K) for better growth of plants resulted enhance the productivity. • Interculture operation to manage the weed & polarise the soil resulted save the soil moisture & better growth of root as well as plant. • Use of IPM module for proper management of insect- pest.	
Farmer Feedback	➢ Excellent growth of hybrid variety of Castor- GCH-8 ➢ Very less incidence of fungal diseases due to seed treatment of fungicide. ➢ Excellent growth of plant due to use of liquid bio fertilizer (N,P,K) as well as RDF as per STV ➢ Low infestation of pest due to timely use of IPM module ➢ Ultimately 26.2 per cent enhance the productivity due to adoption of improved technology.	

Yield (q/ha)	
Demonstration	35.2 q/ha
Potential yield of variety/technology	35.8 q/ha
District average	19.12 q/ha
State average	20.96 q/ha

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	32.2	32580	193056	160476	5.9
Demonstration	40.6	36610	243600	206990	6.7
% Increase	26.2	12.4	26.2	29.0	13.5

SUCCESS STORY- 02

Enhancing Mustard productivity through adoption of improved technology

Name of KVK	**Krishi Vigyan Kendra, District – Patan (Gujarat)**	
Title of intervention	Enhancing Mustard productivity through adoption of improved technology	
Crop and Variety	Mustard & GDM-4	
Name of farmer & Address	Patel Chaturbhai Shankarbhai Village:- Junamoka, Ta. Harij, Di. Patan	
Details of technology demonstrated	➢ Improved Variety- GDM-4 ➢ Seed treatment & soil inoculation of Bio-fertilizer viz. NPK liquid consortia and Bio-fungicide viz. Trichoderma viridae ➢ Timely application of INM, IWM & IPM	
Institutional Involvement	• Krishi Vigyan Kendra, Patan • ATMA, Patan • Agriculture Department, Patan • Reliance Foundation, Patan	
Success Point	➢ GDM-4- High Yield, Bold seeded, ➢ Seed treatment and soil inoculation by liquid bio-fertilizer enhance the germination as well as growth and Bio-fungicide viz. Trichoderma viridae reduce the Fungal disease incidence. ➢ Soil inoculation by Trichoderma viridae reduce the disease incidence. ➢ Application of RDF and IWM technology ➢ Use of IPM modal- Stiky trap & need based application of pesticide management of insect pest infestation during the crop season.	
Farmer Feedback	➢ Excellent growth of crop (variety GDM-4 in Mustard) ➢ Seed treatment and soil inoculation by Bio-fertilizer enhance the germination and growth during the season. ➢ Very low infestation of insect pest specially Aphid and blight disease incidence due to adoption of IPDM modals. ➢ Ultimately 21.7% enhance the productivity due to adoption of improved technologies.	

Yield (q/ha)	
Demonstration	16.9 q/ha
Potential yield of variety/technology	24.1 q/ha
District average	14.95 q/ha
State average	18.36 q/ha

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	17.5	16360	72485	56125	5.7
Demonstration	21.3	19730	92105	72375	6.1
% Increase	21.7%	20.6	27.1	29.0	7.0

SUCCESS STORY- 03

Enhancing Balck gram productivity through adoption of improved technology

Name of KVK	**Krishi Vigyan Kendra, District – Patan (Gujarat)**	
Title of intervention	Enhancing black gram productivity through adoption of improved technology	
Crop and Variety	Black gram & GU-1	
Name of farmer & Address	Prajaati Kanjibhai Bababhai, Village- Nana, Taluka- Harij, District- Patan	
Details of technology demonstrated	• Improved variety : GU-1 • Seed & soil inoculation bt Trichoderma viridea • Soil inoculation of N.P. & K. liquid bio-fertilizer • RDF as per STV • Timely application of IWM & IPM	
Institutional Involvement	• Krishi Vigyan Kendra, Patan • ATMA, Patan • Agriculture Department, Patan	
Success Point	• **GU-1** – High yielding variety of blackgram. It is mature in 78 Days & seed colour is greenish black in colour. • Seed treatment by fungicide to reduce the fungal incidence at early stage. • Soil inoculation by liquid bio fertilizer (N, P & K) for better growth of plants resulted enhance the productivity. • Use of Pendimethalin as pre-emergence for management of weeds. It saved Rs. 1950/ha weeding cost as compare to local check plot. • Use of IPM module (Botanical & need based application of chemical pesticide) for proper management of insect- pest in black gram.	
Farmer Feedback	➢ Excellent growth of improved variety of black gram (GU-1) ➢ Very less incidence of fungal diseases due to seed treatment of fungicide. ➢ Excellent growth of plant due to use of liquid bio fertilizer (N,P,K) as well as RDF as per STV ➢ Low infestation of sucking as well as spodoptera due to timely use of IPM module ➢ Ultimately 39.7 per cent enhance the productivity due to adoption of improved technology.	

Yield (q/ha)		District average	4.24
Demonstration	8.6	State average	6.09
Potential yield of variety/technology	12.0	National Average	5.70

Performance of technology vis-à-vis Local check (Increase in productivity and returns)

Practice used	Yield (q/ha)	Gross cost (Rs/ha)	Gross income (Rs/ha)	Net income (Rs/ha)	B:C ratio
Farmer practices	7.8	17200	50160	32960	2.92
Demonstration	8.6	18700	56760	38060	3.04
% Increase	10.26	8.72	13.16	15.47	4.11

SUCCESS STORY- 04

Enhancing Chickpea productivity through adoption of improved technology

Name of KVK	**Krishi Vigyan Kendra, District – Patan (Gujarat)**	
Title of intervention	Enhancing Chickpea productivity through adoption of improved technology	
Crop and Variety	Chickpea & GG-5 (Gram)	
Name of farmer & Address	Mr Sagardan Dheerudan Gadhavi, Village- Tarora, Taluka- Sami, District- Patan	
Details of technology demonstrated	➢ Improved & wilt resistant variety GG-5 ➢ Seed treatment & soil inoculation of Bio-fertilizer viz. NPK liquid consortia and Bio-fungicide viz. Trichoderma viridae ➢ Timely application of INM, IWM & IPM	
Institutional Involvement	• Krishi Vigyan Kendra, Patan • ATMA, Patan • Agriculture Department, Patan	
Success Point	➢ GG-5 improved and wilt resistant variety of chickpea. Days of maturity 100-103, have 50-65 pods per plant, seed color Brown, recommended by JAU, Janagadh (Gujarat) ➢ Seed treatment and soil inoculation by liquid bio-fertilizer enhance the germination as well as growth and Bio-fungicide viz. Trichoderma viridae reduce the wilt disease incidence. ➢ Soil inoculation by Trichoderma viridae reduces the disease incidence. ➢ Use of IPM modal for management of insect pest infestation during the crop season. ➢ Application of INM and IWM as per need base	
Farmer Feedback	➢ Excellent growth of variety GG-5 of chickpea ➢ Seed treatment and soil inoculation by Bio-fertilizer enhance the germination and growth during the season. ➢ Very low infestation of insect pest and disease incidence due to adoption of IPDM modals. ➢ Ultimately 51.8% enhance the productivity due to adoption of improved technologies.	

Yield (q/ha)	
Demonstration	20.8
Potential yield of variety/technology	22.00
District average	10.39
State average	14.33
National Average	10.86

SUCCESS STORY- 05

Adotion of natural farming for improving soil health & enhancing income

Name of Farmer : Patel Dahyabhai Laxmanbhai
Village : Matpur
Taluka : Patan
District : Patan
Education : 10th Pass
Introduction :

Dahyabhai has been associated with agriculture for 30 years. He grows Cotton, Castor, Mustard, Wheat, Fennel and Horticultural crops. Total land holding is 5 ha. In which 0.50 ha. Land under natural farming.

Training and guidance of KVK :

KVK Patan provides information and given training to Dahyabhai for practices of natural farming in various crops.

Practices adopted :

Jivamrut, Ghan Jivamrut, Bijamrut, Nimastra

Comparison between Natural farming and conventional farming :

Parameters	Natural Farming (Area one ha)	Conventional Farming (Area one ha)
Name of Crop	Wheat	Wheat
Cost of cultivation (Rs)	18000	27400
Production (q)	33.1	43.7
Gross return (₹)	105920	89148
Net return (₹)	87920	61748
BC ratio	5.8	3.2

Benefits and achievements :

- Input cost reduction
- Labor cost saving
- Time saving in farming
- Quality seed availability
- Improved soil health

Impact of the technology :

- Increase organic carbon of soil
- Improve soil properties
- Maintain crops yield with less cost

SUCCESS STORY- 06

Adotion of natural farming for improving soil health & enhancing income

Name of Farmer : Patel Sumitraben Rameshbhai
Village : Thakarasan
Taluka : Sidhpur
District : Patan
Education : 07th Pass

Introduction :

Sumitraben has been associated with agriculture for 20 years. She grows Cotton, Castor, Wheat, Green gram, Fennel crops. Total land holding is 2.16 ha. In which 0.60 ha. Land under natural farming.

Training and guidance of KVK :

KVK Patan provides information and given training to Sunitraben for practices of natural farming in various crops.

Practices adopted :

Jivamrut, Bijamrut, Nimastra,Bramastra, Dashparni Ark

Comparison between Natural farming and conventional farming :

Parameters	Natural Farming (Area one ha)	Conventional Farming (Area one ha)
Name of Crop	Wheat	Wheat
Cost of cultivation (Rs)	20000	25400
Production (q)	30.4	42.5
Gross return (₹)	121600	108375
Net return (₹)	99600	82975
BC ratio	6.0	4.2

Benefits and achievements :

- Input cost reduction
- Labour cost saving
- Time saving in farming
- Quality seed availability
- Improved soil health

Impact of the technology :

- Increase organic carbon of soil
- Improve soil properties
- Maintain crops yield with less cost

SUCCESS STORY- 07

Adotion of natural farming for improving soil health & enhancing income

Name of Farmer : Rajput Pravinsinh Madarji
Village : Dhanpura
Taluka : Sidhpur
District : Patan
Education : Graduate
Introduction :

Pravinsinh has been associated with agriculture for 05 years. He grows Cotton, Castor, Wheat, Green gram, Fennel crops. Total land holding is 4 ha. In which 0.50 ha. Land under natural farming.

Training and guidance of KVK :

KVK Patan provides information and given training to Sunitraben for practices of natural farming in various crops.

Practices adopted :

Jivamrut, Bijamrut, Nimastra,Bramastra, Dashparni Ark

Comparison between Natural farming and conventional farming :

Parameters	Natural Farming (Area one ha)	Conventional Farming (Area one ha)
Name of Crop	Wheat	Wheat
Cost of cultivation (Rs)	18900	26300
Production (q)	31.6	43.2
Gross return (₹)	126400	88128
Net return (₹)	107500	61828
BC ratio	6.6	3.3

Benefits and achievements :

- Input cost reduction
- Labour cost saving
- Time saving in farming
- Quality seed availability
- Improved soil health

Impact of the technology :

- Increase organic carbon of soil
- Improve soil properties
- Maintain crops yield with less cost

SUCCESS STORY- 08

Enhancing milk productivity throgh adoption of latest technology

Name of farmer & address : Chudhary Jeliben Bharatbhai
Village : Dudharampura, Ta.: Saraswati, Dist.:Patan
Mobile No.: 9662091406

No of Animal : HF Cow- 04 No, Calf- 05 No,
Buffalo- 01, Gir cow- 01No

Background information about farmer field :

Details of technology demonstrated :

- Improved breed
- Balance feeding
- Use of feed supplements like chelated mineral mixture, bypass fat, etc.
- Deworming
- Timely vaccination
- Round the year green fodder production

Institutional involvement :

- Krishi Vigyan Kendra
- Department of Animal Husbandry, Patan
- Dudhsagar Dairy
- ATMA, Patan

Success point :

- Use of Gir Cow for natural farming (Also get 900 rs/month from government for rearing Gir cow)
- Use of Sexed semen dose for producing female calf
- Use of Azolla as a animal feed and drinking water facility with calcium
- Always adopt the latest technology of animal sector & also motivate to other farmers for adopting them.
- Average milk production is 15000 lit/ year

Farmer feedback :

- Use of super bullet Napier grass under round the year green fodder production
- Use of latest technology like- by pass fat, by pass protein, chelated mineral mixture etc

Performance of technology:-

Total milk production in a year	15000 Liter
Average milk selling price	Rs 32/ Liter
Total expenditure in a year	Rs 2,00,000/-
Grass income	Rs 4,80,000/-
Net Income	Rs 2,80,000/-
B:C Ratio	

SUCCESS STORY- 09

Kitchen garden for regular availability of fresh vegetable

1. Name and address:

Name :Smt Lalitaben Bhudarbhai Patel
Address: Village: Ganeshpura,Ta.Sidhpur
Dist.Patan,Gujarat
Age:52 years
Education:- 5th

Background:- smt lalitaben b patel live in village ganeshpura.she mentioned that prior to joining the programme,her family dite lacked diversity and consisted mostly of the crops they grow on their farmland or what they could purchase from market. she is further noted that relying on market for food can be costly, thus their family could not expand their diets though the market.she is educated&work as house wife.

Traning and Motivational support:-

krishi vigyan Kendra, district-patan conducted training& demonstration under NARI programme on house hold nutritional security through kitchen garden.Home scientist of krishi vigyan Kendra is regularly visit& motivate to farm women for proper execution of demonstration.

Impact in the area:-Round the year availability of fresh vegetables

- clean & decorate the back yard space of house
-use surplus time for creativity in kitcen garden
-Use wastage material like water &other waste in the farm of compost
-Save money

Output:-Regular availability of fresh& quality seasonal vegetables

Outcome:- Enhance income Rs 11,800/Year,Improve fitness level

SUCCESS STORY- 10

Drudgery reduction through secature for harvesting of castor spike

Theme	**Drudgery Reduction**
Title	**Drudgery reduction through secature for harvesting of castor**
Introduction	smt Bhikhiben jayantilal Patel live in Madhupura village, Taluka- sidhpur ,district-Patan. she was cultivation castor crop&castor spike is harvested through sickle. for harvesting of castor spike through sickle,they face low working efficiency for harvesting of castor spike& also damage the branch& spike of castor crop. Sometime they face the physical damage also during harvesting of castor spike
KVK intervention	KVK Introduce secatier for harvesting of castor spike for enhancing the work efficiency & reduce the damage of plant& as well as also reduce the physical damage
Output	Enhance the work efficiency up to 22-25%
Outcome	Enhance the profitability through reduce the cost& increase the working efficiency
Impact	Reduce the damage of plants as well as spice of castor,Reduce the physical damage, Enhance the workind effciency

SUCCESS STORY- 11

Income generation activity- Tailoring and Stitching

Title	**women empowerment through Tailoring& Stitching in Women & children garments**
Introduction	Now a day human need is increased very intensively.so there is a acute need to earn more income from other occupation by rural youth. with a view to empower& generate income vocational training programme has been organized by KVK for rural youth.
KVK intervention	Looking to the requirements& interest of the 20 rural youth (girls) of the Sandesri village ,Taluka- sidhpur, District- Patan. KVK Home scientist arraned a long term vocational course from 18/04/2022 to 18/05/2022 on "Tailoring & stitching .in this vocational traning programme 20 rural youth had been trained about Drawing of the Diagram, method of measurement,cutting& sewing of Different garments as introduction & function of the different parts of the machine
Output	After completion of the long term vocational training programme 14 enthusiastic girls.
Outcome	Has started the tailoring at their home. they are preparing the different garments and earn averageRs7000 to 10000 per month regularly

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

Digital Farm School:- Krishi Vigyan Kendra & Reliance Foundation, Patan were jointly conducted digital farm school for dissemination of production technology of cumin, which is selected under One District One Product. In this programme, we selected three group- One control group, second Kisan mobile sandesh group & third group is digital farm school group. In each group have 60 No of farmers.Under this programme, first we are conducted base line survey & plan the technology according to crop stage. After completion of prgramme, we are find out the impact of the programme.

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	Dairy	Ethno Vet practices	Metabolic & reproductive Disease management

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

A. Practicing Farmers

a)

B. Rural Youth

a)

C. In-service personnel

a)

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
v) Others if any

For FLD:

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

5.3. Field activities

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

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
Sardarkrushinagar Dantiwada Agril. University, S.K.Nagar	-Technical Back stopping
Agril. Department Gujarat State, Patan	-Linkage for exchange of information regarding farming. -Linkage for training programme of seasonal crops for practicing farmers. -Linkage for training of extension functionaries.
Gujarat State Fertilizer & Chemical Ltd. Sidhpur	-linkage for demonstration about efficient and proper use of chemical fertilizer and importance of bio-fertilizer. -Linkage for soil and water analysis and training programme to farmers
G.N.F.C. Sidhpur	-Linkage for soil and water analysis. -Linkage for farmer training programme
Department of Animal Husbandry, Gujarat State, Patan	-Linkage for training of management of milking animal & steps to solve the burning problem of cattle owner. -Linkage for training to Ext. functionaries.
Dept. of Horticulture Gujarat State, Patan	To create awareness regarding different schemes of Horticulture development. -To increase the awareness about protective cultivation in shade net
Farmers Training Centre, Patan	-linkage for imparting training to farmers & farm women & rural youth
ICDS Patan	In-service training programme and sponsored training programme
ATMA Patan	-Seasonal training programme -Demonstration of Agril. technology
IWMP, Patan	Imparting training to the extension functionaries, farmers & farm women about soil reclamation & other enterprises
NABARD, Patan	Training to members of farm science club
Forest Department, Patan	Training & Gosthi regarding awareness about agro forestry as well as medical plant cultivation
SSNL	Demonstration & Training for dissemination of latest technology
Reliance Foundation	Quick delivery of message in large scale through Kisan Mobile sandesh Technical backup through training & demonstration for dissemination of latest technology
Dudhsagar Dairy, Mehsana	Training regarding awareness among the farming community about feed management in dairy animals

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

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

Name of the scheme	Date/ Month of initiation	Funding agency	Amount (Rs.)
Natural farming	October, 2022 to March, 2023	ICAR- ATARI, Pune	2,66,000
Microbial based Agricultural Waste Management through using Vermi Compost	March, 2023	ICAR- ATARI, Pune	34390

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?

KVK actively participate for preparation of SREP

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	**Meetings**	ATMA Management Committee Meeting	03		
		AGB Meeting	02		
		Meeting for ATMA Award	02		
		Meeting Selection of best farmers	02		
		SAC Meeting	-	01	
		Meeting for Kisan Mela	02	02	
02	**Training programmes**	**Awareness programme like-** Low cost technology for higher production in major filed crops, Fruit & vegetable preservation, Crop production, Animal Science & Horticulture etc	16		
05	**Extension Programmes**				
	Technology Week		01		
	KisanMela	KisanMela	01		
	Kisan Gosthi	Kisan Gosthi	12		
	FFS	FSS	03		
	Exhibition	Exhibition	02	**02**	

D. Give details of programmes implemented under National Horticultural Mission - NA

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 - NA

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 - NA

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) - NA

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

H. Details of linkage with NFSM

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	Training & Gosthi	Finalization of technology & provide Expert support to line department	-	-	

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

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	Training & Gosthi	Provide Expert support to line department	-	-	-

7. Convergence with other agencies and departments:

Date	Venue	Participants			Convergence with	Remark
		SC/ST	Others	Total		
23-02-2022	Kuwara	10	98	108	ATMA, Patan	Natural farming in horticultural crops
01-09-2022	Mandloop	3	52	55	ATMA	Kisan Gosthi on Natural farming Sponsored by
02-09-2022	Kot	8	82	90	ATMA	Kisan Gosthi on Natural farming Sponsored by ATMA, Patan
27 to 28-07-2022	KVK, Patan	2	58	60	FTC, Patan	Production technology of kharif crops, feed management in milch animal & Natural farming.
14 to 15 - 03-2022	Aklava	0	40	40	Horti.Deptt, Patan	Preparation & preservation of fruits & vegetable
09 to 10-06-2022	Vaghel	4	42	46	Horti.Deptt	Preparation & preservation of fruits & Vegetable
14 to 15-06-2022	Sherpura	2	34	36	Horti.Deptt	Preparation & preservation of fruits & Vegetable
02 to 03-08-2022	Piplana	1	38	39	Horti.Deptt	Preparation & preservation of fruits & vegetable
04 to 05-08-2022	Nana	6	44	50	Horti.Deptt	Value addition of fruits & vegetable,
29 to 30-08-2022	Patan	2	29	31	Horti.Deptt	Preparation & preservation of fruits & vegetable,
22 to 23-09-2022	Kanesara	0	26	26	Horti.Deptt	Preparation & preservation of fruits & vegetable
21-09-2022	Patan	0	20	20	Animal Hus. Deptt, Patan	Innovative technology in animal husbandry
23-09-2022	Harij	0	20	20	Animal Hus. Deptt, Patan	Innovative technology in animal husbandry
22-12-2022	Patan	04	147	151	BAIF, Patan	ICM & IPM in BT Cotton

8. Innovative Farmers Meet

Sl.No.	Particulars	Details
1	Have you conducted Farm Innovators meet in your district?	Yes/ No
	Brief report in this regard- FPO meeting regardining self seed production & adoption of organic farming	

FPO Meeting details

Name of activity	Date	Venue	Participants
Annual general meeting of FPO Banas & Chorad- spice crop production technology	29-09-2022	Vernosery	18 Member
FPO Kahoda in general meeting of FPO member	11-07-2022	Kahoda	94 Member

9. Farmers Field School (FFS) - NA

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:

- Need to develop yellow mosaic resistant variety of black gram.
- Need to develop high yielding, wilt resistant & drought tolerance variety of chickpea.
- Need to develop wilt resistant variety in castor
- Need to develop wilt & pink boll worm resistant/ tolerance variety in cotton
- Need to develop cropping system module of vegetable crops.
- Need to develop INM module as per cropping system.
- Need to develop to resistant variety of chilli against viral diseases.
- Need to develop IPM module in major insect of vegetable crop.
- Need to develop complex fertilizer as per crops.

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

Name of scientist	Feed back
Mr R.P.Chaudhri, SMS- Crop Production	Need to develop high yielding & drought tolerant variety of chickpea Need to develop INM module in field crop as per cropping system Need to develop complex fertilizer as per crops
Mr S S Darji, SMS- Horticulture	Need to develop cropping system module of vegetable crops Need to develop INM module in vegetable crop as per cropping system
Mr G A Patel, SMS- Plant Protection	Need to develop yellow mosaic resistant variety of black gram. Need to develop wilt resistant variety of chickpea Need to develop wilt resistant variety in castor Need to develop wilt & pink boll worm resistant/ tolerance variety in cotton
Dr S J Patel, SMS- Animal Science	Need to develop high yielding & high protein contain variety of fodder crop

11. Technology Week celebration during2021:Yes/No, If Yes

Period of observing Technology Week : From 18-12-2022 to 24-12-2022
Online / Offline : Online & Off line both
Total number of farmers visited :
Total number of agencies involved : 06 No- Krishi Vigyan Kendra, ATMA, Agriculture Department, Village Panchayat, Reliance Foundation, BAIF
Number of demonstrations visited by the farmers within KVK campus: 04 No

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Kisan Gosthi of Input dealers	01	200	Awareness programme on safe use of pesticide
Field day	03	89	INM in cotton & Feed management in dairy animal
OFT	01	10	IPM for management of pink boll worm in cotton
Training to farmers & farm women	02	49	Nutrient management & Plant protection in field crops
Lecture deliver	01	151	Cotton production & protection technology
Kisan Diwas	01	172	Awareness programme on latest technology in agriculture
Field visit	06	50	Regular visit for monitoring FLD & OFT
No of Activities-12	15	721	

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

- NA

A. Introduction of alternate crops/varieties

State	Crops/cultivars	Area (ha)	Number of beneficiaries

B. Major area coverage under alternate crops/varieties

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

C. Farmers-scientists interaction on livestock management

State	Livestock components	Number of interactions	No.of participants
Total			

D. Animal health camps organized

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

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

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

F. Large scale adoption of resource conservation technologies

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

G. Awareness campaign

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

13. IMPACT

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

Name of specific technology/skill transferred	No. of participants	% of adoption	Change in income (Rs.)	
			Before (Rs./Unit)	After (Rs./Unit)
Varietal adoption				
Castor-GCH-8	50	68	-	-
Fennel-GF-12	25	62	-	-
Wheat-GW-451	50	74	-	-
Cumin-GC-4	25	72	-	-
Ajwain- GA-2	25	54	-	-
Wilt disease management in Cumin through us of Bio-fungicide (Trichoderma spp.)	25	38	-	-
INM in cotton	25	28	-	-
Application of sulpher in mustard	25	85	-	-
Management of wilt in fennel	25	76	-	-

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

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

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

14. Kisan Mobile Advisory Services

Month	No. of SMS sent	No. of farmers to which SMS was sent	No. of feedback / query on SMS sent
Jan 2022	3	35350	
Feb 2022	3	10335	
March 2022	3	10335	
April 2022	4	10335	
May 2022	4	10335	
Jun 2022	4	38500	
Jul 2022	4	38500	
Aug 2022	4	35354	
Sept 2022	4	35354	
Oct 2022	4	35354	
Nov.2022	4	35354	
Dec.2022	4	35354	

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
	Text only	35	06	-	01	03	-	45
	Voice only							
	Voice & Text both							
	Total Messages	35	06	-	01	03	-	45
	Total farmers Benefitted	**1128220**	**16800**		**36500**	**84300**	**-**	**1265820**

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	Nursery unit	2021	0.4	Lime- Kagzi Papaya seedling Vegetable seedling Rose – Desi Tobacco Seedling	Seedling Seedling Sapling Seedling Seedling	1384 100 15840 89 40000	15000	20760 1000 22160 890 00	Sale to farmers & seedling of vegetable grow & provide to farming community under FLD
2	Vermi compost	2021		*Icenia foetida*	Compost	325	5000	1625	Sale to Farmers & Use in KVK farm
3	Azolla	2021	02 No of Pit	*A pinnata*	Azolla Seed culture	500 Kg	-	-	Used at KVK
4	Bio decomposer	2021	-	*Waste decomposed*	-	500 Lit	-	-	Used at KVK
5	Bio pesticide	2021	-	Neemastra	-	100 Lit	-	-	Used at KVK

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									
Wheat	24/11/2021	25to27/03/2022	1.25	G-W-451 (Breeder)	Seed	5457kg	18081	183920	
Wheat	26/11/2021	28/03/2022-	0.10	G-W-513	Seed	266kg	2912	9310	
Wheat	28to29/11/2022	-	0.80	G-W-451	seed	Crop is standing position			
Wheat	28/11/2022	-	0.20	G-W513	Seed	Crop is standing position			
S.Bajra	03to10/03/2022	23 to 25/05/2022	1.06	Hybrid & GHB	Commercial	3634kg	10086	76314	
Pulses									
Black Gram	22/07/2021	21/10/2021	0.60	G,U 1	Commercal	413kg	2214	14440	
Sunhemp	19/07/2021	25/09/2021	1.50	Local	Green Manuring	-	5160	-	
Sunhemp	19/07/2021	20/01/2021	0.20	Local	Seed	88kg	600	5280	
Sunhemp	29/07/2022 to 01/08/22	17 to 20/09/2022	1.50	Local	Green Manuring	-	4256	Green Manuring Purpose	
Oilseeds									
Castor (irrigated)	04 to 07/08/2021	02/02/2022 t o 30/03/2022	2.50	GCH7,	Commercial	7528 kg	26506	547666	
Castor (irrigated)	27/08/2022 to 02/09/2022	-	3.50	GCH7,	Commercial	Crop is standing position			
Mustard	18 to 27/10/2021	11 to 20/02/2022	0.88	Hybrid Pioneer	Commercial	1328 kg	9254	80676	
Mustard	25/10/2021	17/02/2022	0.37	GDM-4 (Breeder)	Seed	574 kg	2546	36582	
Mustard	17/10/2022	-	0.20	GDM-4	Seed	Crop is standing position			
Mustard	10 to 12/10/2022	-	0.30	Hybrid KSN-46	Commercial	Crop is standing position			
Fibers									
Cotton	14 to 24/06/2021	18/10/2021 to 20/11/2021	1.0	Bt BGII Mangulum & Ankur Jay	Commercial	1613 kg	13291	134613	
Cotton	22 to 27/06/2022	19/11/2022 to 21/12/2022	1.0	Bt BGII , Ankur Jay, Kedar	Commercial	2319 kg	12382	198470	
Spices & Plantation crops									
Floriculture									
Fruits									
Mango	June1994	May,2022	0.5	Kesar	Commercial	-	-	40000	
Sapota	June1994	March,2022	0.5	Kali patti	Commercial	-	-		
Mango	June1994	May,2023	0.5	Kesar	Commercial	-	-	45000	

Sapota	June1994	March,2023	0.5	Kali patti	Commercial	-	-		
Vegetables									
Others (specify)									
Tobacco	01 to 04/12/2021	01 to 05/04/2022	1.5	GCT-3	Commercial	4701 kg	21476	332564	
Tobacco	10 to 21/11/2022	--	1.5	GCT-3 & DCT-4	Commercial	Crop is standing position			
Guar	03/08/2021	20/11/2021	0.6	GG1	Commercial	732 kg	4601	44317	

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

Sl. No.	Bio Products	Name of the Product	Qty (kg/lit)	Amount (Rs.)		Remarks
				Cost of inputs	Gross income	
1	Bio-Fertilizers/ Product	Vermi compost	5325 Kg	5000	1625	Sale to farmers & rest use at KVK
		Jeevamrut	2000 Liter	-	-	Used at KVK
2	Bio-Agents	Azolla	500 Kg	-	-	Used in Gaushala & given to farmers for expenson of technology
3	Bio-pesticide	Neemastra	100 Lit	-		Used at KVK

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

Sl. No	Name of the animal / bird / aquatics	Details of production			Amount (Rs.)		Remarks
		Breed	Type of Produce	Qty.	Cost of inputs	Gross income	

E. Utilization of hostel facilities

Accommodation available (No. of beds):

Months	No. of trainees stayed	Trainee days (days stayed)	Reason for short fall (if any)
January 2022	-	-	
February 2022	04	15	
March 2022	-	-	
April 2022	-	-	
May 2022	-	-	
June 2022	-	-	
July 2022	-	-	
August 2022	-	-	
September 2022	12	45	
October 2022	-	-	
November 2022	05	45	
December 2022	-	-	

F. Database management - NA

S. No	Database target	Database created

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

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

H. Performance of Nutritional Garden at KVK farm

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

If yes,

Nutritional Garden developed at KVK farm

Area under nutritional garden (ha)	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers visited
600sq feet	Vegetable crops	Brinjal, Tomato, chilli, cabbage, cauliflower, capsicum, leady finger, bitter gourd, potato, spinach, fenugreek, coriander, radish, onion, Garlic	52

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
04	Vegetable crops	brinjal, chilli, tomato. leady finger, cowpea, cluster bean, sponge gourd bottle gourd, Bitter gourd, cucumber,radish,fenugreek,coriander,spinach,Guwar,cauliflower,cabbage	80
	Fruit crops	Papaya-10,lemon-2,Drumstick-2	

H. Details of Skill Development Trainings organized

S.No.	Name of KVKs/SAUs/ICAR Institutes	Name of QP/Job role	Duration (hrs)	No. of participants					
				SCs/STs		Others		Total	
				Male	Female	Male	Female	Male	Female
1	Patan	Tailoring, stitching, embroidery, dying etc.	18-04-2022 to 25-05-2022	00	19	00	01	00	20
2	Patan	Nursery raising of horticultural crops	17 to 22 June, 2022	00	05	00	15	00	20
3	Patan	Article preparation for decoration in home	11 to 16-07-2022	00	15	00	00	00	15
4	Patan	Value addition of fruit & vegetable	07 to 12-12-2022	00	00	00	20	00	20

17.FINANCIAL PERFORMANCE

A. Details of KVK Bank accounts

Bank account	Name of the bank	Location	Branch code	Account Name	Account Number	MICR Number	IFSC Number
With Host Institute							
With KVK	State Bank of India	Kahoda, Mahesana	SBIN0015232	KVKSGVS Ganwada, Saraswati Gram Vidyapeeth, Ganwada, Siddhpur	10265325092	384002509	SBIN0015232

C. Utilization of KVK funds during the year 2021-22 (Rs. in lakh)(Till Dec, 2021)

Sr.No.	Particulars	Sanction	Released	Expenditure	Remark
A.	**GRANT IN AID SALARY**				
1.	Pay and allowance	31157000.00	31157000.00	30868553.00	
B.	**GRANT IN AID GENERAL**				
2.	Traveling allowance	80000.00	80000.00	93661.00	
3.	Recurring Contingencies				
(i)	Stationery, telephone, postage and other expenditure on office running publication of Newsletter and library maintenance (Purchase of News paper & Magazines)etc.	345000.00	345000.00	187369.00	
(ii)	POL, repair of vehicle, tractor and equipment			187639.00	
(iii)	Meals/refreshment for trainees (Rs.150/- per person per day towards foods & refreshment for KVK training programmes for farmers/ extension personnel)	340000.00	340000.00	158709.00	
(iv)	Training materials (Postage, charts, demonstration materials including chemicals etc. required for conducting the training)			38636.00	
(v)	Training of extension functionaries etc.			5825.00	
(vi)	Front line demonstration including oilseed and pulses, supportive extension activities which includes farmers fair, field days, kisan gosthis etc.			240306.00	
(vii)	On farm testing (On need based location specific and newly generated information in the major production system on the area)etc.			49736.00	
(viii)	Maintenance of buildings/Farm etc.	-	-	-	
(ix)	Library	-		6480.00	
(x)	Demon. Unit	75000.00	75000.00	74996.00	
4.	Revolving fund	-		-	
	TOTAL (Grant in Aid General)	**840000.00**	**840000.00**	**1043357.00**	
C.	**NON-RECURRING CONTIGENCE (Grant in Aid Capital)**				
1.	Equipment and furniture	-	-	-	
2.	Information Technology	-	-	-	
3.	Furniture & Fixture	-	-	-	
4.	Works	-	-	-	
5.	Library	-	-	-	
6.	Vehicle	-	-	-	
	TOTAL (B) (Grant in Aid Capital)	**-**	**-**	**-**	
	GRAND TOTAL (A+B+C)	**31997000.00**	**31997000.00**	**31920613.00**	

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 2019 to March 2020	1016186	761813	627345	1150654
April 2020 to March2021	1150654	833659	470791	1513516
April 2021 to March, 2022	1513516	839033	533398	1819151
April 2022 to March 2023	1822438	2627781	1500195	3010024

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
Mr S.S.Darji	Sci. Horticulture	ZREAC Meeting	SDAU,S.K.Nagar	Online	29/01/2022
Mr S.S.Darji	Sci. Horticulture	DMC Meeting	JDH,Mehsana	Offline	14/02/2022
Mr S.S.Darji	Sci. Horticulture	DFI Success Story	ATARI,Pune	Offline	22-26/05/2022
Mr S.S.Darji	Sci. Horticulture	Soft skills for personality development	EEI,Anand	Offline	11-16/07/2022
Mr S.S.Darji Smt H.M.Patel	Sci. Horticulture Sci.Home science	Video editing & conferencing skills in social media for extension services	EEI,Anand & KVK Khedbrahma	Offline	22-24/08/2022
Mr S.S.Darji	Sci. Horticulture	Bi-monthly review meeting	SDAU S.K.Nagar	Offline	29/06/2022
Mr S.S.Darji	Sci. Horticulture	Bi-monthly review meeting & workshop on Natural Farming	SDAU S.K.Nagar & KVK Kherva	Offline	03/09/2022
Mr S.S.Darji	Sci. Horticulture	FPO Banas & Chorad Annual general Meeting	Varnosary	Offline	29/09/2022
Mr S.S.Darji Mr R.P.Chaudhari Dr. S.J.Patel	Sci. Horticulture Sci. Agronomy Sci. Ani.Sci.	Workshop on rabi Pre seasonal	SDAU S.K.Nagar	Offline	18/10/2022
Mr S.S.Darji	Sci. Horticulture	ZREAC Meeting	SDAU,S.K.Nagar	Offline	20/10/2022
Mr S.S.Darji Smt H.M.Patel	Sci. Horticulture Sci.Home science	Post harvest management & Storage tecxhnique	NIPHM,Hydrabad	Online	19-23/09/2022
Mr S.S.Darji	Sci. Horticulture	Natural Farming for healthy nutrition	ICAR,ATARI, Pune	online	10/02/2022
Smt H.M.Patel	Sci.Home science	Entrepreneurial development in agriculture for sustainable growth and self reliance	RVSKVV.Gwalior	online	24/02/22to16/03/22
Smt H.M.Patel	Home science	Advance processing technology for super food a new horizon of income	CIAE Bhopal	Offline	16to25/11/22
Mr R.P.Chaudhari	Sci. Agronomy	National Workshop on Natural Farminf	RVSKVV.Gwalior	Offline	03/12/2022
Mr S.S.Darji	Sci. Horticulture	Workshop on Natural Farming	Kurukshetra	Offline	8-9/12/2022
All Staff		Technological back stopping & Review meeting	KVK,Patan	Offline	30/12/2022

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

Name of	Total No. of	Key interventions	No. of farmers	Change in income (Rs/unit)

the village	families surveyed	implemented	covered in each intervention	Before (base year)	After (current year)
Hajipur	25	1. High yielding variety 2. IPM modules 3. Dairy management	25	185000	375000
Madhupura	25	1. High yielding variety 2. Cultivation of Horti. crops with MIS 3. IPM modules 4. Dairy management	25	215000	455000

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
01	NARI	02	Training	11	238
			Demonstration	2	20
			Field visit	13	92
			Exhibition	-	-
			Health checkup camp	-	-
			Group meeting	2	39
			Field day	1	40

20. Details of Progress of ARYA Project

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

21. Details of SAP

S. No.	*Types of major Activity conducted- SwachhtaPakhwada, Cleaning, Awareness Workshop, Microbial based Agricultural Waste Management by Vermicomposting etc.*	No. of Programmes conducted	No. of Participants
1	Training progarmme	17	501
2	Kisan Seminar	3	401
3	Kisan Gosthi under Natural Farming	4	851
4	Microbial Based Agriculture waste awareness programme	8	235
5	Vermi compost	1	12
6	Clening Awareness	10	110
7	World Environment day (Youtube live)	1	102
8	Clebration of Special day (Kisan diwas)	1	172
9	Workshop Exhibitions	1	151
10	Group Meeting	4	98
11	Mahila diwas	1	58
12	Orientation of School Children On Various	2	396

13	Organization of Press Conference	1	82
14	PM live telecast Kisan Samman nidhi	1	266
15	Kisan Mela Exhibition	1	357
16	Garib kalayan Sammelan Cum PM live telecast	1	317
17	Clening of Offices and camps disposal of refrences	7	171
	TOTAL	64	4280

22. Books published 2022-23

Title of the Book	Authors	ISBN No (Optional) / Pages No	Description/review of the book (one paragraph/sentence)
Fasalo ke pramukh keet-rog, unka prabandhan & tikau Kheti	**Dr Upesh Kumar, Dr Triloki Singh & Dr K B Anand**	**978-93-95581-23-3**	

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

APR SUMMARY

(Note: While preparing summary, please don't add or delete any row or columns)

1. Training Programmes

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	51	753	420	1173
Rural youths	04	00	118	118
Extension functionaries	09	227	91	318
Sponsored Training	10	643	144	787
Vocational Training	03	00	74	74
Total	**77**	**1623**	**847**	**2470**

2. Frontline demonstrations

Crops/Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	100	40	-
Pulses	100	40	-
Cereals	45	15	
Vegetables	110	07	
Spices	85	25	
Fruit plant			
Other crops- Mixed cropping	20	05	
Hybrid crops	25	10	
Total	485	142	
Livestock & Fisheries	60	-	60
Other enterprises	25	4	5 vermibeds
Total	85		
Grand Total	570	146	

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	06	06	48
Livestock	02	02	10
Various enterprises			
Total	**08**	**08**	**58**
Technology Refined			
Crops			
Livestock			
Various enterprises			
Total			
Grand Total	**08**	**08**	**58**

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	95	5559 & 954 Animal
Other extension activities	71	Mass
Total	166	5559 & 954 Animal

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Awar e-ness	Other enterpri se	Total
	Text only	35	06	-	01	03	-	45
	Voice only							
	Voice & Text both							
	Total Messages	**35**	**06**	**-**	**01**	**03**	**-**	**45**
	Total farmers Benefitted	**1128220**	**16800**	**-**	**36500**	**84300**	**-**	**1265820**

6. Seed & Planting Material Production

	Quintal/Number	Value (Rs.)
Seed (q)	3745	135575
Planting material (No.)	17413	44810
Bio-Products (kg)	5825 kg & 2100 lit	1625

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value (Rs.)
Soil	155	-
Water		
Plant		
Total	**155**	**-**

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	04
2	Conferences	01
3	Meetings	08
4	Trainings for KVK officials	06
5	Visits of KVK officials	-
6	Book published	01
7	Training Manual	01
8	Book chapters	-
9	Research papers	03
10	Lead papers	-

11	Seminar papers	-
12	Extension folder	02
13	Electronic Media (CD\DVD)	02
14	Award & recognition	01
15	Newspaper Coverages	06
16	Popular article	21
17	Technical report	04