ICAR-ATARI, Pune
DETAILS OF ANNUAL PROGRESS REPORT OF KVKs DURING 2020
(January 2020 to December 2020)

1. GENERAL INFORMATION ABOUT THE KVK

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

Address with PIN code	Telephone		E mail	Website address & No. of visitors (hits)
	Office	FAX		
Krishi Vigyan Kendra,Navsari Agricultural University, Ahwa road, Waghai, Ta: Waghai, District: Dang, Gujarat-394 730	02631-296645	-	kvkwaghai@nau.in	http://dangs.kvk6.in

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

Address	Telephone		E mail	Website address
	Office	FAX		
Navsari Agricultural University, Eru Char Rasta, Dandi Road, Navsari, Gujarat, 396 450	02637-282823 02637-282026	-	dee@nau.in	www.nau.in

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

Name	Telephone / Contact		
	Office	Mobile	Email
Dr. G. G.Chauhan	02631-296645	9427176916	kvkwaghai@nau.in

1.4. Year of sanction: ICAR 1984-85

1.5. Staff Position (as on 31 December, 2020)

Sl. No.	Sanctioned post	Name of the incumbent	Discipline	Pay Scale If Temporary, pl. indicate the consolidated amount paid (Rs./month) (Rs.)	Grade Pay	Present basic (Rs.)	Date of joining	Permanent /Temporary	Mobile No.	Email id	Please attach recent photograph
1.	Senior Scientist & Head	Dr. G. G. Chauhan	Extension Education	131400-217100	-	-	26-08-2019	Temporary	9427176916	ggchauhan@nau.in	
2.	Scientist	Mr. J. B. Dobariya	Extension Education	57700-182400	-	-	20.08.2015	Temporary	9724761097	dobariyajignesh@yahoo.in	
3.	Scientist	Dr. P. P. Javiya	Crop Production	57700-182400	-	-	27-08-2019	Temporary	9925689822	drppjaviya@nau.in	
4.	Scientist	Mr. H. A. Prajapati	Horticulture	57700-182400	-	-	13.02.2017	Temporary	9429430999	prajapatiharshad20@gmail.com	
5.	Scientist	Dr. S. A. Patel	Animal Science	57700-182400	-	-	27-08-2019	Temporary	9913439987	drsagarpatel10@nau.in	
6.	Scientist	Mr. B. M. Vahunia	Crop Protection	57700-182400	-	-	28-08-2019	Temporary	8141802632	bipinmv94@nau.in	
7.	Scientist	Vacant (Home Science)	-	-	-	-	-	-	-	-	-

8.	Programme Assistant	Mr. K. V. Patel	--	39900-126600	-	-	24-09-2015	Temporary	9687788642	kashyappvpatel2@gmail.com	
9.	Computer Programmer	Mr. T. R. Ahir	-	39900-126600	--	--	01-08-2020	Temporary	9825424555	tejasahir@nau.in	
10.	Farm Manager	Mr. R. S. Patel	--	39900-126600	-	-	08-03-2019	Temporary	9904410078	Patelrs6996@gmail.com	
11.	Accountant / superintendent	Vacant	-	-	-	-	-	-	-	-	-
12.	Stenographer	Vacant	-	-		-	-	-	-	-	-
13.	Driver (1)	Vacant	-	-		-	-	-	-	-	-
14.	Driver (2)	Vacant	-	-		-	-	-	-	-	-
15.	Supporting staff (1)	Mr. D. N. Parmar		14800-47100		-	01.08.2011	Temporary	6356862156	-	
16.	Supporting staff (2)	Vacant	-	-		-	-	-	-	-	-

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1.	Under Buildings	0.97
2.	Under Demonstration Units	--
3.	Under Crops	2.80
4.	Horticulture	1.00
5.	Pond	--
6.	Others if any	1.00
	Total	5.77

1.7. Infrastructural Development:

A) Buildings

Sr. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	1990	200.73	0.93	--	--	--
2.	Farmers Hostel	ICAR	2005	278.00	12.00	--	--	--
3.	Staff Quarters (6)	--	--	--	--	--	--	--
	B-Type(2)	ICAR	1994			--	--	--
	C-Type(1)	ICAR		197.04	343696	--	--	--
	A-Type(1)	ICAR				--	--	--
	E-Type(1)	ICAR				--	--	--
	Total			197.04	343696	--	--	--
	RCC approach road		2005	82.00	2.21	--	--	--
	RCC Sump		2005	40000 lit cap	0.76	--	--	--
4.	Demonstration Units	----	--	--	--	--	--	--
5.	Fencing	----	--	--	--	--	--	--
6.	Rain Water harvesting system	----	--	--	--	--	--	--
7.	Threshing floor	ICAR	2012	84	2.00	--	--	--
8.	Farm godown	ICAR	2011	12	3.00	--	--	--
9.	ICT lab	--	--	--	--	--	--	--
10.	other	--	--	--	--	--	--	--

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Mobile soil testing Van	2009	2630000	13015 (31-12-2020)	Working
Motorcycle Hero Honda Splendor	2011	50755	35081 (31-12-2020)	Working
Mahindra Bolero	2019	686240	29462 (31-12-2020)	Working

C) Equipments & AV aids

Name of the equipment/ Implements	Year of purchase	Cost (Rs.)	Present status
Camera (Sony-Digital)	05.01.2001	27100/-	Working
Digital camera	03.01.2009	19038/-	Working
Generator set (Honda)	26.03.2010	49600/-	Working
EPBAX system	24.02.2011	49868/-	Working
Plough (Heavy duty)	18.02.2011	19000/-	Working
Rotavator	14.03.2011	63400/-	Working
Vivitek Multimedia DLP projector	14.03.2011	99990/-	Working
Winnowing fan	27.02.2011	6900/-	Working
Power sprayer	04.02.2011	24150/-	Working
Power tiller	24.03.2011	148785/-	Working
Cultivator	03.03.2011	20700/-	Working
Two-way-leveler	03.03.2011	12600/-	Working
Thresher	17.02.2011	18000/-	Working
Seed cum fertilizer drill	17.02.2011	36100/-	Working
Scale (Weighing)	18.02.2011	6000/-	Working
PROTON Impact	28.03.2011	35600/-	Working
Trailer (For Power tiller)	28.03.2011	26500/-	Working
Submersible pump ISIV-6	07.03.2014	18,750/-	Working
Digital mini lab	23.11.2015	75000/-	Working
Tractor	04.12.2015	581228/-	Working
Paddy winnowing fane	29-02-2016	42200/-	Working
Rotary power tiller	18-03-2016	98500/-	Working
Desk top computer (Lenova)	21-03-2016	38775/-	Working
HP printer	28-03-2016	10999/-	Working
Tractor Trailer	29-03-2016	117000/-	Working
M.B.Plough	20-02-2017	30500/-	Working

Roklith cooler	23-02-2017	79000/-	Working
Lenovo computer (All in one)	07-03-2017	46199/-	Working
Laser printer	07-03-2017	25800/-	Working
Voltas AC	08-03-2017	72000/-	Working
Photocopier machine	10-03-2017	150000/-	Working
Mridaparishak soil testing kit	15-03-2017	90300/-	Working
Multicrop thresher	16-03-2017	210000/-	Working
Kiosk thin client based free standing type model	23-03-2017	90250/-	Working
Stabilizer	27-09-2017	8260/-	Working
V-ditcher, Ridzer, Burd former	19-02-2018	60000/-	Working
Lawn mover	17-03-2018	31500/-	Working
Paddy threshing table (2 peace)	29-09-2018	14000/-	Working
H P Laptop	11-03-2019	44715/-	Working
H P Printer	15-03-2019	14450/-	Working
Reaper	27-03-2019	97211/-	Working
Brush Cutter	27-03-2019	17813/-	Working
Submersible pump 7.5 HP	27-03-2019	29488/-	Working
Projector	27-03-2019	48500/-	Working
U P S inventor	29-03-2019	48000/-	Working
Disc harrow	27-03-2019	101115/-	Working
Air conditional	26-03-2019	116670/-	Working
Mini tractor (VST-Mitsubishi- Shakti)	28-03-2019	335699/-	Working
All in one printer (HP -1005 Laser jet pro MFP)	28-03-2019	17480/-	Working
All in one printer (HP - Laser jet pro MFP)	28-03-2019	28700/-	Working
All in one Computer (No. 4)	28-03-2019	227534/-	Working
Revolving Chair (No. 2)	29-03-2019	9000/-	Working

1.8. Details of SAC meetings conducted in the year 2020

Date	Name and Designation of Participants	Salient Recommendations	Action taken
14-12-2020	Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari Dr. C. K. Timbadiya, Director of Extension Education, NAU, Navsari Dr. S. R. Chaudhary, Director of Research, NAU, Navsari Dr. J. J. Pastagiya, Principal, CoA, NAU, Waghai-Dangs Dr .G. G. Chauhan, Senior Scientist & Head, KVK, NAU, Waghai-Dangs Dr. H. E. Patil, Associate Research Scientist, (HMRS), NAU, Waghai-Dangs Dr. S. N. Saravaiya, Professor & Head (Vegetable Sci.) Aspee College of Horticulture and Forestry, NAU, Navsari Dr. A. P. Patel, Associate Professor (Agronomy), College of Agriculture, NAU, Waghai-Dang Mr. Bendubhai M. Gaikwad, Progressive Farmer, Nadagkhadi, Tal.- Waghai-Dang Smt. Baliben Gamit, Progressive farm Women, Bheshkatri, Tal. -Ahwa, Dang Dr. Mahaveer Choudhary, Principal of Agri. Polytechnic, NAU, Waghai-Dang Mr. H. N. Pavagadhi, Representative , ATMA, Ahwa, Dang Mr. T. M. Gamit, Assistant Director of Horticulture, Ahwa, Dang Dr. Divya G. Chaudhary, Representative of DAHO, Ahwa, Dang Mr. D. L. Jat P. S. Agriculture, AKRSP(I), Ahawa, Dang Mr. K. S. Patel, Branch Manager, SBI, Waghai, Dang Mr. J. V. Parmar, Senior Associate, SBI, Waghai, Dang Mr. B. M. Bhoye, Chairman, Khapri Co. Mandli, Waghai, Dang Smt. Bhartiben C. Patel, Chair person of Women SHG, Waghai, Dang Mr. M. M. Zirval, Representative of DAO, Ahwa, Dang Dr. P. P. Javiya, Scientist (Crop Production), KVK, NAU, Waghai-Dang Mr. H. A. Prajapati, Scientist (Horticulture), KVK, NAU, Waghai-Dang Mr. B. M. Vahuniya, Scientist (Plant Protection), KVK, NAU, Waghai-Dang Dr. S. A. Patel, Scientist (Animal Science), KVK, NAU, Waghai-Dangs Mr. J. B. Dobariya, Scientist (Extension Education), KVK, NAU, Waghai-Dang Mr. R. S. Patel, Farm Manager, KVK, NAU, Waghai-Dang Mr. S. M. Chaudhary, SMS (Agro-meteorologist), KVK, NAU, Waghai-Dang Mr. Pradip Sabale, Agromet Observer , KVK, NAU, Waghai-Dang	1. Promotion of nutitional Security by *Moringa oleifera*. 2. Increase awereness about value addition in Mushroom. 3. Prepare a database of Awardee farmers of the Dang district. 4. Increase awareness about new variety of mango "Sonpari" 5. Add pheromone trap in the FLD of okra in the discipline of plant protection. 6. Increase awereness about Fisheries. 7. Provide new variety of Pigeon pea "GT 105" in FLDs.	1. In poshan Abhiyan -2020, KVK had distributed the 200 *Moringa oleifera* plants to 100 beneficiaries. 2. Prepared demo unit of Mushroom at KVK farm 3. We had collected 20 awardee farmers database and give the example of that farmers in FLD, On training & ext-activities program 4. We had collected 25 number of "sonpari" graft & planted at KVK, Rajendrapur farm 5. We had provide Pheromone trap in the FLD along with yellow sticky trap 6. We had prepared demonstration unit for create awerness of Fisheries cultivation and also given one training to 51 farmers. 7. We had provided the new variety of Pigeon pea "GT 105" under KVK regular FLD to 25 farmers during *kharif* - 2020

2. DETAILS OF DISTRICT / JURISDICTION AREA OF KVK

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

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

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

a) Soil type

Sl. No.	Agro-climatic Zone	Characteristics
1	South Gujarat Heavy Rainfall Zone–I Agro Ecological Situation-I	Dangs district comes under South Gujarat Heavy Rainfall Zone–I Agro Ecological Situation-I having total 172366 ha land. Out of that, 53.74% is occupied with forest and only 33.80% of land comes under cultivation and cultivable fallow. The district is remote forest area and characterized mainly by tribal. The cropping pattern of the district is single rainfed crops. The major crops in *kharif* are Paddy, Finger millet, Little millet, Sorghum, Black gram *etc.* Some more information regarding the district is given below.

b)Topography

S. No.	Agro ecological situation	Characteristics
1	Location	73'.29' to 73'.51' longitude and 20'.39' to 21'.50' latitude. An elevation 105 to 1317 mtrs. MSL
2	Agro climatic zone	South Gujarat Heavy Rainfall Zone–I Agro Ecological Situation-I
3	Soil	Laterite, hilly, undulating with slopes of 20 to 40 percent, shallow to medium in depth
4	Rainfall	1800-2000 mm with average rainy days of 85-95
5	Irrigation	18 percent
6	Rivers	Ambica, Khapri, Purna, Gira

2.3 Soil Types

S. No	Soil type	Characteristics	Area in ha
1	Lateritic, hilly, undulating with the slopes of 20 to 40 per cent, light to medium texture soil and others	Shallow to medium in depth, low to moderately fertile, medium to high in slope, normal to slightly acidic pH, moderate temperature because of thick forest cover, area under irrigation (10500 ha)	56,300

2.4. Area, Production and Productivity of major crops cultivated in the area of jurisdiction of KVK (2020)

A.

S. No	Crop	Area (ha)	Production (MT)	Productivity (Kg/ha)
1	Paddy	26750	93625000	3500
2	Nagli	9400	14100000	1500
3	Sorghum	75	71250	950
4	Maize	625	593750	950
5	Other cereal	-	-	-
6	Pigeon Pea	3525	4406250	1250
7	Black Gram	9150	8235000	900
8	Ground nut	573	601650	1050
9	Niger	975	341250	350
10	Soybean	1395	837000	600
11	Vari	4100	6150000	1500
12	Other pulses	-	-	-
13	vegetables	-	-	-
	Kharif Total			
14	Wheat	255	535500	2100
15	Gram	17050	21312500	1250
16	Sugarcane	345	86250000	250000
	Other pulses	-	-	-

B.

Sr. No.	Crop	Area (ha)	Production (MT.)	Productivity (t/ha)
A.	**Fruit Crops**			
1.	Mango	5188	35382	6.81
2.	Sapota	32	345	10.78
3.	Banana	31	1208	38.96
4.	Pomegranate	15	108	7.2
5.	Cashew nut	1643	1840	1.11
6.	Custard Apple	121	939	7.76
7.	Amla	26	150	5.76
8.	Papaya	2	89	44.5
9.	Others	--	--	00
	Total	**5474**	**40061**	**122.88**
B.	**Vegetable crops**			
1.	Okra	1526	23653	15.5
2.	Brinjal	660	11794	17.86
3.	Onion	109	2260	20.73
4.	Tomato	398	8484	21.31
5.	Cowpea	144	1238	8.59
6.	Cucurbitaceous	932	12999	13.94
7.	Cabbage	1	18	18.00
8.	Cauliflower	1	20	20.00
9.	Clusterbean	420	6518	15.51
10.	Chilli-Dry	29	37	1.27
11	Turmeric	264	6083	23.04
12.	Others	--	--	--
	Total	**4484**	**73104**	**175.75**
C	***Flower crop***			
1.	*Rose*	66	595	9.08
2.	Marigold	154	1374	8.92
	Total	**220**	**1969**	**17.93**

Source: District agriculture department.

2.5. Weather data (2020)

Month	Rainfall (mm)	Temperature ^{0} C		Relative Humidity (%)	
		Maximum	Minimum	Maximum	Minimum
January	0.0	29.2	11.8	75	67
February	0.0	33.3	12.5	67	59
March	5.0	34.2	15.1	68	61
April	0.0	38.8	19.8	68	56
May	0.0	39.2	23.6	75	60
June	139.0	34.7	24.9	80	74
July	224.0	32.7	24.7	83	80
August	925	29.5	23.6	91	87
September	225	31.9	23.2	88	83
October	36	33.2	21.1	85	73
November	0.0	32.7	15.1	69	57
December	51.0	30.9	13.2	68	64
Total	**1605**				

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

Category	Population	Production	Productivity
Cattle			
Cow	78160	-	-
Desi cow	68180	-	800-2200 lit/cow
HF cow	9980	-	800
Buffalo	24514	-	1200-2200 lit/buffalo
Sheep and goats	28151	-	300 lit
Pigs	64	-	-
Rabbits	-	-	-
Poultry	193612	-	-
Other	576	-	-
Category		Production (Q.)	Productivity
Fish (Reservoir)	-	-	-

2.7. Details of Operational area / Villages

Taluka	Name of the block	Name of the village	Major crops & enterprises	Major problem identified	Identified Thrust Areas
Ahwa Subir Waghai	Ahwa	Divan Tembruan Gadhavi Jamlapada	**Cereals:** Paddy, Finger millet, little millet **Pulses:** Gram, Black gram, Pigeon pea **Oilseeds:** Groundnut, Niger **Vegetables:** Okra, Bittersgourd **Fruit crops:** Mango, Custard apple , Cashew **Floriculture:** Rose and Marigold **Others:** Tuber crops **Animal Husbandry**	❖ Use of traditional varieties ❖ Poor quality of seed ❖ Improper use of fertilizers ❖ Lack of awareness about plant protection measures ❖ Scarcity of fodder ❖ Repeat Breeding and Anoestrus ❖ Less interest in dairy business	➢ Promoting Animal husbandry/horticultural crops ➢ Use of recommended varieties ➢ Promotion of scientific package of practices ➢ Create awareness about plant protection measures ➢ Scientific feeding management ➢ Awareness about dairy enterprise ➢ Artificial Insemination
	Subir	Bardipada Bibupada Vahutiya			
	Waghai	Borpada Dokpatal Kosmal Uga			

2.8. Priority thrust areas:

Crop/Enterprise	Thrust area
Rice	Integrated Nutrient Management
	Introduction of new variety
	Water management
	Integrated Pest and Disease Management
Finger millet/Little millet	Introduction of new variety
	Soil moisture conservation
	Integrated Nutrient Management
Pulses	Soil moisture conservation
	Integrated Pest and Disease Management
Oilseeds (Groundnut)	Soil moisture conservation
	Integrated Pest and Disease Management
Okra	Integrated Nutrient Management
	Integrated Pest and Disease Management
	Marketing
Watermelon	Integrated Nutrient Management
	Integrated Pest and Disease Management
Mango	Integrated Pest and Disease Management
	Integrated Nutrient Management

The Major thrust areas are as under:

- Increase productivity of the major field crops, fruits and vegetables by introduction of new technologies
- Increasing milk production by dissemination of latest technology
- Management of Natural Resources (Soil and water conservation)
- Empowerment of tribal women for sustaining livelihood
- Popularization of suitable farming system
- Value addition in farm produce
- Protected cultivation and high-tech agriculture
- Integrated farming system
- Farm mechanization
- Introduction of new crops like sunflower, bajra, strawberry, tuber crops, pineapple, *etc.*

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	148	112	17	18	405	617

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
50	74	1045	2224	146	734	8464	41033

Seed Production (Qtl.)		Planting materials (Nos.)	
5		6	
Target	Achievement	Target	Achievement
88	85.00	5000	23867

Livestock, poultry strains and fingerlings (No.)		Bio-products (Kg)	
7		8	
Target	Achievement	Target	Achievement
00	00	00	00

3.1. B. Operational areas details during the year 2020

Sr.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.*)*
			Crop	**Area (ha)**		
1.	**Cereals:**	-Use of traditional varieties	Paddy	135	Divan Tembruan	On campus training, Off campus training, Sponsored training, Vocational training, In-service training, Lecture delivered, Field visit, FLD visit, OFT visit, Scientist visit to farmer field, Farmer visit to KVK, Diagnostic visit, Exposure visit, KisanGosthi, Animal camps, Field day, Farmer fair, Farmer scientist interaction, Farmers meeting, TV-Film show, Exhibition, Farm School, Soil health campaign, Celebration of importance day, SwachataJagruti, Soil sample analyzed, Plant health clinic diagnostic services, SMS portal, Telephone helpline
2.	Paddy, Finger millet, little millet	- Poor quality of seed	Finger millet	78	Gadhavi	
3.	**Pulses:**	-Lack of awareness related with organic crop package & practices	Vari	69	Jamlapada	
4.	Gram, Black gram, Tur		Sorghum	15	Bardipada	
5.	**Oilseeds:** Groundnut, Niger		Maize	10	Bibupada	
6.	**Vegetables:** Okra, Brinjal	- Lack of awareness about plant protection measures	Black Gram	15	Vahutiya	
7.	**Fruit crops:** Mango, Cashew		Pigeon Pea	20	Borpada	
8.	nut, Custard apple	-Scarcity of fodder	Soybean	15	Dokpatal	
9.	**Floriculture:** Rose and Marigold	- Repeat Breeding &Anoestrus	Ground nut	5	Kosmal	
10	**Others:**	- Less interest in dairy business	***Kharif Total***	362	Uga	
11.	Tuber crops		Gram	38		
12.	**Animal Husbandry**		Wheat	10		
13.			Okra	12		
14.			Brinjal	10		
15.			Mango	20		
16.			Cashew nut	6		
			Rabi-Total	**96**		

* Support with problem-cause and interventions diagram

3.2. Technology Assessment (Kharif 2020, Rabi 2019-20, Summer 2020)

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

Thematic areas	Cereals	Oilseeds	Pulses	Commercial Crops	Vegetables	Fruits	Flower	Plantation crops	Tuber Crops	TOTAL
Integrated Nutrient Management										
Varietal Evaluation					1				1	2
Integrated Pest Management										
Integrated Crop Management	2									2
Integrated Disease Management	1		1							2
Small Scale Income Generation Enterprises										
Weed Management										
Resource Conservation Technology										
Farm Machineries										
Integrated Farming System										
Seed / Plant production										
Value addition										
Drudgery Reduction										
Storage Technique										
Mushroom cultivation										
Total	**3**		**1**		**1**				**1**	**6**

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

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

B. Achievements on technologies Assessed

B.1. Technologies Assessed under various Crops

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers	Area in ha (Per trial covering all the Technological Options)
Integrated Nutrient Management					
Varietal Evaluation	Tomato	Varietal assessment of Tomato in the Dangs	10	10	0.66
	Turmeric	Varietal assessment of turmeric during *Kharif* season in the Dangs, variety GNT1	10	10	0.72
Integrated Pest Management					
Integrated Crop Management	Finger millet	Sowing method in finger millet	10	10	1.0
	Pigeon pea	Spacing management in pigeon pea	10	10	1.0
Integrated Disease Management	Finger millet	Control of blast disease of Finger millet in the Dangs	6	6	0.6
Integrated Disease Management	Gram	Control of wilt in gram	6	6	0.6
Small Scale Income Generation Enterprises					
Weed Management					
Resource Conservation Technology					
Farm Machineries					
Integrated Farming System					
Seed / Plant production					
Post Harvest Technology / Value addition					
Drudgery Reduction					
Storage Technique					
Mushroom cultivation					
Total			**52**	**52**	**4.58**

B.2. Technologies assessed under Livestock and other enterprises

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Evaluation of breeds				
Nutrition management	Crossbred cattle	Effect of concurrent use of mineral mixture and deworming on growth rate of calves	10	30
Disease management				
Value addition				
Production and management				
Feed and fodder	Crossbred cattle	Effect of supplementing mineral mixture and concentrate on body growth performance in calves	10	30
Small scale income generating enterprises				
Total			20	60

C1.Results of Technologies Assessed

Results of On Farm Trial

Crop/ enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Finger millet	Rain fed	Random throwing of seedlings	Sowing method in finger millet	10	T_1: Farmers Practices (Random throwing) T_2: 30 x 10 cm T_3: 22.5 x 10 cm	Yield (Q/ha)	**1st year :** T_1:10.06 Qt T_2:12.18 Qt T_3 :14.10 Qt **2nd year:** T_1: 9.45 Qt T_2: 11.94 Qt T_3 : 13.20 Qt	Treatment T_3 (22.5 x 10 cm) was better than T_1 (Random throwing)	Sowing with proper method is good than throwing seedling	No	NA
Pigeon pea	Rain fed	Low yield of pigeon pea	Spacing management in pigeon pea	10	T_1 : Farmers Practices (Random sowing) T_2 : 45 x 15 cm T_3 : 60 x 20 cm	Yield (Q/ha)	T_1:9.13 Qt T_2:10.56 Qt T_3 : 11.82 Qt	Treatment T_3 (60 x 20 cm) was better than T_1 (Broadcasting)	More weed infestation found in T_1 which ultimately reduce yield	No	NA
Tomato	Irrigated	Low yield of Farmers adopted hybrid variety	Varietal assessment of Tomato in the Dangs	10	T_1: Farmers practices (Hybrid variety-*Vaishali*) T_2: Gujarat Tomato-7 T_3: Arka Rakshak	Yield (Q/ha)	T_1 :308 Qt T_2:224 Qt T_3: 467 Qt	T_3 treatment is best among T_1 and T_2	Arka rakshak gave higher yield than private company variety	No	NA

Turmeric	Rain fed	Low yield of turmeric in *Kharif*	Varietal assessment of turmeric during *Kharif* season in the Dangs	10	T_1. Farmers practices (Salem Variety) T_2. Gujarat Navsari Turmeric -1	Yield (Q/ha)	**1st year :** T_1:135.1 Qt T_2:189.2 Qt **2nd year:** T_1:145.50 Qt T_2:180.00 Qt	Treatment T_2 (Gujarat Navsari Turmeric -1) was better than T_1 (Farmers practices)	GNT 1 variety give higher production then Salem	No	NA
Finger millet	Rain fed	Low yield of Finger millet	Control of blast disease of Finger millet in the Dangs	06	T_1: Farmers practice T_2:Spray of *Pseudomonas* sp. @ 60ml/10litre of water T_3 : Seed treatment *Trichoderma harzianum*@5 g/kg seed	Yield (Q/ha)	**1st year :** T_1:9.75 Qt T_2:13.90 Qt T_3 :13.65 Qt **2nd year:** T_1: 8.41 Qt T_2: 10.31 Qt T_3: 9.98 Qt	T_2 treatment is best than T_1 and T_3	Need high yielding blast disease resistant variety in Finger millet	No	NA
Gram	Rain fed	Low yield of Gram and high mortality after germination	Control of wilt in gram	06	T_1: Farmers practice T_2:Seed treatment with *Trichoderma viride* @ 5 g/kg of seed	Yield (Q/ha)	**1 st year:** T_1: 9.25 Qt T_2: 10.58 Qt **2nd year:** T_1: 9.26 Qt T_2: 10.50 Qt	T_2 treatment is best than T_1	Good quality and uniformity	No	NA
Cross bred cattle	NA	Parasitic infestation & mineral imbalance Lower body growth rate	Effect of concurrent use of mineral mixture and deworming on growth rate of calves	10	T_1 - Farmer's practice T_2-Mineral mixture powder @25 gm/calf/day T_3 - Mineral mixture powder @25 gm/calf/day + Bol. Albendazole (7.5 mg/kg B. weight, Oral) on day 5, 35, 80th after birth	Weight of calf (Kg/calf)	**1 st year :** T_1 :60.kg/calf T_2:63.8 kg/calf T_3:65.9 kg/calf **2 nd year :** T_1 :60.20 kg/calf T_2:63.5 kg/calf T_3:65.5kg/calf **3 rd year :** T_1 :62.1 kg/calf T_2:64.6 kg/calf T_3:66.8kg/calf	T_3 treatment is best among T_1 and T_2	Feeding of mineral mixture along with deworming resulted in to better body growth performance	No	NA

Cross bred cattle	NA	Lack of knowledge about mineral mixture and concentrate feeding technology. Lower body growth due to improper feeding	Effect of supplementing mineral mixture and concentrate on body growth performance in calves	10	T_1-Framer's practice (n=10) T_2-Feeding of 15 gm mineral mixture + deworming (Bol. Fenbendazole (7.5 mg/kg B. weight, Oral) (n=10) T_3-Feeding of 15 gm mineral mixture + deworming (Bol. Fenbendazole (7.5 mg/kg B. weight, Oral) + Concentrate feeding @ 1% body weight (n=10)	Weight of calf (Kg/calf)	**1 st year :** T_1 :60.3 kg/calf T_2:61.2 kg/calf T_3:62.1 kg/calf **2 nd year :** T_1 :61.9 kg/calf T_2:63.8 kg/calf T_3:65.7kg/calf	T_3 treatment is best among T_1 and T_2	Feeding of mineral mixture along with Concentrate feed resulted in to better body growth performance	No	NA

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. /ha unit**	**B:C Ratio**
13	**14**	**15**	**16**	**17**	**18**
T_1: Farmers Practices (Random throwing) T_2: 30 x 10 cm T_3: 22.5 x 7.5 cm	Hill Millet Research Station, NAU, Waghai (2018) Regional Research Station, TNAU, Paiyur (2016)	**1st year :** T_1:10.06 Qt T_2:12.18 Qt T_3 :14.10 Qt **2nd year:** T_1: 9.45 Qt T_2: 11.94 Qt T_3 : 13.20 Qt	Qt/ha	**1st year :** T_1:18168 T_2:24104 T_3 :29480 **2nd year:** T_1: 16460 T_2: 21432 T_3 : 24960	**1st year :** T_1: 2.82 T_2: 3.41 T_3 : 3.95 **2nd year:** T_1:2.64 T_2:2.78 T_3 :3.08
T_1 : Farmers Practices (Random sowing) T_2 : 45 x 15 cm T_3 : 60 x 20 cm	NAU, Navsari 2016	T_1:9.13 Qt T_2:10.56 Qt T_3 : 11.82 Qt	Qt/ha	T_1: 16520 T_2: 22240 T_3 : 27280	T_1:1.83 T_2:2.11 T_3 : 2.36
T_1: Farmers practices (Hybrid variety-Vaishali) T_2: Gujarat Tomato-7 T_3: Arka Rakshak	Navsari Agricultural University, Navsari (2017-18) ICAR-IIHR, Bangalore, (2013)	T_1 :308 Qt T_2:224 Qt T_3: 467 Qt	Qt/ha	T_1 :102600 T_2: 62300 T_3: 210100	T_1 :2.24 T_2: 1.86 T_3: 3.99
T_1: Farmers practices (Salem variety) T_2: Gujarat Navsari Turmeric -1	NAU, Navsari (2016)	**1st year :** T_1:135.1 Qt T_2:189.2 Qt **2nd year:** T_1:145.50 Qt T_2:180.00 Qt	Qt/ha	**1st year :** T_1: 30490 T_2: 131460 **2nd year:** T_1: 23760 T_2: 59700	**1st year :** T_1:1.25 T_2:2.14 **2nd year:** T_1:1.19 T_2:1.49

T_1: Farmers practice T_2: Spray of *Pseudomonas* sp. @ 60ml/10litre of water T_3 : Seed treatment *Trichoderma harzianum*@5 g/kg seed	NAU, Navsari (2011-12)	**1st year :** T_1:9.75 Qt T_2:13.90 Qt T_3 :13.65 Qt **2nd year:** T_1: 8.41 Qt T_2: 10.31 Qt T_3: 9.98 Qt	Qt/ha	**1st year :** T_1:10241 T_2:19529 T_3 :15706 **2nd year:** T_1:15255 T_2:19930 T_3: 18965	**1st year :** T_1:2.08 T_2:2.94 T_3 :2.55 **2nd year:** T_1:2.52 T_2:2.8 T_3: 2.72
T_1: Farmers practice T_2: Seed treatment with *Trichoderma viride* @ 5 g/kg of seed	NAU, Navsari (2010)	**1 st year:** T_1: 9.25 Qt T_2: 10.58 Qt **2nd year:** T_1: 9.26 Qt T_2: 10.50 Qt	Qt/ha	**1st year:** T_1: 1125 T_2: 3250 **2nd year:** T_1: 21,997 T_2: 30,111	**1st year:** T_1:1.03 T_2:1.09 **2nd year:** T_1:2.62 T_2:3.09
T_1: Farmer's practice T_2: Mineral mixture powder @25 gm/calf/day T_3 : Mineral mixture powder @25 gm/calf/day + Bol. Albendazole (7.5 mg/kg B. weight, Oral) on day 5, 35, 80th after birth	NAU, Navsari (2011)	**1 st year :** T_1 :60.kg/calf T_2:63.8 kg/calf T_3:65.9 kg/calf **2 nd year :** T_1 :60.20 kg/calf T_2:63.5 kg/calf T_3:65.5kg/calf **3 rd year :** T_1 :62.1 kg/calf T_2:64.6 kg/calf T_3:66.8kg/calf	Kg/Calf	**1st year :** T_1 : 800 T_2: 1100 T_3: 1400 **2nd year :** T_1: 1000 T_2: 1200 T_3: 1500 **3 rd year :** T_1: 1400 T_2: 1000 T_3: 800	**1st year :** T_1 :1.36 T_2: 1.44 T_3:1.53 **2nd year :** T_1 :1.36 T_2: 1.46 T_3: 1.51 **3 rd year :** T_1: 1.53 T_2: 1.44 T_3: 1.36
T_1: Framer's practice (n=10) T_2: Feeding of 15 gm mineral mixture + deworming (Bol. Fenbendazole (7.5 mg/kg B. weight, Oral) (n=10) T_3: Feeding of 15 gm mineral mixture + deworming (Bol. Fenbendazole (7.5 mg/kg B. weight, Oral) + Concentrate feeding @ 1% body weight (n=10)	NAU, Navsari (2011)	**1 st year :** T_1 :60.3 kg/calf T_2:61.2 kg/calf T_3:62.1 kg/calf **2 nd year :** T_1 :61.9 kg/calf T_2:63.8 kg/calf T_3:65.7kg/calf	Kg/Calf	**1st year :** T_1 :1200 T_2:1800 T_3:2200 **2nd year** T_1: 2200 T_2: 1800 T_3: 1200	**1st year :** T_1:1.50 T_2:1.69 T_3:1.78 **2nd year :** T_1 :1.36 T_2: 1.46 T_3: 1.51

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

OFT: 1

Title: Sowing method in finger millet

Problem Definition: Finger millet is a main staple food for tribal farmers of Dang district and also it emerging as a important nutritive cereal crop due to its high nutrient content. In Dang district, finger millet is normally grown on poor and marginal soils. Finger millet requires healthy seedlings and specific spacing for its growth and development. Most of the farmers followed random throwing of seedlings which reduce the number of productive tillers and ultimately its reduce the crop yield.

Details of technologies selected for assessment:

Treatment:

T_1: Farmers Practices (Random throwing)

T_2: 30 x 10 cm

T_3: 22.5 x 7.5 cm

Input: Seed, Novel organic fertilizer, PSB and *Azotobacter*

Source of technology: HMRS, NAU, Waghai

Production system and thematic area: Rainfed & ICM

Performance of the technology with performance indicators:

Sr. No.	Year	No. of trial	Area (ha)	Yield(Q/ha)		
				T_1 **Farmer practices** (Random throwing)	T_2 **30 x10 cm (Recommended)**	T_3 **22.5 X 7.5 cm (Recommended)**
1.	2019-20	10	1.0	10.06	12.18	14.10
2.	2020-21	10	1.0	9.45	11.94	13.20

Farmers Feedback, matrix scoring of various technology parameters done through farmer's participation/ other scoring techniques:

Farmers Feedback

1. Farmers are impressed by recommended practices.

Final recommendation for micro level situation (Conclusion):

On the basis of average data, treatment T_3 (22.5 X 7.5 cm) gave 14.10 Q/ha yield as compared with T_1 i.e. farmer practices (10.06 Q/ha) with net return (Rs. 29480/-) 3.95 BC Ratio.

Constraints identified and feedback for research: Nil

Process of farmer's participation and their reaction:

1. Field day, Method demonstration, OFT visit *etc.*
2. Farmers are ready to adopt this technology

OFT: 2

Title: Spacing management in pigeon pea

Problem Definition: In dang district, productivity of pigeon pea is low because of improper cultivation of land and random sowing method followed by farmers. Due to this severe wilt problem in seedlings and weed problems which ultimately affect the growth and yield of pigeon pea. Pigeon pea requires well cultivated land and specific spacing for its growth and development. Improper cultivation with random sowing reduces the plant population and ultimately it's reducing the crop yield.

Details of technologies selected for assessment:
Treatment:
T_1: Farmers Practices (Random sowing)
T_2: 45 x 15 cm
T_3: 60 x 20 cm
Input: Seed, Novel organic fertilizer, *Rhizobium*

Source of technology: Pulse Research Station, NAU, Navsari (2016)

Production system and thematic area: Rainfed & ICM

Performance of the technology with performance indicators:

Sr. No.	Year	No of trial	Area (ha)	Yield(Q/ha)		
				T_1 Farmer practices (Random sowing)	T_2 45 x 15 cm (Recommended)	T_3 60 x 20 cm (Recommended)
1.	2019-20	10	1	9.13	10.56	11.82

Farmers Feedback, matrix scoring of various technology parameters done through farmer's participation/ other scoring techniques:

Farmers Feedback
1. Farmers are impressed by recommended practices.
2. It is easy for farmers to remove weed in 60 cm x 20 cm sowing of pigeon pea rather than farmer practices.
3. Higher yield in recommended practices due to easy weeding and less competition of nutrients and fertilizer between plants.

Final recommendation for micro level situation:
On the basis of average data, treatment T_3 (60 x 20 cm) gave 11.82Q/ha yield as compared with T_1 i.e. farmer practices (9.13 Q/ha) with net return (Rs. 27280) having 2.36 BC Ratio.

Constraints identified and feedback for research: Nil

Process of farmer's participation and their reaction:
1. Field day, Method demonstration, OFT visit *etc.*
2. Farmers are ready to adopt this technology

OFT: 3

Title: **Varietal assessment of Tomato in the Dangs**

Problem definition: Low yield of Farmers adopted hybrid variety (due to lack of knowledge about proper scientific cultivation method)

Details of Technologies selected for assessment: In the Dangs district, mostly hybrid variety of tomato (private company) is grown with low yield potential due to lack of knowledge about proper seedling preparation and lack of knowledge about new released variety of State Agricultural Universities and Government Institutions. Tomato variety GT-7 (280.0 q/ha) performed well under South, Middle and North Gujarat regions. This variety showed less damage by fruit borer, whitefly as well as leaf miner. Tomato variety "Arka Rakshak" is a First F1 hybrid with triple disease resistance to Tomato Leaf Curl Virus, Bacterial Wilt and Early blight. Fruits square round, large (90-100g), deep red colored and firm. Suitable for fresh market and processing. So OFT has been framed for comparing farmer adopted private company variety to "GT 7" and "Arka Rakshak" variety.

reatment:

T_1: Farmers practices (Hybrid varietie-vaishali)
T_2: Gujarat Tomato 7
T_3: Arka Rakshak

Source of Technology: IIHR , Banglore and Navsari Agricultural University, Navsari

Production system and thematic area: irrigated & varietal Assessment

Performance of the Technology with performance indicators:

Sr. No.	Year	No of trial	Area (ha)	Yield (Q/ha)		
				T_1: Farmers practices (Hybrid varietie-vaishali)	**T_2: Gujarat Tomato 7**	**T_3: Arka Rakshak**
1.	2019-20	10	0.6	308.00	224.00	467.00

Feedback, matrix scoring of various technology parameters done through farmer's participation/ other scoring Technique: - Arka rakshak gave higher yield than farmer's practices
Final recommendation for micro level situation: On the basis of average data, treatment T_3 (Arka Rakshak) gave 467 Q/ha yield as compared with T_1 i.e. farmer practices (308.00 Q/ha) with net return (Rs. 210100) having 3.99 BC Ratio. (Note : An observation could not be possibal on farmers field)

Constrains identified and feedback for research: Water scarcity

Process of farmer's participation and their action:

1. Field day, Method demonstration, OFT visit *etc.*
2. Farmers are ready to adopt this technology

OFT: 4

Title: Varietal assessment of Turmeric during *Kharif* season in the Dangs Problem Definition

Poverty, low yield, traditional farming practices, No plant protection measures due to lack of knowledge, High incidence of rhizome rot

Details of technologies selected for assessment

Turmeric (*Curcuma longa* L) is one of the most valuable and important spices all over the world, belongs to the family Zingiberaceae. It is an important spices crop grown in certain pockets of the Dangs district especially during *Kharif* season due to which farmers gets better returns. In the Dangs, it is grown in an about 235 ha area and production is about 5405 M.T (Annual Progress report, 2016-17). In Dangs mostly Salem variety of Turmeric is grown with low yield potential of 130 to 140 q/ha , so the OFT has been framed for comparing "Gujarat Navsari Turmeric 1" variety which is having average yield potential of 230 to 330 q/ha.

Treatment: T_1: Farmers practices (Salem variety)
T_2: Gujarat Navsari Turmeric 1

Source of Technology: NAU, Navsari (2016)

Production system and thematic area: irrigated & varietal evaluation

Performance of the Technology with performance indicators:

Sr. No.	Year	No of trial	Area (ha)	Yield(Q/ha)	
				T_1: Farmers practices (Salem Variety)	**T_2: Gujarat Navsari Turmeric -1**
1.	2018-19	10	2	135.1	189.2
2.	2019-20	10	0.72	145.50	180.00

Feedback, matrix scoring of various technology parameters done through farmer's participation/ other scoring Technique: GNT 1 variety give higher production then local variety

Final recommendation for micro level situation: On the basis of average data, treatment T_2 (GNT 1) gave 180 q/ha yield as compared with T_1 i.e. farmer practices (145.50 Q/ha) with net return (Rs. 59700) having 1.49 BC Ratio.

Constrains identified and feedback for research: Nil

Process of farmer's participation and their action:

1. Field day, Method demonstration, OFT visit *etc.*
2. Farmers are ready to adopt this technology.

OFT: 5

Title: Control of blast disease of Finger millet in the Dangs

Problem Definition: Low yield of Finger millet

Details of technologies selected for assessment:

Finger millet (*Elusine corcana*) is a cereal crop widely grown during *Kharif* season in dang district. Locally it is known as Nagli or Ragi. Finger millet is infected by blast disease. Occasional outbreak of this disease causing losses to farmer.

Treatment

T_1: Farmers practice
T_2: Spray of *Pseudomonas* sp. @ 60 ml/10litre of water
T_3: Seed treatment *Trichoderma harzianum*@5 g/kg seed

Source of technology: NAU, Navsari (2011-12)

Production system and thematic area: Rainfed & Integrated Disease Management

Performance of the Technology with performance indicators

Sr. No.	Year	No of trial	Area (ha)	Yield (Q/ha)		
				Farmers practice	Spray of *Pseudomonas* sp.@60ml/10litre of water	Seed treatment *Trichoderma harzianum*@5 g/kg seed
1.	*Kharif* -2019	06	3.6	9.75	13.90	13.65
20	*Kharif* -2020	06	3.6	8.41	10.31	9.98

Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Need high yielding blast disease resistant variety

Final recommendation for micro level situation

From the above table, treatment T_2 (Spray of *Pseudomonas* sp.@ 60ml/10litre of water) in finger millet recorded highest average yield (13.90 q/ha) than treatment T_1 (farmers practices) with net return (**Rs. 19529/-)** having 2.94 BC Ratio.

Constraints identified and feedback for research: Nil

Process of farmer's participation and their reaction: Field day, Method demonstration, OFT visit *etc.*

OFT: 6

Title: Control of wilt in gram

Problem Definition: Low yield of Gram and high mortality after germination

Details of technologies selected for assessment:

Gram is a pulse crop grown during *Rabi* season in dang district. Gram is infected by wilt, sclerotium rot disease causing occasional outbreak and economical loss to farmers. In view of losses caused by wilt disease in dang, we proposed the OFT to reduce disease incidence and increase yield.

Treatment

T_1: Farmers practice

T_2: Seed Treatment of *Trichoderma viride* @ 5 g/kg of seed

Source of technology: NAU, Navsari (2010)

Production system and thematic area: Rainfed & Integrated Disease Management

Performance of the Technology with performance indicators

Sr. No.	Year	No of trial	Area (ha)	Yield (Q/ha)	
				Farmers practice	Seed Treatment with *Trichoderma viride* @ 5 g/kg of seed
1.	*Rabi*-2019	6	2.4	9.25	10.58
2	*Rabi*-2020	6	2.4	9.26	10.50

Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Good Quality & uniformity of product

Final recommendation for micro level situation

From the above table, treatment T_2 (*Trichoderma viride* @ 5 g/kg of seed) in gram recorded highest average yield (10.50 q/ha) than treatment T_1 (farmers practices) with net return (Rs. 30111/-) having 3.09 BC Ratio.

Constraints identified and feedback for research: Nil

Process of farmer's participation and their reaction: Field day, Method demonstration, OFT visit *etc*

OFT: 7

Title: Effect of concurrent use of mineral mixture and deworming on growth rate of calves

Problem Definition:

Parasitic infestation & mineral imbalance & Lower body growth rate

Details of technologies selected for assessment:

Milk production is growing at a much faster pace compared to many other agricultural commodities and is being increasingly viewed as a source of food and an effective instrument for improving livelihood. Dairy production is mainly based on proper scientific feeding of animals. The young calves are the fate of tomorrow's Indian dairy industry. Their scientific feeding, housing, watering and overall management is a key to make them more productive. The calves are to be fed with good quality roughages along with green fodder belonging to legumes or cereals as per the availability.

Parasitic load & mineral imbalance are known to directly affect the health of calves. The dang district is a hilly area with heavy rainfall. Animal living in such area became prone to parasitic infection due to ingestion of infected grasses around stagnant water while grazing. A few years ago, people were using local breeds & traditional husbandry practices, but now a day they are rearing crossbred cows. These valuable animals are highly productive but due to particular geographical location such animals become infected with parasites which directly affect their health and ultimately affect the body growth rate.

Moreover, in spite of high rain, there is water sacristy during summer season due to particular geographical condition. So, green fodder is not available during summer, hence these animals undergo mineral imbalance & improper feeding. The socio- economic status of farmers is not very good so, they could not feed their growing calves with mineral supplements and deworming drugs. Such growing calves undergo negative energy balance due to malnutrition & high parasitic infestation. So, to overcome these problems of parasitic infestation & mineral imbalance in growing calves we have identified following problems and proposed on farm testing programme.

Source of technology: NAU, Navsari (2011)

Production system and thematic area: Feeding management

Details of technologies selected for assessment:

Treatments:

T_1: Framer's practice
T_2: Mineral mixture powder @25 gm/calf/day
T_3: Mineral mixture powder @25 gm/calf/day + Bol. Albendazole (7.5 mg/kg B. weight, Oral) on day 5, 35, 80^{th} after birth.

Detail of OFT Programme :

- ✓ No. of Villages : 10
- ✓ No. of animals : Total 30 calves (10 calves in each group)

Parameters to be evaluated/ recorded: Body weight gain (kg / day) and general body condition

Performance of the Technology with performance indicators

Result:

Table 7.1: Effect of concurrent use of mineral mixture and deworming on body weight of calves (2017-18)

Average Body Weight (Kg)	T_1 (n = 10)	T_2 (n = 10)	T_3 (n = 10)
First Month	17.8 kg	18.7 kg	19.9 kg
Second Month	24.1 kg	25.2 kg	26.3 kg
Third Month	32.2 kg	33.6 kg	33.8 kg
Forth Month	40.3 kg	42.5 kg	43.6 kg
Fifth Month	48.5 kg	50.0 kg	51.6 kg
Sixth Month	60.0 kg	63.8 kg	65.9 kg

Table-7.2: Economic Impact

Cost of cultivation (Rs)			Av. Gross return (Rs)			Av. Net return (Rs)			B:C		
D		LC	D		LC	D		LC	D		LC
T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1
2600	2500	2200	4000	3600	3000	1400	1100	800	1.53	1.44	1.36

Table 7.3: Effect of concurrent use of mineral mixture and deworming on body weight of calves (2018-19)

Average Body Weight (Kg)	T_1 (n = 10)	T_2 (n = 10)	T_3 (n = 10)
First Month	17.0 kg	18.9 kg	19.6 kg
Second Month	23.5 kg	25.5 kg	26.0 kg
Third Month	32.5 kg	34.3 kg	34.5 kg
Forth Month	40.0 kg	43.5 kg	44.0 kg
Fifth Month	47.5 kg	50.8 kg	52.0 kg
Sixth Month	60.2 kg	63.5 kg	65.5 kg

Table 7.4: Economic Impact

Cost of cultivation (Rs)			Av. Gross return (Rs)			Av. Net return (Rs)			B:C		
D		LC	D		LC	D		LC	D		LC
T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1
2700	2600	2200	4100	3800	3200	1500	1200	1000	1.51	1.46	1.36

Table 7.5: Effect of concurrent use of mineral mixture and deworming on body weight of calves (2019-20)

Average Body Weight (Kg)	T_1 (n = 10)	T_2 (n = 10)	T_3 (n = 10)
First Month	18.0	19.4	20.6
Second Month	24.5	26.3	27.4
Third Month	33.2	35.2	36.2
Forth Month	41.9	45.5	46.7
Fifth Month	48.6	52.8	53.9
Sixth Month	62.1	64.6	66.8

Table-7.6: Economic Impact

Cost of cultivation (Rs)			Av. Gross return (Rs)			Av. Net return (Rs)			B:C		
D		LC	D		LC	D		LC	D		LC
T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1
2700	2600	2200	4200	3900	3200	1500	1300	1000	1.55	1.50	1.45

Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Feeding of mineral mixture along with deworming resulted in to better body growth performance.

Summary & Conclusion

On the basis of the study carried out for three consecutive years it is summarized that T3 – recorded the better body growth performance in comparison to T1 & T2, However the body weight gain with T2 was comparatively higher than T1. So it is concluded that T3 (Mineral mixture powder @25 gm/calf/day + Bol. Albendazole (7.5 mg/kg) B. Weight, Oral) proved the best husbandry practices in tribal area of Dangs.

Final recommendation for micro level situation: T3 treatment is best among T1 and T2

Constraints identified and feedback for research: Nil

Process of farmer's participation and their reaction: Diagnostic visit, Method demonstration, OFT visit etc.

OFT: 8

Title: - Effect of supplementing mineral mixture and concentrate on body growth performance in calves.

Problem Definition:

Lack of knowledge about mineral mixture and concentrate feeding technology & Lower body growth due to improper feeding.

Details of technologies selected for assessment:

Milk production is growing at a much faster pace compared to many other agricultural commodities and is being increasingly viewed as a source of food and an effective instrument for improving livelihood. Major share of milk produced in India is by small and marginal farmers with mixed crop-livestock production system as the dominant system. Increasing demand for milk offers possibility of scope to improve their income. Dairy production is mainly based on proper scientific feeding of animals. The growing calves are to be fed with good quality roughages with green fodder belonging to legumes or cereals as per the availability. Looking to the productivity of crossbred cattle such food resources are not sufficient to meet the nutrient requirement of growing calves. Hence we have to add more nutrious food in to the diet of such animals to reach the maximum body growth and to maintain the normal body condition. Concentrate feeding is very common to overcome nutrient deficit. Which we can only fed on a dry matter basis, as it is not a natural food for ruminants. Now a day, mineral mixture feeding technology is recommended for cattle. Dang district of Gujarat is a heavy rainfall area having about 10,000 crossbred cattle population and still the figure is increasing very rapidly. The farmers in Dangs district are feeding mineral mixture and concentrate along with deworming to only lactating animals. The growing calves are the future of dairy industry of tomorrow. So, complete awareness regarding animal nutrition in the Dangs is necessary. The growing calves are to be regularly dewormed and fed with the 15 gm of mineral mixture supplementation along with the concentrate at the rate of 1% body weight on daily ration basis. Hence, we have proposed this on farm testing by our KVK to fulfill the nutritional demand of growing calves.

Source of technology: NAU, Navsari (2011)

Production system and thematic area: Feeding management

Details of technologies selected for assessment:

Treatments:

T_1: Framer's practice (n=10)

T_2: Feeding of 15 gm mineral mixture + deworming (Bol. Fenbendazole (7.5 mg/kg B. weight, Oral) (n=10)

T_3: Feeding of 15 gm mineral mixture + deworming (Bol. Fenbendazole (7.5 mg/kg B. weight, Oral) + Concentrate feeding @ 1% body weight (n=10)

Detail of OFT Programme :

- ✓ No. of Villages : 5
- ✓ No. of animals : 30 (6 growing calves was selected from each village)

Parameters to be evaluated/ recorded: Body weight (kg)

Performance of the Technology with performance indicators
Result:

Table 8.1: Effect of supplementing mineral mixture and concentrate on body growth performance in calves (2018-19)

Average Body Weight (Kg)	T_1 (n = 10)	T_2 (n = 10)	T_3 (n = 10)
First Month	17.5 kg	17.9 kg	18.6 kg
Second Month	23.7 kg	24.4 kg	25.5 kg
Third Month	33.5 kg	34.2 kg	34.9 kg
Forth Month	41.8 kg	42.7 kg	43.3 kg
Fifth Month	49.2 kg	50.3 kg	50.9 kg
Sixth Month	60.3 kg	61.2 kg	62.1 kg

Table-8.2: Economic Impact

Cost of cultivation (Rs)			Av. Gross return (Rs)			Av. Net return (Rs)			B:C		
D		LC	D		LC	D		LC	D		LC
T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1
2800	2600	2400	5000	4400	3600	2200	1800	1200	1.78	1.69	1.50

2nd year result: (2019-20)

Average Body Weight (Kg)	T_1 (n = 10)	T_2 (n = 10)	T_3 (n = 10)
First Month	18.4	19.3	20.6
Second Month	24.2	26.4	27.8
Third Month	33.9	35.7	36.9
Forth Month	42.1	43.8	45.4
Fifth Month	49.8	51.6	53.8
Sixth Month	61.9	63.8	65.7

Table-8.3: Economic Impact

Cost of cultivation (Rs)			Av. Gross return (Rs)			Av. Net return (Rs)			B:C		
D		LC	D		LC	D		LC	D		LC
T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1	T_3	T_2	T_1
2800	2600	2400	4900	4400	3700	2100	1800	1300	1.75	1.69	1.54

Feedback, matrix scoring of various technology parameters done through farmer's participation / other scoring techniques: Feeding of mineral mixture along with Concentrate feed resulted in to better body growth performance.

Final recommendation for micro level situation: T_3 treatment is best among T_1 and T_2

Constraints identified and feedback for research: Nil

Process of farmer's participation and their reaction: Diagnostic visit, Method demonstration, OFT visit etc

3nd year result: Awaited

3.3. FRONTLINE DEMONSTRATION

A. Follow-up for results of FLDs implemented during previous years
List of technologies demonstrated during previous year and popularized during 2020 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.	Gram	ICM	GG 5	FLD, Training, Field Days, Farmers meeting, Exposur visit to KVK farm, Mass media	1	25	05
2.	Paddy	ICM	GNR 6		5	25	05
3.	Little millet	ICM	GV 3		3	25	05
4.	Bottle gourd	ICM	GABH 1		3	10	01
5.	Indian bean	ICM	GNIB 22		7	50	05
6.	Paddy	IPM	Pheromone trap		1	05	02
7.	Finger millet	IDM	Pseudomonas fluroscence		2	08	04
8.	Mango	IPM	Methyl eugenol trap		1	05	02
9.	Green gram	ICM	GM 6		5	50	20
10.	Turmeric	Varietal evaluation	GNT 2		2	08	0.16
11.	Pigeon pea	ICM	GNP 2		1	25	05

B. Details of FLDs implemented during 2020 **(Kharif 2020, *Rabi* 2019-20, Summer 2020)** (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	
Oilseed crops										
1.	-	-	-	-	-	-	-	-	-	-
Pulse crops										
2.	Gram	ICM	GG 5	Rabi 19-20	5	5	25	0	25	-
3.	Pigeon pea	ICM	GNP 2	*Kharif* 19-20	5	5	25	0	25	-
4.	Gam	IDM	Local	Rabi 19-20	4	4	10	0	10	-
Cereal crops										
5.	Paddy	ICM	GNR 6	*Kharif* 2020	5	5	25	0	25	-

6.	Finger millet	ICM	GNN 8	Kharif 2020	5	5	25	0	25	-
7.	Little millet	ICM	GV 3	*Kharif* 2020	5	5	25	0	25	-
Horticultural crops										
8.	Bottle gourd	ICM	GABH 1	Summer 2020	0.66	0.66	10	0	10	-
9.	Mango graft	ICM	Sonpari	Summer 2020	1.0	1.0	20	0	20	-
10.	Indian bean	ICM	GNIB 22	Summer 2020	5.0	5.0	50	0	50	-
Plant Protection										
11.	Okra	IPM	Azadirachtin	*Kharif* 19-20	1	1	5	0	5	
12.	Mango	IPM	Fruit Fly Trap	Summer 2020	2	2	5	0	5	-
13.	Finger millet	IDM	Pseudomonas fluroscence	*Kharif* 2020	2.5	2.5	25	0	25	-
14.	Paddy	IPM	Pheromone trap	*Kharif* 2020	5	5	25	0	25	-
FLD under Other schemes (Other than KVK-ICAR): Adaptive Trial (Phase-II), CFLD-Pulses, Mega seed TSP										
Oilseed crops										
15.	-	-	-	-	-	-	-	-	-	-
Pulse crops										
16.	Green gram	ICM	GM 6	Summer 2020	20	20	50	0	50	-
17.	Green gram	ICM	GM 6	Summer 2020	2.4	2.4	24	0	24	-
Cereal crops										
18.	Little millet	INM	GV 3	*Kharif* 2020	4	4	10	0	10	-
Horticultural crops										
19.	Turmeric	ICM	GNT 2	Rabi 19-20	0.16	0.16	08	0	08	
Plant Protection										
20.	Mango	IPM	Fruit fly trap	Irrigated	50	20	250	0	250	-

Details of farming situation

Crop	Season	Situation (RF/Irr	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm	No. of rainy days
				N	P	K					
Oilseed crops											
-	-	-	-	-	-	-	-	-	-	-	-
Pulse crops											
Pigeon pea	*Kharif* 19-20	Rain fed	Lateritic black Hilly	H	M	H	Gram	17-07-2019			
Gram	Rabi 2020	Rain fed	Lateritic black Hilly	H	M	H	Paddy	10-12-20219			
Cereal crops											
Paddy	*Kharif* 2020	Rain fed	Lateritic black Hilly	H	M	H	Green gram	05-06-2020			
Finger millet	*Kharif* 2020	Rain fed	Lateritic black Hilly	H	M	H	Gram	06-06-2020			
Little millet	*Kharif* 2020	Rain fed	Lateritic black Hilly	H	M	H	Gram, Green gram	06-06-2020			
Horticultural crops											
-	-	-	-	-	-	-	-	-	-	-	-
Plant Protection											
Okra	Rabi 2020	Rain fed	Lateritic black Hilly	H	M	H	Paddy	02-01-2020			
Gram	Rabi 2020	Rain fed	Lateritic black Hilly	H	M	H	Finger millet	13-11-2019			
Mango	Summer 2020	Irrigated	Lateritic black Hilly	H	M	H	Mango	13-03-2020			
Finger millet	*Kharif* 2020	Rain fed	Lateritic black Hilly	H	M	H	Paddy, Green gram	31-07-2020			
Paddy	*Kharif* 2020	Rain fad	Lateritic black Hilly	H	M	H	Gram, Green gram	17-08-2020			
FLD under Other schemes (Other than KVK-ICAR): Adaptive Trial (Phase-II), CFLD-Pulses, Mega seed TSP											
Oilseed crops											
-	-	-	-	-	-	-	-	-	-	-	-
Pulse crops											
Green gram	Summer	Irrigated	Lateritic	H	M	H	Paddy	13-02-2020			

	2020		black Hilly								
Green gram	Summer 2020	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	03-03-2020			
Cereal crops											
Little millet	*Kharif* 2020	Rain fed	Lateritic black Hilly	H	M	H	Gram, green gram	10-07-2020			
Horticultural crops											
Turmeric	*Kharif* 2020	Rain fed	Lateritic black Hilly	H	M	H	Turmeric	12-06-2019			
Plant Protection											
Mango	Summer 2020	Irrigated	Lateritic black Hilly	H	M	H	Mango	13-03-2020			

Technical Feedback on the demonstrated technologies

Sr. No.	Discipline	Feed Back
1.	Crop Production	Validation of mathod of prepation of various cow basad bio enhancers
2.		Need to development of Bio-weediside for major crop of dang district
3.	Horticulture	Need to develop Govt. sector Hybrid variety for Bittergourd
4.		Require Government sector Hybrid variety of okra which is suitable for Dang district
5.	Plant Protection	Need to develop traps for pests of rice, pulses, mango & cashew nut. (Rice: Gundhi bug; Pulse: Mites; Mango: Hopper; Cashew nut: TMB)
6.		Development of false smut resistant variety in rice.
7.		Tolerant/resistant variety of cashew nut against tea mosquito bug.
8.		Pest disease control measures for organic farming.
9.	Animal Science	Measures must be taken for conservation of local Dangi cattle breed as there is meager number of animals available in its own breeding track of Dangi cattle.
10.		To develop area specific mineral mixture for dang district
11.	Home Science	Due to use of Twin wheel hoe Labour cost reduce and Time saving and also increase work efficiency
12.	Extension Education	Need to develop proper post harvest chain from farm to market.

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Farmers' reactions on specific technologies

Sr. No.	Discipline	Feed Back
1.	Crop Production	List of recommended weedicides for organic farming
2.		GNN 8 is good variety of finger millet for higher yield & early maturity, We want medium duration variety
3.		GNP 2 is excellent variety of pigeon pea both for seed & vegetable purpose
4.		GNR 6 excellent short duration variety of paddy but susceptible to lodging, We want medium duration varierty
5.	Horticulture	Need to develop proper marketing channel for Turmeric.
6.		Provide the planting material of greater yam var. "Hemlata" for FLD purpose
7.	Plant Protection	Require trap similar as Nauroji fruit fly trap for Tea mosquito bug in cashew
8.		GG 5 variety of gram gave excellent yield under conserve moisture & resistant to wilt
9.	Animal Science	Feeding mineral mixture and timely deworming leads to better health and body growth in cross breeds calves
10.		Feeding bypass fat along with mineral mixture in cross breed cattle resulted increase milk production and better health
11.	Home Science	After demonstration, farm women started growing 6 to 8 types of vegetables in scientific way in their backyard by using waste water
12.		Through Kitchen garden farmers get fresh and organic vegetables at low cost
13.		Reduce physical fatigue and hazard due to use of Twin wheel hoe

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	10	05-09-2020, 09-11-2020, 10-11-2020, 09-11-2020, 29-10-2020, 26-10-2020, 28-11-2020, 15-01-2020, 08-01-2020, 02-03-2020	126	No any
2	Farmers Training	64	From different date of the year	1930	No any
3	Media coverage	17	From different date of the year	--	No any
4	Training for extension functionaries	9	8,10- 03 -2020, 18,19-01-2020, 10-08-2020, 14,15-03-2020, 26-27-02-2020, 17-09-2020, 29-08-2020, 04-12-2020, 29 & 30-09-2020	202	No any

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

* 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										
Pulse crops																		
Gram	ICM	New variety	GG 5	25	5	12.3	10	10.93	8.16	33.95	15500	50278	34778	3.24	13800	37536	23736	2.70
Pigeon pea	ICM	New variety	GNP 2	25	5	12.85	11.20	11.97	9.31	28.37	20000	47880	27880	2.39	18000	37240	19240	2.07
Plant protection																		
Gram	IDM	*Trichoderma*	Local	10	4	10.65	9.6	10.19	8.6	18.48	14669	45451	30782	3.09	14331	35323	20992	2.46

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

FLD on Other crops

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Cereals																			
Paddy	ICM	GNR 6	25	5	29.20	26.90	28.03	23.59	18.77	-	-	27500	50454	22954	1.83	25500	42480	17480	1.70
Finger millet	ICM	GNN 8	25	5	11.40	9.15	10.21	8.22	24.18	-	-	12000	30660	18660	2.56	10000	24690	14690	2.47
Little millet	ICM	GV 3	25	5	11.20	9.25	10.22	7.49	36.27	-	-	10000	22484	12484	2.25	8000	16500	8500	2.06
Horticultural crop																			
Bottle gourd	ICM	GABH 1	10	0.66	130	170	148	119	25.47			40900	103600	62700	2.53	43500	65450	21950	1.50
Mango graft	ICM	Sonpari	20	1.0	Survival rate of graft on farmers field is 30-35 %														
Indian bean	ICM	GNIB 22	50	5.0	28.00	42.00	35.90	25.64	41.75			40840	107700	66860	2.64	43940	94868	50928	2.16

Plant protection																			
Okra	IPM	*Azadirachtin*	5	1	98	94	96	84.96	12.99	-	-	41300	170840	129540	4.14	40400	127000	86600	3.14
Mango	IPM	Fruit Fly Trap	5	2	50	47	48.2	36.8	31.12	-	-	50000	161700	118700	3.37	48100	128800	80700	2.67
Finger millet	IDM	*Pseudomonas fluroscence*	25	2.5	10.4	9.9	10.12	8.35	21.23	-	-	11000	30360	19360	2.76	10200	25054	14854	2.45
Paddy	IPM	Pheromone trap	25	5	26.7	25.1	26.04	23.96	8.77	-	-	27476	46886	19410	1.7	26346	43128	16782	1.63

* 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 under other schemes (Other than KVK-ICAR Budget)

Category & Crop	Thematic Area	Name of the technology	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Other Parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demo			Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
					High	Low	Average												
Pulses																			
Green gram (Adaptive)	ICM	GM 6	50	20	7.05	6.14	6.72	4.61	45.77	-	-	20000	48384	28384	2.42	16500	33192	16692	2.01
Green gram (TSP)	ICM	GM 6	24	2.4	6.90	6.26	6.65	4.52	47.12	-	-	20000	47880	27880	2.29	16500	32544	16044	1.97
Cereal crop																			
Little millet (Promotion of less water consuming nutri-cereal crops)	INM	GV 3	10	4	1240	970	1079	765	41.05	-	-	10000	23738	13738	2.37	8000	16830	8830	2.10
Horticultural crop																			
Turmeic (Adaptive)	ICM	GNT 2	08	0.16	240	190	216	176	22.95	-	-	97700	216000	118300	2.21	99400	176000	76600	1.77
Plant protection																			
Mango (Adaptive)	IPM	Fruit fly trap	250	50	52	45	49.67	37.64	32.15	-	-	50000	173852	123852	3.47	48100	128800	80700	2.67

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

FLD on Livestock -2019-20

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/ Poultry/ Birds, etc)	Major parameters lit/cow/day		% change in major parameter Demo	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Demo		Check	Gross Cost	Demo	Check	Gross Cost	Demo	Gross Cost	Gross Return	Net Return	BCR (R/C)
Dairy cow (KVK regular)																	
1.	Nutrition management	Mineral mixture	30	30	6.3	5.4	16.67	-	-	2300	5737	3437	2.49	2200	4550	2350	2.06
2.	Nutrition management	Bypass fat	30	30	11	9.1	20.88	-	-	4000	10527	6527	2.63	3550	8400	4850	2.36
3.	Nutrition management	Bypass protein	30	30	10.2	8.7	17.24	-	-	4100	10404	6304	2.53	3550	8450	4900	3.38
4.	Nutrition management	CSV 21 F	20	20	371	310	19.68	-	-	28000	94047	66047	3.35	31000	78591	47591	2.5
Dairy cow (Adaptive trial)																	
5.	Nutrition management	Bypass fat	20	20	11.2	9.3	20.43	-	-	4000	10510	6510	2.62	3550	8300	4750	2.33
6.	Nutrition management	Mineral mixture	30	30	6.2	5.3	16.98	-	-	2300	5917	3617	2.57	2200	4600	2400	2.09

* 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 Livestock -2020

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	Area (ha)	Major parameters lit/cow/day		% change in major parameter Demo	Other parameter		Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Demo		Check	Gross Cost	Demo	Check	Gross Cost	Demo	Gross Cost	Gross Return	Net Return	BCR (R/C)
Dairy cow (KVK regular)																	
1.	Fodder management	Introduction of new variety of Fodder Sorghum " CSV 21 F"	20	2	327 (q/ha)	270	21.11	-	-	26000	81750	55750	3.14	29000	67500	38500	2.32

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)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* 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)
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check	Saving
Home science	Resource conservation technology (Solar cooker)	05	Fuel expenses Rs/Unit/Year	2625.00	8200	5575

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
Hand weeder (KVK regular)	Kitchen garden, pulses	Drudgery reduction technology	25	1	Labour requirement man hour/ha	82	114	39.02	--	--	4	4	--	980	--	980

FLD on Other Enterprise: Kitchen Gardening

Category and Crop	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units	Yield (Kg)		% change in yield	Other parameters		Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
					Demonstration	Check		Demo	Check	Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Home science	Nutrition garden- *kharif*	Organic kitchen garden	35	35	98.6	-	-	-	-	800	2370	1570	2.96	-	-	-	-
Home science	Nutrition garden-*Rabi*	Organic kitchen garden	25	25	96.9	25.00	287.60	--	--	680	2500	2700	3.67	--	--	--	--
Home science	Nutrition garden-*Rabi*-Adaptive trial	Organic kitchen garden	30	30	105.00	34.00	208.82	--	--	700	2400	1700	3.42	--	--	--	--

CFLD on Oilseed crops

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

CFLD on pulse crops

Crop	technology demonstrated	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						
Pulses													
Gram	ICM	GG 5	50	20	11.25	10.7	10.85	8.26	31.28	15500	49910	34410	3.22

D. FLD Ongoing

Sr No	Date	Village	Title	Area (ha)	Male	Female	Total	Remarks	Oilseed/Pulse/Other crop/Enterprise
1	26-11-2020	Barigavntha, Kunda, Bhalkhet, Motidabdar, Chinchod, Koshmal, Kudkas, Barkhandya, Vankan and Dokpatal	Cue lure trap in cucurbitacious crops	2	20	0	20	-	Other crop
2	02-12-2020	Dokpatal,Borpada	Bypass Protein(Adaptive trail)	0	0	30	30	-	Enterprise
3	10-06-2020	Dokpatal and Borpada	Pigeon pea - GT 105	5	21	4	25	-	Pulse

4	12-10-2020	Kosamal	Gram - GG 5	5	22	3	25	-	Pulse
5	19-06-2020	daguniya, susarda, sadadmal,nanapada, darapada, nadagchaund,nimbarpada, lahanbarda	Introduction of new germplasm of Aloevera " INGR 13043"	0.1	10	0	10	-	Other
6	30-07-2020	Koshmal, Gadhvi, Dokpatal,Borpada, Jamlapada, Divan temrun	Introduction of promising mango variety "Kesar"	1	18	2	20	Due to unavilability of Sonpari variety this FLD transferred for Kesar variety	Other
7	05-10-2020	Gadhvi, Jamlapada, Divan Temrun, Sendriamba	Introduction of new variety of indian bean "GNIB 22"	2.5	20	5	25	-	Pulse
8	15-10-2020	Borpada, Dokpatal	Trichoderma In Gram	5	24	1	25	-	Pulse
9	20-10-2020	Gadhvi, Jamlapada and Diwantembrun	Gram - GG 5	6	23	7	30	Addaptive trail	Pulse
10	19-05-2020	Uga, Koshmal,Vahutiya, Dokpatal, Ambapada	Introduction of new variety in Turmeric (GNT-2)	0.4	10	0	10	-	Other
11	12-11-2020	Kalibel, Jamalapada, Jamanvihir, sati, Rajendrapur, Nadadkhadi, Borpada, Gadhavi, Waghai, Dokpatal, Ambapada	Mushroom kit	0	7	23	30	-	Enterprise

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

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

Farmers' Training including sponsored training programmes (on campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	1	-	-	-	0	18	18	0	18	18
Resource Conservation Technologies										
Cropping Systems	1	-	-	-	8	2	10	8	2	10
Crop Diversification	1	-	-	-	20	3	23	20	3	23
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management	2	-	-	-	85	10	95	85	10	95
Soil & water conservatioin	1	-	-	-	14	6	20	14	6	20
Integrated nutrient management	1	-	-	-	17	4	21	17	4	21
Production of organic inputs										
Others (pl specify)										
Total	**7**	-	-	-	**144**	**43**	**187**	**144**	**43**	**187**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	1	-	-	-	21	7	28	21	7	28
Off-season vegetables										
Nursery raising										
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify) Cultivation, Organic product	4	-	-	-	34	62	96	34	62	96
Total (a)	**5**	-	-	-	**55**	**69**	**124**	**55**	**69**	**124**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	-	-	-	30	0	30	30	0	30
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)	**1**	-	-	-	**30**	**0**	**30**	**30**	**0**	**30**
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										
Processing and value addition										
Others (pl specify)										
Total (f)										
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)	**6**	**-**	**-**	**-**	**85**	**69**	**154**	**85**	**69**	**154**
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	3	-	-	-	51	46	97	51	46	97
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management										
Feed & fodder technology										
Production of quality animal products										
Others (pl specify)	1	-	-	-	14	37	51	14	37	51
Total	**4**	-	-	-	**65**	**83**	**148**	**65**	**83**	**148**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	1	-	-	-	0	50	50	0	50	50
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										
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care										
Others (pl specify)										
Total	**1**	-	-	-	**0**	**50**	**50**	**0**	**50**	**50**
VI Agril. Engineering										
Farm Machinary 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	1	-	-	-	7	46	53	7	46	53
Integrated Disease Management	2	-	-	-	38	4	42	38	4	42
Bio-control of pests and diseases	2	-	-	-	14	49	63	14	49	63
Production of bio control agents and bio pesticides										
Others (pl specify) Mushroom	1	-	-	-	0	14	14	0	14	14
Total	**6**	-	-	-	**59**	**113**	**172**	**59**	**113**	**172**
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	1	-	-	-	28	14	42	28	14	42
Group dynamics	1	-	-	-	30	21	51	30	21	51
Formation and Management of SHGs										
Mobilization of social capital	1	-	-	-	17	8	25	17	8	28
Entrepreneurial development of farmers/youths										
WTO and IPR issues	1	-	-	-	0	13	13	0	13	13
Others (pl specify)	1	-	-	-	0	25	25	0	25	25
Total	**5**	-	-	-	**75**	**81**	**156**	**75**	**81**	**156**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	**29**	-	-	-	**428**	**439**	**867**	**428**	**439**	**867**

Farmers' Training including sponsored training programmes (off campus)

Thematic area	No. of courses	Participants								
		Others			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
I Crop Production										
Weed Management	1	-	-	-	12	4	16	12	4	16
Resource Conservation Technologies										
Cropping Systems										
Crop Diversification										
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management										
Integrated Crop Management										
Soil & water conservatioin	1	-	-	-	18	0	18	18	0	18
Integrated nutrient management										
Production of organic inputs										
Others (pl specify) Quality of produce	2	-	-	-	27	26	53	27	26	53
Total	**4**	-	-	-	**57**	**30**	**87**	**57**	**30**	**87**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops										
Off-season vegetables	1	-	-	-	39	7	46	39	7	46
Nursery raising	1	-	-	-	21	0	21	21	0	21
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)	2	-	-	-	21	18	39	21	18	39
Total (a)	**4**	-	-	-	**81**	**25**	**106**	**81**	**25**	**106**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	1	-	-	-	15	35	50	15	35	50
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)	1	-	-	-	6	14	20	6	14	20
Total (b)	**2**	-	-	-	**21**	**49**	**70**	**21**	**49**	**70**
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	1	-	-	-	9	10	19	9	10	19
Processing and value addition										
Others (pl specify)										

Total (f)	**1**	**-**	**-**	**-**	**9**	**10**	**19**	**9**	**10**	**19**
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
Total (g)										
GT (a-g)	**7**	**-**	**-**	**-**	**111**	**84**	**195**	**111**	**84**	**195**
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	1	-	-	-	27	21	48	27	21	48
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing	1	-	-	-	14	11	25	14	11	25
Others (pl specify)										
Total	**2**	-	-	-	**41**	**32**	**73**	**41**	**32**	**73**
IV Livestock Production and Management										
Dairy Management	3	-	-	-	55	32	87	55	32	87
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	-	-	-	9	6	15	9	6	15
Disease Management	1	-	-	-	7	45	52	7	45	52
Feed & fodder technology	1	-	-	-	15	23	38	15	23	38
Production of quality animal products										
Others (pl specify)										
Total	**6**	-	-	-	**86**	**106**	**192**	**86**	**106**	**192**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	2	-	-	-	44	18	62	44	18	62
Design and development of low/minimum cost diet	1	-	-	-	48	0	48	48	0	48
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										
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care	1	-	-	-	3	20	23	3	20	23
Others (pl specify)										
Total	**4**	-	-	-	**95**	**38**	**133**	**95**	**38**	**133**
VI Agril. Engineering										
Farm Machinary 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	2	-	-	-	38	23	61	38	23	61

Integrated Disease Management	3	-	-	-	83	24	107	83	24	107
Bio-control of pests and diseases	1	-	-	-	36	7	43	36	7	43
Production of bio control agents and bio pesticides										
Others (pl specify)										
Total	**6**	-	-	-	**157**	**54**	**211**	**157**	**54**	**211**
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	1	-	-	-	29	13	42	29	13	42
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital	1	-	-	-	24	2	26	24	2	26
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
Total	**2**	-	-	-	**53**	**15**	**68**	**53**	**15**	**68**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify) Tool & technical	1	-	-	-	23	12	35	23	12	35
Total	**1**	-	-	-	**23**	**12**	**35**	**23**	**12**	**35**
GRAND TOTAL	**32**	-	-	-	**623**	**371**	**994**	**623**	**371**	**994**

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	2	-	-	-	12	22	34	12	22	34
Weed Management										
Resource Conservation Technologies										
Cropping Systems	1	-	-	-	8	2	10	8	2	10
Crop Diversification	1	-	-	-	20	3	23	20	3	23
Integrated Farming										
Micro Irrigation/irrigation										
Seed production										
Nursery management	2	-	-	-	85	10	95	85	10	95
Integrated Crop Management	1	-	-	-	14	6	20	14	6	20
Soil & water conservatioin	2	-	-	-	35	4	39	35	4	39
Integrated nutrient management										
Production of organic inputs										
Others (pl specify)	2	-	-	-	27	26	53	27	26	53
Total	**11**	-	-	-	**201**	**73**	**274**	**201**	**73**	**274**
II Horticulture										
a) Vegetable Crops										
Production of low value and high valume crops	1	-	-	-	21	7	28	21	7	28
Off-season vegetables	1	-	-	-	39	7	46	39	7	46
Nursery raising	1	-	-	-	21	0	21	21	0	21
Exotic vegetables										
Export potential vegetables										
Grading and standardization										
Protective cultivation										
Others (pl specify)	6	-	-	-	55	80	135	55	80	135
Total (a)	**9**	-	-	-	**136**	**94**	**230**	**136**	**94**	**230**
b) Fruits										
Training and Pruning										
Layout and Management of Orchards										
Cultivation of Fruit	2	-	-	-	45	35	80	45	35	80
Management of young plants/orchards										
Rejuvenation of old orchards										
Export potential fruits										
Micro irrigation systems of orchards										
Plant propagation techniques										
Others (pl specify)	1	-	-	-	6	14	20	6	14	20
Total (b)	**3**	-	-	-	**51**	**49**	**100**	**51**	**49**	**100**
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	1	-	-	-	9	10	19	9	10	19
Processing and value addition										
Others (pl specify)										

Total (f)	**1**	**-**	**-**	**-**	**9**	**10**	**19**	**9**	**10**	**19**
g) Medicinal and Aromatic Plants										
Nursery management										
Production and management technology										
Post harvest technology and value addition										
Others (pl specify)										
r										
GT (a-g)	**13**	**-**	**-**	**-**	**196**	**153**	**349**	**196**	**153**	**349**
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	1	-	-	-	27	21	48	27	21	48
Micro nutrient deficiency in crops										
Nutrient Use Efficiency										
Balance use of fertilizers										
Soil and Water Testing	1	-	-	-	14	11	25	14	11	25
Others (pl specify)										
Total	**2**	-	-	-	**41**	**32**	**73**	**41**	**32**	**73**
IV Livestock Production and Management										
Dairy Management	6	-	-	-	106	78	184	106	78	184
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management	1	-	-	-	9	6	15	9	6	15
Disease Management	1	-	-	-	7	45	52	7	45	52
Feed & fodder technology	1	-	-	-	15	23	38	15	23	38
Production of quality animal products										
Others (pl specify)	1	-	-	-	14	37	51	14	37	51
Total	**10**	-	-	-	**151**	**189**	**340**	**151**	**189**	**340**
V Home Science/Women empowerment										
Household food security by kitchen gardening and nutrition gardening	3	-	-	-	44	68	112	44	68	112
Design and development of low/minimum cost diet	1	-	-	-	48	0	48	48	0	48
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										
Women empowerment										
Location specific drudgery reduction technologies										
Rural Crafts										
Women and child care	1	-	-	-	3	20	23	3	20	23
Others (pl specify)										
Total	**5**	-	-	-	**95**	**88**	**183**	**95**	**88**	**183**
VI Agril. Engineering										
Farm Machinary 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	3	-	-	-	45	69	114	45	69	114

Integrated Disease Management	5	-	-	-	121	28	149	121	28	149
Bio-control of pests and diseases	3	-	-	-	50	56	106	50	56	106
Production of bio control agents and bio pesticides										
Others (pl specify)	1	-	-	-	0	14	14	0	14	14
Total	**12**	-	-	-	**216**	**167**	**383**	**216**	**167**	**383**
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	2	-	-	-	57	27	84	57	27	84
Group dynamics	1	-	-	-	30	21	51	30	21	51
Formation and Management of SHGs										
Mobilization of social capital	2	-	-	-	41	10	51	41	10	51
Entrepreneurial development of farmers/youths										
WTO and IPR issues	1	-	-	-	0	13	13	0	13	13
Others (pl specify)	1	-	-	-	0	25	25	0	25	25
Total	**7**	-	-	-	**128**	**96**	**224**	**128**	**96**	**224**
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)	1	-	-	-	23	12	35	23	12	35
Total	**1**	-	-	-	**23**	**12**	**35**	**23**	**12**	**35**
GRAND TOTAL	**61**	**-**	**-**	**-**	**1051**	**810**	**1861**	**1051**	**810**	**1861**

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	1	-	-	-	20	4	24	20	4	24
Rejuvenation of old orchards										
Protected cultivation technology	2	-	-	-	39	5	44	39	5	44
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	2	-	-	-	6	40	46	6	40	46
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	1	-	-	-	21	9	30	21	9	30
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	1	-	-	-	20	2	22	20	2	22
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)	2	-	-	-	22	58	80	22	58	80
TOTAL	**9**	**-**	**-**	**-**	**128**	**118**	**246**	**128**	**118**	**246**

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

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

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

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Productivity enhancement in field crops										
Integrated Pest Management										
Integrated Nutrient management	1	-	-	-	20	4	24	20	4	24
Rejuvenation of old orchards										
Protected cultivation technology	2	-	-	-	39	5	44	39	5	44
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	2	-	-	-	6	40	46	6	40	46
Low cost and nutrient efficient diet designing										
Group Dynamics and farmers organization	1	-	-	-	21	9	30	21	9	30
Information networking among farmers										
Capacity building for ICT application										
Management in farm animals	1	-	-	-	20	2	22	20	2	22
Livestock feed and fodder production										
Household food security										
Any other (pl.specify)	2	-	-	-	22	58	80	22	58	80
TOTAL	**9**	**-**	**-**	**-**	**128**	**118**	**246**	**128**	**118**	**246**

Sponsored training programmes

Area of training	No. of Courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Crop production and management										
Increasing production and productivity of crops	2	-	-	-	17	22	39	17	22	39
Commercial production of vegetables										
Production and value addition										
Fruit Plants										
Ornamental plants										
Spices crops										
Soil health and fertility management	2	-	-	-	41	32	73	41	32	73
Production of Inputs at site										
Methods of protective cultivation	3	-	-	-	18	47	65	18	47	65
Others (pl. specify)	5	-	-	-	84	114	198	84	114	198
Total										
Post harvest technology and value addition										
Processing and value addition										
Others (pl. specify)	5	-	-	-	111	77	188	111	77	188
Total	**17**	**-**	**-**	**-**	**271**	**292**	**563**	**271**	**292**	**563**
Farm machinery										
Farm machinery, tools and implements										
Others (pl. specify)										
Total										
Livestock and fisheries										
Livestock production and management	1	-	-	-	21	8	29	21	8	29
Animal Nutrition Management	1	-	-	-	37	5	42	37	5	42
Animal Disease Management										
Fisheries Nutrition	1	-	-	-	14	37	51	14	37	51
Fisheries Management										
Others (pl. specify)	1	-	-	-	22	21	43	22	21	43

Total	**4**				**94**	**71**	**165**	**94**	**71**	**165**
Home Science										
Household nutritional security										
Economic empowerment of women	2	-	-	-	44	18	62	44	18	62
Drudgery reduction of women										
Others (pl. specify)										
Total	**2**				**44**	**18**	**62**	**44**	**18**	**62**
Agricultural Extension										
CapacityBuilding and Group Dynamics	1	-	-	-	30	21	51	30	21	51
Others (pl. specify)	1	-	-	-	0	13	13	0	13	13
Total	**1**				**30**	**34**	**64**	**30**	**34**	**64**
GRAND TOTAL	**25**	-	-	-	**439**	**415**	**854**	**439**	**415**	**854**

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			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	1	-	-	-	16	11	27	16	11	27
Organic farming										
Others (pl. specify)										
Total	1				16	11	27	16	11	27
Post harvest technology and value addition										
Value addition										
Others (pl. specify)										
Total										
Livestock and fisheries										
Dairy farming	1	-	-	-	0	30	30	0	30	30
Composite fish culture										
Sheep and goat rearing										
Piggery										
Poultry farming										
Others (pl. specify)										
Total	1				0	30	30	0	30	30
Income generation activities										
Vermicomposting										
Production of bio-agents, bio-pesticides,										
bio-fertilizers etc.										
Repair and maintenance of farm machinery										
and implements										
Rural Crafts										
Seed production										
Sericulture										
Mushroom cultivation	2	-	-	-	8	52	60	8	52	60
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dying etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total	**2**	**-**	**-**	**-**	**8**	**52**	**60**	**8**	**52**	**60**
Agricultural Extension										
Capacity building and group dynamics										
Others (pl. specify)										
Total										
Grand Total	**4**	-	-	-	**24**	**93**	**117**	**24**	**93**	**117**

3.5. Extension Programmes

Activities	No. of programmes	No. of farmers	TOTAL
Diagnostic visits	53	134	134
Field Day	10	126	126
KisanGhosthi	7	417	417
Film Show	124	25103	25103
KisanMela	2	1434	1434
Exhibition	2	1434	1434
Scientists' visit to farmers field	66	239	239
Plant/animal health camps	2	43	43
Farmers' seminar/workshop	11	1514	1514
Method Demonstrations	72	1210	1210
Celebration of important days	32	3584	3584
Exposure visits	17	415	415
Others Lecture delivered	57	2339	2339
Others Field visit with title	76	364	364
Others FLD visit	70	191	191
Others OFT visit	28	65	65
Others Farmers visit to KVK	16	520	520
Others farmers scientist interaction	33	198	198
Others Farmer meeting	6	162	162
Others TV, Radio talk	1	-	-
Others BRS/MRS/MSW placement	4	15	15
Others Farm school	6	159	159
Others Swachh bharat abhiyan	19	626	626
Other/ Survey	20	741	741
Total	**734**	**41033**	**41033**

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

Details of other extension programmes

Particulars	Number
Newspaper coverage	16
Popular articles	68
Radio Talks	1
Animal health amps (Number of animals treated)	2
Social Media (No. of platforms Used)	4
Video send to farmers mobile	14757
KVK Waghai YouTube channel	25529
Soil sample collected and analyzed	338
Water sample collected and analyzed	6
Plant health clinic Diagnostic service	58
Success story	5
Research paper	1
Folder, Leaflet	6
technical reports	317
Meeting, Seminar, Conference	100
Teaching, Examination, Supervision	82
Project proposal	1
University product sell	166
SMS send to farmers mobile	312823
WhatsApp Messages	30745
Telephone helpline	1600
Total	**386625**

3.6 Online activities during year 2020

S. No.	Activity Type	Mode of implementation (Video conferencing / Audio Conferencing / Facebook Live / YouTube Live/ Zoom/ Google meet/ Webexetc)	Title of Program	No. of Programmes	No. of Participants/ Views
A	Farmers training				
1	Training	Audio Conferencing	Tool and Techniques used in Organic farming	1	42
2	Training	Audio Conferencing	Importance of primary tillage	1	18
3	Training	Audio Conferencing	Scientific cultivation of Cucurbeateous crops	1	46
	Total			3	106
B	Farmers scientist's interaction programme				
1	-	-	-	-	-
	Total				
C	Farmers seminars				
1	Seminar	Video conferencing	Farmer Bill Act 2020	1	13
2	Seminar	Audio Conferencing	Crop Production, Animal Husbandry, Home Science	1	87
	Total			2	100
D	Expert lectures				
1	-	-	-	-	-
	Total				
E	Any other (Pl. specify)				
1	YouTube	YouTube Video	Sort Film on KVK, Navsari Agricultural Universitry, Waghai, Dang For Farmers	1	352
2	YouTube	YouTube Video	Blast of Paddy	1	411
3	YouTube	YouTube Video	(Azolla) Jaivik Khatar Azolla	1	527
4	YouTube	YouTube Video	NFSM CFLD 2019 20 / KVK Waghai	1	88
5	YouTube	YouTube Video	TSP 2019-20 /KVK waghai	1	120
6	YouTube	YouTube Video	Shree Padhghati \ SRI Technic	1	373
7	YouTube	YouTube Video	Selection of milch animals/pashu pasnd	1	1066
8	YouTube	YouTube Video	CM Kisan Sahay Yojana	1	451
9	YouTube	YouTube Video	Pheromone Trap in Paddy | KVK Waghai	1	817
10	YouTube	YouTube Video	Smart hand tools kit Yojana	1	583
11	YouTube	YouTube Video	Fodder cutting benefit	1	731
12	YouTube	YouTube Video	Leptospirosis Zoonotic disease	1	798
13	YouTube	YouTube Video	Solar trap (i-khedut portal)	1	598
14	YouTube	YouTube Video	Method of preparation of Panchagavya and Use	1	1094
15	YouTube	YouTube Video	Preparation of Dasparni Arka...	1	344

16	YouTube	YouTube Video	Control of neck blast in Rice/ KVK, NAU, Waghai, Dang	1	400
17	YouTube	YouTube Video	Agniastra	1	698
18	YouTube	YouTube Video	Jeevamrut/Natural Farming/ZBNF	1	4178
19	YouTube	YouTube Video	Seedling preparation in Plug tray	1	688
20	YouTube	YouTube Video	False smut of paddy	1	254
21	YouTube	YouTube Video	Success story of Azolla Unit// KVK Waghai Dang	1	441
22	YouTube	YouTube Video	Scientific cultivation of gram	1	2149
23	YouTube	YouTube Video	Mushroom Production Technology	1	1029
24	YouTube	YouTube Video	Jaivik Khatar /Azatobactor/Rhizobium/Acetobactor/PSB/Potash/Azospirillium/Micorrhiza	1	401
Total				24	18591
Grand Total (A+B+C+D+E)				**28**	**18751**

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
Pulses	Chickpea	New varirty	GG 5	23.7	189600	140
Pulses	Green gram	New varirty	GM 6	11.2	112000	250
Cereals	Paddy	New varirty	GNR 6	46.2	-	-
Tuber crop	Turmeric	New varirty	GNT 2	2.75	6875	4
Tuber crop	Turmeric	New varirty	GNT 1	1.15	2875	3
Total				**85.00**	**311350**	**397**

Production of planting materials by the KVK

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Vegetable Crop	Brinjal	New varirty	GNRB 1	8709	8709	50
Vegetable Crop	Chilli green	New varirty	Arka khyati	6985	6985	40
Vegetable Crop	Tomato	New varirty	Arka rakshak	7973	7973	60
Vegetable Crop	Drumstick	New varirty	PKM 1	200	200	100
Total				**23867**	**23867**	**250**

Production of Bio-Products

Bio Products	Name of the bio-product	Quantity Kg	Value (Rs.)	No. of Farmers
-	-	-	-	-

Production of livestock materials

Particulars of Live stock	Name of the breed	Number	Value (Rs.)	No. of Farmers
-	-	-	-	-

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
Research papers	Knowledge and attitude of self help group members towards micro finance	*Guj. J. Ext. Edu*. Vol. 31 : Issue 2 : December 2020	01
Technical reports	Annual Action Plan 2021-22	ATARI Pune	01
	Annual Progress report 2020	ATARI Pune	01
	Scientific Advisory Commits meeting reports	ATARI Pune	01
Press note	*(1) Lockdown darmiyan krushi vigyan kendra vaghai dvaaraa khedootone dial-out(Audio conference) sevana maadhyamathee margadarshan*	Vatsalya news	01
	(2) Lockdown darmiyan krushi vigyan kendra vaghai dvaaraa khedootone dial-out(Audio conference) sevana maadhyamathee margadarshan	Satya de dainik	01
	Waghai Krushi Vigyan Kendra dwara 4 divasiy off campus talim	Gujrat samachar	01
	Waghai khate poshan mashni ujvani	Satya Day	01
	Dang jillana vaghai khate poshan masni ujavani karai	Vastalaya news	01
	Dang jillana vaghai khate poshan masni ujavani karai	Navgujarat samay	01
	Waghai khate poshan masni ujavani	Satya de dainik	01
	Dang jillama dangarani kheti karta khedutone pajavata "karmodi" na rog sandarbhe krushi vigyan kendranu margadarshan	Info Dang GOG	01
	Dang; Dangerni kheti karta khedutone pajvata karmodina rog sandarbhe kvk waghai nu margdarshan	Vatsalya news	01
	Waghai na krushi vigyan kendra khate visv jameen diwas ni ujvani karai	Vatsalyanews	01
	Waghai Krushi Vigyan Kendrama Janjagruti Mate Swachhata Pakhvadiya Ujavani	Sabdesh, Navsari, Valsad Vapi Sanghpradesh, Page no 07	01
	Krishi Vigyan Kendra,College of Agriculture, waghai dvara Global potato conclave-2020 nu jivant prasaran	Sandesh	01
	Waghai Krushi Vigyan Kendra khate technology saptah ni ujavani	Vatsalyanews	01
	waghai ni agriculture college ma global potato conclave nu jivant prasaran karayu	E-TV bharat (https://etvbharat.com/gujarati/ gujarat/state/dang/live-broadcast-of-the-globa l-potato-conclave -2020-program-in-dang/ gj20200130091172289 4	01
	Sort film on KVK, Navsari Agricultural University, waghai , Dang for farmers	youtube (https://youtu.be/Lvd3kl7FOlc	01
	khedutone alag alag kalstar banavi parnparagat krushi taraf valavanu aahavaan	Sandesh	01
Technical bulletins	-	-	-
Popular articles	*Unalama dudhala pashuoni utpadan kshamta par mathi asaro ane teni sarsambahl*	Krushiprabhat	01
	Medicinal value & Nutritional value of Elephant foot yam	Krushiprabhat	01
	Suranni khetima aabohava ane jamin kevi joiye?	Krushiprabhat	01
	Suranni khetima jaminni taiyri ane jat vishe jano	Krushiprabhat	01
	climate and soil requirement for Elephant foot yam cultivation	Krushi Prabhat	01
	Soil preapartion and varieties of Elephant foot	Krushi Prabhat	01

	yam		
	Ambani khetima may-June masma karvana thata mahatvana kheti karyo	Krushi Prabhat	01
	Ghascharama rahela hydrocynic acid zeri tatvo vishe jano	Krushiprabhat	01
	Ghascharama rahela Nitratite zeri tatvoni pashu uparni asar	Krushiprabhat	01
	Ghascharama rahela oxalate zeri tatvo vishe jano	Krushiprabhat	01
	Anaj-kobi -rajkoma rahela saponin namna zeri tatvane jano	Krushiprabhat	01
	Dudhjany rogo ane tene atkavavana soneri suchano	Godarshan guide	01
	Suranni khetima bij ane ropani badni mavajat	Krushiprabhat	01
	Suranni khetima piyat ane pak sarkshan-niyantroni jankari	Krushiprabhat	01
	Khiru: navjat vachharada mate ek kudarati bhetnu mahtav	Krushiprabhat	01
	khiranu mahatav ane pivdavvano yogy samay	Krushiprabhat	01
	Gay aadharit pravahi sendriy khataro	Krushiprabhat	01
	Khetpako mate tonik: panchgavy	Krushiprabhat	01
	Gayna panchagyne upyog karvani rito	Krushiprabhat	01
	Sendriy khetima jivamrutni upyogita ane fayada	Krushiprabhat	01
	Sajiv khetima upyogi amrutpani, sanjivak ane bijamrut vishe jano	Krushiprabhat	01
	lamba divaso chalti pakni kapni thodak kshanma puri karnar: rantid	Krushiprabhat	01
	Dangar utpadanni shree paddhti	Krushiprabhat	01
	Dangarma shree paddhti pramane ropani mate tyari	Krushiprabhat	01
	Dangarma nindan niyatran ane shree paddhtina fayada	Krushiprabhat	01
	Sendriya kheti paddhtima falmakhino asarkarak upay: Falmakhi trap	Krushiprabhat	01
	Falpakoni nursary banavava shu karsho?	Krushiprabhat	01
	fal nursarynu aayojan karti vakhte dhyanma rakhvani babato	Krushiprabhat	01
	Nursaryma yogy matruchhod matena dhara dhoran	Krushiprabhat	01
	Chhod ucher madhyam ane teni tyari kevi rite karavi?	Krushiprabhat	01
	Fal zadna ropa-kalamo taiyar karva juda juda kyra vishe jano	Krushiprabhat	01
	Falpakonma prachalit savrdhanni rito ane teno samay	Krushiprabhat	01
	Suran ni kheti ma beej ane ropani bad ni mavjat	Krushiprabhat	01
	Suran ni khetima piyat ane pak sarkshan-niyantrano ni jankari	Krushiprabhat	01
	Khiru (kharetu): Navjaat vacharda mate ek kudarti bhet nu mahtva	Krushiprabhat	01
	Khira nu mahtv ane tene pivdavano yogya samay	Krushiprabhat	01
	Sendriy kheti padhhatima falmakhino asarkarak upay: falmakhi trap	Krushiprabhat	01
	Gay aadharit pravahi sendriy khataro	Krushiprabhat	01
	Khetpako mate tonik: panchgavy	Krushiprabhat	01
	Gayna panchagyne upyog karvani rito	Krushiprabhat	01
	Sendriy khetima jivamrutni upyogita ane fayada	Krushiprabhat	01
	Sajiv khetima upyogi amrutpani, sanjivak ane bijamrut vishe jano	Krushiprabhat	01
	Dangar utpadanni shree paddhti	Krushiprabhat	01
	Dangarma shree paddhti pramane ropani mate tyari	Krushiprabhat	01
	Dangarma nindan niyatran ane shree paddhtina	Krushiprabhat	01

	fayada		
	Dudhjany rogo ane tene atkavavana soneri suchano	Godarshan guide	01
	lamba diwaso chalti pakni kapni thodak xan ma puri karnar : rantid	Krushiprabhat	01
	Ghascharama vividh prakarna zeri tatvo vishe jano	Krushiprabhat	01
	Pashuna sharirmathi zeri asar nivarva matena upayo	Krushiprabhat	01
	Tandurast pashuoni olkh kyi rite karavi te vishe jano?	Krushiprabhat	01
	Pashumathi manavma ane manavmathi pashuma thata rogo	Krushiprabhat	01
	Pratisancharit rogono felavo thava na karano	Krushiprabhat	01
	Pratisancharit rogone atkavava matena pagala	Krushiprabhat	01
	sendriy khetima falmakhenu vyavsthapan	Krushi jivan	01
	Nagalini kheti vaigyanik abhigam sathe	Krushi jivan	01
	Pratisancharit rog swine flue visheni mahiti ane savchetina pagla	Godarshan guide	01
	Ghascharama rahel jeri tatvo dwara pasuona svasthya par asar	Godarshan Guide	01
	Pasuoma lal pesabno rog : phosphorus ni unap	Godarshan Guide	01
	Hadakava- ek jivlen pratisancharit rog	Gaudhuli	01
	Dudhala pasuonu shiyalani thandi same rakshan	Godarshan guide	01
	Dudhala pasuonu thandi same rakshan	Krushi govidhya	01
	"Kandmul pakono raja- suran"	Krushigovidhya	01
	Kitnashak davaono upayog ange khedutoma pravrtati ketalik gersamaj	Krushi prabhat	01
	Bordo mixran ane bordo pest kevi rite banavavu?	Krushi prabhat	01
	Agamchetina Pagla lo to pashupalanama Akhuvarsh Avak	Agro sandesh	01
	Krimiyan kong hemrejik fiver ek jivlen rog	Krushigovidhya	01
	Dudh ane dudhni pedashona many mapdando ane banavavani rit	Krushigovidhya	01
	Kimiyan kongo hemerajik fivar ake jivlen rog	Krushi Govidhya, Varse 72, Anke 11, Sarang anke 863	01
Extension literature	*Dudh jany rogo ane tene atakavavana soneri suchano*	NAU, Navsari	01
	Jeivik khataro	NAU, Navsari	01
	Prtisncharit rogo (Zunosis) ane tene felata atakavana upayo	NAU, Navsari	01
	Shendriy khetima falmakhinu vyvasthapan	NAU, Navsari	01
	Suranani vaigyanik kheti padhdhti	NAU, Navsari	01
	Gay aadharit pravahi sendriy khataro	NAU, Navsari	01
TOTAL			**94**

C. Details of Electronic Media Produced

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

D. Details of Social Media Platforms Created / Used

S. No.	Type of social media platform	Title of social media	Number of Followers/ Subscribers
1	YouTube Channel	KVK Waghai Dang	1211
2	Facebook page/ Account	-	-
3	Mobile Apps	KVK Mobile App	-
4	WhatsApp groups	Krishi Vigyan Kendra 1	214
		Krishi Vigyan Kendra 1	138
5	Twitter Account	KVK Waghai, NAU (The Dangs)	20

D. Success Stories / Case studies, if any (two or three pages write-up on each case with suitable action photographs. The Success Stories / Case Studies need not be restricted to the reporting period).

Success story -1
Popularizing line sowing and high yielding pigeon pea variety
P. P. Javiya, J. B. Dobariya, H. A. Prajapati, S. A. Patel & B. M. Vahuniya

1. Situation analysis/ Problem:

Pigeonpea, a *kharif* season crop, is also commonly known as Red gram, Arhar or Tur. It is the IInd important pulse crop after the gram and a major *kharif* crop in the country. India ranks Ist in area and production in the world with 80% and 67% of world's acreage and production respectively. Pigeon pea grows well in worm tropical and subtropical climate. The crop prefers a fairly moist and warm climate during the period of its vegetative growth during the flowering and repining stages of its growth, its requires bright sunny weather for the setting of fruits

In dang district, productivity of pigeon pea is low because of improper cultivation of land and random sowing method followed by farmers. Due to this severe wilt problem in seedlings and weed problems which ultimately affect the growth and yield of pigeon pea. Pigeon pea requires well cultivated land and specific spacing for its growth and development. Improper cultivation with random sowing reduce the plant population and ultimately it's reduce the crop yield. Most of the farmers were broadcasting the pigeon pea seed, so that required more quantity of seed than recommended seed rate, which ultimately increase the seed cost. Most of the farmers are tribal and resource poor, so that they have not knowledge regarding scientific cultivation practices of pigeon pea.

2. Plan, implement and support:

The team of KVK scientists had made survey of the village to identify the adoption gap and technological needs of farmers as well as their socio economic status. The development plan of village for various TOT activities has been prepared. Among various technological gaps, the KVK scientists have worked out the gap regarding method of sowing, seed rate, spacing and fertilizer application in pigeon pea by the farmers. The Scientist,Dr. P. P. Javiya(Crop production) decided to intervene on this point and given demonstration of pigeon pea to the farmers. The farmers have been given training on pigeon pea package of practices. The team of KVK scientist made frequent visits of the farmers' field and guided them accordingly for various operations.

Gadhvi, Divantemrun and Jamlapada are tribal dominated villages situated about 30 km away from KrishiVigyan Kendra, Waghai, Dist. Dangs head quarter. The farmers of these villages are recourse poor with undulating, fragmented land. Majority of the farmers are marginal farmers. The farmers used their own farm saved seeds. Then the KrishiVigyan Kendra intervened and trained the farmers of these villages about the land selection, sources of seed, seed rate, spacing, rouging, judicious use of fertilizer, harvesting and post-harvest handling of seeds and also provides seed, biofertilzer and novel organic fertilizer to farmers.

3. Output:

Economics:

Details of Technology	No. of Farmers /Demos	Area (ha)	Yield (q/ha)				% Increase in yield
			Demo			Check	
			Highest	Lowest	Average		
Pigeon pea (GNP2)	25	5	1320	1020	1210	913	33

Details	No. of Farmers /demos	Area (ha)	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
			Gross Cost	Gross Return	Net Return	CBR	Gross Cost	Gross Return	Net Return	CBR
Pigeon pea (GNP-2)	25	5	14000	36300	22300	2.6	12000	27390	15390	2.3

In farmer's method the farmers were able to harvest average of 913 kg/ha of pigeon pea as against 1210 kg/ha in demonstration with an increase of 33 per cent. The net benefit incurred was Rs. 22300 per hectare in demonstration plot of pigeon pea.

Off campus training

FLD visit

On campus training

Farm school

4. Outcome

As a result of intervention, the seed rate has been reduced to 30 kg/ ha in line sowing method of pigeon pea. Further due to line sowing, the application of fertilizers, weeding and other interculturing operations were become easy for the farmers which in turn saved labour charges and increased family income which ultimately improved the standard of living of the farm family.Farmers also extra income from intercropping of sort duration pulse crop in between tow row of pigeon pea.

5. Impact

By implementing this, farmers become aware about the importance and benefits of newly released variety of pigeon pea and its production and productivity. Cost of cultivation was decreased in demonstration plots up to the tune of 5-10 per cent. Net return of pigeon pea in demonstrated plots was Rs. 22300/ ha and cost benefit ratio is 2.6, whereas, in control plot was Rs. 15390/ ha and cost benefit ratio is 2.3.

Success story-2

High yielding Indian bean variety "GNIB 22"

Introduction:

South Gujarat is main Indian bean (*Dolichos lablab* L.) growing region of our state. About 42000 hectares (Anon., 2016) area is covered by Indian bean in Valsad, Navsari, Dangs, Surat, Tapi, Narmada and Bharuch districts of South Gujarat. It is mostly sown in late *Kharif or Rabi*. It is cultivated for grain as well as vegetable purposes. For vegetable purpose katargam local, desi variety and GNIB-21 varieties are popular.

In the Dang district, people adopted Indian bean farming as just for backyard farming. Generally farmers adopted old or local variety of Indian bean, but not included in commercial cultivation. Dang people always use this Indian bean in *sabji, ubadiya* etc. Navsari Agricultural University produced Indian bean variety named "GNIB 22". The new variety "GNIB 22" is early, determinate and erect type with good market & cooking quality and yield, hence it is highly acceptable to the farmers and consumers. Its green pod fetches similar price to that of surti papadi good character.

1. Situation analysis/ Problem:

Borpada, Chinchod, Koshmal, Chikar, Dokpatal, Moti-Dabdar, Ambapada, Kakarda, Godadiya, Vankan,Bhongadiya, Kalibel, Uga(Chichpada), Divdiyavan are tribal dominated villages. The farmers of these villages are resource poor with undulating, fragmented land. Majority of the farmers are marginal farmers. The farmers have used the old and desi Indian bean seed.

Farmers of the cluster villages were using old variety of Indian bean with low yield, high seed rate and commercial cultivation of Indian bean was not adopted by them. These increase the cost of production of Indian bean. Further due to random sowing, weeding and other interculturing operations were become difficult and it increase labour charges. Farmers of these villages were facing very poor economic condition and very hard to run her family satisfactorily.

2. Plan, implement and support:

The team of KVK scientists had made survey of the village to identify the adoption gap and technological needs of farmers as well as their socio economic status. The development plan of village for various TOT activities has been prepared. Among various technological gaps, the KVK scientists have worked out the gap regarding method of sowing, seed rate and application of new variety in Indian bean by the farmers. The Scientist (Horticulture) decided to intervene on this point and given demonstration of new variety of Indian bean "GNIB 22" to the farmers of Dang district. The farmers have been given training on Indian bean package of practices. The team of KVK scientist made frequent visits of the farmers' field and guided them accordingly for various critical operations.

The Krishi Vigyan Kendra intervened and trained the farmers of these villages about the land selection, sources of seed, selection of variety, seed rate, and rouging, judicious use of fertilizer, harvesting and post harvest handling of seeds and also provides seed, biofertilizer and novel organic nutrient to farmers.

Input Distribution

Training

3. Output:

Economics:

Details of Technology	No. of Farmers /Demos	Area (ha)	Yield (q/ha)				% Increase in yield
			Demonstration			Check	
			Highest	Lowest	Average		
Indian bean GNIB 22	50	5	39	24	32.83	24.46	34.46

Details	No. of Farmers /demos	Area (ha)	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
			Gross Cost	Gross Return	Net Return	CBR	Gross Cost	Gross Return	Net Return	CBR
Indian bean GNIB 22	50	5	41470	114450	72740	2.74	42752	73080	30328	1.71

In farmer's variety, the farmers were able to harvest average of 24.46 q/ha of Indian bean as against 32.83 q/ha in demonstration with an increase of 34.46 per cent. The net benefit incurred was Rs. 72740 per hectare in demonstration plot of Indian bean.

4. Outcome

By implementing this, farmers become aware about the importance and benefits of newly released variety of Indian bean "GNIB 22" and its production and productivity. Cost of cultivation was decreased in demonstration plots. Net return of Indian bean, in demonstrated plots was Rs. 72740/ ha and cost benefit ratio is 2.74, whereas, in control plot was Rs. 30328/ ha and cost benefit ratio is 1.71.

5. Impact

As a result of intervention, the Production and commercial cultivation of Indian bean has been increased and farmers adopted the line sowing method in Indian bean cultivation. Further due to line sowing, the application of fertilizers, weeding and other interculturing operations were become easy for the farmers which in turn saved labour charges and increased family income which ultimately improved the standard of living of the farm family.

Demonstration plot

Line Sowing

Success story – 3

Title – Mushroom cultivation a source of additional income and women empowerment for tribals in Dang District

Name – Gangoda Jagrutiben Kiranbhai
Village – Kosmal
Ta.- Waghai
Dist.- Dang (Gujarat)
Mo.- 94281 19322

1. Situation Analysis/ Problem Statement:

Profile		
Age	32	Before contact with KVK, Waghai, she was not actively participating in farming only her husband was doing most part of farming. Economic condition are not strengthening after lot of work.
Education	Up to College Third Year	
Land Holding	1 Hactare	
Farming Experience	08 year	
Crop grown	Nagli, Paddy, Urdbean, Pigeonpea	
Animal own	04	

Jagrutiben Gangoda is a farmer of village Kosmal, Taluka- Waghai, District- Dangs in Gujarat. Jagrutiben complete her education up to TY in Degree and having 1 Hactare of land. Somehow, she was earning his livelihood by practising rainfed farming in her land. She was growing local and old varieties of Paddy, vari and Tur during Kharif season. Under such situation, she needed some additional or supplementary income to increase income, food & Nutritional security of her family. Therefore, she was in search of some alternate sources of income.

By the some sources, she contact KVK imparting knowledge and Vocational Training for Mushroom cultivation. She got knowledge about Scientific cultivation of Mushroom and also get Book of Mushroom in Gujarati language as well as one folder in Dangi local language by SMS of KVK. She prepared a small shed of 5*5mt. Information was made available to her for purchasing spawn and preparation of cylinder for Mushroom Production by the training conduct by KVK as well as line department too. Due to adoption of scientific methods of mushroom cultivation, her constant efforts, Hard work and timely support from KVK, she was able to increase her income.

The success of Mushroom cultivation in resource poor area is a unique example to generate extra income and women empowerment.

2. Plan, implementation and Support

The team of KVK scientist had made survey of the village to identify adoption gap and Technology needs of farmers as well as their social economic status. The development plan of village for various activity has been prepared. Among various technology gaps, the KVK Scientist have worked out following activities-

- Vocational Training on Mushroom Production
- Give Extra motivation to market her mushroom in large scale
- Providing literature in local language
- Technical Guidance for maintaining the unit
- Advisory service
- Follow-up visit

3. Output

After training she got mushroom spawn and carried out cultivation on her own and with KVK intervention. Install Mushroom cylinder on small room with scientific method and was able to generate extra income from this farming.

4. Outcome

Mushroom cultivation has benefited the farmer to earn additional income from farm waste and use of periphery space in house. labours required only in initial days. She can carry out Mushroom cultivation without disturbing her daily routine.

5. Economic Impact

Sr. No.	Particulars/Items	Before KVK Intervention	After KVK Intervention
1	Mushroom Cultivation	Only few lady of her village	Mushroom Production adopted by majority of women
2	Mushroom Production	4-5 Cutting	6-7 Cutting and Marketed @Rs. 200/kg
3	Technology Intervention	Hot water immersion for sterilization of paddy straw	Use of chemicals in starting only for sterilization (saves time, valuable wood and get healthy or diseases free mushroom)
4	Economy	6700 income on Investment of 2200 only	8500 income on investment of 2200 only

Success Story-4

Title: Dairy Farming-A boon for tribal women

1. Situation Analysis/Problem Statement

Manjulaben Maheshbhai Gamit is a woman farmer of Village Biliaamba, Taluka Shubir, District Dangs in Gujarat, educated up to 8th standard and having 1.5 Acre of land. Her husband is also a farmer. They have two children a son and a daughter. Somehow, they were earning their livelihood by practicing rain fed agriculture in their land. She was growing local and old varieties of Paddy, Vari and Ragi during Kharif season. She had two bullocks and two cows of local origin. These animals were a burden rather than a source of income due to the meagre productivity; however the bullocks were used for the agricultural operations. Under such situation, it was difficult to sustain house hold food and nutritional security of her family. Therefore, she was in search of some alternate sources of income.

Manjulaben Maheshbhai Gamit
Village: Biliaamba, Taluka-Shubir, District Dangs - (Gujarat)
Age: 32 years , Education: 8th Standard , Size of Land holding: 1.5 Acre

2. Plan, Implement and Support

By some sources, she came to know about some welfare schemes for tribal. First of all she visited a co-operative dairy in a nearby village and she also decided to extended & good mange co-operative dairy in her village. But for that she has to convince her villagers. Meanwhile her village, Biliaamba was care by KVK of the district. A series of animal husbandry activities like meetings, trainings, kisan gosthis, field visits, farm school, visit to a dairy co-operative has been started by KVK scientists. Manjulaben and other interested farmers had purchased one HF cross-bred cow worth Rs. 32,000/- by receiving loan with 50% subsidy.

As cross bred cow was a new enterprise for them, they often faced so many troubles for proper guidance. In the beginning she was not able to maintain the proper health of her animals. She started to visit the KVK in order to get the guidance for maintaining the dairy animals. Animal scientist of KVK was impressed to see her keen interest in dairy farming. It was found that the farmers of this village were rearing the animals with traditional method, imbalance in use of feeds and fodder as well as facing the chronic problem of anoestrus, repeat breeder and poor growth. The Scientist of KVK started a series of activities i.e. training, demonstration, film show etc to deal with the existing problems and observed a positive impact.

3. Output

At present, Manjulaben has adopted scientific concepts to rear her animals as per the suggestions given by KVK scientists. She has extended her farm and today she owned 3 milking HF crossbred cows, 3 heifers, 1-buffalo and 2 calves. She has constructed a pakka house with manger and water tank. She uses proper concentrate feed, green and dry fodder, mineral mixture, timely vaccination, de-worming and diagnosis as per the guidance provide by the scientists of KVK through training, demonstrations and very frequent farm and home visits. She is a purchase chaff cutter for cutting fodder & regularly use this instrument. As result, a strong competition between various farm women to get more and more milk production developed.

4. Outcome

Due to adoption of improved practice, her constant efforts and hard work and timely support from KVK, ATMA Dang & other line departments and Vasudhara dairy she could achieve very impressive growth in dairy farming as per the below table.

5. Impact of KVK

Sr. No.	Particulars/ Items	Before KVK intervention	After KVK intervention
1	Animals own	1-Desi cows 3- Desi Bullocks	4- HF cows, 3-Heifers, 2 - Calves , 1-Buffalo, 2- Bullocks
2	Vaccination & De-worming	Not proper	Regular
3	Milk production (day)	Initial 1.5 lit/day	Average-21 lit/cow/day Average-6 lit/Buffalo/day She could sold milk of about 27 lit/day i.e. highest income up to Rs. 27,000/- per month
4	Highest milk production per animal per day	2.0 lit/day	Up to 22 lit/day/animal
5	Anoestrus and repeat breeder problems	Yes	No
6	Inter-calving interval	More than 2 yrs	12-16 months
7	Service period	Average-170 days	90-95 days
8	No. of service per conception rate	7-8	1-2
9	Growth of calves and heifers	Poor	Good
10	Age of first calving	5-6 yrs	30-48 months
11	Economics enhancement Income per month(Net profit) Income through selling of self reared HF animals	 Not good Nil	 Rs.12,000-15,000 per month Planned in future
12	Modern assets in the house because of dairy farming	Nil	Freeze – 1, TV – 1, Telephone - 1, Motorcycle - 1
13	Bank loan	-----	Paying regularly
14	B.C. Ratio		1: 1.58

For the success of dairy farming in tribal areas she believes that it is due to intensive guidance provide by the Scientist of KVK. In addition to this, humble support made by Vasudhara dairy as well as state government to provide subsidy for purchasing the cross bred cows and proper marketing facility, respectively.

She feels that having good genetic potential and dairy characters of HF cross bred animals plays an important key role in dairy business. She also emphasized that after starting the dairy farming she need not to go anywhere for earning employment as well as she could make herself away from the money lender's clutch to satisfy her needs. Now she can easily manage her all needs and able to think in advance for the sake of better education to her children due to dairy farming.

This impressive result of dairy farming turned Manjulaben Maheshbhai Gamit & her husband from poor farmer to a happy progressive dairy farmer. The success of dairy farming in resource poor areas is a unique example to generate the employment as well as empower the tribal economy in the country.

Success story-5

Honey bee production by scientific and technical methods

Dalubhai Pecheryabhai Gamit is a farmer of village Nishanna, Tal: Shubir, Dist: Dang, Gujarat. He is married and his date of birth is 04-05-1970. His Formal education is 10th standard. He is more interested in the agriculture and honey bee production. So he has decided to do business of hone be production. He have not any types of knowledge about hone be production. But the information of scientific honey bee production is taken in the farmer fair organized by krushi vigyan Kendra, waghai, dang. Now he is strongly decided to do something in honey bee production. He has started his business by input available in his farming.

1. Resources owned by Farmer:

(i) Land (ha): 3.95 ha

(ii) Water bodies with irrigation capacity: Bore well

(iii) Animal Resources including fish and Poultry: 4 cattle (2 HF cows + 2 Calves)

(iv) Farm Machinery: Honey extract machine, Queen Protector Machine, Bee protection dress, Queen Capacitor and Honey bee box

2. Area

(i) Field Crops: Paddy, Pigeon pea, Black gram, Finger millet, Little millet

(ii) Horticultural Crops: Cashew nut, Mango, Onion, Garlic, Tomato, Brinjal

(iii)Agroforestry/Apiculture/ Sericulture: Bamboo, Tick wood, Honey bee unit

(iv) Dairy/Poultry/Fisheries/Duckaries/Piggaries(specifyunit): 4 Cattle (2 HF cows + 2 Calves)

3. New Technologies developed:

- Creation of Rani Honey Bee & innovation of stingless bee
- Bee keeping in pot

4. New Technologies adopted in Farming (List only)

- Organic farming
- Cultivation of tomato in net house
- Cashew nut plantation
- Adopted drip irrigation
- Adopted crossbred dairy animals
- Design own honey bee box

5. Activity and year wise income, cost benefit ratio, gross and net income for previous five years

- **Field crops**

Sr. No.	Year	Crop	Area (ha)	Production (kg)	Income (Rs.)	Cost of cultivation (Rs.)	Benefit (Rs.)
1.	2015	Paddy	1.15	4200 (Rs 13/Kg)	54600/-	26000/-	28600/-
		Finger millet	1.0	990 (Rs 15/Kg)	14850/-	5000/-	9850/-
2.	2016	Finger millet	1.15	1050 (Rs 15/Kg)	15750/-	6000/-	9750/-
		Black gram	1.00	680(Rs 35/Kg)	23800/-	7000/-	16800
3.	2017	Finger millet	1.15	1050 (Rs 15/Kg)	15750/-	6000/-	9750/-
		Little millet	1.00	1100 (Rs 15/Kg)	16500/-	6500/-	10000/-
4.	2018	Paddy	1.15	4660 (Rs 15/Kg)	70000/-	25000/-	45000/-
		Pigeon pea	0.50	540 (Rs 40/Kg)	21600/-	4500/-	17100/-
5.	2019	Paddy	1.15	5020 (Rs 15/Kg)	75300/-	23000/-	52300/-
		Pigeon pea	0.50	560 (Rs 45/Kg)	25200/-	5000/-	20200/-

- **Horticulture crops**

Sr. No.	Year	Crop	Area (ha)	Production (kg)	Income (Rs.)	Cost of cultivation (Rs.)	Benefit (Rs.)
1.	2015	Onion	0.20	3649(Rs. 10/Kg)	36490/-	15000/-	21490/-
		Garlic	0.25	2500(Rs. 35/Kg)	87500 /-	20000/-	67500/-
2.	2016	Tomato	0.50	7500 (Rs. 5 /Kg	37500/-	25000/-	12500/-
		Brinjal	0.40	2000 (Rs. 4 /Kg)	8000/-	3000/-	5000/-
3.	2017	Cashew nut	0.10	120(140 per kg)	16800/-	5500/-	11300/-
		Mango	0.05	135 (Rs. 21/ kg)	2835/-	1600/-	1235/-
4.	2018	Cashewnut,	0.10	133.33(Rs.150/ kg)	20000/-	5400/-	14600/-
		Mango	0.05	140 (Rs. 22.5/kg)	3150/-	1500/-	1650/-
5.	2019	Cashewnut	0.10	140 (Rs.150/kg)	21000/-	5300/-	15700/-
		Mango	0.05	180 (Rs. 22.5/kg)	4050/-	1400/-	2650/-

- **Livestock**

Sr. No.	Year	No of Animal	Milk production	Income (Rs.)	Cost (Rs.)	Net benefit (Rs.)
1.	2015	1 (HF Cows)	1200 liter	Rs. 23 per liter (27600)	15000/-	12600/-
2.	2016	1 (HF Cows)	1350 liter	Rs. 24 per liter (32400)	14000/-	18400/-
3.	2017	2 (HF Cows)	2500 liter	Rs. 25 per liter (62500)	36500/-	26000/-
4.	2018	2 (HF Cows)	2700 liter	Rs. 25 per liter (67500)	37000/-	30500/-
5.	2019	2 (HF Cows)	2900 liter	Rs. 25 per liter (72500)	40000/-	32500/-

- **Apiculture**

Sr. No.	Year	Crop	Area	Production (kg)	Income (Rs.)	Cost of cultivation (Rs.)	Benefit (Rs.)
1.	2015	Honey bee	70 box	85 (Rs 1000 per kg)	85000/-	25000/-	60000/-
2.	2016	Honey bee	70 box	90 (Rs 1000 per kg)	90000/-	25000/-	65000/-
3.	2017	Honey bee	70 box	92 (Rs 1000 per kg)	92000/-	20000/-	72000/-
4.	2018	Honey bee	70 box	100 (Rs 1000 per kg)	100000/-	30000/-	70000/-
5.	2019	Honey bee	70 box	130 (Rs 1000 per kg)	130000/-	35000/-	95000/-

6. Productivity Levels achieved in major income generating activity during the last five years.

Apiculture (Honey production)

Year	Gross income in lakh	Expenses Income lakh	Net profit Income in lakh
1.	0.85	0.25	0.60
2.	0.90	0.25	0.65
3.	0.92	0.20	0.72
4.	1.00	0.30	0.70
5.	1.30	0.35	0.95

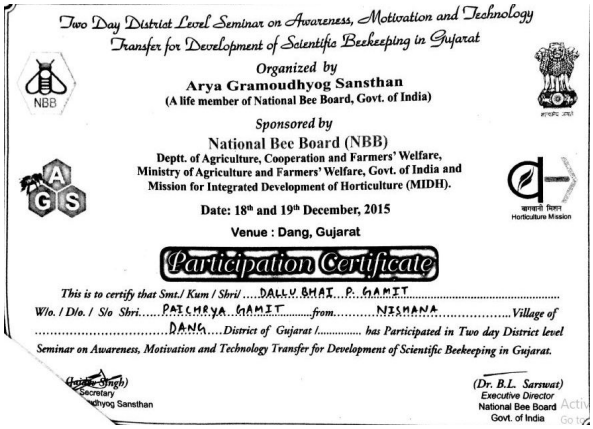
Bee keeping could be able to increase their annual income by Rs. 25000 over and above Rs. 14500 earned by crop production, Horticulture& Animal husbandry during 2018-19. In per cent terms it was about 172 % higher than that of crop production, Horticulture& Animal husbandry. Honey bee keeping activity helped to increase employment by 92 man days (52.79%) for small farmers.

7. Any spread effect on Fellow Farmers

Presently, Dalubhai trains the local tribal's to cultivate honey and has not only attended seminars in Karnataka, Maharashtra, but also in other state. He was associated with NGOs. He wants to conduct more research, if some assistance is provided to him. He also established self-employment centre for tribal farmer at his village Nishanna. He trained more than 250 farmers for scientific bee keeping. Giving knowledge about various government schemes and benefited to them.

8. Innovative interventions inducted in the system of production and management and effects

- Creation of Rani Honey Bee & innovation of stingless bee
- Bee keeping in pot
- Honey bee keeping also double the farmer income
- Honey bee keeping also increase 30-40 % production in sweet corn, mango and cashew nut



Two Day District Level Seminar on Awareness, Motivation and Technology Transfer for Development of Scientific Beekeeping in Gujarat

Organized by

Arya Gramoudhyog Sansthan

(A life member of National Bee Board, Govt. of India)

Sponsored by

National Bee Board (NBB)

Deptt. of Agriculture, Cooperation and Farmers' Welfare, Ministry of Agriculture and Farmers' Welfare, Govt. of India and Mission for Integrated Development of Horticulture (MIDH).

Date: 18th and 19th December, 2015

Venue : Dang, Gujarat

Participation Certificate

This is to certify that Smt./ Kum / Shri/ ....DALU BHAT P. GAMIT

W/o. / D/o. / S/o Shri.....PATHERYA GAMIT.....from.....NISHANA.....Village of .....DANG.....District of Gujarat /..... has Participated in Two day District level Seminar on Awareness, Motivation and Technology Transfer for Development of Scientific Beekeeping in Gujarat.

(Jaidev Singh) Secretary Arya Gramodhyog Sansthan

(Dr. B.L. Sarswat) Executive Director National Bee Board Govt. of India

NATIONAL BEE BOARD

Deptt. of Agriculture & Co-operation, Ministry of Agriculture, Govt. of India

Under National Horticulture Mission

5 Days Out of State Exposure Visit on Bee Keeping

FOR THE FARMERS OF GUJARAT

Certificate of Participation

This is to Certify that

Sh. / Smt. .....DALUBHAT P. GAMIT.....

from Village & Post .....NISHNA..... Distt. .....DANG.....

State Gujarat has participated in the above mentioned Training Programme on Bee Keeping

19th March to 23rd March 2012 at Punjab & Himachal Pradesh.

Jaidev Singh Secretary Arya Gramodyog Sansthan

Organised by : Arya Gramodyog Sansthan Village & Post Kandera, Distt. Baghpat (U.P)

Dr. B.L. Sarswat Executive Director National Bee Board

9. The contribution of the farmers in terms of

- New package of practices/ managements strategies: Integrated farming approach along with apiculture.
- Saving or resources/ inputs: Pot culture technique instead of wooden boxes for apiculture
- Breaking technology transfer barriers: Knowledge about different eight types of honey bee survived in Dang region & Unawareness about apiculture in farmers
- Prevention of outbreak of diseases and pests: Yes
- Bringing about radical change in management packages/ in contributing record production from land, water or animals
- Recognition received at the Block/District/State level and other sources
- Taken best ATMA Farmers Award

10. Extent of publicity of his/her innovations/contributions/ success story

Anything is possible with the help of hard work and strong will power. This is the message sent to us by farmer in Dangs –**Dalubhai Pecharyabhai Gamit**, who has set an example for us to learn from Dalubhai, a resident of Nishanna village near Ahwa in Dangs is an ordinary farmer in the district, but what makes him special is his in-depth expertise in honey farming. Through intensive research for more than five years, Dalubhai has successfully developed a season cycle that can boost the production of honey with the same number of honey bees.

If the bee-hives are kept in different farmer during different season, it can help boost the production of honey by 30-40%. I have also found a technique that can help the honey-bees survive longer.

Another important innovation that Dalubhai has come up with is the creation of Rani Honey Bee the only bee that can deliver larva within 16 days. In a bee-hive no female bee other than Rani, can deliver larva and if she dies, the entire been-hive gets destroyed. He has attained so many straggle to develop this techniques.

- Out of 8 honey bee of dang district he was produce hones from 3 honey bee
- By the hard work, interest and knowledge, he was found and established honey bee box and honey pot so easily honey is collected
- The box is arranged in crop like maize so the production is increase 30 to 40 percent
- The production is also increase30 to 40 per cent in crop like mango and cashew nut
- He was trained and gives information to farmers in various training and awareness programme

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

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

ITK Technology 01

Sr. No.	Particular	Detail
1	Name of integration of indigenous technical knowledge (ITK) and traditional Practices (TP).	Development of stingless honeybee colony in pot.
2	Description of ITK/TP	The stingless bee generally nesting on Stem and branches of living trees including bamboo, dead logs (either standing or lying on the ground), old and abandoned ant hills, cracks in walls of houses, cavities in unused panel doors of buildings (accessed by cracks and key holes). So the honey bee rarer success in rearing of stingless bee in pot.
3	Name of framer/village from where the information collected	Chandrasinghbhai Chhaganiya Village-Rambhas , Ta:Waghai, Dist: Dang
4	Method of preparation/use of ITK/TP, if any	Cultivation of stingless honeybee in pot
5	Dose/rate/amount/time of use of ITK/TP,	The honey of stingless bee is very costly and its used as medicinal purpose in honey therapy
6	Benefits/effect of ITK/TP on yield/production/control of disease-pest/saving of inputs etc	Cost of cultivation is low.
7	Whether farmers adopting at present? Yes/No If yes, from how many years?	No
8	Any other supportive information	The commercial cultivation of honey bee in dang district at lower leval.

ITK Technology : 02

S. N.	Particular	Detail
1	Name of integration of indigenous technical knowledge (ITK) and traditional Practices (TP).	Treatment of Bloat
2	Description of ITK/TP	Ruminal tympany, also known as bloat, is a disease of ruminant animals, characterized by an excessive volume of gas in the rumen. In cattle, the disease may be triggered after an animal eats a large amount of easily fermenting plants, such as legumes, alfalfa, red clover, or white clover. The desi treatment relieves the gas from rumen. ITK- 50 GM Asafoetida + 50 GM Ajwin + salt add in 250 ml butter milk & well mix it.
3	Name of framer/village from where the information collected	Rajeshbhai Gavit Village- Koshmal, Ta:Waghai, Dist: Dang
4	Method of preparation/use of ITK/TP, if any	50 GM Ascifoetida + 50 GM Ajwin + salt add in 250 ml butter milk & well mix it.
5	Dose/rate/amount/time of use of ITK/TP,	Twice in day & continue given 2-3 days.
6	Benefits/effect of ITK/TP on yield/production/control of disease-pest/saving of inputs etc	Relieving of gas
7	Whether farmers adopting at present? Yes/No If yes, from how many years?	Yes Since last 20 years
8	Any other supportive information	Nil

ITK Technology: 03

Sr. No.	Particular	Detail
1	Name of integration of indigenous technical knowledge (ITK) and traditional Practices (TP).	Development of uterus
2	Description of ITK/TP	The reproductive function of the uterus is to accept a fertilized ovum which passes through the utero-tubal junction from the fallopian tube. The fertilized ovum divides to become a blastocyst, which implants into the endometrium, and derives nourishment from blood vessels which develop exclusively for this purpose. This local treatment helpful for development of uterus. ITK- Sprouted moth bean 200 gm to 300 gm
3	Name of framer/village from where the information collected	Govindbhai machhi Village- Uga, Ta: Waghai, Dist: Dangs
4	Method of preparation/use of ITK/TP, if any	Sprouted moth bean 200 gm to 300 gm
5	Dose/rate/amount/time of use of ITK/TP,	20 to 25 days continues given
6	Benefits/effect of ITK/TP on yield/production/control of disease-pest/saving of inputs etc	Growth of uterus in cow / buffalo
7	Whether farmers adopting at present? Yes/No If yes, from how many years?	Yes Since last 20 to 25 years.
8	Any other supportive information	Nil

ITK Technology : 04

Sr. No.	Particular	Detail
1	Name of integration of indigenous technical knowledge (ITK) and traditional Practices (TP).	Cultivation of Black Turmeric
2	Description of ITK/TP	Black turmeric is a powerful antioxidant and anti-inflammatory. The root has been used medicinally for centuries to treat arthritis, asthma, and epilepsy.
3	Name of framer/village from where the information collected	Kashirambhai Birari Village -Jamlapada, Ta: Waghai, Dist: Dang
4	Method of preparation/use of ITK/TP, if any	Commercial cultivation of Black Turmeric is useful for pharmaceutical purpose.
5	Dose/rate/amount/time of use of ITK/TP,	Sowing season is June-July
6	Benefits/effect of ITK/TP on yield/production/control of disease-pest/saving of inputs etc	Commercial cultivation of Black turmeric for providing row material to pharmaceutical company.
7	Whether farmers adopting at present? Yes/No If yes, from how many years?	Due to use of black turmeric in “local tantra-mantras” the black turmeric is rear for people and other persons.
8	Any other supportive information	No

ITK Technology : 05

Sr. No.	Particular	Detail
1	Name of integration of indigenous technical knowledge (ITK) and traditional Practices (TP).	Cultivation of safed musli and value addition by local *stone chakki*
2	Description of ITK/TP	Safed musli is a rare herb from India. It is used in traditional systems of medicine including Ayurveda, Unani and homeopathy.
3	Name of framer/village from where the information collected	Jayeshbhai Mokashi Village - Bhawadi, Ta: Waghai Dist: Dangs
4	Method of preparation/use of ITK/TP, if any	Value addition of safed musli to form powder by local stone chakki.
5	Dose/rate/amount/time of use of ITK/TP,	It is traditionally used for arthritis, cancer, diabetes, boosting vitality, improving sexual performance and for many other uses.
6	Benefits/effect of ITK/TP on yield/production/control of disease-pest/saving of inputs etc	Valve addition of safed musli to increases the net profit of farmers.
7	Whether farmers adopting at present? Yes/No If yes, from how many years?	Yes. Since last 15 to 20 years
8	Any other supportive information	No

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

A. Practicing Farmers

a) Organic farming
b) Use of mulching with drip irrigation in mulching
c) Organic protection measure

B. Rural Youth

a) Farm mechanization
b) Use of various Agri apps
c) Bee keeping
d) Mushroom production

C. In-service personnel

a) Use of bank credit in Agriculture
b) Organic farming
c) Pont for doubling farmer's income

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 technologies

6. LINKAGES

A. Functional linkage with different organizations

Name of organization	Nature of linkage
Navsari Agricultural University	Provides technical experts for various disciplines as well as practical training to the trainees during educational tour. Teaching at Agricultural college & politechnique of NAU, Waghai.
NAIP, ICAR	Technical support
Agricultural department, District Panchayat , Ahwa Dept. of Horticulture, Ahwa	Helps in organizing in service training for VLWs, khedut shibir and conducting sponsored training programme by receiving the grant from DAO Ahwa.
ATMA, Dangs	Technical support, joint organization of farmers fair.
FTC, Dangs, and Tapi	Technical support
Forest dept., South Dangs, Ahwa.	Helps in organizing van mahotsav, farmers training.
District Information Department, Ahwa.	Publish the activities in news papers.
Veterinary college, NAU, Navsari, Department of Ani. Husb., Ahwa Vasudhara dairy, Waghai	Organization of programme jointly- animal treatment camp, khedut shibir, calf rally etc.
Mahila samakhya,Ahwa.	They depute the SHG for training in the KVK.
District Watershed Development Agency, Ahwa	Training & technical advice.
Lotus foundation, Waghai, World vision, Waghai Rowadan trust, Ahwa, ICDs, AKRS (Agakhan)	Training & field demonstration.
Bhimrao Ambedkar Trust	Training & technical advice.
Naheru Yuva Kendra, Ahwa, Dang	Training & technical advice
Collectorate and District Development Officer, Dang	Election related activities, Krishi Mahotsava and other Government programmes.

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.)
-	-	-	-

C. Details of linkage with ATMA

a) Is ATMA implemented in your district Yes

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

Coordination activities between KVK and ATMA

S. No.	Programme	Particulars	No. of programmes attended by KVK staff	No. of programmes Organized by KVK	Other remarks (if any)
01	**Meetings**	NMSA yojana ni meeting	01	01	-
02	**Research projects**	-	-	-	-
03	**Training programmes**	Organic farming of gram	01	01	-
		Weed management in *rabi* crops	01	01	-
		Importance of vegetable in human diet	01	01	-
		Scientific cultivation of vegetables	01	01	-
		Promotion of Organic Products	01	01	-
		Organic Plant Protection measure in Gram	01	01	-
		Disease management in Vegetable crop	01	01	-
		Care & mangement in milch Animals	01	01	-
04	**Demonstrations**	-	-	-	-
05	**Extension Programmes**				
	KisanMela	Krishi mela (New India Manthan Sanklpe se Sedhhi)	06	01	-
	Technology Week	-	-	-	-
	Exposure visit	Processing of turmeric	05	01	-
		Processing of cashewnut	05	01	-
		Strwberry farm	05	01	-
	Exhibition	Krishi mela (Submission on Agricultural Mechanisation))	06	01	-
	Soil health camps	-	-	-	-
	Animal Health Campaigns	-	-	-	-
	Others (Pl. specify)	-	-	-	-
06	**Other Activities** (Pl.specify)				
	Film Show	Profitable Animal Husbandry & Clean milk production	01	01	-

D. Give details of programmes implemented under National Horticultural Mission

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

E. Nature of linkage with National Fisheries Development Board

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

F. Details of linkage with RKVY

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

G. Details of linkage with PKVY (Paramparagat Krishi VikasYojana)

S. No.	Programme	Nature of linkage	Funds received if any Rs.	Expenditure during the reporting period in Rs.	Remarks
1	Certification in PGS India	Organic farming	3.30 lak	2,76,136	-

H. Details of linkage with NFSM

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

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

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

7. Convergence with other agencies and departments:

KVK Name	Name of scheme	Name of Agency (Central/state)	Funds received (Rs.)	Activities organized	Operational Area	Remarks
KVK-Waghai	ATMA	State		25	Dang	-
	DRDA	State	-	1	Dang	-
	Others (Plz. Specify)	Sevadham	-	2	-	-
	DAO	State	-	6	Dang	-
	ADHO	State	-	8	Dang	-

8. Innovator Farmer's Meet

Sl.No.	Particulars	Details
1	Have you conducted Farm Innovators meet in your district?	Yes
2	Brief report in this regard	
I	Crop Production, Animal Husbandry, Home Science	87 Participated
II	Agronomy, Animal science and Home science	87 Participated
III	*Gujaratma masroom uchherni sakyatao*	96 Participated
IV	Gujaratma mushroom uchherni shakyatao (poshan abhiyan)	96 Participated
V	*Gujaratma masroom uchherni sakyatao*	316 Participated
VI	Inauguritory ceremony by PM cume orgenic farming Workshop	90 Participated
VII	Constitution	38 Participated
VIII	Workshop on Global Potato Conclave	40 Participated
IX	Pradhan mantri Fasal Bima Yojana	216 Participated
X	Paramparagat Krushi Vikas Yojana	136 Participated
XI	Protection of plant varieties and Farmers right Act 2001	312 Participated

9. Farmers Field School (FFS)

S. No	Thematic area	Title of the FFS	Budget proposed in Rs.	Brief report
1	Income generation	Scientific cultivation of Cowpea	-	-
2	Income generation	Pashupalam farm school	-	-
3	Income generation	Scientific cultivation of Okra	-	-
4	Income generation	Scientific cultivation and pest management in okra	-	-
5	Income generation	Scientific cultivation of Okra	-	-
6	Income generation	Pashupalan farm school	-	-

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

Sr. No.	Discipline	Feed Back
1.	Crop Production	List of recommended weedicides for organic farming
2.		GNN 8 is good variety of finger millet for higher yield & early maturity, We want medium duration variety
3.		GNP 2 is excellent variety of pigeon pea both for seed & vegetable purpose
4.		GNR 6 excellent short duration variety of paddy but susceptible to lodging, We want medium duration varierty
5.	Horticulture	Need to develop proper marketing channel for Turmeric.
6.		Provide the planting material of greater yam var. "Hemlata" for FLD purpose
7.	Plant Protection	Require trap similar as Nauroji fruit fly trap for Tea mosquito bug in cashew
8.		GG 5 variety of gram gave excellent yield under conserve moisture & resistant to wilt
9.	Animal Science	Feeding mineral mixture and timely deworming leads to better health and body growth in cross breeds calves
10.		Feeding bypass fat along with mineral mixture in cross breed cattle resulted increase milk production and better health
11.	Home Science	After demonstration, farm women started growing 6 to 8 types of vegetables in scientific way in their backyard by using waste water
12.		Through Kitchen garden farmers get fresh and organic vegetables at low cost
13.		Reduce physical fatigue and hazard due to use of Twin wheel hoe

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

Sr. No.	Discipline	Feed Back
1.	Crop Production	Validation of mathod of prepation of various cow basad bio enhancers
2.		Need to development of Bio-weediside for major crop of dang district
3.	Horticulture	Need to develop Govt. sector Hybrid variety for Bittergourd
4.		Require Government sector Hybrid variety of okra which is suitable for Dang district
5.	Plant Protection	Need to develop traps for pests of rice, pulses, mango & cashew nut. (Rice: Gundhi bug; Pulse: Mites; Mango: Hopper; Cashew nut: TMB)
6.		Development of false smut resistant variety in rice.
7.		Tolerant/resistant variety of cashew nut against tea mosquito bug.
8.		Pest disease control measures for organic farming.
9.	Animal Science	Measures must be taken for conservation of local Dangi cattle breed as there is meager number of animals available in its own breeding track of Dangi cattle.
10.		To develop area specific mineral mixture for dang district
11.	Home Science	Due to use of Twin wheel hoe Labour cost reduce and Time saving and also increase work efficiency
12.	Extension Education	Need to develop proper post harvest chain from farm to market.

11. Technology Week celebration during2020: Yes/No, If Yes

Period of observing Technology Week: From to 15-02-2020 to 19-02-2020
Online / Offline: **Offline**
Total number of farmers visited : 1871
Total number of agencies involved : 20
Number of demonstrations visited by the farmers within KVK campus: 05

Other Details

Types of Activities	No. of Activities	Number of Farmers	Related crop/livestock technology
Gosthies	1	120	-
Lectures organized	37	1871	-
Exhibition	2	1286	-
Film show	2	1012	-
Fair	4	1559	-
Farm Visit	4	1559	-
Diagnostic Practicals	50	50	-
Supply of Literature (No.)	1	1871	-
Supply of Seed (q)	0	0	-
Supply of Planting materials (No.)	0	0	-
Bio Product supply (Kg)	0	0	-
Bio Fertilizers (q)	0	0	-
Supply of fingerlings	0	0	-
Supply of Livestock specimen (No.)	101	1871	-
Total number of farmers visited the technology week	20	20	-

Detail of Technology Week celebration during 2020

Sr. No.	Day/ Date	Thematic area	Topic / Technology covered	No. of participants		
				M	F	T
1.	First 15/02/2020 Saturday	Seminar cum Pradhan Mantri Fasal Bima Yojana	➢ Pradhan Mantri Fasal Bima Yojana ➢ Bank loan yojana ➢ Pashu Dhiran ane Pashu Bima Yojana ➢ Organic production of *Safed musli* ➢ Crop loan Yojana ➢ Pulse production by organic farming ➢ Doubling farmers income ➢ Seals management of organgnic farm produce ➢ SRI technology of Paddy ➢ Organic farming in cereal crops ➢ State & Central Government Schemes for the farmers	87	33	120
2.	2nd day 16/02/2020 Sunday	Seminar cum Paramparagat Krishi Vikas Yojana	➢ Paramparagat Krishi Vikas Yojana ➢ Sales management of organic farm produce ➢ Plant Protection in organic farming ➢ Doubling farmers income ➢ Making of *Jeevamrut* and *Panchagavya*	102	51	153

			➢ Structure and function of ATMA ➢ Demand of organic produce in megacity			
3.	3rd day 17/02/2020 Monday	Farmer fair cum Sankalpe se sidhi Programme, Exhibition, Lectures, Method Demonstration	➢ Cash studies vediograpy of Ashokbhai, Ramchandrabhai Patel, Purshotambhai Patel and Apna Bakeri ➢ Importance of green manuring in Organic farming ➢ Environmental protection through organic farming ➢ Organic farming in fruit crops ➢ Different methods of preparation of bio fertilizer ➢ Main elements of Organic farming ➢ Organic farm produces and marketing management ➢ Encouragement of organic farming in dry land areas ➢ Farmers feedback towards organic farming ➢ Doubling farmers income	420	280	700
4.	4th day 18/02/2020 Tuesday	Farmer fair cum Sankalp Se Siddhi programme, Exhibition, Lectures, Method Demonstration, TV & Film show, Kishan Gosthi	➢ Cash studies vediograpy of Manoharbhai (Surat-Kamrej),Valjibhai Marad (Marad-Kach), Nareshbhai (Anand) ➢ Information of Submission on Agriculture Mechanisation ➢ Honee bee production and pest control in vegetable crop ➢ Scientific farming in mashroom crops ➢ "Shree" methods in Paddy ➢ Scientific crop production and its importance ➢ Organic farm produces and marketing management ➢ Processing and value addition of turmeric and its marketing ➢ Importance of Farm mechanisation	357	229	586
5.	5th day 19/02/2020 Thursday	Training cum awareness programme on Protection of plant varieties and Farmers rights Act 2001, Exhibition, Lectures, Method Demonstration, TV & Film show, Kishan Gosthi	➢ Cash studies vediograpy of Manoharbhai (Surat-Kamrej),Valjibhai Marad (Marad-Kach), Nareshbhai (Anand) ➢ Information of Submission on Agriculture Mechanisation ➢ Honee bee production and pest control in vegetable crop ➢ Scientific farming in mashroom crops ➢ "Shree" methods in Paddy ➢ Scientific crop production and its importance ➢ Organic farm produces and marketing	206	106	312
Total				**1172**	**699**	**1871**

12. IMPACT

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

1. Title: Impact of training in adopted villages of KVK-Dang

Background:

KVK is the Farm Science Center with multidisciplinary aims to transfer the latest technology to farmers in the district. The mandates of KVKs are conducting on farm testing, organizing training, front line demonstrations (FLDs) and to work as knowledge resource for overall agricultural and rural development through its various research and transfer of technology mechanisms. The transfer of modern agricultural practices to the farmers with pre-conceived thought of traditional farming calls for a well developed and organized training programmes for the farmers. Training is a critical input for quick transfer of technology and a way to improve their agriculture and to uplift their socio economic condition. Keeping this fact in view, many Krishi Vigyan Kendras have been started all over the country. The past studies clearly indicated that training is an important medium to impart the latest technical knowhow to the farmers. Other extension activities carried out by the KVK was also important in TOT. Keeping this in view, it was felt worthwhile to study "The impact of KVK activities in adopted villages of KVK-Dang".

Objectives:

1 To study the profile of the respondents.
2 To know the impact of training in adopted villages of KVK-Dang.
3 To ascertain the relationship between dependent and independent variables

Methodology:

The present study was conducted in dang district of Gujarat. For the purpose of this study, 20 Villages of Waghai, Ahwa and Subir taluka were selected of which 10 adopted village and 10 non adopted village was selected purposively from dang district to conduct the study by following the random sampling methods. A total sample of 200 respondents, 10 from each village was selected at Purposive and Random sampling, PRA method were be used. The information of each respondents was collected with the help of pre tested, structured interview schedule by personal interview. The collected data were analyzed and interpreted in the light of the objectives with appropriate statistical tools like percentage, rank, mean and standard deviation. The impact of KVK activities in adopted villages have shown by comparing the tables. The resultant changes occurred due to main training carried out by the Scientist of KVKs.

Findings:

The outcome of the present study has been presented here after applying the appropriate statistical analysis. The results have been described under the following sub heads in the light of the objectives of the study.

1 Socio-economic and personal characteristics of the respondents

The data regarding socio-economic and personal characteristics of respondents were analyzed and presented in the following sequence.

1.1 Age

The respondents were asked to indicate their age in completed year. Age refers as the number of years completed by an individual at the time of collection of information. The data in this regards were grouped into three categories viz; (i) Young age (up to 35 years), (ii) Middle age (36 to 50 years) and (iii) Old age (Above 50 years). The data collected about their age are presented in table 1.

Table 1: Distribution of respondents according to their age (n= 200)

Sr.No.	Age groups	Category of farmers			
		Beneficiary(n=100)		Non beneficiary(n=100)	
		Number	Per cent	Number	Per cent
1	Young age	30	30	23	23
2	Middle age	52	52	45	45
3	Old age	18	18	32	32
	Total	**100**	**100**	**100**	**100**

The data in Table 1 revealed that 52.00 per cent of beneficiary and 45.00 per cent of non beneficiary farmers belonged to middle age group, whereas 18.00 per cent of beneficiary and 32.00 per cent of non beneficiary farmers belonged to old age group. Thus, only 30.00 per cent of beneficiary farmers and only23.00 percent of non beneficiary farmers could be observed under young age category.

1.2 Education

Education plays an important role in bringing out desirable changes in human behavior in the form of knowledge, skill and attitude. Education is valued as means of increasing level of knowledge and information. Keeping this in view, the level of education of the respondents was studied. The data in this regards was collected and grouped as; Illiterate, Primary level of education (1st to 7th standard), Secondary and Higher secondary level of education (8th to 12th standard) including diploma and College level of education (above 12th standard). The data in this regards are presented in table 2.

Table 2: Distribution of respondents according to their education (n= 200)

Sr.No.	Level of education	Category of farmers			
		Beneficiary(n=100)		Non beneficiary(n=100)	
		Number	Per cent	Number	Per cent
1	Illiterate	00	00.00	05	05.00
2	Primary level of education	100	100.00	95	95.00
3	Secondary and Higher secondary level of education	00	00.00	00	00.00
4	College level of education and above	00	00.00	00	00.00
	Total	**100**	**100**	**100**	**100**

It is seen from Table 2 that 100.00 per cent of beneficiary and 100.00 per cent of non beneficiary farmers had educated up to primary level.

1.3 Land holding

In present study the information was collected from the respondents. Press Information Bureau Government of India Ministry of Agriculture & Farmers Welfare the operational holdings are categorized in five size classes. They all were grouped into five categories, viz.; (i) Marginal farmer (Below 1.00 ha) (ii) Small farmer (1.1 ha to 2.00 ha), iii) Semi medium (2.1 ha to 4.0 ha), Medium (4.1 ha to 10.00 ha) and Large (10.00 ha and above) the classified data are presented in table 3.

Table 3: Distribution of respondents according to their land holding (n= 200)

Sr.No.	Land holding	Category of farmers			
		Beneficiary (n=100)		Non beneficiary (n=100)	
		Number	Per cent	Number	Per cent
1	Marginal farmer (Below 1.00 ha)	40	40	47	47
2	Small farmer (1.1 ha to 2.00 ha),	33	33	28	28
3	Semi medium (2.1 ha to 4.0 ha)	17	17	20	20
4	Medium (4.1 ha to 10.00 ha)	09	09	05	05
5	Large (10.00 ha and above)	01	01	00	00
	Total	**100**	**100**	**100**	**100**

It is observed from Table 3 that nearly two third beneficiary farmers (73.00%) and (75.00 %) possessed Small and marginal land holding, followed by semi medium to Medium land holding (26.00%) and (25.00%) respectively, Thus, in case of beneficiary farmers only (01.00%) respondents had large land holding, and No any large holder farmer found in non adopted village.

1.4 Family type: Joint/Nuclear

Each type of family has their respective advantages and disadvantages. However type of family determines the progressiveness of the family in the society. It is the common phenomenon that joint families are more progressive and relatively resource each. Moreover the number of the joint family system is better involved in development activities for income generation. Distribution of the type of the respondents were analyzed and presented in table below.

Table 4: Distribution of respondents according to their family Type (n= 200)

Sr.No.	Family Type	Category of farmers			
		Beneficiary (n=100)		Non beneficiary(n=100)	
		Number	Per cent	Number	Per cent
1	Joint	39	39	57	57
2	Nuclear	61	61	43	43
	Total	**100**	**100**	**100**	**100**

The data furnished in Table 4 indicated that near half of the beneficiary and non beneficiary farmers (39.00 % and 57.00%, respectively) had joint family type whereas, 61.00 per cent of beneficiary and 43.00 per cent of non beneficiary farmers belonged to Nuclear family Type.

1.5 Family size

This referred to the total number of members in the respondents' family consisting of husband, wife, children and other dependent. The size of family was measured on the basis of total number of family members of respondents. It was measured with the help of SES scale developed by Venkatarmaiah (1983). They all were grouped into three categories, viz.; (i) Small size of family (Up to 5 members) (ii) Medium size of family (6 to 8 members) and iii) Large size of family (Above 8 members). The classified data are presented in table 5.

Table 5: Distribution of respondents according to their family size (n= 200)

Sr.No.	Family size	Category of farmers			
		Beneficiary (n=100)		Non beneficiary(n=100)	
		Number	Per cent	Number	Per cent
1	Small size of family (Up to 5 members)	42	42	41	41
2	Medium size of family (6 to 8 members)	47	47	47	47
3	Large size of family(Above 8 members)	11	11	12	12
	Total	**100**	**100**	**100**	**100**

The data furnished in Table 5 indicated that near half of the beneficiary and non beneficiary farmers (47.00 % and 47.00%, respectively) had medium family size whereas, 42.00 per cent of beneficiary and 41.00 per cent of non beneficiary farmers belonged to small family size. Thus, 11.00 per cent of beneficiary and 12.00 per cent of non beneficiary farmers belonged to large family size.

1.6 Social participation

Social participate denotes the evolvement of an individual in various social, religious, Political, educational as well as cultural groups, organization and institutions. The individual who have generally involved in social participation, they are definitely resourceful, highly advanced and empowered. Maximum cases it is seen that individuals having less/ negligible level or high participation due to social participation. The extent of social participation tells about the progressiveness and social standing of a person in the society. A man with greater exposure is supposed to be more up to date and more enthusiastic about new innovations.

Table 6: Distribution of respondents according to their Social participation n=200

Sr.No	Organization	Level of Participation						Level of Participation					
		Beneficiary(n=100)						Non beneficiary(n=100)					
		Regularly Participate		Occasionally Participate		Not Participate		Regularly Participate		Occasionally Participate		Not Participate	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Co-operative society	76	**76.00**	23	23.00	1	1.00	26	26.00	52	52.00	22	22.00
2	Panchayat	50	**50.00**	48	**48.00**	2	2.00	16	16.00	75	**75.00**	9	9.00
3	Social Organization	40	40.00	46	**46.00**	14	14.00	5	5.00	51	**51.00**	44	44.00
4	Cultural Organization	36	36.00	43	43.00	21	21.00	6	6.00	34	34.00	60	**60.00**
5	Religious Organization	38	38.00	32	32.00	30	**30.00**	8	8.00	27	27.00	65	**65.00**
6	Educational Organization	38	38.00	34	34.00	28	**28.00**	3	3.00	44	44.00	53	**53.00**
7	Any other (Specify)	26	26.00	52	**52.00**	22	22.00	2	2.00	46	46.00	52	52.00

As observed from the table majority of the respondents were regularly participated in Co-operative society (76.00 %) and Panchayat (50.00%) in the adopted village while in non adopted village were regularly participated in Co-operative society (26.00 %) and Panchayat (16.00%) that shows so many differences compared to adopted village.

As observed from the table majority of the respondents were occasionally participated in Panchayat (48.00 %) and Social Organization (46.00%) in the adopted village while in non adopted village were occasionally participated in Panchayat (75.00%) and Social Organization (51.00 %).

As per the observed from the table majority of the respondents were not Participated in Religious Organization (30.00 %) and educational organization (28.00%) in the adopted village while in non adopted village majority of the respondent were not participated in cultural organization (60.00%), religious organization (65.00 %) and Educational Organization (53.00 %) respectively. The result showed that more number of the non beneficial farmers has very less participated in the social activities.

1.7 Cosmo politeness

Cosmo politeness is the degree to which an individual is oriented to outside of the immediate social system. It also otherwise indicate the frequency of visit made by the individuals to the nearby town or urban area to accelerate their exposure and develop competency in managing all the farm activities. The responses collected have been analyzed and presented in the table below.

Table 7: Cosmopolite behavior of the respondents **n=200**

Sr.No	Organization	Level of Participation						Level of Participation					
		Beneficiary(n=100)						Non beneficiary(n=100)					
		Regularly		Occasionally		Never		Regularly		Occasionally		Never	
		F	%	F	%	F	%	F	%	F	%	F	%
1	Post office	40	**40.00**	59	59.00	01	**01.00**	10	**10.00**	75	75.00	15	**15.00**
2	Primary Health Center	32	**32.00**	67	67.00	01	**01.00**	14	**14.00**	72	72.00	14	**14.00**
3	Block head quarter	22	22.00	73	73.00	05	**05.00**	9	9.00	67	67.00	24	**24.00**
4	Credit institution	17	17.00	61	61.00	22	**22.00**	2	2.00	53	53.00	45	**45.00**
6	District headquarter	21	21.00	61	61.00	18	**18.00**	3	3.00	65	65.00	32	**32.00**
7	Government officials	13	13.00	69	69.00	18	**18.00**	0	0.00	76	76.00	24	**24.00**
8	Any other (Specify)	12	12.00	61	61.00	27	**27.00**	0	0.00	54	54.00	46	**46.00**

The data in the table revealed that majority (40.00 %) of the respondent had regularly visited to the Post office and Primary Health Center (32.00 %). Majority of the respondent had occasionally visited to other organizations as mentioned in the table. And percentage of never visit of organization is higher in non adopted village as compared to adopted village. Hence, it can be concluded that the responding attaining KVK training programmes had better cosmopolite behavior.

1.8: Media Exposure

Source of information are an important criterion which determine the literacy level. Exposure to the latest developments and use in day to day activities. Attempt was therefore made in the study to assess the extent of exposure of the respondent to various source of information. Information collected on a 3 point scale consisting of "regularly" Occasionally, and 'never' with the corresponding score of 3, 2, and 1.

Table 8: Extent of exposure of various media **n=200**

Sr.No	Organization	Contact Pattern						Contact Pattern					
		Beneficiary(n=100)						Non beneficiary(n=100)					
		Regularly		Occasionally		Never		Regularly		Occasionally		Never	
		F	%	F	%	F	%	F	%	F	%	F	%
1	News paper	46	**46.00**	30	30.00	24	24.00	6	6.00	25	25.00	69	69.00
2	Farm broadcast	18	18.00	64	64.00	18	18.00	1	1.00	22	22.00	77	77.00
3	Farm telecast	17	17.00	36	36.00	47	47.00	1	1.00	13	13.00	86	86.00
4	Farm periodicals	19	19.00	43	43.00	38	38.00	0	0.00	11	11.00	89	**89.00**
5	Technical bulletins	18	18.00	38	38.00	44	44.00	1	1.00	8	8.00	91	**91.00**
6	Exposure visit	15	15.00	43	43.00	42	42.00	0	0.00	15	15.00	85	85.00
7	Meeting/Training	26	**26.00**	66	66.00	8	08.00	1	1.00	25	25.00	74	74.00
8	Farmer fair/Exhibition	23	23.00	66	66.00	11	11.00	1	1.00	33	33.00	66	66.00
9	Mobile	25	25.00	50	50.00	25	25.00	14	**14.00**	24	24.00	62	62.00
10	Internet	14	14.00	45	45.00	41	41.00	5	5.00	19	19.00	76	76.00
11	Any other (Specify)	11	11.00	50	50.00	39	39.00	0	0.00	26	26.00	74	74.00

As observed from the data in the table, Majority of (46.00 %) of the respondents had regularly contact to News paper followed by attaining Meeting/Training (26.00 %) in adopted village. In case of non adopted village Majority of (14.00 %) of the respondent had regularly contact to mobile that is less as compared to adopted village. The table itself concluded that the farmers of adopted village were regularly contact of various mass media that help them to increase farm production.

1.9 Housing Pattern

The type of residential houses indicates the status of an individual in the society. The person having more income usually resides in a better house. Data collected on of housing pattern have been analyzed and presented in the table below.

Table 9: Distribution of housing pattern of the respondent **n=200**

Sr.No	Category	Beneficiary(n=100)		Non beneficiary(n=100)	
		Frequency	Percentage	Frequency	Percentage
1	Hut	00.00	00.00	00.00	00.00
2	Thatched	20.00	20.00	50.00	**50.00**
3	Semipucca	49.00	**49.00**	46.00	**46.00**
4	Pucca	31.00	**31.00**	04.00	04.00
	TOTAL	**100**	**100**	**100**	**100**

It is observed from the table that in adopted village that No single person in the study area had hut type of house. Majority of the respondents had Semipucca type of house (49.00 %) followed by Pucca type (31.00 %)

In case of non adopted village it is observed from the table that No single person in the study area had hut type of house. Majority of the respondents had Thatched type of house (50.00 %) followed by Semipucca type (46.00 %)

1.10 Possession of farm power

Possession of farm implements the progressiveness of a farmer and involvement in scientific farming. It is the assumption that farmer using more implements in farm operation usually go for commercial farming. Possession of farm implements by the sample respondents is appeared in the table.

Table: 10 Extent of possession of farm power **n=200**

Sr.No	Farm Power	Beneficiary(n=100)				Beneficiary(n=100)			
		Yes		No		Yes		No	
		F	%	F	%	F	%	F	%
1	Iron plough	95	**95.00**	5	5.00	97	**97.00**	03	03.00
2	Sprayer	62	**62.00**	38	38.00	26	**26.00**	74	74.00
3	Duster	46	46.00	54	54.00	2	2.00	98	98.00
4	Weeder	34	34.00	66	66.00	5	5.00	95	95.00
5	Seed drill	12	12.00	88	88.00	2	2.00	98	98.00
6	Tractor/Power tiller	16	16.00	84	84.00	23	23.00	77	77.00
7	Winnower	57	**57.00**	43	43.00	52	**52.00**	48	48.00
8	Pump set	41	41.00	59	59.00	24	24.00	76	76.00
9	Any other (Specify)	13	13.00	87	87.00	15	15.00	85	85.00

From the above calculated table, it is revealed that majority of the respondent was possess Iron plough, Sprayer, Winnower used in their farm operations, Considerer able percentage of the farmers had also duster and pumset, the table has a whole revealed that the beneficiary respondents had conscious about of the farm mechanization which me be due to labour scarcity, motivation from KVKs and extension functionaries.

1.11 Family Annual Income:

Income of the family influence decision making habit of an individuals and family. It also regulate for commercial farming and adoption of improved practices It is very difficult to assess the annual income of the farmers as there are not keeping any records. The aspiration and goals if an individual is more of less ascertained on the basis of his average annual income. However, sufficient interaction made by the investigator to record the annual income as reflected in table.

Table: 11 Distribution of respondent according to annual income **n=200**

Sr.No.	Annual Income	Beneficiary(n=100)		Non beneficiary(n=100)	
		Frequency	Percentage	Frequency	Percentage
1	Upto : 25000	13.00	13.00	28.00	28.00
2	25000 to 50000	83.00	83.00	69.00	69.00
3	50000 to 1.0 lakh	03.00	03.00	03.00	03.00
4	1.1 lakh to 3.0 lakh	01.00	01.00	00.00	00.00
5	3.0 lakh to 5 lakh	00.00	00.00	00.00	00.00
6	Above 5.0 lakh	00.00	00.00	00.00	00.00
	Total	**100.00**	**100.00**	**100.00**	**100.00**

In the table 11 it should be clearly seen that in adopted village majority (83.00 %) farmers had income Rs. 25000 to 50,000/- and 13.00 per cent farmers had income upto Rs.25000/-, while in non adopted village 69.00 per cent farmer had income Rs. 25000 to 50000 and 28.00 per cent farmers income were up to Rs. 25000/-It is clearly seen that the farmers of adopted village had some more income as compared to non adopted village.

2. To know the impact of training in adopted villages of KVK-Dang.

KVK is an innovative science based institution which functions on the principal of collaborative participation of scientist, Subject matter expert, Extension workers and farmers. The main purpose of KVK is to impart learning through work experience to those who are engage in farming. Learning by doing is the main method of imparting skill training by KVK. Follow-up actions are are also made through visit of the scientists, organizing ex-trainees meet discussing with the field functionaries etc. to assist the farmers in adoption of changes practice learned through training.

With this hypothesis, another objective was framed in the study to analyze the extent of knowledge gained and used of technologies by the farmers after undergoing training at KVK. Knowledge of various practices Crop production, Horticulture, Animal husbandry, Plant protection, Income generating capacity and Home Science were selected as variable

Attempt has been made for comparative analyses of the extent of gained in the knowledge through KVK training programme. The result obtain has been presented in table below.

Table 2.1 Comparative knowledge gained on farm activities **n=200**

Knowledge gained for training					
Sr.No.	**Activities**	**Mean Score**		**Increase %**	**Gap %**
		Adopted village	**Non adopted village**		
1	Crop production	2.28	1.56	54.24	30.35
2	Horticulture	2.08	1.29	78.35	34.52
3	Animal husbandry	2.52	1.55	75.47	37.51
4	Plant protection	2.48	1.61	63.27	34.31
5	Income generating capacity	2.24	1.46	59.85	31.56
6	Home Science	2.26	1.51	57.35	31.23
Average		**2.31**	**1.50**	**64.75**	**33.25**

Comparative analyses of the data in the table reveal that there was significant gain in knowledge on all the aspect of the farm activities covered under the study. Comparatively more knowledge was gained on crop production, horticulture crops, animal husbandry, plant protection, income generating capacity and home Science. At the same time average gap percentage of 33.25 % indicated that the knowledge level was high, there was 64.75 % increase in knowledge as well as 33.25 % gap in knowledge level. Through KVK has made significant role impact on knowledge level of the respondent still more training programmes may be organized to abreast the respondents with knowledge and skills sufficiently for the improvement of the farming community.

Further KVKs have been designed to impart need based and skill oriented vocational training to various categories of farming communities. The main purpose is to influence to productivity to achieve the social justices for the neediest and deserving weaker section of the society. KVKs are also imparting training on the most important need of the client, their resources constants' and nature of eco system. It is therefore apprehended that significant improvements might have been made to the farmers after taking training from KVKs.

Attempt was therefore made in the study to assess the extent of development of the farmers at KVKs. Indicators such as technological, Economical, social, farm activities and infrastructural were selected as the variable to assess the extent of developments. Data collected from the respondent Only three point scale consisting of fully agree, partial agree, and disagreewith the scoresponding score of 3,2 and 1over the statements had been analyzed and discussed in this action. The result of the analysis has been presented in the table below.

Table 2.2 Comparative analysis of various aspect of developments **n=200**

Knowledge gained for training					
Sr.No	**Activities**	**Mean Score**		**Increase %**	**Gap %**
		Adopted village	**Non adopted village**		
1.	Technological development	2.37	1.29	96.90	43.62
2.	Economical development	2.36	1.31	94.84	42.78
3.	Social development	2.50	1.24	117.04	45.38
4.	Farm activities development	2.34	1.29	95.40	43.15
5.	Infrastructural development	2.27	1.20	99.38	44.44
Average		**2.37**	**1.27**	**100.71**	**43.87**

Comparative analysis of the respondent mentioned in the table indicate that the development under various aspect were almost at pear. KVK has imparted training programme for technological development which is turn increase production, productivity, income and brings improvements on economic status of the farmers. The economic development have also regulated for development of farm activities. Various aspects of social improvements could bring the coordination and cooperation among people for better planning and management of farm activities on communities' basis.

Further attempt have also been made to locate the extent of development of the respondent after receiving training from KVK. The selection made with comparatively higher mean score value have been presented herewith.

It is therefore suggested that KVK has to organize training programmes effectively to develop the knowledge and skill competency of the farmers for their improvement.

3. Relationship between the selected characteristic of beneficiary and non beneficiary farmers with their knowledge of improved agricultural technologies

Attempt was also made to analyze influence of socio economic variables in increasing knowledge level of the respondent. Result of the analysis done to find pearson's coefficient of correlation has been presented in table below.

Table 20:- Influence of Socio Economic variable on knowledge n=200

Sr. No.	Variable	(r – Value) for Crop production		(r – Value) for Horticulture		(r – Value) for Animal husbandry		(r – Value) for Plant protection		r – Value) for Income generating capacity		r – Value) for Home Science	
		Beneficiary (n=100)	Non Beneficiary (n=100)	Beneficiary (n=100)	Non Beneficiary (n=100)	Beneficiary (n=100)	Non Beneficiary (n=100)	Beneficiary (n=100)	Non Beneficiary (n=100)	Beneficiary (n=100)	Non Beneficiary (n=100)	Beneficiary (n=100)	Non Beneficiary (n=100)
1	Age	.144	-.028	.103	-.083	.095	-.053	-.052	.009	.147	-.069	.143	-.039
2	Education	-.037	.084	.008	.213*	.029	.040	.093	.201*	.059	.081	.080	.088
3	Land holding	-.011	-.142	-.004	-.146	.066	-.064	-.024	-.113	-.104	-.173	-.021	-.086
4	Family type	.026	-.292**	.028	-.279**	.123	-.163	-.302**	-.151	.106	-.245*	.052	-.244*
5	Family size	.175	-.342**	.186	-.232*	.092	-.249*	-.092	-.101	.177	-.374**	.126	-.256*
6	Social participation	**.446****	.391**	**.579****	.175	**.364****	.211*	**.387****	.153	**.544****	.279**	**.470****	.239*
7	Cosmopoliteness	**.518****	.782**	**.517****	.598**	**.370****	.698**	**.368****	.550**	**.526****	.619**	**.532****	.697**
8	Media Exposure	**.371****	.285**	**.531****	.080	**291****	-.019	**.344****	.129	**.501****	.176	**.434****	.115
9	Housing Pattern	**.575****	-.329**	**.638****	-.247*	**.470****	-.277**	**.471****	-.095	**584****	-.353**	**.539****	-.315**
10	Possession of farm power	**.394****	.349**	**.477****	-.013	**.516****	.250*	.101	-.127	**.532****	.379**	**.539****	.268**
11	Family Annual Income	**.370****	.206*	.190	.021	.176	.156	**.254***	.104	.174	.085	**.239***	.073

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

At observed from the table Social participation, cosmopoliteness, media exposure, housing pattern, possession of farm power and family annual income had influenced significantly in increase level of the respondent towards knowledge. It is therefore suggested that KVK may utilized these socio economic variables while organizing training programme. While very less significant relationship was observed under non beneficiary farmer with their knowledge of improved agricultural technologies.

Conclusion

Majority of the farmer were in middle age group, had primary level of education, land holding up to 2.00 ha, Nuclear family,6 to 8 family member, majority of the respondents were regularly participated in Co-operative society, Panchayat and Social Organization, majority of the respondent had regularly and occasoonally visited to the Post office and Primary Health Center, Majority of beneficiary farmer had regularly contact to News paper followed by attaining Meeting/Training, Majority of

the respondents had Semipucca type of house, majority of the respondent was possess Iron plough, Sprayer, Winnower used in their farm operations, majority of farmers had income Rs. 25000 to 50,000/- Comparatively more knowledge was gained on crop production, horticulture crops, animal husbandry, plant protection, income generating capacity and home Science than non adopted village. At the same time average gap percentage of 33.25 % indicated that the knowledge level was high, there was 64.75 % increase in knowledge as well as 33.25 % gap in knowledge level. KVK has imparted training programme for technological development which is turn increase production, productivity, income and brings improvements on economic status of the farmers. The economic development have also regulated for development of farm activities. Various aspects of social improvements could bring the coordination and cooperation among people for better planning and management of farm activities on community's basis. At observed from the research social participation, cosmopoliteness, media exposure, housing pattern, possession of farm power and family annual income had influenced significantly in increase level of knowledge of the respondent. It is therefore suggested that KVK may utilized these socio economic variables while organizing training programme. While very less significant relationship was observed under non beneficiary farmer with their knowledge of improved agricultural technologies. Through KVK has made significant role impact on knowledge level of the respondent still more training programmes may be organized to abreast the respondents with knowledge and skills sufficiently for the improvement of the farming community. Further KVKs have been designed to impart need based and skill oriented vocational training to various categories of farming communities. The main purpose is to influence to productivity to achieve the social justices for the neediest and deserving weaker section of the society. KVKs are also imparting training on the most important need of the client, their resources constants' and nature of eco system. It is therefore apprehended that significant improvements might have been made to the farmers after taking training from KVKs. It is therefore suggested that KVK has to organize training programmes effectively to develop the knowledge and skill competency of the farmers for their improvement.

B. Cases of large scale adoption

Title: Training Needs of Farmers in Vegetables Cultivation (Concluded of 3 year project)

Investigator : Mr. J.B.Dobariya, Scientist (Extension Education)
Mr. H.A.Prajapati, Scientist (Horticulture)
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Background information:

Average productivity of vegetable crops is low in the Dangs district. It is mainly because of poor knowledge as well as adoption of scientific technology in vegetable cultivation. A wide gap exists between the yield obtained and the potential yield. It has been proved through various impact studies that the production and productivity of vegetables can be increased many times by adopting scientific technologies including use of high yielding varieties. Information on knowledge gap and training needs will help to formulate the training courses in vegetable production technology. Well planned and comprehensive study to gather the desired information was felt necessary. Hence various important practices involved in vegetable production technology like improved variety, seed treatment, seed rate, sowing time, nursery raising, spacing, use of organic manures, management of fertilizers, irrigation, intercultural operations, weed control, disease and IPM, cropping system, harvesting, quality improvement, package of practices and marketing included in the study. Present study was undertaken to assess the knowledge gap and training needs of farmer involved in vegetable cultivation.

Objectives

1) To study the selected characteristics of the respondent
2) To study training needs of farmers in Okra, Brinjal and Onion cultivation
3) To study the relationship between training needs and characteristics of farmers

Methodology

The present study was conducted in the Dangs district of the Gujarat state. For the purpose of this study, Out of three taluka Waghai, Ahwa and Subir 14 village from each taluka were randomly selected. Total 42 villages and 420 respondents, 10 from each village were selected at random for the study with the help of random sampling methods. Collection of data was accomplished by supplying the well-structured schedule from farmer. For the study of dependent variable, the tool consisted of 32 statements on training need of vegetable cultivation covering various aspect of nursery raising, field management; fertilizer management, plant protection and marketing management were used.

Findings

The outcome of the present study has been presented here after applying the appropriate statistical analysis. The results have been described under the following sub heads in the light of the objectives of the study.

1 Characteristic of the respondents

The data regarding socio-economic and personal characteristics of respondents were analyzed and presented in the following sequence.

1.1 Age

The respondents were asked to indicate their age in completed year. Age refers as the number of years completed by an individual at the time of collection of information. The data in this regards were grouped into three categories with the help of mean and standard deviation viz; (i) Young age (below 37 years), (ii) Middle age (37 to 59 years) and (iii) Old age (Above 59 years). The data collected about their age are presented in table 1.

Table 1: Distribution of respondents according to their age (n= 420)

Sr.No.	Age groups	Frequency	Percentage
1	Young age	60	14.00
2	Middle age	287	69.00
3	Old age	73	17.00
	Total	**420**	**100.00**

It is clear from the data in the table 1 that less than three forth (69.00 per cent) of the respondents were in the middle age group. The respondents found in old and young age group were 17.00 per cent and 14.00 per cent, respectively.

1.2 Education

Education plays an important role in bringing out desirable changes in human behavior in the form of knowledge, skill and attitude. Education is valued as means of increasing level of knowledge and information. Keeping this in view, the level of education of the respondents was studied. The data in this regards was collected and grouped as; Illiterate, Primary level of education (1st to 7th standard), Secondary and Higher secondary level of education (8th to 12th standard) including diploma and College level of education (above 12th standard). The data in this regards are presented in table 2.

Table 2: Distribution of respondents according to their education (n= 420)

Sr.No.	Level of education	Frequency	Percentage
1.	Illiterate	41	10.00
2.	Primary level of education	199	47.00
3.	Secondary and Higher secondary level of education	167	40.00
4.	College level of education and above	13	3.00
	Total	**420**	**100.00**

It becomes clear from the data in table 2 that slightly less than one half (47.00 per cent) of the respondents were found to have primary level of education. The respondents from secondary and higher secondary level of education and its above level were 40.00 and 3.00 per cent, respectively. 10.00 percent respondent was found illiterate.

1.3 Land holding

In present study the information was collected from the respondents. They all were grouped into three categories, viz.; (i) Small and marginal farmer (Up to 2 hectares) (ii) Medium farmer (Greater than 2 hectares and less than/equal to 5 hectares) and (iii) Big farmer (Above 5.00 hectares). The classified data are presented in table 3.

Table 3: Distribution of respondents according to their land holding (n= 420)

Sr.No.	Land holding	Frequency	Percentage
1.	Small and marginal	214	51.00
2.	Medium farmer	181	43.00
3.	Big farmer	25	06.00
	Total	**420**	**100.00**

The data presented in table 3 indicated that 51.00 per cent of the respondents belonged to the small and marginal farmer, while 43.00 and 06.00 per cent respondents belonged to the category of medium farmer and big farmer respectively.

1.4 Social participation

It refers to the involvement of an individual in any formal as well as non formal social organization/institutions as a members or office bearer or distinctive feature (M.L.A, M.P.). It was measured by modified subrammanian's scale (1982).The scoring pattern is as follows.

1. No participation in any organization = 0

2. Membership of one organization in past = 1

3. Membership of one organization at present = 2

4. Office bearer in past = 3

5. Office bearer at present = 4

6. Distinctive feature = 5

The respondents were classified in to three categories on the basis of mean and standard.

Table 4: Distribution of respondents according to their social participation (n= 420)

Sr.No.	social participation	Category of farmers	
		Number	Per cent
1.	Low = less than (X - SD)	18	4.00
2.	Medium= (X - SD) to (X + SD)	329	79.00
3.	High = more than (X + SD)	73	17.00
	Total	**420**	**100.00**
	Mean	**3.54**	
	SD	**1.8436**	

The data furnished in Table 4 indicated that greater than three forth of the respondent (79.00%) had belonged to medium level of social participation followed by higher (17.00 per cent) and low (4.00 per cent) respectively.

1.5 Extension contact

It is operationally defined as the frequency of contact of respondents with extension personnel for acquiring information about package of practices of Okra, Brinjal and Onion. The responses of selected respondents were rated six point continuums, namely daily, weekly, fortnightly, monthly, six monthly and yearly with assigning score 6, 5, 4, 3, 2 and 1 respectively. The data in this regards were grouped into three categories with the help of mean and standard deviation viz; (i) Low (up to 19 score), (ii) Medium (19 to 35 Score) and (iii) High (Above 35 Score). The data collected about their Extension contact are presented in table 5.

Table 5: Distribution of respondents according to their Extension contact (n=420)

Sr.No.	Extension contact	Frequency	Percentage
1.	Low	38	9.00
2.	Medium	326	78.00
3.	High	56	13.00
	Total	**420**	**100.00**
	Mean	**30.00**	
	SD	**7.0631**	

It is clear from the data in the Table 5 that more than three forth (78.00 per cent) of the respondents were in the middle level of extension contact, followed by 13.00 per cent and 09.00 per cent has higher and lower level of extension contact respectively.

1.6 Utilization of different source of information

This variable refer to receive or get the latest agricultural information from various source like friends, neighbors, progressive farmers, relatives, village leaders, VEWs, Scientist of university, Input supplier, AEOs, Cooperative society, Magazine, radio/TV, etc. This was measured by knowing frequency of different sources of information used by the respondent in term of regularly, occasionally and need base by giving the score 2, 1 and 0 and score was worked out by summing scores of all the items to quantify this variable. The respondents were grouped into three categories viz. Low (below men score-0.5 SD), medium (mean score ± 0.5 SD), and high (above mean score + 0.5 S.D).

Table 6: Distribution of respondents according to their information input behavior (n=420)

Sr.No.	Level of source of information	Number	Per cent
1.	Low	44	10.00
2.	Medium	323	77.00
3.	High	53	13.00
	Total	**420**	**100.00**
	Mean	**11.29**	
	S.D	**2.8197**	

The result seen in Table 6 portrays that more than three forth of beneficiary farmers (77.00%) had medium information input behavior, followed by high (13.00 %) and meager low category (10.00 %) respectively.

1.7 Economic motivation

Economic motivation was measured by scales assess the individual's success in term of profit maximization and the relative importance placed on economics end. Economic motivation of the beneficiaries was measured by using the scale which was developed by supe (1969) with due modification. The scale consisted of six statements out of which four statement were positive and remaining two statement were negative the response of the respondent were obtained against each statement in form of their agreement or disagreement on a five point continuum ranging from strongly agree, agree, undecided, disagree and strongly disagree. The positive statements were scored 5,4,3,2 and 1 and revised score was given to negative statement. The score was computed by summing up the each response and categorized by using mean and standard deviation. The data in this regards were grouped into three categories with the help of mean and standard deviation viz. The data collected about their Economic motivation are presented in table 7

Table 7: Distribution of respondents according to their level of economics motivation (n=420)

Sr.No.	Level of economic motivation	Number	Per cent
1.	Low level of economic motivation	37	9.00
2.	Medium level of economic motivation	274	65.00
3.	High level of economic motivation	109	26.00
	Total	**420**	**100**
	Mean	**15.05**	
	S.D.	**2.4338**	

A critical perusal of the data furnished in Table 7 portrays that majority of the beneficiary farmers (65.00 %) had medium economic motivation, followed by high (26.00 %) and low (09.00 %) respectively.

2.0 Training need

The tool consisted of 32 statements on training needs of farmers in vegetable cultivation covering various aspects like Suitable varieties of Okra, Brinjal and Onion, Seed treatment, Preparation of seed bed, Time of sowing, Selection of suitable weedicides, Technique of weedicide application, Land preparation, Time of transplanting, Transplanting technique, Spacing of transplanting, Depth of planting seedling, Irrigation at critical stages, Drainage to prevent water logging, Technique of weedicide application, Staking, pinching, Application of FYM and their quantity, Content of chemical fertilizers, Dose of chemical fertilizers, Methods of fertilizer's application, Time of fertilizer' application, Content of Bio- fertilizers application, Identification of diseases and their control measures, Identification of pests and their control measures, Proper handing techniques of sprayer / other plant protection equipments, Time of harvesting/picking, Storage of flowers, Grading of flowers, packing, Disposal of flowers, Market place, Market intelligence

The training needs of farmer in various aspects of vegetable cultivation technology were assessed with scale of 3 point continuum. I.e. most needed, somewhat needed and least needed with weight-age of 3, 2 and 1, respectively. Mean score of the training needs obtained for different aspects are presented in Table-8

Table-8 Distribution of the vegetable grower according to their Overall training needs with regard to vegetable production technology. (n=420)

Sr.No.	Training needs	Respondents	
		Number	Per cent
1.	Low	57	13.00
2.	Medium	302	72.00
3.	High	61	15.00
	Total	**420**	**100.00**
	Mean	**67.77**	
	S.D.	**7.038**	

It is clear from the Table 8 that about two third of the vegetable grower (72.00 per cent) were fall under medium group. While 15.00 and 13.00 per cent of the vegetable grower were categorized under High and low groups of training needs, respectively.

Table-9 Distribution of the vegetable grower according to their item wise training needs about nursery rising.

(n=420)

Sr.No.	Item	Most needed	Needed	Least needed	Total Score	Rank
1.	Suitable varieties of Okra, Brinjal and Onion	181 (43.09)	203 (48.34)	36 (08.57)	985	II
2.	Seed treatment	126 (30.00)	230 (54.77)	64 (15.23)	902	IV
3.	Preparation of seed bed	129 (30.71)	198 (47.15)	93 (22.14)	876	V
4.	Time of sowing	105 (25.00)	191 (45.48)	124 (29.52)	821	VI
5.	**Selection of suitable weedicides**	**218 (51.90)**	**153 (36.43)**	**49 (11.67)**	**1009**	**I**
6.	Technique of weedicide application	153 (36.43)	201 (47.86)	66 (15.71)	927	III

From the data in Table 9 it was observed that nearly one half of the vegetable growers (51.90 per cent) were grouped in ' most needed' training while 36.43 per cent and 11.67 per cent of the vegetable grower were categorized under ' needed' and 'leas needed' training group with regard to selection of suitable weedicides of okra, brinjal and onion respectively.

According to item vise training needs related to nursery raising hierarchy, selection of suitable weedicides, suitable varieties of okra, brinjal and onion, technique of weedicide application with ranked I, II and III respectively.

Table-10 Distribution of the vegetable grower according to their item wise training needs about field management. (n=420)

Sr.No.	Item	Most needed	Needed	Least needed	Total Score	Rank
1.	Land preparation	77 (18.33)	153 (36.43)	190 (45.24)	727	IX
2.	Time of transplanting	93 (22.14)	197 (46.90)	130 (30.96)	803	VII
3.	Transplanting technique	131 (31.19)	173 (41.19)	116 (27.62)	855	III
4.	Spacing of transplanting	125 (29.76)	183 (43.57)	112 (26.67)	853	IV
5.	**Depth of planting seedling**	**164 (39.04)**	**166 (39.52)**	**90 (21.44)**	**914**	**I**
6.	Irrigation at critical stages	102 (24.30)	223 (53.09)	95 (22.61)	847	V
7.	Drainage to prevent water logging	91 (21.66)	163 (38.82)	166 (39.52)	765	VIII
8.	Staking	105 (25.00)	179 (42.62)	136 (32.38)	809	VI
9.	Pinching	162 (38.57)	144 (34.29)	114 (27.14)	888	II

Table 10 revealed that as regard to training needs for Irrigation at critical stages, more than one third (39.52 per cent) of the vegetable grower fall under ' needed' training followed by 39.04 per cent and 21.44 per cent of the vegetable grower under 'most needed' and 'least needed' training group, respectively.

Deducing the finding it can be said that nearly less than one half of the vegetable growers categorized under the most needed training groups for the items like irrigation at critical stages, pinching, and drainage to prevent water logging. Whereas majority of them required less training pertaining to item land preparation, drainage to prevent water logging.

Table-11 Distribution of the vegetable grower according to their item wise training needs about fertilizer management

(n=420)

Sr.No.	Item	Most needed	Needed	Least needed	Total Score	Rank
1.	**Application of FYM and their quantity**	**173 (41.19)**	**197 (46.91)**	**50 (11.90)**	**963**	**I**
2.	Content of chemical fertilizers	172 (40.95)	191 (45.48)	57 (13.57)	955	II
3.	Dose of chemical fertilizers	179 (42.62)	164 (39.05)	77 (18.33)	942	IV
4.	Methods of fertilizer's application	122 (29.05)	210 (50.00)	88 (20.95)	874	V
5.	Time of fertilizer' application	118 (28.09)	215 (51.19)	87 (20.72)	871	VI
6.	Content of Bio- fertilizers application	177 (42.14)	178 (42.38)	65 (15.48)	952	III

From data in Table 11 observed that less than half of the vegetable growers (46.91 per cent) were group in 'needed' while 41.19 per cent were categorized in to most needed and 11.90 per cent vegetable grower comes under least needed categories in item group of Application of FYM and their quantity.

In nutshell, majority of the vegetable growers belonged to most needed training with respect to Application of FYM and their quantity and dose of chemical fertilizers.

Table-12 Distribution of the vegetable grower according to their item wise training needs about Plant protection

(n=420)

Sr.No.	Item	Most needed	Needed	Least needed	Total Score	Rank
1.	**Identification of diseases and their control measures**	**273 (65.00)**	**133 (31.67)**	**14 (3.33)**	**1099**	**I**
2.	Identification of pests and their control measures	255 (60.71)	146 (34.76)	19 (4.53)	1076	II
3.	Proper handing techniques of sprayer / other plant protection equipments	193 (45.95)	157 (37.39)	70 (16.66)	963	III

The data presented in Table 12 regarding training needs of identification of diseases and their control measures of the vegetable grower (65.00 per cent) were group in " most needed" while 31.67 and 3.33 per cent of the vegetable grower were categorized under "needed" and " least needed" training need category, while as per the rank viz Identification of diseases and their control measure, Identification of pests and their control measures and Proper handing techniques of sprayer / other plant protection equipments comes under I, II and III ranks respectively.

Table-13 Distribution of the vegetable grower according to their item wise training needs about harvesting and market management

(n=420)

Sr.No.	Item	Most needed	Needed	Least needed	Total Score	Rank
1.	Time of harvesting/picking	112 (26.66)	163 (38.81)	145 (34.53)	807	VII
2.	Storage of flowers	138 (32.86)	238 (56.67)	44 (10.47)	934	V
3.	Grading of flowers	117 (27.85)	216 (51.44)	87 (20.71)	870	VI
4.	Packing	260 (61.90)	94 (22.39)	66 (15.71)	1034	III
5.	Disposal of flowers	151 (35.95)	229 (54.53)	40 (09.52)	951	IV
6.	Market place	237 (56.42)	162 (38.58)	21 (5.00)	1056	II
7.	**Market intelligence**	**282 (67.14)**	**119 (28.34)**	**19 (4.52)**	**1103**	**I**

The data presented in Table 13 regarding training need of Market intelligence of vegetable grower (67.14 per cent) were grouped in "most needed" training, while 28.34 and 4.52 per cent of the vegetable grower were categorized under " needed" and " least needed" training in item group of Market intelligence, respectively. This result shows that the vegetable grower gave highest emphasis on Market intelligence to get proper price for their product.

Table-14 Distribution of the vegetable grower according to their aspect wise training needs

(n=420)

Sr.No.	Item	Mean	S.D	Category			Total score	Rank
				High	Medium	Low		
1.	Nursery raising	13.20	2.51	60 (14.28)	297 (70.71)	63 (15.00)	838	III
2.	**Field management**	**18.00**	**2.80**	**78 (18.57)**	**308 (73.33)**	**34 (08.10)**	**884**	**I**
3.	Fertilizer management	13.16	2.49	100 (23.81)	240 (57.15)	80 (19.04)	860	II
4.	Plant protection	7.54	1.33	84 (20.00)	227 (54.05)	109 (25.95)	815	V
5.	Harvesting and market management	15.90	2.60	59 (14.04)	299 (71.20)	62 (14.76)	837	IV

From the in Table 14 observed that as regard to training needs of vegetable grower, Field management ranked first, followed by fertilizer management, nursery raising, harvesting and market management and plant protection with rank II, III, IV and V respectively.

To epitomized the result, it can be said that majority of the farmer were fall under medium level of training need category with regards to all the aspect covered under study.

3. Relationship between the selected characteristic of vegetable growers with training need.

In order to find out the relationship between the selected characteristics of vegetable grower and training need correlation was worked out the finding are presented in Table 16

Table 15:- Relationship between training needs and characteristics of farmers

Sr.No.	Variable	Correlation-coefficient (r – Value)
1.	Age	0.053
2.	Education	-0.186**
3.	Land holding	-0.001
4.	Social participation	0.001
5.	Extension contact	-0.142**
6.	Utilization of different source of information	-0.072
7.	Economic motivation	0.185**

The analysis of data showed in the Table 15 that age, land holding, social participation and utilization of different source of information had no any relation with training need. While education and extension contact had high negatively significant relation with training need. Only one parameter that is economic motivation had significant relation with training need.

Conclusion

Majority of the vegetable grower were found in the middle age group (69.00 %) having primary level of education (47.00 %), small and marginal (51.00 %), belonged to medium level of social participation (79.00 %) and extension contact (78.00 %) respectively. 77.00 per cent of them had low utilization of different sources of information and having medium level of economic motivation (65.00 %)

As regard to aspect viz training needs of vegetable grower, selection of suitable weedicides, depth of planting seedling, application of FYM and their quantity, identification of diseases and their control measures and market intelligence ranked first in all aspect vise statements of training needs in vegetables cultivation. About three forth of the vegetable growers (72.00 per cent) were categorized under “medium needed” group as far as overall training need is concerned.

Budget Head: 2704-06 (KVK, NAU, Dangs)

C. Details of impact analysis of KVK activities carried out during the reporting period
Title: Adoption of recommended technologies released for farming community in Finger millet crop

Background information:

Average productivity of Finger millet crops is low in the Dangs district. It is mainly because of poor knowledge as well as adoption of scientific technology in Cereal crop cultivation. A wide gap exists between the yield obtained and the potential yield. Well planned and comprehensive study to gather the desired information was felt necessary. The main objective in our agricultural strategies is to increase the total agricultural production as well as to puss the efficiency various input used by rural community. The adoption of recommended technologies by the farmers is prime importance of the KVK. Present study was undertaken to assess the adoption of recommended technologies released for farming community in Finger milletcrop.

Objectives

1) To study the profile of respondents
2) To assess the adoption of recommended technologies released for farming community in Finger millet
3) To find out the constraints in adoption of recommended finger millet technologies by farmers.
4) Suggestions from the farmers to overcome the constraints

Methodology

The present study was conducted in the Dangs district of the Gujarat state. For the purpose of this study, Out of three taluka, Waghai, Ahwa and Subir 05 village from each taluka was randomly selected. A total sample of 150 respondents, 10 from each village was selected at random for the study with the help of random sampling methods. Collection of data was accomplished by supplying the well-structured schedule from farmer. In order to ascertain adoption about improved agricultural technologies of Finger millet crop, the respondent asked to give the account of package of practices they followed in Finger millet cultivation. Adoption quotient of Finger millet for each respondent calculated and they were classified into three categories of adoption vise, low, medium and high level of adoption.

Findings:

The outcome of the present study has been presented here after applying the appropriate statistical analysis. The results have been described under the following sub heads in the light of the objectives of the study.

1 Profile of the respondents

The data regarding socio-economic and personal characteristics of respondents were analyzed and presented in the following sequence.

1. Age

The respondents were asked to indicate their age in completed year. Age refers as the number of years completed by an individual at the time of collection of information. The data in this regards were grouped into three categories with the help of mean and standard deviation viz; (i) Young age (below 35 years), (ii) Middle age (35 to 58 years) and (iii) Old age (Above 58 years). The data collected about their age are presented in table 1.

Table 1: Distribution of respondents according to their ag **n= 150**

Sr.No.	Age groups	Frequency	Percentage
1.	Young age	25	16.6
2.	Middle age	94	62.7
3.	Old age	31	20.7
	Total	150	100
	Mean	46.94	
	SD	11.88	

It is clear from the data in the table 1 that less than Two third (62.70 per cent) of the respondents were in the middle age group. The respondents found in old and young age group were 20.70 per cent and 16.70 per cent, respectively.

2. Education

Education plays an important role in bringing out desirable changes in human behavior in the form of knowledge, skill and attitude. Education is valued as means of increasing level of knowledge and information. Keeping this in view, the level of education of the respondents was studied. The data in this regards was collected and grouped as; Illiterate, Primary level of education (1st to 7th standard), Secondary and Higher secondary level of education (8th to 12th standard) including diploma and College level of education (above 12th standard). The data in this regards are presented in table 2.

Table 2: Distribution of respondents according to their education **n= 150**

Sr.No.	Level of education	Frequency	Percentage
1.	Illiterate	19	12.7
2.	Primary level of education	73	48.7
3.	Secondary and Higher secondary level of education	53	35.3
4.	College level of education and above	5	3.3
	Total	150	100.00

It becomes clear from the data in table 2 that slightly less than one half (48.70 per cent) of the respondents were found to have Primary level of education. The respondents from Secondary and Higher secondary level of education and its above level were 35.30 and 12.70 per cent, respectively. 03.30 percent respondent was found illiterate.

3. Land holding

In present study the information was collected from the respondents. They all were grouped into three categories, viz.; (i) Small and marginal farmer (Up to 2 hectares) (ii) Medium farmer (Greater than 2 hectares and less than/equal to 5 hectares) and (iii) Big farmer (Above 5.00 hectares). The classified data are presented in table 3.

Table 3: Distribution of respondents according to their land holding **(n= 150)**

Sr.No.	Land holding	Frequency	Percentage
1.	Small and marginal	50	33.3
2.	Medium farmer	61	40.7
3.	Big farmer	39	26.0
	Total	**150**	**100.00**

The data presented in table 3 indicated that 40.70 per cent of the respondents belonged to the medium farmers, while 33.30 and 26.00 per cent respondents belonged to the category of small and marginal farmers and big farmer respectively.

4. Social participation

Social participation was operationalized as the degree of involvement of respondents in the nearby social organizations. It was measured with the help of SES scale developed be Venkatarmaiah (1983). Later on, total score were obtained from the assigned score values.

Table 4: Distribution of respondents according to their Social participation **n=150**

Sr.No.	Social Participation	Category of farmers	
		Number	Per cent
1.	No membership	104	69.33
2.	Membership in one organization	38	25.33
3.	Membership in more than one organization	8	05.34
	Total	**150**	**100**

The data furnished in Table 4 indicated that near about more than one half of beneficiary farmers (69.33%) had belonged to no membership in any organization, followed by member in one organization (25.33%) and membership in more than one organization (05.34 %) respectively.

5. Occupation

Occupation is operationalised as the vocation in which major share of time of the responden's spent for main source of income. The respondents are classified in to different categories of occupation such as On Farming, Farming + Animal Husbandry, Farming + Business, Farming + Service, Farming + Labour work and Farming + Animal Husbandry + Service

Table 5: Distribution of respondents according to their Occupation **n=150**

Sr.No.	Occupation	Category of farmers	
		Number	Per cent
1.	Farming only	06	04.00
2.	Farming + Animal Husbandry	65	43.30
3.	Farming + Business	05	03.30
4.	Farming + Service	03	02.00
5.	Farming + Labour work	67	44.70

6.	Farming + Animal Husbandry + Service	04	02.70
	Total	**150**	**100**

It is cleared from the table 5 that majority (44.70 %) farmers had Farming + Labour work, while (43.30 %) had Farming + Animal Husbandry activities. So the main occupation of the farmers is Farming + Animal Husbandry+ Labour work

6. Risk orientation

Risk orientation was operationally defined as the degree to which the respondent is oriented towards risk and uncertainty in facing problems in performance of economic activity.

Supe (1969) developed a scale for measuring risk orientation. The same was used in the present investigation. The scale contained 6 statements of which first and fifth are negatively keyed. They are arranged on a 5 point continuum of strongly agree, agree, UN decided, dis agree and strongly dis agree, with a scoring of 5, 4, 3, 2 and 1 for positive and reverse for negative. The possible range of scores was from 6-30. Based on the scores, the respondents were categorized intothree groups by adopting Meand and SD.

Table 6: Distribution of respondents according to their level of Risk orientation n=150

Sr.No.	Level of Risk orientation	Category of Farmers	
		Number	Per cent
1.	Low level of risk orientation (up to 17.53)	22	14.7
2.	Medium level of risk orientation (17.53 to 21.27)	106	70.7
3.	High level of risk orientation (Above 21.27)	22	14.6
	Total	150	100
	Mean	19.40	
	SD	**1.87**	

A glance at Table 6 revealed that majority of the respondent (70.70%) had medium level of risk orientation, followed by low (14.70%) and (14.60 %) respondent had low and high level of risk orientation respectively.

7. Economic Motivation

Economic motivation scales assess the individual's success in term of profit maximization and the relative importance placed on economics end. Economic motivation of the beneficiaries was measured by using the scale which was developed by supe (1972) with due modification. There are six statements, which were weighted on a 5 point continuum of Strongly agree, Agree, Undecided, Disagree and strongly Disagree, with a scoring of 5, 4, 3, 2 and 1 for positive and reverse for negative. The possible range of scores was from 6-30.The score was computed by summing up the each response and categorized by using mean and standard deviation. The data in this regards were grouped into three categories with the help of mean and standard deviation viz; (i) Low (up to 19.15 score), (ii) Medium (19.15 to 22.25 Score) and (iii) High (Above 22.25 Score). The data collected about their Economic motivation are presented in table 7.

Table 7: Distribution of respondents according to their level of economics motivation n=150

Sr.No.	Level of economic motivation	Frequency	Percentage
1.	Low level of economic motivation	21	14.0
2.	Medium level of economic motivation	117	78.0
3.	High level of economic motivation	12	8.0
	Total	150	100
	Mean	20.70	
	SD	**1.55**	

It is clear from the data in the table 7 that more than three forth (78 per cent) of the respondents were in the middle level of economic motivation, followed by 14.00 per cent of them with low and 8.00 per cent of them were with high level of economic motivation respectively.

8. Scientific orientation

The scale was constructed to measure the degree to which farmers are oriented to use scientific methods in farming. It was developed by supe (1969) and was adopted with due modifications. The scale contents six statements. The scale contained 6 statements of which first and fifth are negatively keyed. They are arranged on a 5 point continuum of strongly agree, agree, UN decided, disagree and strongly disagree, with a scoring of 5, 4, 3, 2 and 1 for positive and reverse for negative. The possible range of scores was from 6-30. The beneficiaries were grouped into three categories

with the help of mean and standard deviation viz; (i) Low (up to 20.69 score), (ii) Medium (20.69 to 25.34 Score) and (iii) High (Above 25.34 Score). The data collected about their Economic motivation are presented in table 8.

Table 8: Distribution of respondents according to their level of scientific orientation

n=150

Sr.No.	Level of scientific orientation	Frequency	Percentage
1.	Low level of scientific orientation	21	14.0
2.	Medium level of scientific orientation	106	70.7
3.	High level of scientific orientation	23	15.3
	Total	150	100
	Mean	23.02	
	SD	**2.33**	

It is evidence in the Table 8 that more than two third (70.70 per cent) of the respondent had medium level of scientific orientation, followed by 15.30 per cent of them with high and 14.00 per cent of them were with low level of scientific orientation. Thus it can be concluded that majority (70.70 per cent) of the respondent were with medium level of scientific orientation.

2.0 Attitude of farmers towards Finger millet cultivation practices

The scale was constructed to measure the degree to which farmers are oriented to attitude towards Finger millet cultivation practices. The scale contents fifteen statements. They are arranged on a 5 point continuum of strongly agree, agree, UN decided, disagree and strongly disagree, with a scoring of 5, 4, 3, 2 and 1 for positive and reverse for negative. The possible range of scores was from 15-75. The beneficiaries were grouped into three categories with the help of mean and standard deviation viz; (i) Low (up to 30.72 score), (ii) Medium (30.72 to 37.88 Score) and (iii) High (Above 37.88 Score). The data collected about attitude of farmers towards finger millet cultivation practices are presented in table 9.

Table 9: Distribution of respondents according to their attitude towards Finger millet cultivation practices

n=150

Sr.No.	Level of scientific orientation	Frequency	Percentage
1.	Low level of attitude	18	12.0
2.	Medium level of attitude	97	64.7
3.	High level of attitude	35	23.3
	Total	150	100
	Mean	34.30	
	SD	3.58	

It is evidence in the Table 8 that less than two third (64.70 per cent) of the respondent had medium level of attitude towards Finger millet cultivation practices, followed by 23.30 per cent of them with high and 12.00 per cent of them were with low level of attitude towards Finger millet cultivation practices. Thus it can be concluded that majority (64.70 per cent) of the respondent were with medium level of attitude towards Finger millet cultivation practices.

PART – II

ADOPTION OF RECOMMENDED TECHNOLOGIES FOR THE FARMING COMMUNITY

1. Improved Variety

Table 1: Distribution of farmers according to use of improved variety of Finger millet

n=150

Sr.No	Variety	Frequency	Percentage
1.	Deshi	57	38.00
2.	University varieties GN 8	68	45.33
3.	University varieties GN 4, GN 5	25	16.67
	Total	**150**	**100**

The recommended varieties for Finger millet are Gujarat Nagli 1, Gujarat Nagli 2, Gujarat Nagli 3, Gujarat Nagli 4, Gujarat Nagli 5, Gujarat Navsari Nagli 6, Gujarat Nagli 8 etc. The perusal of data in table-1 on this particular aspect reveals that almost 45.33 per cent of the farmers were adopted Gujarat Nagli 8. About 38.00 per cent farmers adopt his own deshi varieties and 16.67 per cent farmers adopt Gujarat Nagli 4 and Gujarat Nagli 5 respectively.

2. Method of Sowing:

Table 2: Distribution of farmers according to use of method of Sowing of Finger millet crop

n=150

Sr.No	Sowing method	Frequency	Percentage
1.	Transplanting	130	86.67
2.	Broadcasting	20	13.33
	Total	**150**	**100**

Planting of Finger millet is done by direct sowing (Random Sowing) and Line sowing. Line sowing is beneficial over random sowing as it ensures uniform distribution of seedling, placement of seedling at proper depth, better plant stand, easy in cultural operations and also improved drainage. Line sowing by 22.5 to 30 cm between two rows was recommended. Majority of the farmers (86.67 per cent) were using the recommended transplanting sowing method and 13.33 per cent used broadcasting or random throwingmethod

3. Time of sowing:

Table 3: Distribution of farmers according to time of sowing of Finger millet crop **n=150**

Sr.No	Sowing time	Frequency	Percentage
1.	June	98	65.33
2.	July	47	31.33
3.	August	05	03.34
	Total	**150**	**100**

The optimum times for planting Finger millet is generally sown with a pre-plant irrigation and follow a regular Kharif crop, lies between June to August. Table 3 expressed that 65.33 per cent farmers were sown their crop on June month, 31.33 per cent in July month, while rest 03.34 percent have been sown after recommended time.

4. At which distance did you sow the crop

Table 4: Distribution of farmers according to distance of sowing of Finger millet crop

n=150

Sr.No	Sowing method	Frequency	Percentage
1.	Direct sowing (Random Sowing)	88	58.67
2.	Line sowing (22.5 to 30 cm)	62	41.33
	Total	150	100

Planting of Finger millet is done by direct sowing (Random Sowing) and Line sowing (22.5 to 30 cm). Line sowing is beneficial over random sowing as it ensures uniform distribution of seedling, placement of seedling at proper depth, better plant stand, easy in cultural operations and also improved drainage. Line sowing by 22.5 to 30 cm between two rows was recommended. But majority of the farmers (58.67 per cent) were not using the recommended sowing method due to lack of knowledge and lack of sowing implements. 41.33 per cent farmers were using line sowing techniques.

4. Intercropping:

Table 5: Distribution of farmers according to intercrop sown in the Finger millet crop

n=150

Sr.No	Crop of Inter cropping	Frequency	Percentage
1.	**Pigeon pea**	**102**	**68.00**
2.	**Black gram**	**15**	**10.00**
3.	**No any**	**33**	**22.00**
	Total	**150**	**100**

As per the table 5 the data indicated that 68.00 per cent farmers choose pigeon pea as a intercrop. 10.00 percent farmers choose black gram as intercrop. 22.00 farmers was used single crop or mono crop practices.

5. Manures and fertilizers application:

Table 6: Distribution of farmers according to manures and fertilizers use in the Finger millet crop

n=150

Sr.No	Manures and fertilizers use	Frequency	Percentage
1.	As recommended	37	24.66
2.	Below recommended	113	75.34
	Total	**150**	**100**

Application of the various fertilizers should be recommended only on the basis of soil test. However, in absence of soil fertility data, application of 40:20 (N: P) kg ha-I. Rainfed as well as in irrigated situation as basal application are recommended on the basis of response obtained in trials. Only 24.66 per cent farmers followed the recommendation of balanced fertilizer application while 75.34 per cent farmers were not using balanced fertilizer application. The reason of not using recommended dose of balanced fertilizer application were mostly attributed by the farmers as a lack of knowledge behind using of any fertilizer in any cereal crop and high risk involved in Finger millet, pulses crop treated as a secondary crop by the farmers.

7.0 Irrigation methods:

Table 7: Distribution of farmers according to Irrigation method use in the Finger millet crop

n=150

Sr.	Irrigation method	Frequency	Percentage
1.	Flood irrigation	112	74.67
2.	Bed irrigation System	38	25.33
3.	Sprinkler irrigation System	00	00
4.	Drip irrigation System	00	00
	Total	**150**	**100**

The majority of the Finger millet grower (74.66 %) had adopted flood irrigation. 25.33 percent farmer were used bed irrigation method. No any farmers had adopted Sprinkler and drip irrigation system.

8. Weed control methods

Weed competes with crop plants for various production resources such as nutrients, moisture, sunlight and space. In field Finger millet, crop suffers from a severe weed infestation which causes in drastic reduction in yield. Therefore, it is advisable to keep the field free from weeds by giving one hand weeding about 20-25 days after sowing of the crop. By using herbicides the field will be weed free up to 50 days of sowing and least damage of crop will take place.

Table 8: Distribution of farmers according to weed control methods use in the Finger millet crop

n=150

Sr.No	Weed control	Frequency	Percentage
1.	Manual	63	42
2.	As chemical recommended	15	10
3.	No weed control	72	48
	Total	**150**	**100**

The data from table-8 reveals that 10 per cent farmers are adopting recommended weedicides as a chemical weed control, 42 percent farmers are applying manual weed management by Khurpi (a hand weeding small equipment) and majority of the farmers (48 per cent) not applying any method of weed management in field Finger millet crop it's because of lack of knowledge about losses in productivity due to weed problem in Finger millet crop.

9. Plant protection

Table 9: Distribution of farmers according to Plant protection measures use in the Finger millet crop

n=150

Sr.No	Plant protection	Frequency	Percentage
1.	As recommended	23	15.33
2.	Below recommended	67	44.67
3.	Nil	60	40.00
	Total	**150**	**100**

As regards plant protection measures the data revealed that 44.67% farmers followed plant protection measures below recommended, 15.33 % farmers followed plant protection measures as recommendation in Finger millet crop. 40.00 % farmers do not do any step towardsplant protection measure. The high cost, non availability of effective fungicides, insecticides might have important reason. The lack of knowledge about pest control, IPM and IDM module in Finger millet crop was the important reason behind this.

10. Harvesting

Table 10: Distribution of farmers according to harvesting in the Finger millet crop

n=150

Sr.No	Plant protection	Frequency	Percentage
1.	As recommended	102	68.00
2.	Below recommended	48	32.00
	Total	**150**	**100.00**

As regards harvesting the data revealed that 68 per cent farmers followed harvesting as per the recommended and 32.00 per cent farmers followed harvesting below recommended in finger millet crop.

PART – III

CONSTRAINTS IN ADOPTION OF RECOMMENDED TECHNOLOGIES FOR THE FARMING COMMUNITY OF FINGER MILLET CROP

n =150

Sr. No.		Constraints	Most important	Important	Least important	Not important	Total Score	Rank
1.		Input supply constraints :						
	(a)	Lack of availability of guaranteed and improved variety of crop	39 (26.00)	76 (50.67)	33 (22.00)	02 (1.33)	452	III
	(b)	Lack of compost and chemical fertilizer	46 (30.66)	35 (23.33)	60 (40.00)	09 (06.00)	418	IV
	(c)	Lack of availability of irrigation	106 (70.67)	28 (18.67)	16 (10.66)	00 (00.00)	540	I
	(d)	Lack of supply of insecticides and pesticides in times	93 (62.00)	22 (14.67)	31 (20.67)	4 (02.66)	504	II
	(e)	Lack of availability of skilled labour	4 (02.67)	59 (39.33)	57 (38.00)	30 (20.00)	337	V
2.		Economical constraints :					Total Score	Rank
	(a)	Non-availability of credit	16 (10.67)	38 (25.33)	52 (34.67)	44 (29.33)	326	IV
	(b)	More cost of cultivation	11 (7.33)	66 (44.00)	64 (42.67)	9 (06.00)	379	II
	(c)	High rates of labour wages	6 (04.00)	53 (35.33)	79 (52.67)	12 (08.00)	353	III
	(d)	Insufficient capital	59 (39.33)	65 (43.33)	25 (16.66)	1 (0.68)	482	I
	(e)	Non-availability of finance by the co- operative societies in time	0 (00.00)	7 (04.67)	80 (53.33)	63 (42.00)	244	V
	(f)	High rates of interest on the loans	0 (00.00)	4 (02.66)	68 (45.33)	78 (52.00)	226	VI
3.		Technological constraints :					Total Score	Rank
	(a)	Lack of knowledge about time of planting and spacing	68 (45.33)	55 (36.67)	24 (16.00)	3 (02.00)	488	I
	(b)	Lack of knowledge about availability of seedlings/grafts	38 (25.33)	73 (48.67)	37 (24.67)	2 (1.33)	447	II
	(c)	Lack of knowledge about timely application of fertilizers	39 (26.00)	57 (38.00)	42 (28.00)	12 (08.00)	423	III
	(d)	Lack of knowledge about export of the crops	31 (20.67)	41 (27.33)	55 (36.66)	23 (15.34)	380	IV

4.	Extension constraints :						Total Score	Rank
	(a)	The visit of the extension personnel is not in time	37 (24.67)	72 (48.00)	38 (25.33)	3 (02.00)	443	I
	(b)	The extension personal are lacking in the knowledge of the crop cultivation	07 (04.67)	14 (09.33)	36 (24.00)	93 (62.00)	235	VI
	(c)	Result and method demonstrations arenot conducted	16 (10.66)	84 (56.00)	47 (31.33)	03 (02.00)	413	III
	(d)	The visit are not organized by the extension workers to the Agricultural Universities, Research Centres etc.	23 (15.33)	75 (50.00)	48 (32.00)	04 (02.67)	417	II
	(e)	Audiovisual aids are not used by the extension workers	17 (11.33)	47 (31.33)	79 (52.67)	7 (4.67)	374	IV
	(f)	Lack of availability of literature in local language	1 (0.67)	20 (13.33)	68 (45.33)	61 (40.67)	261	V
5.	Marketing constraints :						Total Score	Rank
	(a)	Fluctuation in the prices of crops	114 (76.00)	28 (18.67)	6 (04.00)	2 (1.33)	554	I
	(b)	The rates are not according to thegrades of the crops	71 (47.33)	24 (16.00)	24 (16.00)	31 (20.67)	435	II
	(c)	More cost of the packaging	10 (06.67)	23 (15.33)	33 (22.00)	84 (56.00)	259	IV
	(d)	Middlemen takes more commission	43 (28.67)	35 (23.33)	26 (17.33)	46 (30.67)	375	III

PART – IV

SUGGESTIONS FROM THE FARMERS TO OVERCOME THE CONSTRAINTS

Sr. No.	Suggestions	Yes	No	Total Score	Rank
1.	The improved varieties of crop should be made available	148	02	298	I
2.	The seeds should be available in time with reasonable price	115	35	265	VIII
3.	The chemical fertilizers should be made available timely and as per the requirements	66	84	216	XII
4.	The insecticides and pesticides should be made available in time and at cheaper rates	88	62	238	XI
5.	The co-operative institutions and banks should provide loans in time	99	51	249	IX
6.	There is a necessity of nearby markets	147	3	297	II
7.	Timely information about crop prices should be made available	145	5	295	IV
8.	The co-operative organizations should be established for marketing	141	9	291	V
9.	The crop processing industries should be established	97	53	247	X
10.	The technical guidance should be made available in time	146	4	296	III
11.	The export of crops should be done through co-operatives	139	11	289	VI
12.	The availability of skilled labour at required time and reasonable wages	128	22	278	VII

Conclusion

Majority of farmers had Middle age group, Primary level of education, Medium farmer, No membership in any social organization, main Occupation is Farming + Labour work, Medium level of risk orientation, Medium level of economic motivation, Medium level of scientific orientation and Medium level of attitude towards finger millet crop.

It could be concluded that the adoption of recommended varieties had been 45.33 per cent that is GN 8, while 86.67 percent farmer used transplanting method, choose June month as a sowing time, used random sowing, choose pigeon pea as a intercrop, used manure and fertilizer below recommended, having flood irrigation method and follow harvesting time as per the university recommendation. Most of the farmers were not using plant protection measures and weed management practices Therefore, for enhancing the production and productivity of Finger millet, strategy should be made for getting the more and more recommended technologies adopted by the farmers.

The main constraints in adoption of recommended technologies for the farming community of finger millet crop were lack of availability of irrigation, insufficient capital, lack of knowledge about time of planting and spacing, the visit of the extension personnel is not in time and fluctuation in the prices of crops

The main suggestions from the farmers to overcome the constraints were improved varieties of crop should be made available, there is a necessity of nearby markets, the technical guidance should be made available in time and timely information about crop prices should be made available

13. 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 2020	03	3941	NA
Feb 2020	-	-	-
March 2020	-	-	-
April 2020	88	21390	NA
May 2020	93	48592	NA
Jun 2020	68	49692	NA
Jul 2020	55	16127	NA
Aug 2020	101	32420	NA
Sept 2020	40	14129	NA
Oct 2020	19	5122	NA
Nov. 2020	14	3923	NA
Dec. 2020	15	4170	NA

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke -ting	Aware- ness	Other enterprise	Total
KVK, NAU, Waghai Dang	Text only	60	10	1	0	256	131	458
	Voice only	-	-	-	-	-	-	-
	Voice & Text both	-	-	-	-	-	-	-
	Total Messages	**60**	**10**	**1**	**0**	**256**	**131**	**458**
	Total farmers Benefitted	**17875**	**6196**	**3845**	**0**	**125608**	**159299**	**312823**

14. 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	
-	-	-	-	-	-	-	-	-	-

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	
Paddy	24-06-20	25-11-20	2.5	GNR 6	Foundation seed	46.20	75000	118321	-
Gram	15-11-19	14-04-20	2.0	GG 5	Certified seed	23.70	60000	189600	-
Green gram	15-02-20	20-04-20	0.08	GM 6	Foundation seed	11.20	26000	112000	-
Turmeric	12-06-19	15-04-20	0.15	GNT 2	Truthful seed	2.60	600	6000	-
Turmeric	12-06-19	15-04-20	0.10	GNT 1	Truthful seed	1.2	500	2500	-
Mango	-	-	0.9	Kesar	-	2.50	2000	7500	-
				Totapuri	-	0.20		300	-
				Desi	-	1.00		1100	-
seedlings	-	-	-	-	-		-	-	-

University Product Sell

Sr. No.	Name of the Product	Liter	Selling (Rs.)
1.	*Pseudomonas*	22	6,840/-
2.	Novel Organic liquid nutrient	4079	4,89,570/-
3.	*Azospirillum*	4060	4,06,000/-
4.	P.S.B	4060	4,06,000/-
5.	Brinjal seed GNRB 1	1.10 kg	3,300/-
6.	Cue lure block	30	1,500/-
7.	Cue lure Trap	114	7,980/-
		Total	**13,21,190/-**

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

Sr. No.	Bio Products	Name of the Product	Qty (kg)	Amount (Rs.)		Remarks
				Cost of inputs	Gross income	
-	-	-	-	-	-	-

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

Sr. 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)
-	-	-	Hostel facilities provided to Agriculture college, NAU, Waghai for students hostel purpose. Farmer hostel is also used by hill millet research station, NAU, Waghai, Dang.

F. Database management

Sr. No	Database target	Database created
-	-	-

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

Amount sanction (Rs.)	Expenditure (Rs.)	Details of infrastructure created / micro irrigation system etc.	Activities conducted					Quantity of water harvested in '000 litres	Area irrigated / utilization pattern
			No. of Training programmes	No. of Demonstration s	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/No

If yes,

Nutritional Garden developed at KVK farm - Yes

Area under nutritional garden (ha)	Component of Nutritional Garden	No. of species / plants in nutritional garden	No. of farmers visited
0.01	Vegetable crops	23867	520
	Fruit crops	-	-
	Others if any	-	-

Nutritional Garden developed at Village Level - No

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

Mushroom unit

Crop	Area (ha)	Qty	Income
Mushroom	-	11 (Kg)	1100

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					
				SC/ST		Others		Total	
				Male	Female	Male	Female	Male	Female
1	KVK, NAU, Waghai	Preparation of Azolla culture	56	16	11	-	-	16	11
2	KVK, NAU, Waghai	Mushroom production technology	56	1	29	-	-	1	29
3	KVK, NAU, Waghai	Mushroom Cultivation	56	7	23	-	-	7	23
4	KVK, NAU, Waghai	Scientific rearing of poultry	56	0	30	-	-	0	30

15.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	Waghai, Dangs	SBIN0014992	Programme coordinator, NAU, Waghai	10692111061	394002508	SBIN0014992

B. Utilization of KVK funds during the year 2020-21 (Rs. in lakh)(Till Dec, 2020)

S. No.	Particulars	Sanctioned	Released	Expenditure
A. Recurring Contingencies				
1	**Pay & Allowances**	81.00		80.64
2	**Traveling allowances**	1.10		0.87
3	**Contingencies**			
A	Stationery, telephone, postage and other expenditure on office running, publication of Newsletter and library maintenance (Purchase of News Paper & Magazines)	15.90		9.00
B	POL, repair of vehicles, tractor and equipments			2.00
C	Meals/refreshment for trainees (ceiling upto Rs.40/day/trainee be maintained)			1.26
D	Training material (posters, charts, demonstration material including chemicals etc. required for conducting the training)			0.34
E	Frontline demonstration except oilseeds and pulses (minimum of 30 demonstration in a year)			1.30
F	On farm testing (on need based, location specific and newly generated information in the major production systems of the area)			1.56
G	Training of extension functionaries			0.00
H	Maintenance of buildings			0.00
I	Establishment of Soil, Plant & Water Testing Laboratory			0.44
J	Library			0.00
TOTAL (A)		**98**		**97.41**
B. Non-Recurring Contingencies				
1	**Works**	0.00		0.00
2	**Equipments including SWTL & Furniture**	0.00		0.00
3	**Vehicle** (Four wheeler/Two wheeler, please specify)	0.00		0.00
4	**Library** (Purchase of assets like books & journals)	0.00		0.00
TOTAL (B)		0.00		0.00
C. REVOLVING FUND		26.59		26.59
GRAND TOTAL (A+B+C)		**124.59**		**124.00**

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

Year	Opening balance as on 1st April	Income during the year	Expenditure during the year	Net balance in hand as on 1st April of each year
April 2018 to March 2019	71.66	8.72	8.68	71.70
April 2019 to March 2020	71.70	8.62	7.72	72.60
April 2020 to December, 2020	72.60	23.82	26.59	69.83

16. 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
All staff	Senior Scientist & Head, Scientist	Agriculture and Covid-19 effects	online live portal	Online	15-05-2020
Mr. J. B. Dobariya	Scientist Extension Education	Attane Joint Agresco by online	NAU, Navsari	Online	16-05-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting	KVK, Waghai	Offline	30-05-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting	KVK, Waghai	Offline	04-06-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting (Online)	KVK, Waghai	Offline	05-06-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting	KVK, Waghai	Offline	10-06-2020
Mr. H. A. Prajapati	Scientist Horticulture	Sustainability Concepts and sustainable development Goal-6 Clean water and sanitation"	online live portal	Online	18-06-2020
Dr. S. A. Patel	Scientist Animal Science	National Webinar	KVK, Waghai	Offline	18-06-2020
Dr. S. A. Patel	Scientist Animal Science	National Workshop	KVK, Waghai	Offline	01-06-2020
Dr. S. A. Patel	Scientist Animal Science	e- Quiz Environment Awareness	KVK, Waghai	Offline	05-06-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	Online Web meeting with Horticulture	KVK, Waghai	Offline	17-06-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	AGB Meeting	Ahwa	Offline	24-06-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	SPNF Meeting	Ahwa	Offline	25-06-2020
All staff	Senior Scientist & Head, Scientist	KVK meeting with World vision	KVK,Waghai	Offline	07-07-2020
Dr. S. A. Patel	Scientist Animal Science	Dairy industry in India: opportunities and challenges in perspective of " COVID-19" pandemic	Rewa (M.P.)	Offline	30-06-2020
Dr. S. A. Patel	Scientist Animal Science	Post COVID-19 Agribusiness: Challenges and Opportunities	Junagadh	Offline	13,14-06-2020
Mr. J. B. Dobariya	Scientist Extension Education	Combine joint AGRESCO meetin	ABM, Navsari	Offline	01-07-2020
Mr. J. B. Dobariya	Scientist Extension Education	Meeting with Gadhvisir about contruction plan estimate	Engg. Branch, NAU, Navsari	Offline	03-07-2020
Mr. J. B. Dobariya	Scientist Extension Education	Attained online annual zonal workshop of KVKs	KVK, Waghai	Offline	12-07-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	Online Annual Zonal Workshop of Maharashtra, Gujarat and Goa	KVK,Waghai	Offline	10,11,12-07-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	Online meeting of KVKs under NAU jurisdiction	KVK,Waghai	Offline	08-07-2020
Dr. P. P. Javiya	Scientist Crop Production	Recent advances in seed spices production	Online	Online	04-08-2020

All staff	Senior Scientist & Head, Scientist	Bimonthly Workshop August-2020-21	Online	Online	05-08-2020
All staff	Senior Scientist & Head, Scientist	KVK Review meeting	KVK Waghai	Offline	18-08-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	NMSA yojana ni meeting	Ahwa	Offline	18-08-2020
All staff	Senior Scientist & Head, Scientist	KVK Review meeting	KVK Waghai	Offline	26-08-2020
Dr. P. P. Javiya, Dr. G. G. Chauhan	Senior Scientist & Head, Scientist	Online zonel review Zonal review Workshop of GKMS-DAMU 2019-2020	Online	Online	03-09-2020
All staff	Senior Scientist & Head, Scientist	Intrerface meeting with navsari kvk	Navsari, KVK, Navsari	Offline	08-09-2020
All staff	Senior Scientist & Head, Scientist	Election meeting	Mamlatdar office, Waghai	Offline	15-09-2020
All staff	Senior Scientist & Head, Scientist	Gujaratma masroom uchherni sakyatao	Online	Online	16-09-2020
Mr. H. A. Prajapati, Mr. B. M. Vahunia, Dr. P. P. Javiya	Scientist	Election meeting	KVK Waghai	Offline	15-09-2020
Dr. S. A. Patel	Scientist Animal Science	International Webinar on One-Health Perspectives of Antimicrobial Resistance & E-Poster competition	Online	Online	04-09-2020
Dr. S. A. Patel	Scientist Animal Science	One Health Approach to control and Elimination of Rabies in India	Online	Online	25-09-2020
All staff	Senior Scientist & Head, Scientist	Election Meeting	Ahwa		05-10-2020
Dr. P. P. Javiya	Scientist Crop Production	National Level consultation on Principles and Practices of Bharatiya Prakritik Krishi Paddhati (BPKP)-Natural Farming	Online	Online	29,30-09-2020
All staff	Senior Scientist & Head, Scientist	Election Training	Ahwa	Offline	13, 14-10-2020
Dr. P. P. Javiya	Scientist Crop Production	Diagnostics and Remedial Measures for common error in application of Statistics	Online	Offline	20,21-10-2020
All staff	Senior Scientist & Head, Scientist	Interface meeting with KVK Vyara	Vyara, KVK, Vyara	Offline	21-10-2020
Dr. P. P. Javiya, Dr. S. A. Patel, Mr. J. B. Dobariya	Scientist	Video Production and Editing for Transfer of Technology	Online	Online	21 to 23 -10-2020
All staff	Senior Scientist & Head, Scientist	ZREAC meeting	Online	Online	06-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Underutilized fruits:Converting wastelands in to Goldmine	Online	Online	30-10-2020
Mr. H. A. Prajapati, Mr. B. M. Vahunia	Scientist	EEI training on "Video Production and editing for transfer of technology"	Online	Online	21 to 23-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Diagnostics and Remedial measures for common error in application of statistics	Online	Online	20 to 21-10-2020
Mr. J. B. Dobariya	Scientist Extension Education	Advances in Sustainable Agriculture	Society of Krishi Vigyan	Offline	26-28 September, 2020 (3days)

Dr. P. P. Javiya	Scientist Crop Production	Awareness on krishi bill 2020 by Morbi KVK	Online	Online	26-10-2020
Dr. P. P. Javiya	Scientist Crop Production	Election Training	Ahwa	Offline	27-10-2020
Dr. P. P. Javiya	Scientist Crop Production	Election meeting	Ahwa	Offline	30-10-2020
Dr. P. P. Javiya	Scientist Crop Production	KVK review meeting	Waghai	Offline	07-11-2020
Dr. P. P. Javiya	Scientist Crop Production	KVK review meeting with DEE	Waghai	Offline	24-11-2020
Dr. P. P. Javiya	Scientist Crop Production	Siyalu pakma poshan vyavasthapan	Online	Online	09-11-2020
Dr. P. P. Javiya	Scientist Crop Production	Sajiv kheti - takav khetino vaigyanik abhigam	Online	Online	25-11-2020
Mr. H. A. Prajapati	Scientist Horticulture	Awareness on krishi bill 2020 by Morbi KVK	Online	Online	26-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Election Training	Ahwa	Offline	27-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Election meeting	Ahwa	Offline	30-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	KVK review meeting	Waghai	Offline	07-11-2020
Mr. H. A. Prajapati	Scientist Horticulture	KVK review meeting with DEE	Waghai	Offline	24-11-2020
Mr. H. A. Prajapati	Scientist Horticulture	New approaches for Enhancing Animal Productivity at COA, SKNAU, Jobner	online	Online	28-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Impact of climate change on Agriculture organizrd by department of Agronomy, Bharuch	online	Online	28-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Sajeev khetima pak sarakshan organized by ISSS, NAHEP-CAAST,AAU,Anand	online	Online	27-10-2020
Mr. H. A. Prajapati	Scientist Horticulture	Plant health management organised by Dept. of Plant Patho & Ento., COA, NAU,Bharuch	online	Online	02-11-2020 to 04-11-2020
Mr. H. A. Prajapati	Scientist Horticulture	Shiyalu pakoma poshan vyavsthapan	online	Online	09-11-2020
Mr. H. A. Prajapati	Scientist Horticulture	Advances in stored grain pest management by Njational Institute of Plant Health Management, Hyderabad, India	online	Online	25-11-2020
Mr. H. A. Prajapati	Scientist Horticulture	Sajeev kheti-Takau khetino vaigyanik anubhav	online	Online	25-11-20200
Mr. B. M. Vahunia	Scientist Crop Protection	KVK review meeting	Waghai	Offline	07-11-2020
Mr. B. M. Vahunia	Scientist Crop Protection	KVK review meeting with DEE	Waghai	Offline	24-11-2020
Mr. B. M. Vahunia	Scientist Crop Protection	Pest and Disease in Mango	online	Offline	11-11-2020
All staff	Senior Scientist & Head, Scientist	KVK review meeting	KVK, Waghai	Offline	28-10-2020
All staff	Senior Scientist & Head, Scientist	KVK review meeting	Waghai	Offline	07-11-2020
All staff	Senior Scientist & Head, Scientist	KVK review meeting with DEE	Waghai	Offline	24-11-2020
Mr. J. B. Dobariya	Scientist Extension Education	Sajiv kheti ma pak sharakshan	AAU, Anand	Offline	27-10-2020

All staff	Senior Scientist & Head, Scientist	Planning of PKVY and TW	KVK, Waghai	Offline	07-11-2020
Dr. P. P. Javiya	Scientist Crop Production	Senetization workshop - Transforming animal husbandry	Online	Online	28-11-2020
All staff	Senior Scientist & Head, Scientist	SAC	KVK, Waghai		14-12-2020
Dr. P. P. Javiya	Scientist Crop Production	Krushi ane mulyavrdhanma mahilao no falo	Online	Online	23-12-2020
Dr. P. P. Javiya	Scientist Crop Production	Hi-Tech Cultivation of Vegetables & Grafting in Vegetables (Dutch Technology)	Online	Online	24-12-2020
Mr. B. M. Vahunia	Scientist Crop Protection	Krushi ane mulyavrdhanma mahilao no falo	Online	Online	23-12-2020
Mr. B. M. Vahunia	Scientist Crop Protection	Hi-Tech Cultivation of Vegetables & Grafting in Vegetables (Dutch Technology)	Online	Online	24-12-2020
Dr. S. A. Patel	Scientist Animal Science	KVKs DOF -Training on Fisheries	Online	Online	22-12-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	KVKs DOF -Training on Fisheries	Online	Online	22-12-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	Hi-Tech Cultivation of Vegetables & Grafting in Vegetables (Dutch Technology)	Online	Online	24-12-2020
Mr. B. M. Vahunia	Scientist Crop Protection	PP-RAG (Crop Protection) meeting	Navsari	Offline	27-12-2019
All Staff	Senior Scientist & Head, Scientist	KVK, Waghai Review meeting	KVK, Waghai	Offline	01-01-2020
All Staff	Senior Scientist & Head, Scientist	KVK, Waghai Review meeting	KVK, Waghai	Offline	17-01-2020
All Staff	Senior Scientist & Head, Scientist	19 Scientific Advisory Meeting	KVK, Waghai	Offline	23-01-2020
All Staff	Senior Scientist & Head, Scientist	KVK, Waghai Review meeting	KVK, Waghai	Offline	24-01-2020
Mr. H. A. Prajapati	Scientist Horticulture	Awareness programme by WDRA, New delhi and	kvk,waghai	Offline	20-01-2020
Mr. H. A. Prajapati	Scientist Horticulture	Awareness programme on AMI , Gandhinagar	kvk,waghai	Offline	20-01-2020
Mr. H. A. Prajapati	Scientist Horticulture	Same field, Better Yield: Understanding on Current and Emerging Technologies for Doubling farmers Income	Sher-e-Kashmir University of Agricultural Science & Technology of Kashmir, Shalimar, Srinagar (J & K) – 190 025	Offline	03-02-2020 to 23-02-2020 (21 days winter school)
All staff	Senior Scientist & Head, Scientist	Global Potato Conclave-2020	College of Agriculture, Waghai	Online	28-01-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting	KVK, waghai	Offline	07-02-2020
All staff	Senior Scientist & Head, Scientist	ATMA Conversation Meeting	KVK, waghai	Offline	11-02-2020
Mr. B. M. Vahunia	Scientist Crop Protection	Subhash Palekar Prakrutik Kheti	NAU, Campus , Navsari	Offline	09-02-2020

Mr. B. M. Vahunia	Scientist Crop Protection	AGRESCO (Plant Protection)	Seminar hall, NMCA, NAU, Navsari	Offline	14-02-2020
Mr. B. M. Vahunia	Scientist Crop Protection	AGRESCO (Plant Protection)	Seminar hall, NMCA, NAU, Navsari	Offline	15-02-2020
Mr. J. B. Dobariya	Scientist Extension Education	AGRESCO (Social Science group)	Dep.of Ext.Edu., COA, NAU., Navsari	Offline	27-02-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting	KVK, waghai	Offline	12-03-2020
Dr. P. P. Javiya	Scientist Crop Production	16th NRM-AGRESCO	N.M. college of Agriculture NAU, Navsari	Offline	5,6-03-2020
All staff	Senior Scientist & Head, Scientist	KVK Review Meeting	KVK, waghai	Offline	04-03-2020
Mr. H. A. Prajapati	Scientist Horticulture	AGRESCO Horticulture subcommitee meeting	ACHF, NAU,Navsari	Offline	03,04-03-2020
Dr. G. G. Chauhan	Senior Scientist & Head Extension Education	National Conference	New delhi	Online	28,29-2-2020 to 1-3-2020

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

Name of the village	Total No. of families surveyed	Key interventions implemented	No. of farmers covered in each intervention	Change in income (Rs/unit)	
				Before	After
Borpada and Dokpatal	120	Frmers trainings, FLD, Extention activities	120	47000	65000

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

S. No.	Name of the programme	No. of villages adopted	Key activities performed	No. of activities carried out	No. of families covered
1	PKVY	2	Training	2	50

19. 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	
-	-	-	-	-	-	-	-	-

20. Details of SAP

S. No.	Types of major Activity conducted- SwachhtaPakhwada, Cleaning, Awareness Workshop, Miccobial based Agricultural Waste Management by Vermicomposting etc.	No. of Programmes conducted	No. of Participants
1	Taking Swachhata pledge, Lecture deliver , create awareness among farmer	1	29
2	Cleanliness drive including cleaning of offices, corridors and premises. Review of progress on weeding out old records, disposing of old and obsolete furniture's, junk materials and white washing/painting.	1	37
3	Sanitation and SWM, Cleanliness and sanitation drive in the villages.	1	40
4	stock taking of biodegradable and non-biodegradable waste and Lecture deliverd on swachhta pakhwada	1	70
5	Promoting organic farming practices in kitchen garden of residential colonies at near by village	1	47
6	Awareness on recycling of waste water, Water harvesting for agriculture/horticulture and Lecture Deliver on swachhta	1	101
7	Lectured deliver on safe disposal of all kind of wastes and expert talk on awareness of cleaning in village	1	28
8	Celebration of Kisan Diwas-23 December and Felicitating farmers by official for exemplary intiative on Swachhta	1	46
9	Swachhta awreness at local level, lecture deliver	1	27
10	Cleaning of Public place and Nearby Tourist place (Botanical Garden Waghai)	1	16
11	Swachhta Pakhwada	1	13
12	Swachhta Pakhwada	1	26
13	Swachhta Pakhwada	1	42
14	Swachhta Pakhwada	1	61
15	Swachhta Pakhwada	1	33
16	Swachhta Pakhwada	1	10

21. 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	36	612	395	1007
Rural youths	-	-	-	-
Extension functionaries	9	128	118	246
Sponsored Training	25	439	415	854
Vocational Training	4	24	93	117
Total	**74**	**1203**	**1021**	**2224**

2. Frontline demonstrations

Enterprise	No. of Farmers	Area(ha)	Units/Animals
Oilseeds	-	-	-
Pulses	8	90.56	402
Cereals	10	32.16	215
Vegetables	-	-	-
Other crops	-	-	-
Hybrid crops	-	-	-
Total	18	122.72	617
Livestock & Fisheries	6	160	16
Other enterprises	1	35	35
Total	7	195	51
Grand Total	25	317.72	668

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	06	52	52
Livestock	02	20	60
Various enterprises	-	-	-
Total	08	72	112
Grand Total	**08**	**72**	**112**

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	734	41033
Other extension activities	-	-
Total	**734**	**41033**

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						
		Crop	Livestock	Weather	Marke-ting	Aware-ness	Other enterprise	Total
KVK, Waghai	Text only	60	10	1	0	256	131	458
	Voice only	-	-	-	-	-	-	-
	Voice & Text both	-	-	-	-	-	-	-
	Total Messages	**60**	**10**	**1**	**0**	**256**	**131**	**458**
	Total farmers Benefitted	**17875**	**6196**	**3845**	**0**	**125608**	**159299**	**312823**

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	85.00	-
Planting material (No.)	23867	-
Bio-Products (kg)	-	-
Livestock Production (No.)	-	-
Fishery production (No.)	-	-

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	338	-
Water	2	-
Plant	51	-
Total	**391**	**-**

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	11
2	Conferences	01
3	Meetings	46
4	Trainings for KVK officials	06
5	Visits of KVK officials	-
6	Book published	-
7	Training Manual	-
8	Book chapters	-
9	Research papers	01
10	Lead papers	-
11	Seminar papers	-
12	Extension folder	06
13	Proceedings	-
14	Award & recognition	-
15	On going research projects	00