

PROFORMA FOR PREPARATION OF ANNUAL REPORT (April-2016-March-2017)

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	94	1851	1540	3391
Rural youths	5	22	66	88
Extension functionaries	5	66	42	108
Sponsored Training	40	857	1027	1884
Vocational Training	5	22	66	88
Total	149	3818	2741	5559

2. Frontline demonstrations

Enterprise	No. of Farmers	Area (ha)	Units/Animals
Oilseeds	24	7	--
Pulses	295	73.4	--
Cereals	163	23	--
Vegetables	70	12	--
Other crops	164	34.6	--
Hybrid crops	--	--	--
Total	716	150	--
Livestock & Fisheries	32	--	32
Other enterprises	190	--	190
Total	222	--	222
Grand Total	938	150	222

3. Technology Assessment & Refinement

Category	No. of Technology Assessed & Refined	No. of Trials	No. of Farmers
Technology Assessed			
Crops	6	83	83
Livestock	2	75	225
Various enterprises	--		
Total	8	158	308
Technology Refined			
Crops	--	--	--
Livestock	--	--	--
Various enterprises	--	--	--
Total	--	--	--
Grand Total	8	158	308

4. Extension Programmes

Category	No. of Programmes	Total Participants
Extension activities	535	94360
Other extension activities	11056	11056
Total	11591	105416

5. Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Awareness	Other enterprise	
	Text only	6	2	5	5	5	11	34
	Voice only	--	--	--	--	--	--	--
	Voice & Text both	--	--	--	--	--	--	--
	Total Messages	6	2	5	5	5	11	34
	Total farmers Benefitted	7697	2402	7259	7243	5821	17900	48322

6. Seed & Planting Material Production

	Quintal/Number	Value Rs.
Seed (q)	354.11	587616
Planting material (No.)	3320	7295
Bio-Products (kg)	--	--
Livestock Production (No.)	--	--
Fishery production (No.)	--	--

7. Soil, water & plant Analysis

Samples	No. of Beneficiaries	Value Rs.
Soil	690	12500
Water	--	--
Plant	--	--
Total	690	12500

8. HRD and Publications

Sr. No.	Category	Number
1	Workshops	3
2	Conferences	2
3	Meetings	12
4	Trainings for KVK officials	11
5	Visits of KVK officials	0
6	Book published	0
7	Training Manual	0
8	Book chapters	0
9	Research papers	4
10	Lead papers	0
11	Seminar papers	1
12	Extension folder	11
13	Proceedings	0
14	Award & recognition	0
15	On going research projects	2

DETAIL REPORT OF APR-2016-17

1. GENERAL INFORMATION ABOUT THE KVK

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

Address	Telephone		E mail
	Office	FAX	
Krishi Vigyan Kendra, Navsari Agricultural University, Ahwa road, Waghai, Tal: Waghai, District: Dang, Gujarat-394730	02631-246239	02631-246239	kvkwaghai@nau.in

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

Address	Telephone		E mail/Website
	Office	FAX	
Navsari Agricultural University, Eru Char Rasta, Dandi Road, Navsari, Gujarat, 396450	02637-282823 02637-282026	02637-284254 02637282706	dee@nau.in www.nau.in

1.3. Name of the Programme Coordinator with phone & mobile No

Name	Telephone / Contact		
	Residence	Mobile	Email
I/C: Sri V.K.Desai	02631-246239	9979908974	vkdesai@nau.in kvkwaghai@nau.in

1.4. Year of sanction: 1984

Indian Council of Agriculture Research, New Delhi, Letter No.1177/Gujarat-4/84 kvk/23rd October, 1984

1.6. Total land with KVK (in ha) :

S. No.	Item	Area (ha)
1.	Under Buildings	--
2.	Under Demonstration Units	--
3.	Under Crops	4.00
4.	Orchard/Agro-forestry	1.97
5.	Others (specify)	--
Total		5.97

1.5. Staff Position (as on 30th March, 2017)

Sl. No.	Sanctioned post	Name of the incumbent	Designation	Discipline	Pay Scale (Rs.)	Pay scale (Rs.)	Present basic (Rs.)	Date of joining	Permanent /Temporary	Category (SC/ST/OBC/ Others)	Mobile No.	Age	Email id
1	Senior scientist and head	Vacant	Senior scientist and head	-	37400-67000	--	-	-	-	-	-	-	-
2	Scientist(1)	Mr. V. K. Desai	Scientist	Plant Pathology	15600-39100	6000	19050	06.05.2011	Temporary	Others	9979908974	40	vkdesai@nau.in
3	Scientist(2)	Mr. N. M. Thesia	Scientist	Agronomy	15600-39100	6000	18320	16.05.2012	Temporary	Others	9426536161	35	nmthesiya@nau.in
4	Scientist(3)	Mr. H.A.Prajapati	Scientist	Horticulture	15600-39100	6000	15600	13.02.2017	Temporary	Others	9429430999	28	prajapatiharshad20@gmail.com
5	Scientist(4)	Dr. D. B. Bhoi	Scientist	Vet.Gynaec & Obste.	15600-39100	6000	19050	04.04.2011	Temporary	OBC	9925253536	36	drdbbhoi@nau.in
6	Scientist(5)	Mr. J.B.Dobariya	Scientist	Extension Education	15600-39100	6000	15600	20.08.2015	Temporary	Others	9724761097	29	dobariyajignesh@yahoo.com
7	Scientist(6)	Smt. N. N. Patel	Scientist	Home Science	15600-39100	6000	17610	02.01.2014	Temporary	OBC	8128681276, 9586902216	29	nitalnpatel@gmail.com
8	Programme Assistant	Mr. P.M Sankhla	Programme Assistant		13700 Fix			23.09.2015	Temporary	OBC	9998419095	25	prakashmohanlalmali@gmail.com
9	Farm Manager	Mr. K.V.Patel	Farm Manager		13700 Fix			24.09.2015	Temporary	ST	9687788642	24	Kasyapvpatel2@gmail.com
10	Computer Programmer	Mr.G.R.Rathod	Programme Assistant		9300-34800	4400	18280	01.02.2017	Temporary	ST	7874009051	55	
11	Accountant / superintendent	Smt. B.N.Patel	O.S. -cum- Accountant		9300-34800	4200	14840	01.12.2016	Temporary	OBC	9426892745	52	
12	Stenographer	Vacant	Jr.steno-cum-comp.operator		5200-20200		-	-	-	-			
13	Driver	Vacant	Driver/mech-Tractor		5200-20200		-	-	-	-			
14	Driver	Vacant	Driver/ Mech-Jeep		5200-20200		-	-	-	-			
15	Supporting staff	Vacant	Peon		4440-7440		-	-	-	-			
16	Supporting staff	Mr. D. N. Parmar	Peon		4440-7440	1300	5180	19.06.2006	Temporary	ST		36	

1.7. Infrastructural Development:

A) Buildings

S. No.	Name of building	Source of funding	Stage					
			Complete			Incomplete		
			Completion Year	Plinth area (Sq.m)	Expenditure (Rs.)	Starting year	Plinth area (Sq.m)	Status of construction
1.	Administrative Building	ICAR	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 (2)	----	--	--	--	--	--	--
5	Fencing	----	--	--	--	--	--	--
6	Rain Water harvesting system	----	--	--	--	--	--	--
7	Threshing floor	ICAR	2012	84	2.00	--	--	--
8	Farm godown	ICAR	2011	12	3.00	--	--	--

B) Vehicles

Type of vehicle	Year of purchase	Cost (Rs.)	Total kms. Run	Present status
Jeep (one) GJ 15 G 415	1999	343156	3,79,945	Auction was completed at dated 16-03-2017 (Amount Rs. 50000/-) and urgently need another vehicle
Motorcycle Hero Honda Splendour (SPREDRKCC)	2011	50755	14726	working
Mobile Soil testing van GJ-21 T-6881	2009-10	2630000	7296	working

C) Equipments & AV aids

Sr.No.	Name of the equipment	Year of purchase	Cost (Rs.)	Present status
1	Camera (Soni-Digital)	5.1.2001	27100/-	Working
2	Digital camera	03.01.2009	19038/-	Working
3	Fax maschine	30.3.2010	--	Working
4	Generator set (Honda)	26.3.2010	49600/-	Working
5	EPBAX system	24.2.2011	49868/-	Working
6	Plough (Heavy duty)	18.2.2011	19000/-	Working
7	Rotavator	14.3.2011	63400/-	Working
8	Vivitek Multimedia DLP projector	14.3.2011	99990/-	Working
9	Winnowing fan	27.2.2011	6900/-	Working
10	Power sprayer	4.2.2011	24150/-	Working

11	Power tiller	24.3.2011	148785/-	Working
12	Cultivator	3.3.2011	20700/-	Working
13	Two-way-leveller	3.3.2011	12600/-	Working
14	Thresher	17.2.2011	18000/-	Working
15	Seed cum fertilizer drill	17.2.2011	36100/-	Working
16	Scale (Weghing)	18.2.2011	6000/-	Working
17	PROTON Impact	28.3.2011	35600/-	Working
18	Trailor (For Power tiller)	28.3.2011	26500/-	Working
19	Submersible pump ISIV-6	07.03.2014	18,750/-	Working
20	Digital mini lab	23.11.2015	75000/-	Working
21	Tractor	04.12.2015	581228/-	Working
22	Paddy winnowing fane	29-02-2016	42200/-	Working
23	Rotary power tiller	18-03-2016	98500/-	Working
24	Desk top computer (Lenova)	21-03-2016	38775/-	Working
25	HP printer	28-03-2016	10999/-	Working
26	Tractor Trailer	29-03-2016	117000/-	Working
27	M.B.Plugh	20-02-2017	30400/-	Working
28	RO with cooler(100 Liter)	23-02-2017	79000/-	Working
29	Lenovo computer(All in one)	07-03-2017	46199/	Working
30	Laser Printer(All in one)	07-03-2017	25800/-	Working
31	Voltas AC	08-03-2017	72000/-	Working
32	Ricoh make digital photocopier machine	10-03-2017	150000/-	Working
33	Mrida parishak soil testing minilab kit	15-03-2017	90300/-	Working
34	Multi crop thresher	16-03-2017	210000/-	Working
35	Kiosk Information thin client based free standing type model	23-03-2017	90250/-	Working

1.8. A). Details SAC meeting* conducted in the year

Sl.No.	Date	Name and Designation of Participants	Salient Recommendations	Action taken
1.	04-03-2017	1. Dr. C.J. Dangaria, Hon'ble Vice-chancellor, NAU, Navsari 2. Dr. G.R. Patel Director of Extension Education, NAU, Navsari And other members as per Annexure -I	Replace IR-28 for demonstration and seed production purpose with new recommended varieties GNR-7.	
			Take new released varieties GNR-7 for paddy, GJG 5 for gram and GNP-2 & BSMR-711 for pigeon pea for front line demonstration.	
			Create awareness regarding new crops like pineapple, strawberry for crop diversification.	
			To investigate the reasons for shrinkage of harvested turmeric rhizomes after boiling for processing purpose in the dang district.	
			Create awareness on scientifically cultivation of mushroom in dang district and give training for value addition and marketing of mushroom.	
			Popularize dang <i>Nagli</i> biscuit in all over the Gujarat state for the prevention of malnutrition.	
			Take services of government approval manpower agency for dang district for taking services for class-3 and class-4 vacant posts	
			For organic farming, recommendation may be obtained from concern department at N.A.U, Navsari and COA, Waghai.	

* Attach a copy of SAC proceedings along with list of participants

2. DETAILS OF DISTRICT (2016-17)

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

S N	Farming system/enterprise	
1	Cereals	Paddy, Finger millet, Little millet, Sorghum, Maize, Wheat.
2	Pulses	Gram, Black gram, Pigeon pea.
3	Oilseeds	Groundnut, Niger, Soybean.
4	Végétales	Okra, Brinjal, Cucurbite, Tomato
5	Fruit Crops	Mango, Cashewnut, Castard Apple.
6	Floriculture	Marigold and Rose
7	Others	Tuber crops
8	Live Stock	Dangi breed of cow for draft purpose, HF cow for milk and Buffaloes for milk and draft Purpose

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

S.N	Agro-climatic Zone	Characteristics
1	<i>South Gujarat Heavy Rainfall Zone-I Agro Ecological Situation-I</i>	Dangs district is comes under <i>South Gujarat Heavy Rainfall Zone-I Agro Ecological Situation-I</i> having total 172366 ha land. Out of that, 53.74% is occupied with forest and only 33.80% of land comes under cultivated 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 <i>kharif</i> are Paddy, Finger millet, little millet, Sorghum, Black gram etc. Some more information regarding the district is given below.

2.3 Soil type/s

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. 1. Area, Production and Productivity of major crops cultivated in the district

Source: DAO, Ahwa (Dangs)-presentation in 25th ZREAC at NAU, Navsari (October. 2016)

S. No	Crop	Area (ha)	Production (MT.)	Productivity (kg/ha)
1	Paddy (Driilled)	557	--	1648
2	Paddy (T.P)	20588	--	3376
3	Finger millet	7575	--	792
	Little millet	6580	--	820
4	Sorghum	1743	--	866
5	Maize	2728	--	1020
6	Black Gram	5358	--	872
7	Pigeon Pea	2963	--	1241
8	Soybean	3106	--	1124
9	Ground nut	2755	--	1185
10	Niger	1240	--	362
	<i>Kharif Total</i>	55193	--	
11	Gram	20154	-	-

12	Wheat	2556	-	-
13	Pigeon pea	2271	-	-
14	Val	97	-	-
15	Peas	172	-	-
16	Sugarcane	164	-	-
	Rabi-Total	25414	-	-

2.4.2 Area, Production and Productivity of major horticultural crops cultivated in the district (Year 2016-17)

Source: DHO, Ahwa (Dangs)-presentation in 25th ZREAC at NAU, Navsari

SN	Crop	Area (hs)	Production (Mt)	Productivity (t/ha)
A	Fruit Crops			
1	Mango	4822	28932	6.00
2	Sapota	27	299	11.07
3	Banana	24	984	41.00
4	Custard Apple	105	803	7.65
5	Amla	21	130.41	6.21
6	Cashew	1303	4601	3.53
7	Others	84	659	7.85
	Total	6386	36408	--
B	Vegetable crops			
1	Onion	545	21337	39.15
2	Brinjal	623	10591	17.00
3	Okra	1247	18705	15.00
4	Tomato	347	7669	22.10
5	Cowpea	123	103.9	8.45
6	Cucurbitaceous	763	9232	12.10
7	Others	2031	45596	22.45
	Total	5679	113233	--
C	Spices			
1	Chilly (Dry)	5	8	1.60
2	Chilly (Green)	285	6998	24.55
3	Turmeric	235	5405	23.0
	Total	525	12411	--
D	Flower crops			
1	Rose	51	410	8.04
2	Marigold	128	1126	8.80
3	Others	14	110	7.86
	Total	193	1646	--
E	Medicinal crops			
1	Safed Musli	17	35	2.06
	Total	17	35	-
G	Others			
1	Other fruits & veg.	136	1020	52.04
	Grand Total (A+B+C+D+E+G)	12936	164753	-

2.5. Weather data

Month	Rainfall (mm)	Temperature ° C		Relative Humidity (%)	Rainy Days
		Maximum	Minimum		
Jan-2016	00	31.2	10.5	68	00
Feb-2016	00	33.4	12.5	67	00
Mar-2016	00	36.5	16.6	57	00
April-2016	00	38.1	19.8	62	00
May-2016	00	39.0	24.8	64	00
June-2016	34	36.5	27.3	75	04
July-2016	868	28.9	24.6	87	26
Aug-2016	1061	29.1	24.2	88	23
Sept-2016	395	29.7	23.2	87	14
Octo-2016	32.0	31.8	18.9	88	05
Nov-2016	0.0	33.3	11.8	62	00
Dec-2016	0.0	32.9	11.0	62	00
Total	2390	33.3	18.8	72	72

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

Category	Population	Productivity
<i>Crossbred</i>	10720	2000 to 2500 lit//cow
<i>Indigenous</i>	60095	900 lit//cow
Buffalo	21927	1300 lit/cow
Crossbred	--	--
<i>Indigenous</i>	--	--
Goats	32317	400 lit
Pigs		
<i>Crossbred</i>	--	--
<i>Indigenous</i>	165	--
Rabbits	115	--
Poultry- Desi	155090	82 eggs/year
Poultry-Improved	1820	198 Egg/Annum
Ducks	645	160 Egg/Annum
Turkey and others	--	--
Fish & others	Nil	Nil

2.7 Details of Operational area / Villages (2016-17)

S N	Distri ct	Name of the block	Name of the villages	Major crops & enterprises	Major problem identified	Identified Thrust Areas
1	Dang	Waghai	Daguniya	Cereals: Paddy, Finger millet, Little millet Pulses: Gram, Black gram, Tur Oilseeds: Groundnut, Niger Vegetables: Okra Fruit crops: Mango, Custard apple Floriculture: Rose and Marigold Others: Tuber crops Animal Husbandry	-Use of traditional variety - Poor quality of seed -Improper use of fertilizers - Lack of awareness about plant protection measures -Scarcity of fodder - Repeat breeders, Anoestrus conditions - Less interest in dairy business	- Promoting Animal husbandry, horticultural crops - Use of recommended variety - Promotion of scientific package of practices - Create awareness about plant protection -Use of farm mechanization -Scientific feeding management - Artificial Insemination - Awareness about dairy enterprise
			Sadarmal			
			Ghodi			
			Tekpada			
		Ahwa	Lahanchrya			
			Motacharya			
			Kandalghodi			
		Subir	Amsarpada			
			Bijurpada			
			Khambhla			

2.8 Priority/thrust areas

Crop/Enterprise	Thrust area
Rice	Integrated Nutrient Management
	Introduction of new variety
	Water management
	Integrated Pest and Disease Management
Nagli / vari	Introduction of new variety
	Soil moisture conservation
	Integrated Nutrient Management
Pulses	Soil moisture conservation
	Integrated Pest and Disease Management
Oilseeds (Groundnut, Niger)	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 technology.
- Increasing milk production by dissemination of latest technology.
- Management of Natural Resources
- Empowerment of tribal women for sustaining livelihood
- Popularization of suitable farming system
- Value addition & Farm mechanization
- Protected cultivation and high-tech agriculture
- Integrated farming system

3. TECHNICAL ACHIEVEMENTS

3. A. Details of target and achievements of mandatory activities by KVK during 2016-17

OFT (Technology Assessment and Refinement)				FLD (Oilseeds, Pulses, Cotton, Other Crops/Enterprises)				
1				2				
Number of OFTs		Total no. of Trials		Area in ha			Number of Farmers	
Targets	Achievement	Targets	Achievement	Season/Year	Targets	Achievement	Targets	Achievement
8	8	158	158					
--				1. Rabi-Sum., 2015-16	46 ha & 100 units	46 ha & 100 units	257	257
				2. Kharif, 2016	35.6 ha & 50 units	35.6 ha & 50 units	185	185
				Total (1+2)	81.6 ha & 150 units	81.6 ha & 150 units	442	442
				3. Other Schemes (Rabi-2015-16)	173.14 ha	173.14 ha	537	537
				4. Kharif-16	4.0 ha & 20 units	4.0 ha & 20 units	120	120
				Total (3+4)	177.14 ha & 20 units	177.14 ha & 20 units	657	657
				Grand Total	258.74 & 170 units	258.74 & 170 units	1099	1099

Training (including sponsored, vocational and other trainings carried under Rainwater Harvesting Unit)					Extension Activities			
3					4			
Number of Courses			Number of Participants		Number of activities		Number of participants	
Clientele	Targets	Achievement	Targets	Achievement	Targets	Achievement	Targets	Achievement
Farmers	65	94	1625	3391	563	11591	7436	105416
Rural youth	3	5	75	88				
Extn. Functionaries	3	5	75	108	--			
Sponsored	34	40	850	1884				
Vocational	4	5	75	88				
Total	109	149	2700	5559				

Seed Production (Qtl.)			Planting material (Nos.)		
5			6		
Target	Achievement	Distributed to no. of farmers	Target	Achievement	Distributed to no. of farmers
85	354.11	511	3320	3320	5

I.A TECHNOLOGY ASSESSMENT

Summary of technologies assessed under various crops by KVKs

Thematic areas	Crop	Name of the technology assessed	No. of trials	No. of farmers
Integrated Nutrient Management				
Varietal Evaluation	Okra	Varietal evaluation of okra during <i>Rabi</i> season in the Dangs	6	6
Integrated Pest Management	Okra	Control of sucking pest in okra	5	5
Integrated Crop Management	Green gram	Spacing management in summer green gram	30	30
Integrated Disease Management	Finger millet	Control of blast disease of Finger millet in the Dangs	6	6
Small Scale Income Generation Enterprises				
Weed Management	Watermelon	Mulching in watermelon	6	6
Resource Conservation Technology				
Farm Machineries				
Integrated Farming System	Gram	Seed bed preparation for <i>Rabi</i> gram	30	30
Seed / Plant production				
Post Harvest Technology / Value addition				
Drudgery Reduction				
Storage Technique				
Others (Pl. specify)				
Total			83	83

Summary of technologies assessed under livestock by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology assessed	No. of trials	No. of farmers
Disease Management				
Evaluation of Breeds				
Feed and Fodder management	crossbred cattle	To study effect of feeding urea treated paddy straw and mineral mixture on milk production and general health in crossbred cattle	50	150
Nutrition Management	crossbred cattle	Studies on bypass fat feeding and mineral supplementation on milk production in crossbred cattle.	25	75
Production and Management				
Others (Pl. specify)				
Total			75	225

Summary of technologies assessed under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers
--	--	--	--	--

I.B. TECHNOLOGY REFINEMENT

Summary of technologies refined under various crops by KVKs

Thematic areas	Crop	Name of the technology refined	No. of trials	No. of farmers
Integrated Nutrient Management	--	--	--	--
Varietal Evaluation	--	--	--	--
Integrated Pest Management	--	--	--	--
Integrated Crop Management	--	--	--	--
Integrated Disease Management	--	--	--	--
Small Scale Income Generation Enterprises	--	--	--	--
Weed Management	--	--	--	--
Resource Conservation Technology	--	--	--	--
Farm Machineries	--	---	--	--
Integrated Farming System	--	--	---	--
Seed / Plant production	--	--	--	--
Value addition	--	-	--	--
Drudgery Reduction	--	--	--	--
Storage Technique	--	--	--	--
Others (Pl. specify)	--	--	--	--
Total			--	--

Summary of technologies refined under various livestock by KVKs

Thematic areas	Name of the livestock enterprise	Name of the technology refined	No. of trials	No. of farmers
Disease Management	--	--	--	--
Evaluation of Breeds	--	--	--	--
Feed and Fodder management	--	--	--	--
Nutrition Management	--	--	---	--
Production and Management	--	--	--	--
Others (Pl. specify)	--	---	--	--
Total			--	--

Summary of technologies refined under various enterprises by KVKs

Thematic areas	Enterprise	Name of the technology assessed	No. of trials	No. of farmers
--	--	--	--	--

Note: Suppose **IPM in paddy** is the technology refined by 50 KVKs in the Zone with 5 trials by each KVK, then IPM in paddy needs to be considered as a single technology, with $50 \times 5 = 250$ trials and No. of KVKs will be 50. In addition, please note that even if IPM in paddy is done with various combinations of Technology Options (treatments), it may be considered as a single technology only.

I.C. TECHNOLOGY ASSESSMENT AND REFINEMENT IN DETAIL

RESOURCE CONSERVATION

Problem definition: Low yield of paddy.

Technology Refined: Seed bed preparation of *Kharif paddy*.

The KVKs of Waghai, in Gujarat conducted on-farm trial on seed bed preparation of *Kharif paddy*. The seedbed treatment gave higher paddy yield with resource conserving than flat bed and Adar treatment.

Table 1 *Effect of different treatment on average yield and income of paddy*

Technology Option	No. of trials	Yield (qt/ha)	Net Returns (Rs./ha)	BC Ratio
Adar system	30	29.71	19065	1.74
Flat bed		33.68	25020	1.98
Seed bed		32.16	22740	1.89

SPACING MANAGEMENT

Problem definition: Low yield of groundnut.

Technology Refined: Spacing management in summer **groundnut**.

The KVKs of Waghai, in Gujarat conducted on-farm trial on spacing management in summer groundnut. The 30cm between two rows gave higher groundnut yield with income than rest of the treatments.

Table 2 *Effect of different treatment on yield and income of groundnut*

Technology Option	No. of trials	Yield (qt/ha)	Net Returns (Rs./ha)	BC Ratio
Random sowing by hoe	10	23.00	33500	2.39
20cm between row		24.54	37350	2.55
30cm between row		26.83	43075	2.79

SPACING MANAGEMENT

Problem definition: Low yield of **okra** crop in winter due to inappropriate spacing and imbalance use of fertilizers.

Technology Assessed: Evaluation of different spacing in okra during Rabi season in the Dangs.

KVK, Dangs in Gujarat conducted on-farm trial to **assess** the effect of different crop spacing on yield and net return in okra during the Rabi season. The paired row sowing of okra at 30 x 30 x 60 cm had realized a maximum net return of Rs. 0.62 lakh/ha as compared to the normal spacing and farmers practices with net returns of Rs. 0.60 and 0.50 lakh/ha, respectively.

Table-3: Performance of okra at different spacings.

Technology Option	No. of trials	Yield (t/ha)	Net Returns (Rs. in /ha)	BC Ratio
T ₁ : 30 x 10 cm (Farmers practices)	6	85.13	50830	2.48
T ₂ : 45 x 30 cm (Normal spacing)		95.72	60520	2.72
T ₃ : 30 x 30 x 60 cm (Paired row sowing)		97.68	62180	2.75

SPACING MANAGEMENT

Problem definition: Low yield of **watermelon** crop due to narrow spacing and imbalance use of fertilizers.

Technology Assessed: Evaluation of different spacing in watermelon in the Dangs.

KVK, Dangs in Gujarat conducted on-farm trial to **assess** the effect of different crop spacing on yield and net return in watermelon during the summer season. The paired row sowing of watermelon at 0.6 x 1.0 x 3.4 m had realized a maximum net return of Rs. 1.52 lakh/ha as compared to the normal spacing and farmers practices with net returns of Rs. 1.42 and 1.13 lakh/ha, respectively.

Table-4: Performance of watermelon at different spacings.

Technology Option	No. of trials	Yield (t/ha)	Net Returns (Rs. In akh./ha)	BC Ratio
T ₁ : 1.0 x 0.5 m (Farmers practices)	6	151.74	113340	3.95
T ₂ : 2.0 x 1.0 m (Normal spacing)		181.08	142080	4.64
T ₃ : 0.6 x 1.0 x 3.4 m (Paired row sowing)		193	152500	4.77

PEST AND DISEASE MANAGEMENT

Problem definition: : Control of sucking pest in okra.

Technology Assessment: Okra sucking pest infestation and resistance to recommended insecticide among sucking pest adopted by farmers.

Treatments:

T1 : Farmer's practices

T2 : Dimethoate-30 % EC @ 10 ml/10 lit. of water as per ETL

T3 : Acetamiprid-20% S.P. @ 10 g/10 lit. of water as per ETL

Details of OFT Programme: No. of Villages : 3, No. of farmers : 5, Size of plot/treat/farmer: 0.20 ha.

Total OFT area: 3.0 ha

Results:

Treatments	(First year, Rabi-2014)			(Second year, Rabi-2015)		
	Yield (Qtl/ha)			Yield (Qtl/ha)		
	T ₁	T ₂	T ₃	T ₁	T ₂	T ₃
Highest	85	90	<u>95</u>	88	92	<u>96</u>
Lowest	75	82	<u>85</u>	80	85	<u>90</u>
Average	80	86	<u>90</u>	83.4	89	<u>94</u>

Summary: (First year, Rabi-2014)

From the above table, treatment T₃ (spraying of acetamiprid-20% W.P. @ 10 g/10 lit. of water as per ETL) in okra recorded highest average yield of 90.00 qtl/ha and the lowest yield of 80.00 qtl/ha was observed under T₁ (farmers practices). Whereas, T₂ also recorded higher yield than farmer's practices but was next to T₃.

Summary: (Second year, Rabi-2015)

From the above table, treatment T₃ (spraying of acetamiprid-20% W.P. @ 10 g/10 lit. of water as per ETL) in okra recorded highest average yield of 94.00 qtl/ha and the lowest yield of 83.4 qtl/ha was observed under T₁ (farmers practices). Whereas, T₂ also recorded higher yield than farmer's practices but was next to T₃.

PEST AND DISEASE MANAGEMENT

Problem definition: Control of blast disease of Finger millet in the Dangs

Technology Assessed: Control of blast disease of Finger millet in the Dangs

Treatments:

T1:Farmers practice

T2:Spray of Tricyclazole 75%W.P.@8gm/10 litre of water

T3:Spray of Pseudomonas sp.@60ml/10 litre of water

Details of OFT Programme:

No. of Villages: 3,

No. of farmers: 6,

Size of plot/treat/farmer: 0.20 ha. Total OFT area: 2.4 ha

Results: (Second year, 2015)**(Average of 5 farmers)**

Treatments	Yield (Kg/ha)		
	T ₁	T ₂	T ₃
Highest	850	1000	<u>1100</u>
Lowest	750	720	<u>850</u>
Average	750	920	<u>1020</u>

Summary:

From the above table, treatment T₃ (Spray of Pseudomonas sp.@60ml/10 litre of water) in finger millet recorded highest average yield of 1020 kg/ha and the lowest yield of 750 kg/ha was observed under T₁ (farmers practices). Whereas, T₂ also recorded higher yield than farmer's practices but was next to T₃.

LIVE STOCK ENTERPRISES

Problem definition: To study effect of feeding urea treated paddy straw and mineral mixture on milk production and general health in crossbred cattle.

Technology Assessed: Effect of feeding urea treated paddy straw and mineral mixture on milk production and general health in crossbred cattle of dang district of Gujarat state.

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 use of agricultural by-products and crop residues as feed resource with cereal straws contributing 45 - 66 % of the feed consumed by the dairy animals (Kelley and Parthasarathy Rao 1996; Ranjhan 1999, Parthasarathy Rao and Hall 2003). Dang district of Gujarat is a heavy rainfall area and major crop is paddy. Hence, animal owners fed their animals with such roughages.

The value of paddy straws to bovines is limited by low voluntary intake, slow rate of digestion and low content of available energy, protein, minerals and vitamins. Extensive research has been carried out, for several decades, on improving nutritive value of paddy straws for livestock using physical, chemical and biological treatments and varying degree of success has been reported from technical aspect; however, economic benefit and social acceptance of these technologies have been very limited (Rangnekar, 2005). Urea treatment (4%) of paddy straws is one of the technologies that has been strongly recommended for field application and tried extensively. Urea treatment is reported to improve the nutritive value of paddy straws by increasing digestibility, palatability and crude protein content (Ranjhan, 1999; Israel and Pearson 2000).

Treatments:

T 1 - Farmer's practice (Paddy straw without urea treatment)

T 2 - Paddy straw with urea treatment (6-8 kg/cow/day)

T 3 - Paddy straw with urea treatment (6-8 kg/cow/day) + Mineral mixture supplementation @ 35gm/cow/day.

Parameters to be evaluated/ recorded:

- Milk production (lit / cow / day)

RESULTS:-2015-16

Milk Production (Lit/cow/day)	T1	T2	T3
Highest	6.7	7.2	8.1
Lowest	2.5	4.2	6.5
Average	5.0	5.6	7.6

RESULTS 2016-17:- Result awaited

LIVE STOCK ENTERPRISES

Problem definition: Low milk production in crossbred cattle.

Technology Assessed: Low milk production in crossbred cattle of Dang district of Gujarat state

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 lactating animals are to be fed with good quality roughages along 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 a lactating animal. Hence we have to add more nutritious food in to the diet of crossbred animals to reach the maximum production potential 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, bypass fat feeding technology is recommended for high yielding 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.

By-Pass Fat is the most energy dense nutrient available; however, fats with low melting points are already liquid in the rumen and can depress rumen fiber digestion and affect intake as well as reducing the absorption of magnesium and calcium. The deleterious effects of fats on rumen activity can be overcome with the use of by-pass fats. By-pass fats do not interfere with rumen function because they have a higher melting point enabling fat particles to bypass the rumen unaffected and to be absorbed in the small intestine.

In view of bypass fat feeding technology it is necessary to popularize in Dangs district along with concentrate feeding in cattle to fulfill energy and nutrient requirement. Hence, we have proposed this on farm testing to increase the milk production of crossbred cattle.

Problems:

- ✓ Lack of knowledge about bypass fat feeding technology.
- ✓ Low milk production due to improper feeding.
- ✓ Lack of energy for milk production.

Treatments:

T 1 - Farmer's practice

T 2 -Concentrate (1.5kg/cow/day for maintenance+500gm for each lit.milk production)

T 3 - Concentrate (1.5kg/cow/day for maintenance+500gm for each lit.milk production) + Bypass fat 50-100gm/cow/day.

Parameters to be evaluated/ recorded:

- Milk production (lit / cow / day)

RESULIS:- 2015-16

Milk Production (Lit/cow/day)	T1	T2	T3
Highest	6.6	8.7	14.2
Lowest	2.5	7.0	11.0
Average	3.1	7.6	13.3

RESULIS 2016-17 :- Result awaited

II. FRONTLINE DEMONSTRATION

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

List of technologies demonstrated during previous year and popularized during 2015-16 and recommended for large scale adoption in the district

S. No	Crop/ Enterprise	Thematic Area*	Technology demonstrated	Details of popularization methods suggested to the Extension system	Horizontal spread of technology		
					No. of villages	No. of farmers	Area in ha
1	Paddy	Introduction of new varieties	Improved varieties	FLD, Training, Field Days, Farmers meeting, Exposure visit to KVK farm, Mass media	10	125	9
2	Finger millet	Introduction of new varieties	Improved varieties		1	15	5
3	Green gram	Introduction of new varieties	Improved varieties		10	165	38.4
4	Water melon	Plastic mulch	Weed control and Water saving		2	22	2
5	Mango	IPM	Methylugenol trap		5	45	16
6	Poultry	Introduction of new variety	Popularization of RIR improved poultry birds for backyard farming		10	12	12
7	Farm Mechanisation	Drudgery reduction	Twin wheel hoe		7	30	30

* *Thematic areas as given in Table 3.1 (A1 and A2)*

b. Details of FLDs implemented during 2016-17 (Information is to be furnished in the following three tables for each category i.e. cereals, horticultural crops, oilseeds, pulses, cotton and commercial crops.)

S N	Crop	Thematic area	Technology Demonstrated	Season and year	Area (ha)		No. of farmers/ demonstration			Reasons for shortfall in achievement
					Proposed	Actual	SC/ ST	Others	Total	
I Oilseed crops										
1	Groundnut	Introduction of new variety	New variety-TG-37A	Rabi & Summer-2015-16	5	5	15	-	15	--
2	Niger	Intro. of new variety	New variety-GN-2	Kharif, 2016-17	5	5	15	--	15	--
II Pulse crops										

Continue.....

3	Gram	Introduction of new variety	New variety-GG-2	Rabi & Summer-2015-16	10	10	50	--	50	--
4	Green gram	Introduction of new variety	New variety-Meha	Rabi & Summer-2015-16	10	10	30	--	30	--
5	Pigeon pea	Intro. of new variety	New variety-Vaishali	Kharif, 2016-17	5	5	15	--	15	--
III Cereal crops										
6	Paddy	Intro. of new variety	New variety-GNR-3	Kharif, 2016-17	5	5	25	--	25	--
7	Finger millet	Intro. of new variety	New variety-GNN-6	Kharif, 2016-17	5	5	15	--	15	--
8	Little millet	Intro. of new variety	New variety-GV-2	Kharif, 2016-17	5	5	15	--	15	--
IV Horticultural crops										
9	Okra	INM	INM	Rabi & Summer-2015-16	5	5	10	-	10	-
10	French bean	INM	INM	Rabi & Summer-2015-16	5	5	25	-	25	-
11	Watermelon	INM	INM	Rabi & Summer-2015-16	5	5	10	-	10	-
12	Turmeric	Intro. of new variety	New variety-Sugandham, NVST-1 and biofertilizer	Kharif, 2016-17	1.6	1.6	32	-	32	-
V Plant Protection										
13	Gram	Disease management	Trichoderma	Rabi & Summer-2015-16	2	2	6	-	6	
14	Okra	Pest management	Yellow sticky trap	Rabi & Summer-2015-16	2	2	5	--	5	--
15	Mango	Pest management	Nauroji fruit fly trap	Rabi & Summer-2015-16	2	2	6	--	6	--
16	Finger millet	Pest management	Tricyclazole	Kharif, 2016-17	4	4	8	--	8	--
17	Paddy	Pest management	Pheromone trap	Kharif, 2016-17	5	5	10	--	10	--

Continue.....

#	FLDs under other schemes (Other than KVK-ICAR Budget): Adaptive Trial (Phase-II), DGR, NRCG, Junagadh, Pulse production, ZPD, Jodhpur, Mega seed TSP									
I	Oilseed									
18	Niger	Intro. of new variety	New variety-GN-2	Rabi & Summer-2015-16	1	1	25	--	25	--
19	Groundnut	Introduction of new variety	New variety-TG-37A	Rabi & Summer-2015-16	20	20	100	-	100	--
II	Pulse crops									
20	Gram	Introduction of new variety	New variety-GG-2	Rabi & Summer-2015-16	2.08	2.08	13	--	13	--
21	Green gram	Introduction of new variety	New variety-Meha	Rabi & Summer-2015-16	58.8	58.8	136	--	136	--
22	Green gram	Introduction of new variety	New variety-Meha	Rabi & Summer-2015-16	20	20	50	--	50	--
23	Green gram	Introduction of new variety	New variety-Meha	Rabi & Summer-2015-16	4	4	37	--	37	--
II	Cereal crops									
24	Paddy	Intro. of new variety	New variety-GNR-4	Kharif, 2016-17	4	4	100	--	100	--
III	Horticultural crops									
25	Indian bean	Intro. of new variety	New variety-NPS-1/GNIB-1	Rabi & Summer-2015-16	0.5	0.5	5	--	5	--
26	Watermelon	RCT & weed management	Plastic Mulch	Rabi & Summer-2015-16	1.76	1.76	21	--	21	--
IV	Plant Protection									
27	Mango	INM	Novel(Banana pseudo stem cell sap)	Rabi & Summer-2015-16	50	50	100	--	100	--
28	Mango	Pest management	IPDM	Rabi & Summer-2015-16	10	10	30	--	30	--

Details of farming situation

Crop	Season	Farming situation (RF/Irrigated)	Soil type	Status of soil			Previous crop	Sowing date	Harvest date	Seasonal rainfall (mm)	No. of rainy days
				N	P	K					
Oilseed crops											
Groundnut	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	20 to 30 /1/2016	10 to 30 /5/2016	00	00
Niger	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
Pulse crops											
Gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	20 to 25 /11/2015	20 to 28 /2/2016	00	00
Green gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	01 to 10 /2/2016	01 to 10 /5/2016	00	00
Pigeon pea	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram	20 to 30 /7/2016	10 to 30 /1/2017	2356	68
Cereal crops											
Paddy	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram, Green gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
Finger millet	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram, Green gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
Little millet	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram, Green gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
Horticultural crops											
Okra	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	4 th week of Nov, 2015	1 st week of March 2016	00	00
French bean	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	4 th week of Nov., 2015	3 rd week of Feb., 2016	00	00
Watermelon	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	1 st week of Jan, 2016	1 st week of April, 2016	00	00
Turmeric	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram, Green gram	1 to 30 /05/2016	01 to 28/02/2017	2390	72
Plant Protection											
Gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	20 to 25 /11/2015	20 to 28 /2/2016	00	00

Continue.....

Okra	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	2 nd week of Nov.2015	1 st week of March 2016	00	00
Mango	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	--	Existing	May 2016	00	00
Finger millet	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram, Green gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
Paddy	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
#. FLDs under other schemes (Other than KVK-ICAR Budget): Adaptive Trial (Phase-II)											
Oilseed crops											
Niger	Rabi & Summer-2015-16	Rain fed	Lateritic black Hilly	H	M	H	Paddy, Ragi	20 to 25 /11/2015	20 to 28 /2/2016	00	00
Groundnut	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	20 to 30 /1/2016	10 to 30 /5/2016	00	00
Pulse crops											
Gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	20 to 25 /11/2015	20 to 28 /2/2016	00	00
Green gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	01 to 10 /2/2016	01 to 10 /5/2016	00	00
Green gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	01 to 10 /2/2016	01 to 10 /5/2016	00	00
Green gram	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy, Ragi	01 to 10 /2/2016	01 to 10 /5/2016	00	00
Cereal crops											
Paddy	Kharif, 2016-17	Rain fed	Lateritic black Hilly	H	M	H	Gram	25 to 30 /7/2016	10 to 30 /11/2016	2356	68
Horticultural crops											
Indianbean	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	1 st week of Jan, 2016	1 st week of April, 2016	00	00
Watermelon	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	Paddy	1 st week of Jan, 2016	1 st week of April, 2016	00	00
Plant Protection											
Mango	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	--	Existing	May 2016	00	00
Mango	Rabi & Summer-2015-16	Irrigated	Lateritic black Hilly	H	M	H	--	Existing	May 2016	00	00

Technical Feedback on the demonstrated technologies

S. N	Feed Back
1	Improved hand tools for various agricultural operations in hilly area.
2	Need to develop proper post harvest chain from farm to market.
3	French bean variety suitable for Dang district.
4	Availability of plastic mulch in Dang district
5	Immediate 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.
6	After feeding of Poshak aahar to preschool children health and nutritional status improved
7	Improved Suruchi sickle help to reduce Drudgery in terms of time, physical hazard and work efficiency
8	Need to develop proper post harvest chain from farm to market.
9	Frozen semen doses for A.I. should be developed for Dangi cows.
10	Non availability of good quality agro-chemicals for pest as well as weed control.
11	Requirement of false smut & blast resistant variety in Paddy.
12	Need processing unit for Finger millet & Little millet.
13	Need to introduction of new crops like strawberry, sunflower, pineapple and tuber crops
14	Extra income generated by selling extra vegetables grown in Kitchen garden.

Farmers' reactions on specific technologies

S. N	Feed Back
1	Meha is excellent variety with good yield
2	TG 37 A variety of groundnut superior than GG 11
3	Ox drawn seed cum fertilizer drill excellent for sowing of various seed.
4	Line sowing of green gram gave better yield than broadcasting.
5	Wilt problem in Gram that reduce plant population & ultimately affect the yield.
6	Good yield of watermelon with plastic mulch application as compared to without plastic.
7	Problem bud/flower drop was reported in okra.
8	Mineral mixture feeding to dairy cattle resulted in increased milk production and overall good health.
9	Feeding of urea treated paddy straw is more palatable without wastage with increased milk production.
10	Feeding of bypass fat resulted in to increased milk production in cross bred cattle
11	Good quality fodder can be produced with a multi cut sorghum variety CSV 21 F.
12	Use of Chaff cutter resulted in to prevention of wastage in forage feeding.
13	Poshak Aahar easily prepared from easily available food material at home.
14	Suruchi sickle increase work efficiency and time saving
15	Need for sucking pest tolerant/resistant variety in Okra
16	Need high yielding blast disease resistant variety in Finger millet/Paddy
17	GNR 3 performed well in hilly area
18	Novel organic fertilizer performed well and gave good results relevant to pulse crop
19	Increase seed availability for newly released varieties at village level
20	In Finger millet, GNN 6 variety is performing well as compared to GN-4
21	Good yield of turmeric in both the varieties of Sugandham and NVST-1
22	Fodder variety of sorghum CSV 21 F is yielding good quality fodder.
23	Maximum utilization of backyard space and waste water for kitchen garden.
24	Due to demonstration farm women start growing 6 to 8 types of vegetables other than vine vegetables in scientific way in kitchen garden
25	Through Kitchen garden they get benefit of fresh and organic vegetables at low cost.

Extension and Training activities under FLD

Sl.No.	Activity	No. of activities organised	Date	Number of participants	Remarks
1	Field days	18	--	217	--
2	Farmers Training	94	--	3391	--
3	Training for extension functionaries	05	--	108	-

PERFORMANCE OF FRONTLINE DEMONSTRATIONS

A. Frontline demonstrations on oilseed crops:

Crop	Thematic Area	Technology demonstrated	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Increase in yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Average										
Groundnut	Intro. of new variety	New variety	TG-37A	15	5	25	22	23.56	19.17	22.90	24000	58900	34900	2.45	20000	47925	27925	2.40
Niger	Intro. of new variety	New variety	GN 2	15	5	4.12	3.94	4.02	3.55	13.24	2500	6030	3530	2.41	2100	4260	2160	2.03

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

B. 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										
Gram	Intro. of new variety	New variety	GG-2	50	10	10.5	9	9.72	7.67	26.73	12500	34020	21520	2.72	11000	26845	15845	2.44
Green gram	Intro. of new variety	New variety	Meha	30	10	8.5	7.2	7.69	6.33	21.48	11500	34605	23105	3.01	10000	28485	18485	2.85
Pigeon pea	Intro. of new variety	New variety	Vaishali	15	5	10.52	10	10.2	8.5	20.00	9000	24480	15480	2.72	8000	20400	12400	2.55

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

C. FLDs on Other crops:

Category & Crop	Thematic Area	Name of the technology	Variety	No. of Farmers	Area (ha)	Yield (q/ha)				% Change in Yield	Economics of demonstration (Rs./ha)				Economics of check (Rs./ha)			
						Demo			Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Ave.										
Cereal crops																		
Paddy	Intro. of new variety	New variety	GNR 3	25	5	32.4	31.2	31.34	26.36	18.89	25500	53278	27778	2.09	22500	44812	22312	1.99
Finger millet	Intro. of new variety	New variety	GNN 6	15	5	10.67	10.33	10.46	9.33	12.11	6000	15690	9690	2.62	5500	13995	8495	2.54
Little millet	Intro. of new variety	New variety	GV 2	15	5	11.18	10.85	10.97	9.66	13.56	6000	16455	10455	2.74	5500	14490	8990	2.63

Continue.....

Horticultural crops																		
Okra	INM	Integrated nutrient management	Hybrid	10	5	105	92	102	87	17.24	40155	122400	82245	3.05	39250	104400	65150	2.66
French bean	INM	Integrated nutrient management	Local	25	5	33	29	31	26.5	16.98	28200	124000	95800	4.40	26800	106000	79200	3.96
Watermelon	INM	Integrated nutrient management	Hybrid	10	5	190	175	181	154	17.53	41500	144800	103300	3.49	39200	123200	84000	3.14
Turmeric	Intro. of new variety	New variety	Sugandham, NVST-1 and biofertilizer	32	1.6	190	160	170	150	13.33	111500	425000	313500	3.81	99000	375000	276000	3.79
Plant Protection																		
Gram	Disease management	Trichoderma	GG-2	6	2	11.2	9.8	10.5	9.9	6.06	12600	36750	24150	2.92	11000	34650	23650	3.15
Okra	Pest management	Yellow sticky trap	Hybrid	5	2	105	75	90	85	5.88	42000	108000	66000	2.57	39250	102000	62750	2.60
Mango	Pest management	Nauroji fruit fly trap	Mixed	6	2	62	40	55	52	5.77	50000	96250	46250	1.93	49500	91000	41500	1.84
Finger millet	Diseases management	Tricyclazole	Mixed	8	4	95.2	91.1	93.12	82.5	12.87	30000	32585	2585	1.09	28400	28875	475	1.02
Paddy	Pest management	Pheromone trap	Hybrids	10	5	33.4	33.4	30.6	27.5	11.27	21875	46950	25075	2.15	20000	40800	20800	2.04

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

** BCR= GROSS

Continue.....

D. FLDs under other schemes (Other than KVK-ICAR Budget):

Category & Crop	Thematic Area	Name of the technology	Variety	No. of Farmers	Area (ha)	Yield (q/ha)			Check	% Change in Yield	Economics of demonstration (Rs./ha)			
						Demo					Gross Cost	Gross Return	Net Return	BCR (R/C)
						High	Low	Ave.						
Oilseed														
Niger	Intro. of new variety	New variety	GN 2	25	1	9.2	8.5	8.85	NA	--	4000	10500	6500	2.63
Groundnut	Intro. of new variety	New variety	TG-37A	100	20	24.2	22.56	23.38	NA	--	24000	58450	34450	2.44
Pulse crops														
Gram	Intro. of new variety	New variety	GG-2	13	2.08	10.55	7.23	8.89	NA	--	12500	31115	18615	2.49
Green gram	Intro. of new variety	New variety	Meha	136	58.8	8.1	6.74	7.42	NA	--	11500	33390	21890	2.90
Green gram	Intro. of new variety	New variety	Meha	50	20	8.5	7.5	7.88	NA	--	11500	39400	27900	3.43
Green gram	Intro. of new variety	New variety	Meha	37	4	8.1	6.74	7.42	NA	--	11500	30080	18580	2.62
Cereal crop														
Paddy	Intro. of new variety	New variety	GNR 4	100	4	31.32	30.46	30.89	NA	--	25500	53890	28390	2.11
Horticultural crops														
Indian bean	Intro. of new variety	New variety	NPS-1/GNIB-1	5	0.5	5.6	5.1	5.3	NA	--	35200	132500	97300	3.76
Watermelon	WM & RCT	Plasti Mulch	Hybrid	21	1.76	196	175	189	NA	--	43300	151200	107900	3.49
Plant Protection														
Mango(Novel banana pseudo stem cell sap)	Nutritional management	Novel	Mixed	100	50	62	50	56	NA	--	50000	82500	32500	1.65
Mango	Pest and diseases management	IPDM	Mixed	30	10	63	47	55	NA	--	50000	82500	32500	1.65

Continue.....

E. FLDs on Livestock:

Category	Thematic area	Name of the technology demonstrated	No. of Farmer	No. of Units (Animal/Poultry/Birds, etc)	Major parameters		% change in major parameter	Economics of demonstration (Rs.)				Economics of check (Rs.)			
					Demo	Check		Gross Cost	Gross Return	Net Return	BCR (R/C)	Gross Cost	Gross Return	Net Return	BCR (R/C)
Paddy-Straw	Nutrition enhancement	Urea treatment (lit-milk/cow/day)	Crossbred	20	6.4	5.5	16.36	1200	1400	200	1.17	800	900	100	1.13
Mineral mixture	Nutrition enhancement	Mineral mixture feeding (lit-milk/cow/day)	Crossbred	20	6.1	5.3	15.09	1500	3500	2000	2.33	1000	2000	1000	2.0
#. FLDs under other schemes (Other than KVK-ICAR Budget):															
Cattle	Nutrition	Bypass fat (lit-milk/cow/day)	Crossbred	20	11.3	9.45	19.58	2000	3200	1200	1.60	1500	2300	800	1.53
Sorghum-Fodder	Intro. of new variety	New variety	CSV 21 F	20	5	400	NA	23000	82000	59000	3.57	--	--	--	--
Sorghum-Fodder	Intro. of new variety	New variety	CSV 21 F	20	5	385	NA	23500	80000	56500	3.40	--	--	--	--

F. FLDs on Fisheries: Nil**G. FLD on Other enterprises:** Nil**I. FLD on Farm Implements and Machinery:** Nil

Continue.....

J. 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)
Vegetable crops	Nutrition	Kitchen garden	20	20	102	NA	NA	--	--	1020	4088	3068	4.01	NA	NA	NA	NA
Vegetable crops	Nutrition	Kitchen garden	50	50	81	NA	NA	--	--	1050	3645	2595	3.47	NA	NA	NA	NA

K. FLD on Demonstration details on crop hybrids (*Details of Hybrid FLDs implemented during 2015-16*): Nil.

FLD on Women Empowerment

Category	Name of technology	No. of demonstrations	Name of observations	Demonstration	Check
Poshak Aahar	Nutrition	20	Increase body weight	7.2 kg	3.3 kg
Solar cooker	Use of solar power	10	Fuel saving per month	Rs 6720/month	Rs 2675/month

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	Harvesting	Total	Land preparation	Labor	Irrigation	Total
Paddy harvesting	NA	Suruchi sickle	20	20	Drudgery reduction	0.0065	0.0079	21.53	-	-	3	3	-	675	-	675

FLD on Demonstration details on crop hybrids (*Details of Hybrid FLDs implemented during 2016-17*): Nil

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

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			38	0	38	38	0	38
Group dynamics	2			48	31	79	48	31	79
Formation and Management of SHGs	1			4	47	51	4	47	51
Mobilization of social capital	1			19	6	25	19	6	25
Entrepreneurial development of farmers/youths	2			56	70	126	56	70	126
WTO and IPR issues	2			20	77	97	20	77	97
Others (pl specify)									
Total	9			185	231	416	185	231	416
XI Agro-forestry									
Production technologies									
Nursery management									
Integrated Farming Systems									
Total									
GRAND TOTAL	64			1220	1231	2451	1220	1231	2451

Ornamental Plants										
Others (pl specify)										
Total (c)										
d) Plantation crops										
Production and Management technology	1		0	44	28	72	44	28	72	
Processing and value addition										
Others (pl specify)										
Total (d)	1			44	28	72	44	28	72	
e) Tuber crops										
Production and Management technology	1			19	2	21	19	2	21	
Processing and value addition										
Others (pl specify)										
Total (e)	1			19	2	21	19	2	21	
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			149	120	269	149	120	269	
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	1			10	13	23	10	13	23	
Poultry Management										
Piggery Management										
Rabbit Management										
Animal Nutrition Management										
Disease Management	2			32	27	59	32	27	59	

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			0	17	10	27	17	10	27
Group dynamics										
Formation and Management of SHGs										
Mobilization of social capital	1			0	27	2	29	27	2	29
Entrepreneurial development of farmers/youths										
WTO and IPR issues										
Others (pl specify)										
Total	2				44	12	56	44	12	56
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total	0									
GRAND TOTAL	30				631	309	940	631	309	940

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	2				55	10	65	55	10	65
Group dynamics	2				48	31	79	48	31	79
Formation and Management of SHGs	1				4	47	51	4	47	51
Mobilization of social capital	2				46	8	54	46	8	54
Entrepreneurial development of farmers/youths	2				56	70	126	56	70	126
WTO and IPR issues	2				20	77	97	20	77	97
Others (pl specify)										
Total	11				229	243	472	229	243	472
XI Agro-forestry										
Production technologies										
Nursery management										
Integrated Farming Systems										
Others (pl specify)										
Total										
GRAND TOTAL	94	0	0	0	1851	1540	3391	1851	1540	3391
Grand Total	104				1939	1648	3587	1939	1648	3587

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

Thematic area	No. of courses	No. of Participants								
		General			SC/ST			Grand Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
Nursery Management of Horticulture crops	1				0	15	15	0	15	15
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture	1				10	6	16	10	6	16
Mushroom Production	1				0	35	35	0	35	35
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology	1				0	10	10	0	10	10
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production	1				12	0	12	12	0	12
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	5				22	66	88	22	66	88

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

Training for Rural Youths including sponsored training programmes – 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
Nursery Management of Horticulture crops	1				0	15	15	0	15	15
Training and pruning of orchards										
Protected cultivation of vegetable crops										
Commercial fruit production										
Integrated farming										
Seed production										
Production of organic inputs										
Planting material production										
Vermi-culture	1				10	6	16	10	6	16
Mushroom Production	1				0	35	35	0	35	35
Bee-keeping										
Sericulture										
Repair and maintenance of farm machinery and implements										
Value addition										
Small scale processing										
Post Harvest Technology	1				0	10	10	0	10	10
Tailoring and Stitching										
Rural Crafts										
Production of quality animal products										
Dairying										
Sheep and goat rearing										
Quail farming										
Piggery										
Rabbit farming										
Poultry production	1				12	0	12	12	0	12
Ornamental fisheries										
Composite fish culture										
Freshwater prawn culture										
Shrimp farming										
Pearl culture										
Cold water fisheries										
Fish harvest and processing technology										
Fry and fingerling rearing										
Any other (pl.specify)										
TOTAL	5				22	66	88	22	66	88

Training programmes for Extension Personnel including sponsored training programmes (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	1				19	0	19	19	0	19
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	1				23	2	25	23	2	25
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	1				6	40	46	6	40	46
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	1				18	0	18	18	0	18
Household food security										
Any other (pl.specify)										
TOTAL	4				66	42	108	66	42	108

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

Training programmes for Extension Personnel including sponsored training programmes – 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	1				19	0	19	19	0	19
Integrated Pest Management										
Integrated Nutrient management										
Rejuvenation of old orchards										
Protected cultivation technology	1				23	2	25	23	2	25
Production and use of organic inputs										
Care and maintenance of farm machinery and implements										
Gender mainstreaming through SHGs										
Formation and Management of SHGs										
Women and Child care	1				6	40	46	6	40	46
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	1				18	0	18	18	0	18
Household food security										
Any other (pl.specify)										
TOTAL	4				66	42	108	66	42	108

Table. 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	8				205	148	353	205	148	353
Commercial production of vegetables	5				135	110	245	135	110	245
Production and value addition										
Fruit Plants	2				49	98	147	49	98	147
Ornamental plants										
Spices crops										
Soil health and fertility management	2				66	54	120	66	54	120
Production of Inputs at site										
Methods of protective cultivation	1				32	5	37	32	5	37
Others (pl. specify) Plant protection	5				78	132	210	78	132	210
Total	23				565	547	1112	565	547	1112
Post harvest technology and value addition										
Processing and value addition	2				0	66	66	0	66	66
Others (pl. specify)										
Total	2				0	66	66	0	66	66
Farm machinery										
Farm machinery, tools and implements	1				29	0	29	29	0	29
Total	1				29	0	29	29	0	29
Livestock and fisheries										
Livestock production and management	1				14	30	44	14	30	44
Animal Nutrition Management	2				97	15	112	97	15	112
Animal Disease Management	1				0	76	76	0	76	76
Fisheries Nutrition										
Fisheries Management										
Others (pl. specify) Health care of dairy cattle	1				18	18	36	18	18	36
Total	5				129	139	268	129	139	268
Home Science										
Household nutritional security	3				33	53	86	33	53	86
Economic empowerment of women										
Drudgery reduction of women										
Total	3				33	53	86	33	53	86
Agricultural Extension										
Capacity Building and Group Dynamics	6				101	222	323	101	222	323
Others (pl. specify)							0	0	0	0
Total	6				101	222	323	101	222	323
GRAND TOTAL	40				857	1027	1884	857	1027	1884

Name of sponsoring agencies involved

FTC, ATMA, Dept of Agri/Horti/Ani Hus

Details of vocational training programmes carried out by KVKs for rural youth

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										
Organic farming	1				10	6	16	10	6	16
Others (pl. specify)										
Total	1				10	6	16	10	6	16
Post harvest technology and value addition										
Value addition	1				0	10	10	0	10	10
Others (pl. specify)										
Total	1				0	10	10	0	10	10
Livestock and fisheries										
Dairy farming										
Composite fish culture										
Sheep and goat rearing										
Piggery										
Poultry farming	1				12	0	12	12	0	12
Others (pl. specify)										
Total	1				12	0	12	12	0	12
Income generation activities										
Vermicomposting	1				0	15	15	0	15	15
Production of bio-agents, bio-pesticides, bio-fertilizers etc.										
Repair and maintenance of farm machinery and implements										
Rural Crafts										
Seed production										
Sericulture										
Mushroom cultivation	1				0	35	35	0	35	35
Nursery, grafting etc.										
Tailoring, stitching, embroidery, dyeing etc.										
Agril. para-workers, para-vet training										
Others (pl. specify)										
Total	2				0	50	50	0	50	50
Agricultural Extension										
Capacity building and group dynamics										
Others (pl. specify)										
Total										
Grand Total	5				22	66	88	22	66	88

IV. Extension Programmes

Activities	No. of programmes	No. of farmers	No. of Extension Personnel	TOTAL
Advisory Services	34	38236	0	38236
Diagnostic visits	25	88	0	88
Field Day	18	217	0	217
Group discussions	5	196	1	197
Kisan Ghosthi	4	303	0	303
Film Show	9	414	5	419
Self -help groups	2	34	0	34
Kisan Mela	5	12286	35	12321
Exhibition	3	10616	20	10636
Scientists' visit to farmers field	59	447	0	447
Plant/animal health camps	2	44	0	44
Farm Science Club	0	0	0	0
Ex-trainees Sammelan	0	0	0	0
Farmers' seminar/workshop	5	4138	0	4138
Method Demonstrations	13	235	0	235
Celebration of important days	9	4558	0	4558
Special day celebration	9	4558	0	4558
Exposure visits	3	102	0	102
Others (pl. specify)	330	17827	61	17888
Total	535	94299	61	94360

Details of other extension programmes

Particulars	Number
Electronic Media (CD./DVD)	
Extension Literature	11000
News paper coverage	5
Popular articles	2
Radio Talks	3
TV Talks	0
Animal health camps (Number of animals treated)	44
Others (pl. specify)	2
Total	11056

Mobile Advisory Services

Name of KVK	Message Type	Type of Messages						Total
		Crop	Livestock	Weather	Marketing	Aware-ness	Other enterprise	
Dang	Text only	6	2	5	5	5	11	34
	Voice only	--	--	--	--	--	--	--
	Voice & Text both	--	--	--	--	--	--	--
	Total Messages	6	2	5	5	5	11	34
	Total farmers Benefitted	7697	2402	7259	7243	5821	17900	48322

V. DETAILS OF TECHNOLOGY WEEK CELEBRATIONS

Name of KVK	Dang				
Number of Technology weeks celebrated	Types of Activities	No. of Activities	No. of Participants	Related crop/livestock technology	No. of other agencies involved
1	Gosthies	5	504	Oilseed , Vegetable, PPV & FRA	15
	Lectures organised	54	4138	Organic farming, Plant protection	8
	Exhibition	21	4138	Crop, Machinery and latest Technology	5
	Film show	5	1104	Success story of progressive farmer	10
	Fair	1	4138	Krishi mela on women empowerment and animal husbandry symposium	11
	Farm Visit	5	897	Rabi crops & demonstration units like tomato under net house, Drip & Mulching technologies	14
	Diagnostic Practicals	3	504	Pest & Disease in Rabi crops	12
	Distribution of Literature (No.)	15	4138	Folder and Leaf let	9
	Distribution of Seed (q)	1	95	New varieties of green gram Meha	5
	Distribution of Planting materials (No.)	0	0	0	
	Bio Product distribution (Kg)	0	0	0	
	Bio Fertilizers (q)	0	0	0	
	Distribution of fingerlings	0	0	0	
	Distribution of Livestock specimen(No.)	0	0	0	
	Total number of farmers visited the technology week			4138	

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

Production of seeds by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Quantity of seed (q)	Value (Rs)	Number of farmers
Cereals	Wheat	GW-496	--	21.45	38610	19
	Paddy	IR-28	--	57.18	161170	73
	Paddy	GR-7	--	53.75	144160	54
	Paddy	GNR-4	--	2.1	6300	100
Oilseeds	Groundnut	General	--	0.69	3450	
Pulses	Green gram	Meha	--	11.66	128260	215
	Gram	GG-2	--	3.2	20800	40
Vegetables	Watermelon	General		9.13	13695	7
Fodder crop seeds	Wheat Fodder	--	--	25	3497	1
	Pulse Fodder	--	--	10	4500	1
	Rice Fodder	--	--	118.04	37259	1
Others (Fruit Crop)	Mango	Keshar		4.37	10925	0
	Mango	Local	--	2.26	1694	0
	Mango	Rajapuri	--	0.78	1092	0

	Mango	Langdo	--	1.25	3125	0
	Mango	Totapuri	--	28.45	3129	0
	Mango	Sardar	--	0.8	720	0
	Mango	Amrapali	--	2.4	2880	0
	Mango	Vathibathmi	--	1	1000	0
	Mango	Dasherri	--	0.6	1350	0
	Total		--	354.11	587616	511

Production of planting materials by the KVKs

Crop	Name of the crop	Name of the variety	Name of the hybrid	Number	Value (Rs.)	Number of farmers
Vegetable seedlings	Drum stick			520	7035	3
	Tomato			650	260	2
	Brinjal			2150	860	5
Total				3320	8155	10

Production of Bio-Products: Nil

Production of livestock materials: Nil

VII. DETAILS OF SOIL, WATER AND PLANT ANALYSIS

Samples	No. of Samples	No. of Farmers	No. of Villages	Amount realized (Rs.)	No. of soil health cards distributed
Soil	690	690	10	12500	690
Water	--	--	--	--	--
Plant	--	--	--	--	--
Manure	--	--	--	--	--
Others (pl.specify)	--	-	--	--	--
Total	690	690	10	12500	690

VIII. SCIENTIFIC ADVISORY COMMITTEE

Name of KVK	Date of SAC Meeting	Participants
Dang	04-03-2017	22(As per Annexure-I)

IX. NEWSLETTER/MAGAZINE

Name of News letter/Magazine	No. of Copies printed for distribution
--	--

X. PUBLICATIONS

Category	Number
Research Paper	4
Technical bulletins	0
Technical reports	73
Popular article	2
Ext.Litterature	11
Abstract	1
Others (pl. specify)Press release	5
Total	96

XIII. DETAILS ON HRD ACTIVITIES

A. HRD activities organized in identified areas for KVK staff by the Directorate of Extension

Participation (Meetin, Seminar, Conferaence, Workshops, Trainings)				
S.N	Date	Title	Type	Place
1	21-04-2016 to 23-04-2016	Establishment of mother culture of different bio control agents and mycorihza	Training	National Institute of plant helth Managment, Hyderabad
2	13-05-2016	Krushhi mahotsav orientation programme	Meeting	ATIC,Navsari
3	11-06-2016	Organic farming	Seminar	NAU,Navsari
4	18-07-2016	Training for extension personnel on " Climate change adoption through Agro-textile"	Training	KVK,NAU,Navsari
5	14-07-2016 to 03-08-2016	Recent approaches in crop residue management and value addition for entrepreneurship development	Training	IGFRI-ICAR,Jhansi
6	02-08-2016 to 05-08-2016	Writing for print media and electronic media	Training	EEl, Anand
7	19-10-2016	Live conference with honorable AM	Confererence	NIC, Ahwa
9	14-10-2016	25th ZREAC	Meeting	SSK wall, NAU,Navsari
10	21-10-2016	Research approaches Committee meeting of PG students of FLA	Meeting	ACHF, NAU, Navsari
11	24-10-2016	New approaches and innovative extension programmes for transfer of technology	Interation mmet	SSK wall, NAU,Navsari
12	14-10-2016	Climate change for sustainable development	Confererence	AAU,Anand
13	26-09-2016	AGB, ATMA, Waghai-Ahwa Dang	Meeting	Ahwa
14	08-28 Nov 2016 (21 days)	Advance training (CAFT) on "Advance in production technology of commercial vegetable crops	Training	Dr.Y.S Parmar University of Horticulture & Forest (UHF), Nauni-Solan, Himachal Pradesh
15	04-24 Nov 2016 (21 days)	Use of ICT in Education and Rural development	Winter school	DEE, S.K.Rajasthan Agricultural University, Bikaner, Rajasthan
16	06-12-2016	Monthly review meeting	Meeting	KVK,Vyara

17	30-11-2016	National workshop on Mushroom bio prospecting and its role in women empowerment and social upliftment in tribal area organized by COA, waghai and South forest department, waghai, dang	Workshop	COA, Waghai
18	23-12-2016	Animal husbandry and Organic farming organized by Gujarat association of agri science	Seminar	Gujarat Vidyapith, Ahmedabad
19	17-01-2017	Mango Mormation	Brain Storming Session	ACHF, NAU, Navsari
20	7-15/1/16	Sensitization workshop cum training on “Recent Agricultural engineering Technologies” at CIAE(Central Institute of Agricultural Engineering), Bhopal	Workshop cum Training	Bhopal
21	04-02-2017	ZREAC meeting	Meeting	NAU, Navsari
22	09 & 10-02-2017	AGRESCO(Plant protection)	Meeting	NAU, Navsari
23	13-02-2017	AGRESCO(Social science group)	Meeting	NAU, Navsari
24	24-01-2017	AGRESCO(Vetarnary Sci.)	Meeting	NAU, Navsari
25	04-03-2017	16th Scientific Advisory committee meeting	Meeting	KVK, Waghai
26	06-03-2017	7th BOSS meeting of social science group	Meeting	N.M.Collage, N.A.U., Navsari
27	08 to 10-03-2017	Management of commodity interest group and farmer's organization	Training	ATIC, NAU, Navsari
28	27-03-2017	Entrepreneurship development	Training	Waghai

B. HRD activities organized in identified areas for KVK staff by ATARI

Title of the training programmes	No of programmes	No. of Participants	No. of KVKs involved
Pulse production technology	01	--	--
Total	01	--	--

XIII. STATUS REVOLVING FUNDS


Year	Opening balance as on 1 st April	Income during the year	Expenditure during the year	Net balance in hand as on 1 st April of each year
April 2014 to March 2015	24,90,763.00	4,77,675.00	5,16,976.00	24,51,463.00
April 2015 to March 2016	24,51,463.00	8,33,021.00	21,45,553.00	11,38,931.00
April 2016 to March 2017	11,38,931.00	49,52,897.00	7,40,893.00	53,50,935.00

XIV. CASE STUDIES

Success story-1

Seedbed replaces *Adar system* for raising paddy nursery

N.M.Thesiya, J.B.Dobariya, Dr.D.B.Bhoi, V.K.Desai, N.N.Patel, H.A.Prajapati
(Scientist KVK, Waghai, Dang)

	<p>Name of Villages: Bhavangadh, Davdahad and Chinchod Ta: Waghai Dist: Dangs Gujarat Year: 2015-16</p>
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Problem statement

In dang district, productivity of paddy is low because of unscientific preparation of seedbed for healthy seedlings as well as due to hilly and undulating land and causing severe weed problems, farmers followed traditionally age old method of rabbing for preparation of seedbed (*Adar system*) which consumes lot of natural resources and human energy and deteriorate land and vegetation in the area which ultimately reduces the yield. Bhavangadh, Davdahad and Chinchod are tribal dominated villages situated 30 km away from Krishi Vigyan 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 have prepared seedbed through rabbing (*Adar system*) land which is local practices.

Rabbing (*Adar system*)



Flat bed



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 preparation of seedbed by the farmers. The Scientist (Crop production) carried out on farm trial on 90 farmer's fields of these villages and gave training about seedbed preparation for paddy nursery and production of healthy seedlings. The team of KVK scientist made frequent visits of the farmers' field and guided them accordingly for various operations. The farmers of these villages gave positive response to raise seedbed preparation due to easy and eco friendly method over the rabbing (*Adar system*) and flat seed bed for paddy nursery.

Output

As a result of intervention, the farmers of these villages stop rabbing (*Adar system*) for raising of paddy nursery. This reduces their 40 per cent losses of seedlings due to yellowing. Further due to raise seedbed practices, the uprooting of seedlings, the application of fertilizer and weeding operations were become easy for the farmers which in turn saved labour. The major advantage of this method was increase in yield net return of paddy due to scientific cultivation practices.

Raise bed**Training****Outcome**

In farmer's method/rabbing (*Adar system*) the farmers were got average 2971 kg/ha yield of paddy as against 3368 kg/ha in raise seedbed with an increase of 12 per cent. The net benefit incurred was Rs. 37490 per hectare in raise seedbed of paddy.

Comparison of yield and economics:

Sr.No	Particulars		
1	No. of Trails	30	
2	Area (ha)	3	
Yield and economics:			
Technology	Yield (kg/ha)	Net returns(Rs./ha)	B:C Ration
Rabbing(<i>Adar system</i>)	2971	27978	2.10
Flat bed	3216	32388	2.27
Raise Seed bed	3368	35124	2.38

Impact:

Due to this success, around Bhavangadh, Davdahad and Chinchod villages at least **50 farmers** had adopted this technology. Now days the district administration of Dangs decided to stop this burning practices and they have started campaign regarding "*Adar chodo*" and save environment. The raise seedbed concept not only ensure good quality seedlings for enhancing productivity but also save forest, environment, soil and society from hazardous effect of high temperature due to burning of plant waste, debris and dung.

Success Story-2

Title: Dairy Farming-A boon for tribal women

Dr.D.B.Bhoi, H.A.Prajapati, V.K.Desai, N.M.Thesiya, J.B.Dobariya, N.N.Patel.
(Scientist KVK,Waghai, Dang)

Situation Analysis/Problem Statement

Anjanaben Niteshbhai Dhoom is a woman farmer of Village Sadadmal, Taluka Waghai, District Dangs in Gujarat, educated up to 10th standard and having 7.5 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.



Anjanaben Niteshbhai Dhoom and her Husband Niteshbhai

Village: Sadadmal, Taluka-Waghai, District Dangs -394 730 (Gujarat)

Age: 33 years, Education: 10th Standard, Size of Land holding: 7.5 Acre

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 start it in her village. But for that she has to convince her villagers. Meanwhile her village, Sadadmal was adopted by KVK of the district. A series of animal husbandry activities like meetings, trainings, kisan goshthis, field visits, visit to a dairy co-operative has been started by KVK scientists. Anjanaben and other interested farmers had purchased one HF cross-bred cow worth Rs. 30,000/- by receiving loan with 50% subsidy. They also started a village dairy co-operative. 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, exposure visit etc to deal with the existing problems and observed a positive impact.

Output

At present, Anjanaben 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 7 milking HF crossbred cows, 4 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.

Outcome

Due to adoption of improved practice, her constant efforts and hard work and timely support from KVK and other line departments and Vasudhara dairy she could achieve very impressive growth in dairy farming as per the table-1.

Impact of KVK

Sr. No.	Particulars/ Items	Before KVK intervention (2001)	After KVK intervention (2009-10)
1	Animals own	2-Desi cows 2- Desi Bullocks	7- HF cows 4-Heifers 2 - Calves (HF) 1-Buffalo 2- Bullocks 25 poultry birds
2	Vaccination & De-worming	Not proper	Regular
3	Milk production (day)	Initial 1.5 lit/day	Average-10.5 lit/cow/day She could sold milk of about 66 lit/day i.e. highest income up to Rs. 40,000/- 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	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)	Not good	Rs.15,000-22,000 per month
	Income through selling of self reared HF animals	Nil	Planned in future
12	Modern assets in the house because of dairy farming	Nil	Freeze – 1 TV - 1 Telephone - 1 Motorcycle - 1(Hero Honda)
13	Bank loan	-----	Paying regularly
14	C.B. Ratio		1: 1.56

For the success of dairy farming in tribal areas she believes that it is due to intensive guidance provide by the Scientist of KVK, Dr.D.B.Bhoi as he considering me as a family member. 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.

At present she is paying an instalment of loan worth Rs. 1,500/- regularly to the bank. 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 Anjanaben Niteshbhai Dhoom & 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-3

Title: Economic Empowerment through Innovative Dairy Business
Dr.D.B.Bhoi, V.K.Desai, N.M.Thesiya, H.A.Prajapati, J.B.Dobariya, N.N.Patel.
(Scientist KVK,Waghai, Dang)

Situation Analysis/Problem Statement

Sureshbhai Vadalyabhai Pawar is a farmer of Village-Ghodi, Taluka-Waghai, District-Dangs in Gujarat, educated up to 12th standard and having 5.5 Acre of land. His wife is a housewife. They have three children a son and two daughters. Somehow, they were earning their livelihood by practicing rain fed agriculture in their land. He was growing local and old varieties of Paddy, Vari and Ragi during Kharif season. He had two bullocks and one 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 his family. Therefore, he was in search of some alternate sources of income.



Sureshbhai Vadalyabhai Pawar and his wife Raijuben

Village: Ghodi, Taluka-Waghai, District Dangs -394 730 (Gujarat)
 Age: 48 years, Education: 12th Standard, Size of Land holding: 5.5 Acre

Plan, Implement and Support

He came to know about some welfare schemes for tribal by some sources. First of all he visited a co-operative dairy in a nearby village and he also decided to start it in his village. But for that he has to convince his villagers. Meanwhile his village, Ghodi was adopted by KVK of the district. A series of animal husbandry activities like meetings, trainings, kisan gosthis, field visits, visit to a dairy co-operative has been started by KVK scientists. Sureshbhai and other interested farmers had purchased one HF cross-bred cow worth Rs. 32,000/- by receiving loan with 50% subsidy. They also started a village dairy co-operative and Sureshbhai himself became a secretary. As cross bred cow was a new enterprise for them, they often faced so many troubles for proper guidance. In the beginning he was not able to maintain the proper health of his animals. He started to visit the KVK in order to get the guidance for maintaining the dairy animals. Animal scientist of KVK was impressed to see his keen interest in dairy farming. KVK scientist noted that the farmers of this village were rearing their animals with traditional methods, 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, exposure visit etc to deal with the existing problems and observed a positive impact.

Output

At present, Sureshbhai has adopted scientific concepts to rear his animals as per the suggestions given by KVK scientists. He has extended his farm and today he owned 4 milking HF crossbred cows, 2 heifers and 1 calf. He has constructed a pakka house with manger and a locally made automatic water supply device. He used local materials like simple balties, PVC pipes, valves and PVC water tank for making such automatic watering device. He 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.

Outcome

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

Impact of KVK

Sr. No.	Particulars/ Items	Before KVK intervention (2001)	After KVK intervention (2009-10)
1	Animals own	1-Desi cows 2- Desi Bullocks	4- HF cows 2-Heifers 1 - Calves (HF) 2- Bullocks 25 poultry birds
2	Vaccination & De-worming	Not proper	Regular
3	Milk production (day)	Initial 0.5 lit/day	Average-8 lit/cow/day he could sold milk of about 24 lit/day i.e. highest income up to Rs. 15000/- per month
4	Highest milk production per animal per day	1.2 lit/day	Up to 21 lit/day/animal
5	Anoestrus and repeat breeder problems	Yes	No
6	Inter-calving interval	More than 2.5 yrs	12-15 months
7	Service period	Average-190 days	92 days
8	No. of service per conception rate	7-10	1-2
9	Growth of calves and heifers	Poor	Good
10	Age of first calving	5-6 yrs	34-46 months
11	Economics enhancement Income per month(Net profit)	Not good	Rs.12,000-14,000 per month
	Income through selling of self reared HF animals	Nil	Planned in future
12	Modern assets in the house because of dairy farming	Nil	Freeze – 1 TV - 1 Telephone - 1 Motorcycle - 1(Honda)
13	Bank loan	-----	Paying regularly
14	C.B. Ratio		1: 1.58


For the success of dairy farming in tribal areas he believes that it is due to intensive guidance provide by the Scientist of KVK, Dr.D.B.Bhoi as he considering me as a family member. 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.

At present he is paying an instalment of loan worth Rs. 1,000/- regularly to the bank. He feels that having good genetic potential and dairy characters of HF cross bred animals plays an important key role in dairy business. He also emphasized that after starting the dairy farming he need not to go anywhere for earning employment as well as he could make himself away from the money lender's clutch to satisfy his family needs. Now he can easily manage his all needs due to dairy farming and able to think in advance for the sake of better education to his children.

This outstanding result of dairy farming turned Sureshbhai Vadalyabhai Pawar & his wife from poor farmer to a happy progressive dairy farmer. The success of dairy farming with innovative technologies in resource poor areas is a unique example to generate the employment as well as empower the tribal economy in the country.

Success Story-4

Title: Skill Development Enterprise for Additional Income Generation to Tribal Women: Sewing and Stitching
N.N.Patel, J.B.Dobariya, N.M.Thesiya, V.K.Desai, , H.A.Prajapati, Dr.D.B.Bhoi
(Scientist KVK, Waghai, Dang)

	<p>Name of the farmer: MARTHABEN GOVINDBHAI PAALVE Village: Lahancharya Ta: Ahwa Dist: Dang Age: 27 yrs. Education: 12th pass Land holding: 1.25 acre Farming Experience: 10 yrs Crops Grown: Little millet, Paddy (Raifed)</p>
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1. Situation Analysis/ problem statements:

Dang district is tribal and hilly belt of south Gujarat most of populations dependent on agriculture, animal husbandry and daily wages laborious job. It also consist forest and heavy rainfall area. Due to above reason farmers are not receiving good yield and production in agriculture. Here all farmers have small to medium land holding so, most of people live below poverty line. Tribal women also help in agriculture, animal husbandry and extreme cases have to work as migrant labour outside Dang district. There is no Industrial area in Dang so, after monsoon due to scarcity of water most of families are migrate to other district for their livelihood.

2. Plan, Implement and Support:

KVK, Waghai gives vocational training on various aspects like value addition in fruits and vegetables, Ragi papad making, Ragi product, Pickles making, Bamboo artisan etc. for encourage women for other income generating activities besides agriculture and animal husbandry

One of the vocational training on stitching and sewing was carried out in Lahancharya adopted village of KVK during October' 2015. In which 15 rural middle age women and adolescent girls were actively participated and successfully completed one month training was conducted by KVK, Waghai. On behalf of them 5 to 6 women had purchased her own sewing machine and started stitching and tailoring for additional income each member earns additional net income of Rupees 700.00 to 800.00 per month

3. Output:

This vocational training class was attended by **Smt. Marthaben Govindbhai Paalve (age: 27 yrs.)** before joining the class she repaired torn cloth only. due to lack of proper training she not able to do it confidently for stitching as profession. But, after joining the vocational training she learnt many aspects of stitching, cutting, body measurement, repairing and finishing in tailoring. She also learn to stitch cloth like petticoat, blouse, Skirts, bag, pillow cover, Dress etc. Marthaben and her husband have very small land area for farming and no any milch animals or any other sources for their livelihood so, they do daily wages laborious job in another field for income.

During training class she pay maximum effort in learn cutting, stitching and cloth making. As a result after attending training she started tailoring and her stitch school uniform of girls, blouse, petticoat, Skirts, frock, pillow cover and repair the other torn clothes. Now she earns 150 to 200 Rupees per day as extra income. She becomes confident in this business and feel very relaxes from the economic scarcity. She happily say that "i go ahead and ahead in this profession" from this extra income she plan to purchase new stitching Machine for her.

4. Outcome:

5-6 women from village had purchased her own new sewing machine and started stitching and tailoring for additional income each member earn Rs. 700- 800 per month extra income from it.

5. Impact:

Sr. No.	Particulars	Before KVK intervention (2014-15)	After KVK intervention	
			2015-16	2016-17
1	Stitching and tailoring	Repair of torn clothes	Including repairs of torn cloths she also stitches new clothes like blouse, baby frocks, Skirts, newborn baby wares, Petti coat, pillow cover etc.	Now days she purchase one interlock stitching machine and start saree fall stitching. she start to take order of school uniform stitching of schools nearby her village
2	Income (Rs./month)	500-700	4500 - 5500	7000- 9000

Technical Project

1) Title: Impact of KVK activities in adopted villages of KVK-Dang (Concluded)

Investigator : Mr. J.B.Dobariya, Scientist (Extension Education)
 Mr.V.K.Desai, Senior Scientist & Head , KVK, Waghai, Dang.
 Mr N.M.Thesiya, Scientist (Agronomy)

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 KVK activities 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, 12 Villages of Waghai, Ahwa and Subir taluka were selected purposively from dang district to conduct the study by following the random sampling methods. A total sample of 120 respondents, 10 from each village was selected at random for the study with the help of random sampling methods. 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 three activities like FLD, OFT and training carried out by the personnel of KVKs. Moreover, an adoption and knowledge of recommended agricultural technologies was one of the means accounts as impact of FLD and Training. It was define as the resultant changes occurred due to adoption and knowing of recommended agricultural technologies which are disseminated by KVK in the form of changes those prospered within the beneficiary farmers of adopted village of KVK.

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= 120)

Sr.	Age groups	Category of farmers			
		Beneficiary (n=60)		Non beneficiary (n=60)	
		Number	Per cent	Number	Per cent
1	Young age	08	13.00	04	07.00
2	Middle age	37	62.00	31	52.00
3	Old age	15	25.00	25	41.00
	Total	60	100	60	100

The data in Table 1 revealed that 62.00 per cent of beneficiary and 52.00 per cent of non beneficiary farmers belonged to middle age group, whereas 25.00 per cent of beneficiary and 41.00 per cent of non beneficiary farmers belonged to old age group. Thus, only 13.00 per cent of beneficiary farmers and only 07.00 per cent 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= 120)

Sr.	Level of education	Category of farmers			
		Beneficiary (n=60)		Non beneficiary (n=60)	
		Number	Per cent	Number	Per cent
1	Illiterate	02	03.00	05	08.00
2	Primary level of education	30	50.00	25	42.00
3	Secondary and Higher secondary level of education	26	44.00	27	45.00
4	College level of education and above	02	03.00	03	05.00
	Total	60	100	60	100

It is seen from Table 2 that 50.00 per cent of beneficiary and 42.00 per cent of non beneficiary farmers had educated up to primary level whereas, 44.00 per cent of beneficiary and 45.00 per cent of non beneficiary farmers had Secondary and higher secondary level of education. Only 03.00 per cent of beneficiary and 8.00 per cent of non beneficiary farmers were illiterate. Thus, remaining 03.00 per cent of beneficiary and 05.00 per cent of non beneficiary farmers had educated up to college level.

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 2.00 ha) (ii) Medium farmer (2.01 ha to 4.00 ha) and iii) Big farmer (Above 4.00 ha). The classified data are presented in table 3.

Table 3: Distribution of respondents according to their land holding (n= 120)

Sr.	Land holding	Category of farmers			
		Beneficiary (n=60)		Non beneficiary (n=60)	
		Number	Per cent	Number	Per cent
1	Small & marginal farmer	22	37.00	20	33.00
2	Medium farmer	17	28.00	18	30.00
3	Big farmer	21	35.00	22	37.00
	Total	60	100	60	100

It is observed from Table 3 that less than half beneficiary farmers (37.00%) possessed Small and marginal land holding, followed by big land holding (35.00%) and medium land holding (28.00%), Thus, in case of non beneficiary farmers, (37.00%) respondents had big land holding, followed by small and marginal (33.00%), and medium land holding (30.00%).

1.4 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 4.

Table 4: Distribution of respondents according to their family size (n= 120)

Sr.	Family size	Category of farmers			
		Beneficiary (n=60)		Non beneficiary (n=60)	
		Number	Per cent	Number	Per cent
1	Small size of family (Up to 5 members)	24	40.00	23	38.00
2	Medium size of family (6 to 8 members)	26	43.00	31	52.00
3	Large size of family(Above 8 members)	10	17.00	06	10.00
	Total	60	100	60	100

The data furnished in Table 4 indicated that near half of the beneficiary and non beneficiary farmers (43.00 % and 52.00%, respectively) had medium family size whereas, 40.00 per cent of beneficiary and 38.00 per cent of non beneficiary farmers belonged to small family size. Thus, 17.00 per cent of beneficiary and 10.00 per cent of non beneficiary farmers belonged to large family size.

1.5 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 by Venkatarmaiah (1983). Later on, total score were obtained from the assigned score values.

Table 5: Distribution of respondents according to their Social participation (n=120)

Sr.	Social Participation	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	No membership	15	25.00	20	33.00
2	Membership in one organization	18	30.00	28	47.00
3	Membership in more than one organization	27	45.00	12	20.00
	Total	60	100	60	100

The data furnished in Table 5 indicated that near about one half of beneficiary farmers (45.00%) had belonged to membership in more than one organization, followed by member in one organization (30.00%) and no membership category (25.00%). Whereas, near half of non beneficiary farmer (47.00%) had membership in one organization, followed by no membership (33.00%) and membership in one organization (20.00%) respectively.

1.6 Information input behavior

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 \pm 0.5 SD), and high (above mean score + 0.5 S.D).

Table 6: Distribution of respondents according to their information input behavior (n=120)

Sr.	Level of source of information	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	11	18.00	16	27.00
2	Medium	32	53.00	35	58.00
3	High	17	29.00	09	15.00
	Total	60	100	60	100
		Mean=8.5		Mean=6.28	
		SD=2.93		SD=2.54	

The result seen in Table 6 portrays that near about one half of beneficiary farmers (53.00%) had medium information input behavior, followed by high (29.00%) and meager in low category (18.00%). Whereas, more than half of non beneficiary farmer (58.00%) had moderate information input behavior, followed by low (27.00%) and high (15.00%).

1.7 Farming experience

Farming experience referred as the years spent in farming as well as related enterprise by a respondent. The data in this regard were collected and scores were assigned as suggested by the scale developed by the silvakumar (1988). The score was given to every year of experience of an individual in the farming.

Table 7: Distribution of respondents according to their Farming experience (n=120)

Sr.	Family size	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Lower level of farming experience(Up to 5 years)	02	03.00	02	03.00
2	Medium level of farming experience(6 to 10 years)	16	27.00	11	18.00
3	Higher level of farming experience(Above 10 years)	42	70.00	47	79.00
	Total	60	100	60	100

A glance at Table 7 revealed that majority of beneficiary (70.00%) and 79.00 per cent of non beneficiary farmers had above 10 years of experience in farming, whereas 27.00 per cent of beneficiary and 18.00 per cent of non beneficiary farmers had medium (6 to 10 years) experience in farming. Thus, only 3 % beneficiary and non beneficiary farmers had lower level of (up to 5 years) experience in farming.

1.8 Animal possession

The term animal possession refers to animal possessed by the respondent. One score was given for every one animal possessed by individual. Total scoring was obtained by summing off the scores. The respondents were classified as under.

Table 8: Distribution of respondents according to their animal possession (n=120)

Sr.	Categories	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Having no animal	06	10.00	01	02.00

2	Up to 3 animal	13	22.00	19	32.00
3	4 to 6 animal	12	20.00	21	35.00
4	Above 6 animal	29	48.00	19	31.00
	Total	60	100	60	100

The data presented in Table 8 postulated that 48.00 per cent of beneficiary farmers had above 6 animals, followed by 22.00 per cent and 20.00 per cent of them had up to 3 animals and 4 to 6 animals respectively and only 10.00 per cent beneficiary farmers having no animal. In case of non beneficiary farmer, 35.00 per cent of them had 4 to 6 animal followed by 32.00 per cent and 31.00 per cent of them had up to 3 animals and above 6 animals respectively and only 02 per cent beneficiary farmers having no animal.

1.9 Extension participation

Extension participation is defined as the degree to which an individual participated in various non formal extension activities, with a view to obtain new information, knowledge and skill related to agriculture. It was measured by using scoring procedure developed by Siddharaimaiah and Jahhal(1983) with due modifications. One score was given for participating in each of the extension activity. The total score was included in scale categories formed on the bases of mean and standard deviation.

Table 9: Distribution of respondents according to their Extension participation (n=120)

Sr.	Extension participation	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	12	20.00	10	17.00
2	Medium	36	60.00	45	75.00
3	High	12	20.00	05	08.00
	Total	60	100	60	100
		Mean=9.01		Mean=4.4	
		SD=3.31		SD=2.81	

The data in respect of extension participation have been reported in Table 9. The data depicted in Table 9 indicate that two third of beneficiary farmers (60.00%) had moderate participated, followed by both high and low participated (20.00%) in extension programmes. Whereas, majority of non beneficiary farmers (75.00%) had moderate participated in any extension programmes, while only 17 per cent of non beneficiary farmers had low participated in extension programme, followed by high (08.00%) participated in extension programmes.

1.10 Innovativeness

Innovativeness is operationally defined as the degree to which an individual is relatively earlier in adoption of an innovation or an idea under the study. It was measured with the scale developed by Singh (1977) with some modifications. The respondents were grouped into three categories based on arbitrary methods viz" (1) Lowe, 2) moderate and 3) higher innovativeness. Later on, the mean and standard deviation were used to calculate the correlation coefficient.

Table 10: Distribution of respondents according to their Innovativeness (n=120)

Sr.	Innovativeness	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	02	03.00	05	08.00
2	Medium	38	63.00	52	87.00
3	High	20	34.00	03	05.00
	Total	60	100	60	100
		Mean=2.3		Mean=1.96	
		SD=0.53		SD=0.36	

It is evident from Table 10 that slightly more than half (63.00 per cent) of the beneficiary farmer had medium level of innovativeness followed by 34.00 per cent and 03.00 per cent of beneficiary farmer had higher and lower level of innovativeness respectively. While 87 per cent of the non beneficiary farmer had medium level of innovativeness followed by only 08.00 per cent and 05.00 per cent of non beneficiary farmer had higher and lower level of innovativeness respectively.

1.11 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 (1972) with due modification. There are six statements, which were weighted on three point continuum i.e. 3, 2 and 1 for the positive statements and for negative statements reverse scoring were applied. 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 11.

Table 11: Distribution of respondents according to their level of economics motivation (n=120)

Sr.	Level of economic motivation	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low level of economic motivation	11	18.00	11	18.00
2	Medium level of economic motivation	28	47.00	35	58.00
3	High level of economic motivation	21	35.00	14	24.00
	Total	60	100	60	100
		Mean=16.30		Mean=14.86	
		SD=1.69		SD=2.36	

A critical perusal of the data furnished in Table 11 portrays that near about one half of beneficiary farmers (47.00%) had medium economic motivation, followed by higher (35.00%) and meager in low category (18.00%). Whereas, more than half of non beneficiary farmer (58.00%) had moderate economic motivation, followed by high (24.00%) and low (18.00%).

1.12 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 responses were measured on three point continuum were strongly agree, agree and less agree with the score 3, 2 and 1 for positive and was reverse in the case of negative statement. The beneficiaries were grouped into three categories with the help of mean and standard deviation viz. The data collected about their scientific orientation are presented in table 12.

Table 12: Distribution of respondents according to their level of scientific orientation (n=120)

Sr.	Level of scientific orientation	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low level of scientific orientation	13	22.00	21	35.00
2	Medium level of scientific orientation	30	50.00	39	65.00
3	High level of scientific orientation	17	28.00	00	0.00
	Total	60	100	60	100
		Mean= 15.91		Mean=14.86	
		SD=1.81		SD=1.33	

A glance at Table 12 revealed that exactly half of beneficiary farmers (50.00%) had medium level of scientific orientation, followed by high (28.00%) and low (22.00%) level of scientific orientation. Whereas, nearly two third of non beneficiary farmers (65.00%) had medium level of scientific orientation, followed by lower level (35.00%) of scientific orientation and no any non beneficiary farmers had high level of scientific orientation.

1.13 Attitude towards KVK activities

Attitude is pre conditional factor for any action. Attitude of individual play an important role in determining one's behavior in respect to a particular psychological object. To measure this variable, a teacher made scale was developed. The responses collected on three point continuum viz., less favourable, favourable and more favourable with score 1, 2 and 3 for positive and reverse in the case of negative statement. Later on, the mean, standard deviation and 'r' value were used to work out the relationship.

Table 13: Distribution of respondents according to their Attitude towards KVK activities n=120

Sr.	Attitude towards KVK activities	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Less favourable attitude	06	10.00	16	27.00
2	Favourable attitude	42	70.00	34	57.00
3	More favourable attitude	12	20.00	10	16.00
	Total	60	100	60	100
		Mean=36.15		Mean=33.5	
		SD=5.19		SD=4.38	

The data presented in table 13 revealed that majority of the beneficiary farmer (70.00 per cent) had favourable attitude toward KVK activities, 20 per cent of the respondent had more favourable attitude while only 10 per cent of them had found less favourable attitude toward KVK activities. In case of non beneficiary farmer more than half (57.00 per cent) farmer had favourable attitude followed by less (27.00 per cent) and more (16.00 per cent) favourable attitude toward KVK activity.

The analysis of data showed that great majority of beneficiary (90.00 per cent) of farmers had favorable to most favourable and non beneficiary (84.00 per cent) of farmers had favourable to least favourable attitude toward various activities of KVK. It means this may be perhaps due to positive impact of KVK activities. This may be due to the fact that farmer might have been motivated through tremendous benefits of KVK activities.

Table 14:- Comparison between beneficiary and non beneficiary farmer in respect of their attitudes towards various activities of KVK.

Categories of respondents	Number	Mean score of attitude	Standard deviation	't' value
Beneficiary farmer	60	36.15	5.19	3.032**
Non beneficiary farmer	60	33.5	4.38	

** Significant at 1 per cent probability level

Result in table 14 indicated that the observed value of 't' is 3.032 which is significant at 0.01 level of significant, clearly suggested that beneficiary farmer group had more favourable attitude toward various activities of KVK than non beneficiary farmer group. The significant difference in attitude provides sufficient ground to reject the null hypothesis that there will be no difference in attitude of beneficiary and non beneficiary farmer toward various activities of KVK. Also the mean score of attitude is higher in beneficiary farmers than those of non beneficiary farmers.

From the above finding an inference can be drawn that KVK activities had influenced in developing the favourable disposition towards KVK among beneficiary farmer. During the exposure, the beneficiary farmer must have learned about various agricultural technologies which are beneficial to them.

2 Impact of KVK activity like FLD, OFT and training

2.1. Level of knowledge of beneficiary and non beneficiary farmer about improve agricultural technologies of gram and okra crop.

The knowledge of an innovation is prerequisite for adoption. A higher knowledge of scientific methods of improve practices will lead to a higher adoption possibility. KVK is playing importance role in improving the knowledge of improve agricultural practices through FLD, OFT and training activities. The main focus of the study is to assess the impact of KVK on adoption of modern farm technologies; hence, it was felt necessary to know that to what extent the KVK has helped the farmers in acquisition of knowledge about modern farm technology.

In the present study knowledge refers to know how about different improved agricultural technologies of gram and okra crop possessed by the farmers. It was therefore necessary to obtain information from the farmer about the knowledge they possessed about improved agricultural technologies of gram and okra crop. The data about level of knowledge are given in Table 15.1

Table 15.1:- Distribution of respondents according to their knowledge about improved agricultural technologies of gram crop. n=120

Sr.	Level of knowledge	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	06	10.00	11	18.00
2	Medium	43	72.00	47	78.00
3	High	11	18.00	02	04.00
	Total	60	100	60	100
		Mean=29.48		Mean=24.73	
		SD=7.007		SD=6.79	

It can be presented from Table 15.1 that majority (72 per cent) of beneficiary farmer had medium level of knowledge about improved agricultural technologies of gram crop; followed by 18 per cent and 10 per cent farmer had higher and lower level of knowledge about improved agricultural technologies of gram crop respectively. In case of non beneficiary farmer majority (78 per cent) of them had medium level of knowledge about improved agricultural technologies of gram crop, followed by 18 per cent and 04 per cent of them had low and high level of knowledge about improved agricultural technologies of gram crop, respectively.

Table 15.2:- Distribution of respondents according to their knowledge about improved agricultural technologies of okra crop. n=120

Sr.	Level of knowledge	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	18	30.00	27	45.00
2	Medium	39	65.00	30	50.00
3	High	03	05.00	03	05.00
	Total	60	100	60	100
		Mean=25.36		Mean=20.28	
		SD=9.94		SD=8.33	

It can be presented from Table 15.2 that majority (65 per cent) of beneficiary farmer had medium level of knowledge about improved agricultural technologies of okra crop; followed by 30 per cent and 05 per cent farmer had lower and higher level of knowledge about improved agricultural technologies of okra

crop respectively. In case of non beneficiary farmer majority (50 per cent) of them had medium level of knowledge about improved agricultural technologies of okra crop, followed by 45 per cent and 05 per cent of them had low and high level of knowledge about improved agricultural technologies of okra crop, respectively.

It means this may be perhaps due to positive impact of KVK activities. The probable reason for above finding might be due to favourable attitude towards various activities carried out by KVK, frequently contact with extension activities, higher economic motivation and good scientific orientation.

Comparison between groups:

The 't' value was calculated to examine whether there was any significant difference in level of knowledge about improved agricultural technologies of gram crop between beneficiary and non beneficiary farmer. The detail analysis was carried out in this regard which is presented in table 16.1

Table 16.1:- Comparison between beneficiary and non beneficiary farmer in respect of their knowledge about improved agricultural technologies of gram crop.

Categories of respondents	Number	Mean score of knowledge	Standard deviation	't' value
Beneficiary farmer	60	39.48	7.007	3.6181**
Non beneficiary farmer	60	24.73	6.79	

**significant at 1 per cent probability level

It evident from Table 16.1, 't' value (3.6181) was found to be significant at 0.01 level of significant indication thereby that beneficiary farmer had significantly higher knowledge about improved agricultural technologies of gram crop as compare to non beneficiary farmer. The significant difference in knowledge provides sufficient ground to reject the null hypothesis that there will be no difference in knowledge of beneficiary and non beneficiary farmer toward improved agricultural technologies of gram crop. Also the mean score of knowledge is higher in beneficiary farmers than those of non beneficiary farmers.

Table 16.2:- Comparison between beneficiary and non beneficiary farmer in respect of their knowledge about improved agricultural technologies of okra crop.

Categories of respondents	Number	Mean score of knowledge	Standard deviation	't' value
Beneficiary farmer	60	25.36	9.94	1.8172**
Non beneficiary farmer	60	20.28	8.33	

**significant at 1 per cent probability level

It evident from Table 16.2, 't' value (1.8172) was found to be significant at 0.01 level of significant indication thereby that beneficiary farmer had significantly higher knowledge about improved agricultural technologies of okra crop as compare to non beneficiary farmer. The significant difference in knowledge provides sufficient ground to reject the null hypothesis that there will be no difference in knowledge of beneficiary and non beneficiary farmer toward improved agricultural technologies of okra crop. Also the mean score of knowledge is higher in beneficiary farmers than those of non beneficiary farmers.

From the above finding an inference can be drawn that KVK activities had influenced in increasing the knowledge of the beneficiary farmers about improved agricultural technologies of gram crop.

2.2 Level of adoption of beneficiary and non beneficiary farmer about improve agricultural technologies of gram and okra crop.

The main objective in our agricultural strategies is to increase the total agricultural production as well as to push the efficiency various input used by rural community. The adoption of recommended technologies by the farmers is prime importance of the KVK. In order to ascertain adoption about improved agricultural technologies of gram and okra, the respondent asked to give the account of package of practices

they followed in gram and okra cultivation. Adoption quotient of gram and okra crop for each respondent calculated and they were classified into three categories of adoption wise, low, medium and high level of adoption. The data presented in this regard in Table 17.1

Table 17.1:- Distribution of respondents according to their adoption about improved agricultural technologies of gram crop. n=120

Sr.	Level of adoption	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	05	08.00	19	32.00
2	Medium	41	68.00	30	50.00
3	High	14	24.00	11	18.00
	Total	60	100	60	100
		Mean=27.00		Mean=20.97	
		SD=3.02		SD=2.67	

The analysis of data showed that great majority of beneficiary (92.00 per cent) of farmer had medium to high level of adoption and in case of non beneficiary farmer (82.00 per cent) of farmers had medium to low level of adoption about improved agricultural technologies of gram crop. It means this may be perhaps due to positive impact of KVK.

Table 17.2:- Distribution of respondents according to their adoption about improved agricultural technologies of okra crop. n=120

Sr.	Level of adoption	Category of farmers			
		Beneficiary(n=60)		Non beneficiary(n=60)	
		Number	Per cent	Number	Per cent
1	Low	19	31.00	28	47.00
2	Medium	30	50.00	26	43.00
3	High	11	19.00	06	10.00
	Total	60	100	60	100
		Mean=17.85		Mean=14.28	
		SD=5.79		SD=3.41	

The analysis of data showed that majority of beneficiary farmer (69.00 per cent) had medium to high level of adoption while in case of non beneficiary farmer (90.00 per cent) of farmers had medium to low level of adoption about improved agricultural technologies of okra crop. It means this may be perhaps due to positive impact of KVK.

Comparison between groups:

The 't' value was calculated to examine whether there was any significant difference in level of adoption about improved agricultural technologies of gram and okra crop between beneficiary and non beneficiary farmer. The detail analysis was carried out in this regard which is presented in table 18.1

Table 18.1:- Comparison between beneficiary and non beneficiary farmer in respect of their adoption about improved agricultural technologies of gram crop.

Categories of respondents	Number	Mean score of knowledge	Standard deviation	't' value
Beneficiary farmer	60	27.00	3.02	2.964**
Non beneficiary farmer	60	20.97	2.67	

**significant at 1 per cent probability level

The 't' value shown (2.964) in Table 18.1 reveals that there was highly significant difference in the adoption about improved agricultural technologies of gram crop between the beneficiary and non beneficiary farmers.

Table 18.2:- Comparison between beneficiary and non beneficiary farmer in respect of their adoption about improved agricultural technologies of okra crop.

Categories of respondents	Number	Mean score of knowledge	Standard deviation	't' value
Beneficiary farmer	60	17.85	5.79	3.6486**
Non beneficiary farmer	60	14.28	3.41	

**significant at 1 per cent probability level

The 't' value shown (3.648) in Table 18.2 reveals that there was highly significant difference in the adoption about improved agricultural technologies of okra crop between the beneficiary and non beneficiary farmers. It means that the beneficiary farmer had better adoption than non beneficiary farmer in improved agricultural technologies of okra crop. From the above finding an inference could be drawn that KVK, dang had played an important role in increasing the rate of adoption improved agricultural technologies of okra crop.

The probable reason for this finding might be that the beneficiary farmer had favourable attitude towards various activities carried out by KVK, medium to high level of knowledge, frequently extension contact and higher extension and social participation which led them to higher adoption about improved agricultural technologies of gram and okra crop.

2.3 Average yield of gram and okra crop of beneficiary and non beneficiary farmer

Average yield means that crop producing capacity which can be increase through defined farm management practices. Agricultural production is the prime goal of KVK. Hence, an attempt was made to study the present yield of gram and okra crop obtained by beneficiary and non-beneficiary farmer. The data about this presented in Table 19.1 and Table 19.2

Table 19.1:- Distribution of respondents according to their average yield of gram crop. n=120

Sr.	Level of yield	Category of farmers		Level of yield	Category of farmers	
		Beneficiary(n=60)			Non beneficiary(n=60)	
		Number	Per cent		Number	Per cent
1	Low(up to 950 kg/ha)	17	28.00	Low(up to 870 kg/ha)	35	58.00
2	Medium(951 to 1050 kg/ha)	22	37.00	Medium(871 to 995 kg/ha)	17	28.00
3	High(above 1050 kg/ha)	21	35.00	High(above 995 kg/ha)	08	14.00
	Total	60	100		60	100
		Mean=1000			Mean=932.5	
		SD=50			SD=62.5	

A perusal of the table 19.1 indicated that 37.00 per cent of beneficiary farmers had medium level of yield, followed by 35.00 per cent and 28.00 per cent of them had high and low level of yield, respectively.

In case of non-beneficiary farmer, majority (58.00 per cent) of them had low level of yield, followed by 28.00 per cent and 14.00 per cent of them had medium and high level of yield, respectively. It can be concluded that the farmers those who had beneficiary farmers having more yield.

Table 19.2:- Distribution of respondents according to their average yield of okra crop. n=120

Sr.	Level of yield	Category of farmers		Level of yield	Category of farmers	
		Beneficiary(n=60)			Non beneficiary(n=60)	
		Number	Per cent		Number	Per cent
1	Low(up to 9000 kg/ha)	15	25.00	Low(up to 8500 kg/ha)	21	35.00
2	Medium(9001 to 10200 kg/ha)	35	58.00	Medium(8501 to 9600 kg/ha)	35	58.00
3	High(above 10200 kg/ha)	10	17.00	High(above 9600 kg/ha)	04	07.00

	Total	60	100		60	100
		Mean=9600			Mean=9050	
		SD=600			SD=550	

A perusal of the table 19.2 indicated that 58.00 per cent of beneficiary farmers had medium level of yield, followed by 25.00 per cent and 17.00 per cent of them had low and high level of yield, respectively.

In case of non-beneficiary farmer, majority (58.00 per cent) of them had medium level of yield, followed by 35.00 per cent and 07.00 per cent of them had low and high level of yield, respectively. It can be concluded that the farmers those who had beneficiary farmers having more yield.

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

In order to find out the relationship between the selected characteristics of beneficiary and non beneficiary farmers and their level of knowledge and adoption improved agricultural technologies of gram and okra crop, correlation was worked out the finding are presented in Table 20

Table 20:- Relationship between knowledge of improved agricultural technologies of gram and okra crop and independent variable of beneficiary and non beneficiary farmers.

Sr.No.	Variable	Correlation-coefficient (r – Value) for gram crop		Correlation-coefficient (r – Value) for okra crop	
		Beneficiary (n=60)	Non Beneficiary (n=60)	Beneficiary (n=60)	Non Beneficiary (n=60)
1	Age	-0.298*	-0.054	-0.3822**	-0.2211
2	Education	-0.029	-0.1429	-0.0062	0.2170
3	Land holding	0.1175	-0.0546	0.1266	-0.1149
4	Family size	-0.1013	-0.0098	-0.1437	-0.2225
5	Social participation	0.3625**	0.1234	0.3899**	0.0739
6	Information input behaviour	0.049	-0.0827	0.00058	-0.4688**
7	Farming experience	-0.046	0.01961	-0.1719	-0.0550
8	Animal possession	0.1586	0.0923	-0.0239	-0.0981
9	Extension participation	0.3183*	0.0385	0.3909**	0.0563
10	Innovativeness	-0.3588**	-0.0036	-0.1498	-0.0182
11	Economic motivation	0.1206	0.0240	0.2404	-0.4708**
12	Scientific orientation	0.1657	0.0034	0.2748*	-0.3497**
13	Attitude toward KVK	0.2283	-0.1928	0.2357	0.1174

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

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

The analysis of data showed that four variable age, social participation, extension participation and innovativeness of beneficiary farmer were observing significant with their knowledge of improved agricultural technologies of gram crop. Same way three variables like age, social participation and scientific orientation of beneficiary farmer were observing significant with their knowledge of improved agricultural technologies of okra crop. While no any significant relationship was observed under non beneficiary farmer with their knowledge of improved agricultural technologies of gram crop. In crop like okra three variable like information input behavior, economic motivation and scientific orientation were observing significant with their knowledge of improved agricultural technologies.

Conclusion

Majority of the beneficiary farmer were in middle age group, had primary level of education, land holding up to 2.00 ha, 6 to 8 family member, membership in more than one organization, medium level of information input behavior, good farming experience(above 10 year), above 6 animal, medium to higher level of extension participation, innovativeness, economic motivation and scientific orientation, favourable to most favourable attitude towards varies activities of KVK and medium to high level of knowledge, adoption and yield about improve agricultural technologies of gram and okra crop. Four variable age, social participation, extension participation and innovativeness of beneficiary farmer were observing significant with their knowledge of improved agricultural technologies of gram crop. Same way three variables like

age, social participation and scientific orientation of beneficiary farmer were observing significant with their knowledge of improved agricultural technologies of okra crop.

While in case of non beneficiary farmers were found to be in middle age group, had secondary to higher secondary level of education, big farmer, 6 to 8 family member, membership in one organization, medium level of information input behavior, good farming experience(above 10 year), 4 to 6 animal, medium to low level of extension participation, innovativeness, economic motivation and scientific orientation, favourable less favourable attitude towards varies activities of KVK and medium to low level of knowledge, adoption and yield about improve agricultural technologies of gram and okra crop. While no any significant relationship was observed under non beneficiary farmer with their knowledge of improved agricultural technologies of gram crop. In crop like okra three variable like information input behavior, economic motivation and scientific orientation were observing significant with their knowledge of improved agricultural technologies.

Majority of beneficiary farmer had favourable to most favourable attitude towards varies activities of KVK. This may be due to the fact that farmer might have been motivated through tremendous benefits of KVK activities. It evident from the research that beneficiary farmer had significantly higher knowledge about improved agricultural technologies of gram and okra crop as compare to non beneficiary farmer. Same way the beneficiary farmer had better adoption than non beneficiary farmer in improved agricultural technologies of gram and okra crop. Yield data of both the crop clearly suggest that respondent from beneficiary farmer group had higher average yield of both crop than non beneficiary farmer group. From the above finding an inference could be drawn that KVK had played an important role in increasing knowledge and the rate of adoption of improved agricultural technologies of gram and okra crop

Other information/Activities of KVK

A. Programmes undertaken by the KVK, which have been financed by State Govt./ Central Govt. Other agencies:

SN	Name of Scheme	Budget Head	Grant Sanction (Lakh Rs.)	Expenditure made up to 31 st March-2017 (Rs.)
1	Strengthening of testing of University technologies through FLDs. Adaptive trial Phase-II.	12306-D	2,00,000/-	1,99,912/-
2	Mega Seed Project-TSP	2068-B	40,000/-	39,930/-
3	FLDs on Rabi Pulses, 2016-17 schemes (Director, ATARI, Jodhpur /ICAR)	2088-B	1,02,942/-	73,058/-
4	Sub Mission on Agriculture Mechanization (SMAM)	18136-06	1,04,103/-	24,266/-
5	Pradhan Mantri Fasal Bima Yojana	18138-06	1,85,497/-	1,60,269/-
6	Protection of plant varieties & farmers right act 2001 (PPV & FRA 2001)	18158-06	80,000/-	22,630/-

The details of above activities/demo/training are as follow

1. Information on PPV&FRA programme 2016-17

SN	Date	Programme Title	Place	No. of participants		
				Male	Female	Total
1	04/02/2017	Farmer fair-Exhibition and seminar on PPV & FRA-2001 during 5 nd day of TW-2017	KVK, Waghai	329	175	504
2	23/03/2017	Training on Protection of plant varieties and Farmers act 2001		27	03	30
Total				356	178	534

2. Special programmes conducted

Sr No	Title	Date	Village	Male	Female	Total
1	Visve Yog divas	21-06-2016	Waghai	15	5	20
2	Vanmahotsav-2016	14-07-2016	Waghai	92	61	153
3	Mahila Krishi Divas	06-08-2016	FTC,Ahwa	5	70	75
4	Parthenium awareness week	16 to 22 august 2016	Waghai, Kadolghodi	30	0	30
5	World Food Day	17-10-2016	KVK,Waghi	3	40	43
6	Swachhta Pakhwara	16 to 31 Octo 2016	Ambapada	16	15	31
7	Agricultural education day	03-12-2016	Borigavtha	33	0	33
8	World soil health day	05-12-2016	Lokpatal	35	0	35
9	Technology week	31-01-17 to 04-02-2017	KVK, Waghai	1753	2385	4138
Total				1982	2576	4558

3. Mera Gaon Mera Gaurav programme

Team	Visit to village		Goshthis/ Interface meetings conducted		Demonstrations conducted		
	No. of visits	No. of farmers	No. of goshthis/ interface meetings	No. of farmers	Title of demonstration	No. of demons	No. of farmers
1	2	3	4	5	6	7	8
Team 1	1	50	3	100	Twin wheel hoe	30	30
					Improve varieties of onion crops, AFLR (Agri Found Light Red)	20	20
					Mango: Biofertilizer & NOLF	25	25
					Backyard poultry farming using improved RIR birds	12	12
					New varieties Green gram Meha	95	95
					New varieties Green gram GAM-5	50	50

Team	Trainings conducted		Mobile-based advisory		Literature support provided		Input support	
	No. of training	No. of farmers	No. of farmers	No. of advisories	No. of literature	No. of farmers	Area (ha)	No. of farmers
9	10	11	12	13	14	15	16	17
Team 1	5	140	16	1100	650	650	47.4	253

Team	Linkages created with Other departments/ agencies (furnish name)	Problem diagnosed		Awareness created	
		General problem	Agriculture problem	Subject matter	No. of farmers
18	19	20	21	22	23
Team 1	ATMA-Ahwa FTC-Ahwa Lotus Foundation-NGO Cooperative society- Naktiyahanvant	School, post office, Bank are not available, Lack of water	Low yield, insect pest attack, lack of fertilizer, Low milk production, infertility,	1. Water harvesting and judicious used	200
				2. Line sowing of <i>Kharif</i> and <i>Ravi</i> crop	100
		3. Scientific animal husbandry	30		
		Electricity, Health services, veterinary dispensary	Poor quality of seeds, poor agri practices		

4. Ongoing FLDs(Rabi-Summer,2016-17)

S N	Particulars of the FLDs	Season	Crop/ Enterprise	Variety/ Technology Input	Area (ha)	No. of Demonstrations
1	Crop production- Pulses	<i>Rabi</i>	Gram	GG-2	5	40
2	Plant protection	<i>Summer</i>	Groundnut	Trichoderma	2	9
3	Horticulture	<i>Rabi, 2016-17</i>	Indian bean	NPS-1	5	25
		<i>Rabi, 2016-17</i>	Okra	Biofertilizer & NOLF	10	50
		<i>Rabi, 2016-17</i>	Onion	AFLR	2	20
4	Animal Science	<i>Rabi, 2016-17</i>	Backyard Poultry	RIR	12 units	12
5	Home Science	<i>Rabi,2016-17</i>	Nutrition management	<i>Finger millet buscut</i>	10 units	10
		<i>Rabi,2016-17</i>	Seeds/seedlings of vegetables	Kitchen garden	50 units	50
		<i>Summer</i>	Solar cooker	Solar cooker	75 unit	75
Total				16 demons.	24 ha & 147 units	291

5. Ongoing demonstrations given under other scheme: Other than KVK-ICAR budget.

SN	Scheme/ Particulars of the FLD	Season	Crop	Variety/ Component/ Technology	Area (ha)	No. of Demonstrations
I	Adaptive trial (Phase-2)					
1	Crop Production	<i>Rabi, 2016-17</i>	Green gram	Meha	20.4	95
2	Horticulture	<i>Summer, 2017</i>	Watermelon	Plastic mulch	2	22
3	Plant protection	<i>Sum., 2016-17</i>	Cashewnut	IPDM	10	40
		<i>Sum., 2016-17</i>	Mango	Methylugenol trap	6	15
II	TSP (Mega seed)					
4	Crop production	<i>Rabi, 2016-17</i>	Green gram	Meha	18	70
III	Director, ATARI, Jodhpur /ICAR					
5	Crop production (Pulse)	<i>Rabi, 2016-17</i>	Green gram	GAM-5	20	50
Total					76.40	292

ANNEXURE - I

KRISHI VIGYAN KENDRA, NAU, WAGHAI (DANGS)

Minutes of 16th Scientific Advisory Committee Meeting held on 04th March, 2017
at 3.30 pm at KVK, NAU, Waghai

List of members remain present in the meeting:

SN	Name	Designation	Position
1	Dr. C. J. Dangaria	Hon'ble Vice Chancellor, NAU, Navsari	Chairman
2	Dr. G. R. Patel	Director of Extension Education, NAU, Navsari	Member
3	Dr. Z. P. Patel	Principal, CoA, NAU, Waghai-Dangs	Special Invitee
4	Mr. M.M.Patel	Project Director, ATMA, Ahwa, Dang	Member
5	Dr. H. E. Patil	Associate Research Scientist, Hill millet Research Station, NAU, Waghai-Dangs	Member
6	Dr. A. P. Patel	Associate Professor (Agronomy), College of Agriculture, NAU, Waghai-Dangs	Member
7	Dr.C.J.Patel	Principal of Agri. Polytechnic, NAU, Waghai-Dangs	Special Invitee
8	Mr. T.M.Gamit	Assistant Director (Horticulture), Ahwa, Dangs	Member
9	Dr.H.B.Gangude	Representative of district Animal Husbandry Officer, Ahwa, Dangs	Member
10	Mr. K. G. Birari	Agri Entrepreneur, Jamlapada, Tal.- Waghai, Dangs	Member
11	Mr. Bendubhai M. Gaikwad	Progressive Farmer, Nadagkhadi, Tal.- Waghai, Dangs	Member
12	Mrs.Sunadaben U Nikuvya	Progressive farmer, Village: Dagadpada	Special Invitee
13	Mrs. Chamula Vadvi	Progressive farmer, Village: Kudkas, World vision, India, Waghai	Special Invitee
14	Mrs. Sunitaben H Pandvi	Progressive farmer, Village: Dagadpada	Special Invitee
15	Mr. Chintubhai A Gavit	Progressive farmer, Village: Jamlapada	Special Invitee
16	Prof. V. K. Desai	I/C Senior scientist & head (Plant protection), KVK, NAU, Waghai-Dangs	Member
17	Prof. N. M. Thesiya	Scientist (Agronomy), KVK, NAU, Waghai-Dangs	Member
18	Dr. D. B. Bhoi	Scientist (Veterinary Sci.), KVK, NAU, Waghai-Dangs	Member
19	Prof. J. B. Dobariya	Scientist (Extension Education), KVK, NAU, Waghai-Dangs	Member
20	Prof. H.A.Prajapati	Scientist (Horticulture), KVK, NAU, Waghai-Dangs	Member
21	Prof. N.N.Patel	Scientist (Home Science), KVK, NAU, Waghai-Dangs	Member
22	Mr. K.V.Patel	Agriculture Officer, KVK, NAU, Waghai-Dangs	Invitee

List of members could not remain present in the meeting due to some unavoidable circumstances:

SN	Name and Designation of member	Position
1	Director, ATARI, ICAR, Jodhpur	Member
2	Dr. S.R.Chodhri, Director of Research, , NAU, Navsari	Member
3	Dr. S. N. Saravaiya, Asso.Professor & Head, (Vegetable Sci.), Aspee college of Horticulture and Foresry, NAU, Navsari	Member

4	Mr. Bharat Kanade, District Agriculture Officer, Ahwa, Dangs	Member
5	Deputy General Manager, NABARD, Ahwa, Dang	Member
6	Assistant Director (Soil Conservation), GLDC, Ahwa, Dang	
7	Smt. Baliben Laljibhai Gamit, (Progressive Women Farmer), Bhenskatri, Tal.- Waghai, Dang.	Member
8	Smt. Bhartiben C. Patel, Chair person of Women SHG, Waghai, Dangs	Member

The sixteenth meeting of Scientific Advisory Committee (16th SAC) was organized on 04th March, 2017 at 3.30 pm at KVK, Waghai (Dangs). Dr.D.B.Bhoi, Scientist (Veterinary Sci.) welcomed all the distinguished members and invitees. In this meeting, Annual Progress Report for the period of April-2016 to February-2017 was presented by scientist of all discipline working in KVK, Waghai, Dang. The minutes are being presented as per different agenda as mention below.

Item No. 16.1. Approval of minutes of 15th meeting of SAC:

The action taken on the minutes of 15th SAC meeting of KVK held on 23/02/2016 was presented by the senior scientist and head and it was approved by the house.

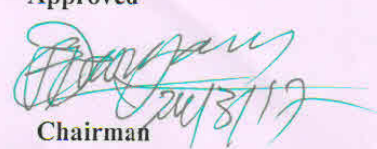
Item No. 16.2. Progress made by KVK during April-2016 to February-2017 and Annual Action Plan for the year 2017-18:

The progress report of the above period was presented by senior scientist and head. The house was satisfied and also appreciated the progress made by KVK staff in this tribal dominated district and gave the following suggestions for further improvement of the activities of the centre.

16.2.1	Replace IR-28 for demonstration and seed production purpose with new recommended varieties GNR-7.
16.2.2	Take new released varieties GNR-7 for paddy, GJG 5 for gram and GNP-2 & BSMR-711 for pigeon pea for front line demonstration.
16.2.3	Create awareness regarding new crops like pineapple, strawberry for crop diversification.
16.2.4	To investigate the reasons for shrinkage of harvested turmeric rhizomes after boiling for processing purpose in the dang district.
16.2.5	Create awareness on scientifically cultivation of mushroom in dang district and give training for value addition and marketing of mushroom.
16.2.6	Popularize dang <i>Nagli</i> biscuit in all over the Gujarat state for the prevention of malnutrition.
16.2.7	Take services of government approval manpower agency for dang district for taking services for class-3 and class-4 vacant posts
16.2.8	For organic farming, recommendation may be obtained from concern department at N.A.U, Navsari and COA, Waghai.

The meeting ended with vote of thanks.


I/C Senior scientist & head
Krishi Vigyan Kendra
Navsari Agricultural University
Waghai (Dangs)

Approved

Chairman
Scientific Advisory Committee
KVK, NAU, Waghai &
Hon. Vice Chancellor
NAU, Navsari

Annexure-II
Report of Technology week celebration – 2016-17 by KVKs of Zone-VI

1. Name of the KVK : Dang, Gujarat
 2. Location where Technology week celebrated : KVK premise
 3. Duration of Technology week-2016-17 celebration : From 31/01/2017 to 04/02//2017 (5days)
 4. Thematic Areas/Topic covered :

S. N.	Day/ Date	Thematic area	Topic / Technology covered	No. of participants		
				Male	Female	Total
1	First 31/01/2017 Tuesday	Inaugural Function, Farmers fair and Organic Farming workshop	<ul style="list-style-type: none"> ➤ Quality seed production ➤ Pulse production by organic farming ➤ Soil health card ➤ SRI technology of Paddy ➤ Organic farming in cereal crops ➤ Disease and pest management in rabi crops ➤ Pradhan Mantri Fasal Bima Yojana ➤ Importance of De worming in animal ➤ State & Central Government Schemes for the farmers 	289	499	788
2	Second 01/02/2017 Wednesday	Farmer fair and Plant protection in organic farming	<ul style="list-style-type: none"> ➤ Organic farming and plant protection in pulse crops ➤ Organic farming and plant protection in cereal crops ➤ Integrated pest/disease management in rabi crops ➤ Information of organic product release by NAU, Navsari ➤ Self employment by mushroom farming ➤ Honey bee production ➤ KVK is a farmer temple ➤ Importance of Vaccination in animals ➤ “Times” importance matter for farm management ➤ Importance of self help group 	416	481	897
3	Third 02/02/2017 Thursday	Farmer fair- Exhibition and dairy farming workshop	<ul style="list-style-type: none"> ➤ Feeding management in milking animals ➤ Schemes of animal husbandry in dang district ➤ Clean milk production ➤ Future and present status of animal husbandry business in dang district ➤ Precautions during calving ➤ Importance of vaccination and deworming ➤ NABARD scheme to purchase dairy animal ➤ Organic farming in pulses ➤ Importance of Kitchen gardening for to overcome malnutrition 	425	420	845

4	Fourth 03/02/2017 Friday	Farmers Fair cum Women Empowerment Symposium	<ul style="list-style-type: none"> ➤ Formation of SHGs and its importance ➤ Management, registration and role of DRDA in formation of SHGs ➤ Role of SHGs in home scale business ➤ Bank loan to SHGs ➤ Conservation of water and soil ➤ Role of women in Poultry farming ➤ Progressive & entrepreneur farmers talk ➤ Role of women in plant protection ➤ I-Kisan & ATMA information 	294	810	1104
5	Fifth 04/02/2017 Saturday	Farmer fair- Exhibition and PPV & FRA- 2001	<ul style="list-style-type: none"> ➤ Introduction PPV & FRA ➤ Provisions of Plant Varieties and Farmers' Rights Act. 2001 ➤ Objectives of the PPV & FR Act, 2001 ➤ General Functions of the Authority ➤ Rights under the Act ➤ Certificate of Registration ➤ Plant Varieties Protection Appellate Tribunal ➤ State & Central Government Schemes ➤ Protected cultivation and drip irrigation system ➤ Drip & Mulching ➤ Organic farming in horticulture 	329	175	504
Total				1753	2385	4138

5. **i. Exhibition stall installed** : Yes
- ii. Number of stalls : 25 & Exhibition of material in hall.
- iii. Firms/organization those installed exhibition stall (specify) : NAU, Line Dept., Agro-Input Dealers / agencies, machine and tools, NGOs and SHGs, Krushi Kendra, GGRC,
- iv. Products displayed (specify) : Seeds, fertilizers, agro-chemicals, tools and implements, drip & sprinkler, honey, ragi & bamboo products, mushroom, Turmeric processing plant, Value added product, live plant, new hybrid variety, Electric motor operated by solar energy. etc.
- V. Technology based panels displayed (specify) : Agriculture, Horticulture, Animal husbandry, Health & nutrition, Water conservation, integrated farming, Pharmacies and allied field technology.

6. **Different crops demonstration plots shown to farmers at KVK instructional farm :**

Sl. No.	Name of crop	Name of variety	Number of farmers visited site		
			Male	Female	Total
1	Gram	GG-2	289	499	788
2	Green gram	Meha	416	481	897
3	Turmeric	Sugandham	425	420	845
4	Tomato & capsicum (Net house)	Hybrids	294	810	1104
5	Crop cafeteria	Vegetables	329	175	504

7. **Other demonstrations at KVK farm visited by farmers** (like vermin-composting unit, dairy, green house/poly house/nursery, orchard, micro-irrigation system, fisheries, etc. (please specify)

Sl. No.	Name of demonstration	Number of farmers visited site		
		Male	Female	Total
1	Low cost green house	416	481	897
2	Net house / nursery	329	175	504
3	Mango (HDP & UHDP)	289	499	788
4	Kitchen garden	425	420	845
5	Vermicompost unit	416	481	897
6	Irrigation Park	425	420	845
7	NADEP unit	329	175	504
8	Plug tray nursery	289	499	788

8. Method demonstrations conducted, if any (please specify)

Sl. No.	Name of method demonstration	Number of farmers present		
		Male	Female	Total
1	Small hand implements	289	499	788
2	Nursery & other horticulture tools	329	175	504
3	Honey bee production	416	481	897
4	Mushroom cultivation	416	481	897
5	Online application in I-Khedut portal	289	499	788

9. Technologies demonstrated / covered (please specify)

Sl. No.	Technology details
1	Scientific cultivation of <i>Rabi</i> crops
2	Integrated nutrient management
3	Bio-fertilizers
4	Organic farming
5	Integrated pest & disease Management
6	Bee keeping
7	Kitchen garden
8	Value addition
9	Green house/ Net house
10	WADI/ High density plantation in mango
11	Care & management of cross bred cow
12	Urea treatment
13	Integrated farming
14	Low cost technologies
15	Drip irrigation

10. Activities carried out during Technology Week(31/01/2017 to 04/02/2017)

Number of Technology weeks celebrated	Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
01	Gosthies	5	504	Oilseed & vegetable crops, PPV&FRA
	Lectures organized	65	4138	Main crops & other technology
	Exhibition	21	4138	Crop, Machinery & latest technology
	Film show	5	1104	Progressive farmers & new technologies
	Fair	1	4138	Krishi Mela,
	Farm Visit	5	897	Rabi crops & demonstration units
	Diagnostic Practical's	3	504	Pest & Disease in Rabi crops
	Distri. Literature	15	4138	Folders
	Total(08)	120	19561	-

11. Lectures delivered

Types of Activities	No. of Activities	Number of Participants	Related crop/livestock technology
Lectures organized	65	4138	Main crops & other technology

12. Guest speaker/VIPs invited

Day	S N	Name	Designation
1 st day	1	Sri Baburav Chorya	Pramukh, District panchayat, Dang
	2	Dr.G.R.Patel	Directorate of Extension Education, NAU, Navsari
	3	Dr. Z. P. Patel	Principal, College of Agriculture, NAU, Waghai, Dang
	4	Dr. H.E.Patil	Research Scientist, Hill Millet Research Station, NAU, Waghai,
	5	Dr. C. G. Itwala	Asso. Res. Sci., Mega Seed (Pulses), NAU, Navsari
	6	Sri M.M.Patel	Project director, ATMA, Dang
	7	Shri B.B.Kanade	District Agriculture Officer, Ahwa, Dangs
	8	Dr.H.M.Viradia	Associated professor, Dept. of agronomy, NAU, Navsari
	9	Dr. D.A.Chauhan	Asso. Res.Sci., Pulse Research station, N.A.U, Navsari
	10	Shri T.M.Gamit	Assistant director of horticulture, Ahwa, Dang
	11	Shri J.D.Patel	DDO, Ahwa, Dang
	12	Sri Hemantbhai Pawagadhi	Deputy Project director, ATMA, Ahwa, Dang
	13	Shri Bendubhai Gaikwad	Progressive Farmers (SRI)
2 nd day	14	Dr. J.J.Pastagiya,	Professor, College of Agriculture, NAU, Waghai, Dang
	15	Shri D.M.Damasiya	Asst. Prof., (Ento), College of Agriculture, NAU, Waghai
	16	Shri Tusharbhai Gamit	Assit. Dir. of Horticulture, Ahwa, Dang
	17	Shri B.B.Kanade	District Agriculture Officer, Ahwa, Dangs
	18	Shri M.M.Patel	Project director, ATMA, Dang
	19	Chandresinh Kokani	Bee keeper, Rambhas
3 rd day	20	Dr. Vipul Patel	Asst. Prof, Veterinary college, NAU, Navsari
	21	Dr. Harendra Patel	Medical officer, Leprosy, ATMA, Dang
	22	Shri M.M.Patel	Project director, ATMA, Dang
	23	Shri B.B.Kanade	District Agriculture Officer, Ahwa, Dangs
	24	Dr. Navin B.Patel	Associated Professor, Veterinary college, NAU, Navsari
	25	Dr. Dharmesh S. Chaudhari	Veterinary Officer, Subir
	26	Dr. Hemant Gangude	Animal Husbandry Officer, Waghai, Dangs
	27	Sri Hemantbhai Pawagadhi	Deputy Project director, ATMA, Ahwa, Dang
	28	Shri Tusharbhai Gamit	Assit. Dir. of Horticulture, Ahwa, Dang
	29	Shri M.D.Chaudhari	DIECO, Ahwa, Dang
4 th day	30	Jahidaben Seyad	Member Taluka Panchayat, Waghai
	31	Mrs. R.R. Deshmukh	Training Officer, FTC, Vyara
	32	Mrs. Nitaben B. Patel	Mahalaxmi SHG, Waghai
	33	Mrs. Bhartiben C. Patel	Krimisha SHG, Waghai
	34	Sushilaben Valvi	World vision India, Dang
	35	Chamulaben Valvi	World vision India, Waghai
	36	Shri Tusharbhai Gamit	Assit. Dir. of Horticulture, Ahwa, Dang
	37	Sri Hemantbhai Pawagadhi	Deputy Project director, ATMA, Ahwa, Dang
	38	Shri M.M.Patel	Project director, ATMA, Dang
5 th day	39	Dr. A. J. Deshmukh	Asst. Prof., Agri. Polytechnic, NAU, Waghai
	40	Shri P.A.Vavdiya	Asst. Prof., Agri. Polytechnic, NAU, Waghai
	41	Dr. S.A.Aklade	Asst. Prof., Agri. Polytechnic, NAU, Waghai
	42	Mrs. R.R. Deshmukh	Training Officer, FTC, Vyara
	43	Dr.Rehana Nihariya	Asso Prof, COA, NAU, Waghai
	44	Shri Tusharbhai Gamit	Assit. Dir. of Horticulture, Ahwa, Dang
	45	Dr. Binayak Chakravati	Asst. Prof., (Horti), COA, NAU, Waghai, Dang
	46	Chandresinh Kokani	Bee keeper, Rambhas

13. Organizations participated in Technology week celebration

SN	Name of Organization	Nature of involvement/participation
1	Department of Agriculture, Ahwa, Dang.	Participant farmers and stall exhibition
2	ATMA, Dang.	Participant farmers & Financial help and stall exhibition
3	FTC, Ahwa, Dang	Participant farmers & Financial help and stall exhibition
4	Department of Horticulture, Ahwa, Dangs	Guest Lecture and Fruit stall exhibition
5	Department of Animal Husbandry, Ahwa, Dang.	Guest lecturer and stall exhibition
6	Department of Irrigation, Ahwa, Dang.	Stall Exhibition
7	Department of Health, Ahwa, Dang	Guest lecturer and stall exhibition
8	Navsari Agricultural University	Technical help & stall exhibition
9	Mega Seed Unit, NAU, Navsari	Technical & financial help and stall exhibition
10	Govind traders	Stall Exhibition
11	Hill Millet Research Station, NAU, Waghai, Dang.	Technical help, Guest lecturer, and stall exhibition and field visit
12	Niger Research Station, NAU, varanasi	Stall Exhibition
13	Soil & Water Management Research Unit, NAU, Navsari	Guest lecture
14	Dept. of NRM, ASPEE college of Horti. & Fort., NAU, Navsari	Guest lecturer
15	Dept. of PHT, ASPEE college of Horti. & Fort., NAU, Navsari	Guest lecturer
16	College of Agriculture, NAU, Waghai, Dangs	Technical help and Guest lecturer
17	Agriculture Polytechnic, NAU, Waghai, dang	Guest lecturer
18	Veterinary College, NAU, Navsari.	Guest lecture
19	World vision of India	Participant farm women
20	BAIF, Lachhakadi	Participant farmers, guest lecture, & stall exhibition
21	AKRSP, Waghai	Guest lecture
22	Lotus Foundation	Participant farmers
23	Dept. of Watershed Management, Ahwa, Dang	Stall exhibition
24	Rovadhan Trust, Devalpada, dang	Participant farmers
25	Jeevan Jyot Trust, Pimpri	Participant farmers
26	Mahalaxmi Self Help Group (Nagli product)	Technical help, Guest lecturer, and stall exhibition and field visit
27	Khodiya Krushi Kendra	Stall exhibition
28	GGRC	Stall exhibition
29	Mahico seed Pra. Lit	Stall exhibition
30	Forest Department, Dang	Stall exhibition
31	Gandevi Taluka Seva Sahkari Madli	Stall exhibition
32	Bij nigam, Vyara	Stall exhibition
33	GSFC, Vasda, Ahwa	Stall exhibition
34	Aklavya Foundation, Waghai	Stall exhibition
35	A.S.Tractor, Bardoli	Stall exhibition
36	Krishna Power tiller	Stall Exhibition
37	Medical officer, Leprosy, ATMA, Dang	Guest lecturer

14. Details of participation

Day	Farmers		SC/ST farmers		Ext. Personnel	
	Male	Female	Male	Female	Male	Female
Total	0	0	1753	2385	55	12

Press Release

<p>Pradhan Mantri Fasal Bima Yojana</p>	<p>Farmer Fair/Krushvi Mahotsav</p>
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સંદેશ સુરેશ્વર, તા. ૦૬-૦૪-૨૦૧૬

પાક વીમા યોજનાનો લાભ લેવાનો ડાંગના ખેડૂતોને સાંસદનું આડવાન

વઘઈમાં પ્રધાનમંત્રી પાક વીમા યોજનાનો જનજાગૃતિ કાર્યક્રમ અને કૃષિમેળો યોજાવવાનો આ આજના રોજના સંદેશમાં પ્રધાનમંત્રી પાક વીમા યોજનાના હેતુઓ અને લાભો વિશેની વિગતો આજના સંદેશમાં પ્રગટ કરવામાં આવી છે. આ કાર્યક્રમમાં કૃષિ આયોજનાના અધિકારીઓ અને ખેડૂતોને જોડવામાં આવ્યા છે. આ કાર્યક્રમમાં કૃષિ આયોજનાના અધિકારીઓ અને ખેડૂતોને જોડવામાં આવ્યા છે.



૨૩/૩/૨૦૧૬

૦૭/૩૮/૫/૨૦૧૬

૨૦/૦૫/૧૬

૨૦/૦૫/૧૬

૨૦/૦૫/૧૬

વઘઈ ખાતે ડાંગ જિલ્લાનો કૃષિ મહોત્સવ યોજાયો

કૃષિ મહોત્સવથી ગુજરાત અન્ય રાજ્યો માટે માર્ગદર્શક : ચૌર્યા

કૃષિ મહોત્સવથી ગુજરાત અન્ય રાજ્યો માટે માર્ગદર્શક : ચૌર્યા



Van Mahotsav 2016

Off campus Training

વઘઈ કૃષિ વિજ્ઞાન કેન્દ્ર દ્વારા વૃક્ષારોપણ કરાયું

વઘઈ કૃષિ વિજ્ઞાન કેન્દ્ર દ્વારા વૃક્ષારોપણ કરાયું



સામના સાપુતારા સામના

સાપુતારા તથા સામનાના વિસ્તારની પ્રેસનોટ, બહેટપબર અને વાઈડ લવાજમ માટે સંપર્ક કરો.

વઘઈ તથા સામના પ્રેસનોટ, બહેટપબર લવાજમ માટે સંપર્ક કરો.

ડાંગના ત્રણ ગામોમાં ખેડૂતોને ખેતી, પશુપાલન અને ડેરી અંગે માર્ગદર્શન

ડાંગના ત્રણ ગામોમાં ખેડૂતોને ખેતી, પશુપાલન અને ડેરી અંગે માર્ગદર્શન



સામના સાપુતારા સામના

સાપુતારા તથા સામનાના વિસ્તારની પ્રેસનોટ, બહેટપબર અને વાઈડ લવાજમ માટે સંપર્ક કરો.

વઘઈ તથા સામના પ્રેસનોટ, બહેટપબર લવાજમ માટે સંપર્ક કરો.

Farmer Fair cum Seminar

Technology Week-2016-17

વિજ્ઞાન સંસ્થા - ૧-૨-૨૦૧૭

વઘઈ, ઉનાઈ, મરોલી

વઘઈ ખાતે કૃષિ મેળો અને પાક પરિસ્વાદન આયોજન થયું

ડાંગ જિલ્લાને ઓર્ગેનિક જિલ્લો બનાવવા માટે ૩.૬૦ કરોડના ખર્ચે

પરિસ્વાદમાં ખેડૂત સેમિનાર સહિત પાક પ્રદર્શન નિહાળવા ખેડૂતો ઉમટયા

વઘઈ ખાતે કૃષિ મેળો અને પાક પરિસ્વાદન આયોજન થયું



આધુનિક ટેકનોલોજીના ઉપયોગથી ડાંગ જિલ્લાના ખેડૂતો સુધ્ધર બન્યા છે: ચૌર્યા

આધુનિક ટેકનોલોજીના ઉપયોગથી ડાંગ જિલ્લાના ખેડૂતો સુધ્ધર બન્યા છે: ચૌર્યા

ટેકનોલોજી સપ્તાહ ૨૦૧૬-૧૭

વઘઈ ખાતે કૃષિ મેળો અને પાક પરિસ્વાદન આયોજન થયું

ટેકનોલોજી સપ્તાહ ૨૦૧૬-૧૭



સામના સાપુતારા સામના


સાપુતારા તથા સામનાના વિસ્તારની પ્રેસનોટ, બહેટપબર અને વાઈડ લવાજમ માટે સંપર્ક કરો.

વઘઈ તથા સામના પ્રેસનોટ, બહેટપબર લવાજમ માટે સંપર્ક કરો.

Popular Article Rashaynik Khatar ne Janiye ane Teno Yogye Upyog Kariye

રાસાયણિક ખાતરને જાણીએ અને તેનો યોગ્ય ઉપયોગ કરીએ

શ્રી જે. બી. ડોમવેળા શ્રી એ. વી. જે. ઝીંગલા
કૃષિ વિજ્ઞાન કેન્દ્ર
નવસારી કૃષિ યુનિવર્સિટી, વઘઈ જિ. ડામ - ૩૮૪ ૭૩૦
ફોન : (૦૨૬૩૧) ૨૪૬૨૨૩૯



રાસાયણિક ખાતર એ જમીનમાં જહી (ધ) સૂક્ષ્મ તત્વો : કલોરોન, ઝિંક, લોહ, મેંગેનીઝ, ઓગળી જાપ અને છોડને એક સાથે મળી જાય તેવું મોલિબ્ડેનમ, તાંબુ, બોરોન, કોબાલ્ટ અને નિકલ. રસાયણ છે. આવા સંજોગોમાં તે જ ખાતર ધીમે ધીમે પલાટને મળે તેવી વ્યવસ્થા આપણે કરવી જોઈએ. નાઈટ્રોજનનો ઉપયોગ ખાસ કરીને પાનના વિકાસ માટે, ફોસ્ફરસનો ઉપયોગ મૂળ, ફલાવર, બીજ અને ફૂટના વિકાસ માટે અને પોટેશિયમનો ઉપયોગ ડાળીના વિકાસ, છોડમાં પાણીના ફેરફાર અને ફૂલ અને ફળ વધુ બેસાડવામાં થાય છે.

પોષક તત્વોનો જુદી જુદી રીતે થતો વ્યય :

(૧) ધોવાણ
(૨) નીંદામણ ધ્વારા ઉપાડ (૩) વાયુ રૂપે ઉડી જવું (૪) જમીન ચકાસણીને આધારે સમતોલ ખાતર વ્યવસ્થા અપનાવી પોષક તત્વોનો પુરતા પ્રમાણમાં ઉપયોગ કરવો.

છોડના પોષક તત્વો :

(ક) **ઠંડારણીય :** કાર્બન, હાઈડ્રોજન અને ઓક્સિજન
(ખ) **મુખ્ય તત્વો :** નાઈટ્રોજન, ફોસ્ફરસ અને પોટાશ
(ગ) **ગૌણ તત્વો :** કેલ્શિયમ, મેગ્નેશિયમ અને સલ્ફર

(૫) જમીન સુધારકોનો અને સેન્ટ્રિફુ તેમજ જૈવિક ખાતરોનો સંકલિત ઉપયોગ કરવો.
(૬) યોગ્ય પાક અને જાત પસંદગી અપનાવવી અને સમયસર નીંદામણ નિયંત્રણ કરવું.

રાસાયણિક ખાતરોની કાર્યક્ષમતા વધારવાના ઉપાયો :

(૧) નાઈટ્રોજન યુક્ત ખાતરો ૨ થી ૩ હપ્તામાં આપવા.
(૨) દાણાદાર ખાતર વાપરવા.
(૩) યુરિયા ખાતરને ફૂલના પટ્ટી છે જેનું ખરેખર કારણ હોય તો યુરિયા, ડી. એ. પી. અને પોટાશનો વધુ પડતો ઉપયોગ. ખેતીમાં પાકની પસંદગીના આધારે તત્વોની જરૂરીયાત જુદી જુદી હોય તે બેલેન્સ પૂર્વકનો ખાતરનો ઉપયોગ અને ઉત્પાદકતાને સીધો સકારાત્મક સંબંધ છે.

કૃષિગોવિદ્યા જુલાઈ-૨૦૧૬ વર્ષ : ૬૯ અંક : ૩ સળંગ અંક : ૮૧૯

એક ઢિલો તત્વ લેવા માટે જરૂરી રાસાયણિક ખાતરનું વજન

ક્રમ	ખાતર	રાસાયણિક ખાતરનું વજન	નોંધ
(૧) હાઈટ્રોજન			
૧	યુરિયા	૨.૧૭૫	---
૨	એમોનિયમ સલ્ફેટ	૪.૭૫૦	૧.૧૪ કિ.ગ્રા. ગંધક જમીનમાં ઉમેરાય છે.
૩	એમોનિયમ નાઈટ્રેટ	૩.૦૩૦	---
૪	કેલ્શિયમ એમોનિયમ નાઈટ્રેટ	૪.૦૦૦	---
૫	એમો. સલ્ફેટ નાઈટ્રેટ	૩.૮૪૫	---
૬	ડાપ એમોનિયમ સલ્ફેટ	૫.૫૫૫	---
(૨) ફોસ્ફરસ			
૧	સુપર ફોસ્ફેટ (સિંગલ)	૬.૨૫૦	૬૮૮ ગ્રામ ગંધક જમીનમાં ઉમેરાય છે.
૨	સુપર ફોસ્ફેટ (ડબલ)	૩.૧૨૫	૩૪૪ ગ્રામ ગંધક જમીનમાં ઉમેરાય છે.
૩	સુપર ફોસ્ફેટ (ટ્રિપલ)	૨.૦૮૩	૨૮૯ ગ્રામ ગંધક જમીનમાં ઉમેરાય છે.
૪	ડાપ એમોનિયમ સલ્ફેટ	૨.૧૭૫	૪૦૦ ગ્રામ નાઈટ્રોજન જમીનમાં ઉમેરાય છે.
(૩) પોટાશ			
૧	મ્યુરેટ ઓફ પોટાશ	૧.૭૨૫	---
૨	સલ્ફેટ ઓફ પોટાશ	૨.૦૮૩	૩૫૪ ગ્રામ ગંધક જમીનમાં ઉમેરાય છે.
૩	પોટેશિયમ નાઈટ્રેટ	૨.૭૭૩	૨૮૦ ગ્રામ નાઈટ્રોજન જમીનમાં ઉમેરાય છે.

(૧) નાઈટ્રોજન : ડિનાર તેમજ ટેરવાં બળી ગયેલા દેખાય છે.
(૨) જમીનમાં નાઈટ્રોજનની ખામી હોય તો..... ૫ નાઈટ્રોજનનો જો પુષ્પ જ અભાવ હોય તો ફળ, ફૂલ, બહુજ ઓછા પ્રમાણમાં બેસે છે અને પાક ઓછો ઉતરે છે.
(૩) નાઈટ્રોજન વધુ પ્રમાણમાં અપાય તો..... ૧ પાક એકી સાથે વધુ નાઈટ્રોજન પચાવી શકતો નથી.

૧૦ જુલાઈ-૨૦૧૬ વર્ષ : ૬૯ અંક : ૩ સળંગ અંક : ૮૧૯ કૃષિગોવિદ્યા

૨ જરૂર કરતાં વધારાનો નાઈટ્રોજન જમીનમાં ઉતરી જાય છે અને હવામાં ઉડી જાય છે.
૩ વાનસ્પતિક વૃદ્ધિ વધુ થાય છે.
૪ નાઈટ્રોજનનો બગાડ થાય છે.

(૩) પોટાશ :

(ક) **જમીનમાં પોટાશની ખામી હોય તો.....**
૧ પાંદડાંની ટોચ અને ડિનારી સુકાય છે.
૨ પાંદડાંની વચલી રંગમાં લાલ રંગના ડાપ પડે છે.
૩ મકાઈ, ધઉ વગેરેમાં પાંદડાં ખરી પડે છે.
૪ દાણા વજનમાં હલકા અને પોચા રહે છે.

(ખ) **પોટાશ વધુ પડતો અપાય તો.....**
૧ કોઈ અસર પાક પર થતી નથી.
૨ ભાકી રહેલો પોટાશ બીજા વર્ષે ઉગાડવામાં આવતા પાકને મળે છે.

(૪) પાકને પ્રમાણસર આપવાથી.....

૧ મૂળનો વિકાસ થાય છે.
૨ રોગ અને જીવાત સામે છોડની પ્રતિકારક શક્તિ વધે છે.
૩ નાઈટ્રોજન તત્વ વધુ અપાઈ ગયું હોય તો તેની ખરાબ અસર નાબૂદ કરે છે.
૪ પાક ઉત્પાદનની ગુણવત્તા જેવીકે રંગ, સુગંધ, ચમક અને મીઠાશ સુધારે છે.
૫ દાણા ભરાવદાર અને વજનદાર બને છે.

કૃષિગોવિદ્યા જુલાઈ-૨૦૧૬ વર્ષ : ૬૯ અંક : ૩ સળંગ અંક : ૮૧૯

પોષક તત્વોની ઉષ્ણ માટેના સૂક્ષ્મ પાકો

ક્રમ	તત્વ	સૂક્ષ્મ પાક (ઉષ્ણ પલ્લી જથ્થા)
૧	નાઈટ્રોજન	મકાઈ, ધાન પાકો, રાઈ, લીલુ
૨	ફોસ્ફરસ	મકાઈ, જવ, ટામેટા
૩	પોટેશિયમ	મકાઈ, બટાટા, રજકો, તમાકુ, વેલાવાળા શાકભાજી, કપાસ, ટામેટા.
૪	કેલ્શિયમ	રજકો, કઠોળ
૫	મેગ્નેશિયમ	બટાટા, કોબી, ફલાવર
૬	ગંધક	રજકો, રાઈ
૭	લોહ	જુવાર, જવ, લીલુ, કોબી, ફલાવર
૮	જસત	મકાઈ, ડુંગળી, લીલુ, ડાંગર
૯	તાંબુ	મકાઈ, બોટ, લીલુ, ડુંગળી, તમાકુ, ટામેટા
૧૦	મેંગેનીઝ	મકાઈ, લીલુ, કઠોળ, ધઉ, મૂળા
૧૧	બોરોન	રજકો, કોબીજ, ફલાવર
૧૨	મોલિબ્ડેનમ	કોબી, ફલાવર, કોબીજ, લીલુ

આવી રીતે જો રાસાયણિક ખાતરના તત્વો પ્રમાણે તેમજ ગુણવત્તા આપણે જાણતા હોઈએ તો કયા કયા કયા ખાતર કેટલું આપવું અને જે તે ખાતરનું પાકમાં શું મહત્ત્વ છે તે વિષે આપણને ઊંડી સમજણ આવી જશે. હવે આપણે વધારે પડતું રાસાયણિક ખાતર આપીને પૈસાનો વ્યય અને જમીન બગાડવી નથી. સારો રસતો એ જ છે કે આપણે જમીનની ચકાસણી કરી પાકને અનુરૂપ રાસાયણિક ખાતર આપીએ. જેટલું જ્યાં આપણે પેલા અણતી ભરવે તે પાકોને છોડને તેટલું જ જ્યાં પેતીના દરેક કાર્યમાં રાખીશું તો વિનયપૂર્વક અને ઓછી ખર્ચાળ ખેતી પધ્ધતિથી સારામાં સારું ઉત્પાદન ઓછી મહેનતે લઈ શકીશું અને બીજા માટે ઉદાહરણ બનીશું.

પશુપાલકોના હિતમાં....
પશુપાલકોનીઓ ઘણા ઉપાધિન કરેલું વિનાર મુજબનું 'અનુભવ સીલેક્ટ વિશ્વલ વિશ્વ' તમને વડોના પશુઓની તકરવી, પ્રજનન અને દુધ ઉત્પાદન માટે સલામત છે. સ્વ પાવના પશુપાલકો સંલોપન વેલિંગટોન અને વડો, પશુપાલકોના અભ્યાસકેન્દ્ર પુલવેલી, આઈ.આઈ.આઈ. (ફોન : ૦૨૬૨-૨૬૩૪૮૦) ખાતેની વ્યાજબી ભાડે મેળવી શકાય.

નોંધ : વધુ જથ્થામાં જરૂરીયાત હોય તો અગાઉની નોંધની જે તે ૨૩મી ભરી સંસ્કરણ પુસ્તક લેવા પુસ્તકાલયનો વિનય.

૧૨ જુલાઈ-૨૦૧૬ વર્ષ : ૬૯ અંક : ૩ સળંગ અંક : ૮૧૯ કૃષિગોવિદ્યા