



REPORT ON 12th SCIENTIFIC ADVISORY COMMITTEE MEETING

TO BE HELD ON
25-01-2020 AT 10:00 A.M.



KRISHI VIGYAN KENDRA
Navsari Agricultural University
Navsari – 396450

**SCIENTIFIC ADVISORY COMMITTEE
OF KRISHI VIGYAN KENDRA, NAVSARI**

Sr. No	Name	Designation	Committee status
1	Dr. Sunil Chaudhary	(I/C) Hon. Vice-Chancellor, NAU, Navsari.	Chairperson
2	Dr. G. R. Patel	Director of Extension Education, N.A.U., Navsari.	Member
3	Dr. Lakhan Singh	Director, ICAR- ATARI, Zone-VIII, College of Agriculture Campus, PUNE - 411005 (Maharashtra)	Member
4	Dr. Sunil Chaudhary	(I/C) Director of Research, N.A.U., Navsari. (Representative of ICAR)	Member
5	Dr. J. D. Thanki	Professor & Head (Agronomy), NMCA, NAU, Navsari	Member
6	Dr. P.K.Shrivastav	I/C Principal, ASPEE College, NAU, Navsari	Member
7	Dr. N.B.Patel	Research Scientist (LRS), NAU, Navsari	Member
8	Dr. R.V. Borichangar	Associate Professor, College of Fisheries Science, NAU, Navsari	Member
9	Dr.Atul Gajera	District Agriculture Officer, Dist. Navsari	Member
10	Mr.B.K. Rai Samant	Assistant General Manager, NABARD, Navsari	Member
11	Dr. Dineshbhai Padaliya	Deputy Director of Horticulture, Dist. Navsari	Member
12	Mr. R.M.Patel	Exe. Eng. (Drainage), Ambika Division, Dist. Navsari	Member
13	Dr. M. G. Prajapati	Deputy Director of Animal Husbandry, Dist. Navsari	Member
14	Mr. A. M. Patel	Assistant Director of Fisheries, Dist. Navsari	Member
15	Shri. C.K. Patel	Progressive Farmer, Village- Bhinar, Ta.Vansda	Member
16	Smt.Alpanaben M. Patel	Progressive Farm Woman, Village- Vasani, Ta.Gandevi	Member
17	Shri Amitbhai Naik	Director, Dhanori Piyat mandali and Seva sahakari Mandali, Village - Dhanori, Ta.Gandevi, Dist : Navsari	Member
18	Shri Surajbhai D. Savalia	Agri-entrepreneur, Village : Ganesh Sisodra, Dist : Navsari,	Member
19	Shri Kiranbhai M. Patel	Progressive farmer and Director, Navsari Taluka Sangh and Deputy director Adada seva sahakri mandali, Village : Adada, Ta.Gandevi, Dist : Navsari	Member
20	Dr. C.K. Timbadia	Senior Scientist & Head, KVK, Navsari	Member Secretary

Agenda for 12th Scientific Advisory Meeting of Krishi Vigyan Kendra

Schedule to be held on 25th January 2020 at 10:00 am

Item No.	Agenda
11.1	Review of last SAC Meeting Minutes.
11.2	Review of KVK activities held between March-2019 to December-2019.
11.3	Presentation on Action Plan of April-2020 to March-2021.
11.4	Presentation of Budget Position.
11.5	Suggestions and discussion to make Krishi Vigyan Kendra, Navsari more effective.
11.6	Any other related matters with the permission of the chairperson.

11.1 Action Taken Report on minutes of 11th SAC meeting held on 20/03/2019

Action Taken Report on minutes of 11th SAC meeting held on 20/03/2019		
Sr. No	Suggestions	Action taken
1. During scientific Advisory committee meeting following suggestions are made by the experts		
	During the presentation of activities carried out by KVK Navsari in 10 th SAC by KVK, following decisions were taken	
11.2.1	Organize one day training or workshop on script writing and presentation for scientists and officers of university. (Action : DEE)	<ul style="list-style-type: none"> • DEE office is in contact with prasar bharti, vadodara and the said workshop will be organized in a short period
11.2.2	Impact should be analyzed for training and extension activities	<ul style="list-style-type: none"> • Impact studies is conducted
11.2.3	Use new variety in FLDs	<ul style="list-style-type: none"> • Following variety were using in FLDs • Paddy GNR-3 (334 farmers),GNR-4 (3 farmers) GNR-5 (45 farmers), GNR-6 (98 farmers), GNR-7 (17 farmers) • Pigeon pea GNP-2 (125 farmers) • Chick pea GG-5 (200 farmers) • Green gram GM-6 (120 farmers) • Turmeric GNT-2 (80 farmers)
11.2.4	Convergence activities with NABARD	<ul style="list-style-type: none"> • NABARD officers invited in guest lecture
11.2.5	Use Novel plus in FLDs	<ul style="list-style-type: none"> • Novel plus use in Following FLDs • Green gram (125 farmers) • Vegetables (105 farmers) • Sapota and mango (127 farmers)
11.2.6	Plan scheme strengthening proposal should be submitted along with required staff for inland fisheries scheme	<ul style="list-style-type: none"> • Work in Progress

મુદ્દા નં. ૧	બેઠક દરમ્યાન સભ્યશ્રીઓ દ્વારા નીચે મુજબનાં સૂચનો કરાયા.	
મુદ્દા નં.	અગિયારમી વૈજ્ઞાનિક સલાહકાર સમિતીની બેઠકથી બારમી બેઠક દરમ્યાન કૃષિ વિજ્ઞાન કેન્દ્ર, નવસારી દ્વારા થયેલ વિવિધ પ્રવૃત્તિઓના અહેવાલના રજૂઆત દરમ્યાન સભ્યોશ્રીએ નીચે જણાવ્યા મુજબના સૂચનો કર્યા.	
મુદ્દા નં ૧૧.૨.૧	વૈજ્ઞાનિકો અને યુનિવર્સિટીઓના કચેરીઓ માટે સ્ક્રિપ્ટ લેખન અને રજૂઆત પર એક દિવસની તાલીમ અથવા વર્કશોપ ગોઠવો.	<ul style="list-style-type: none"> વિસ્તરણ શિક્ષણ નિયામકશ્રીની કચેરી પ્રસાર ભારથી, વડોદરા સાથે સંપર્કમાં છે ટૂંકમાં સમયમાં વર્કશોપનું આયોજન કરનાર છે.
મુદ્દા નં ૧૧.૨.૨	તાલીમ અને વિસ્તરણ પ્રવૃત્તિઓની અસરકારકતા તપાસવી જોઈએ.	<ul style="list-style-type: none"> અસરકારકતા અભ્યાસ કરવામાં આવેલ છે.
મુદ્દા નં. ૧૧.૨.૩	અગ્રીમ હરોળના નિદર્શનમાં નવી જાતોનો ઉપયોગ કરવો.	<ul style="list-style-type: none"> અગ્રીમ હરોળ નિદર્શનમાં નીચે જણાવેલ પ્રમાણે જાતના ઉપયોગ કરવામાં આવેલ. ડાંગર જી.એન.આર.-૩ (૩૩૪ ખેડૂત), જી.એન.આર.-૪ (૩ ખેડૂત), જી.એન.આર.-૫ (૪૫ ખેડૂત) જી.એન.આર.-૬ (૯૯ ખેડૂત), જી.એન.આર.-૭ (૧૭ ખેડૂત) તુવેર જી.એન.પી.-૨ (૧૨૫ ખેડૂત) ચણા જી.જી.-૫ (૨૦૦ ખેડૂત) મગ જી.એમ.-૬ (૧૨૦ ખેડૂત) હળદર જી.એન.ટી.-૨ (૮૦ ખેડૂત)
મુદ્દા નં ૧૧.૨.૪	વિસ્તરણ પ્રવૃત્તિઓમાં રાષ્ટ્રીય કૃષિ અને ગ્રામીણ વિકાસ બેંકને સહયોગી બનાવવી.	<ul style="list-style-type: none"> નાબાર્ડના અધિકારીને તાલીમમાં માર્ગદર્શન આપવા માટે બોલવવામાં આવે છે.
મુદ્દા નં ૧૧.૨.૫	નોવેલ પ્લસનો ઉપયોગ અગ્રીમ હરોળના નિદર્શનમાં થવો જોઈએ.	<ul style="list-style-type: none"> નોવેલ પ્લસના નિદર્શનો નીચે જણાવેલ પાકમાં ગોઠવવામાં આવેલ. મગ (૧૨૫ ખેડૂત) શાકભાજી (૧૦૫ ખેડૂત) ચીકુ અને આંબા (૧૨૭ ખેડૂત)
મુદ્દા નં ૧૧.૨.૬	ઈનલેડ ફીશરીશ વિકાસ યોજનાની વધુ અસરકારકતા માટે જરૂરી સ્ટાફ સાથેની સ્ટ્રેન્ધનીંગ પપ્રોજલ તૈયાર કરી રજૂ કરવી.	<ul style="list-style-type: none"> કાર્ય ચાલુ છે.

11.2 Review of KVK Activities held between March-2019 to December-2019

(A) Training :

1. Farmers, Farm Women and Rural Youths

Subject	On Campus				Off Campus				Total			
	No.	Beneficiaries			No.	Beneficiaries			No.	Beneficiaries		
		M	F	T		M	F	T		M	F	T
(A) Practicing Farmers /Farm Women												
Crop Production	18	673	591	1264	14	329	245	245	574	32	1002	836
Horticulture	11	114	540	654	2	1	61	61	62	13	115	601
Plant Protection	3	139	2	141	13	317	350	350	667	16	456	352
Home Science	0	0	0	0	2	0	83	83	83	2	0	83
Extension Education	5	221	63	284	3	69	203	203	272	8	290	266
Fisheries	4	125	81	206	5	78	48	48	126	9	203	129
Total	41	1272	1277	2549	39	794	990	1784	80	2066	2267	4333
(B) Rural Youth												
Crop Production	2	28	19	47	1	16	17	33	3	44	36	80
Horticulture	1	84	85	169	0	0	0	0	1	84	85	169
Fisheries	2	16	45	61	0	0	0	0	2	16	45	61
Plant Protection	0	0	0	0	1	13	50	63	1	13	50	63
Extension Education	0	0	0	0	1	0	35	35	1	0	35	35
Total	5	128	149	277	3	29	102	131	8	157	251	408
Total A+B	46	1400	1426	2826	42	823	1092	1915	88	2223	2518	4741

2. Sponsored Training :

Sr. No.	Subject	Date	Beneficiaries			Agency
			Male	Female	Total	
1	Plant protection	3-4/7/19	5	40	45	ATMA, Navsari
2		9/7/19	32	10	42	
3		10/7/19	28	38	66	
4		11/7/19	34	4	38	
5		12/7/19	63	1	64	
6	Home Science	21/5/19	0	20	20	ATMA, Navsari
7	Agronomy	5-6/7/19	0	51	51	ATMA, Navsari
8	Horticulture	8-9/7/19	9	33	42	ATMA, Navsari
9	Extension Education	24-26/7/19	0	40	40	ATMA, Botad
	Total		171	237	408	

B. Frontline demonstrations:

Old FLD Results

Sr. No	Season	Crop	Variety	Objective	Area (ha)	No. of farmers	Average Production q/ha		% increase
							Demo.	L.C.	
Crop Production									
1	Kharif-18	Sorghum	PC-9	To Popularize new variety	1	10	421	388	8.51
2	Kharif-18	Bajara	Bajara-HC 20	To Popularize new variety	1	10	398		
3	Rabi-18	Chickpea	G.G.-3	To increase the productivity of Chick pea	10	79	12.81	10.17	25.96
4	Rabi-18	Chickpea	G.G.-5	To Popularize new variety	10	80	15.32	10.17	50.64
5	Rabi-18	Greengram	Co-4	To increase productivity of Green gram	18.5	144	7.88	6.45	22.17
6	Rabi-18	Indian bean	GNIB-21	To Popularize new variety	2	47	49.64	38.47	29.04
7	Rabi-18	Indian bean	Guj-Indian bean-2	To Popularize new variety	6.5	71	8.95	7.58	18.07
Plant Protection									
8	Kharif-18	Pigeon pea	Available	Use of bio pesticide in pest & disease management	5	10	11.87	10.98	8.11
Horticulture									
9	Kharif-18	Mango	Available	Use of PSB, KMB, Azto bio fertilizer	5	226	93.5	85	10.0
10	Kharif-18	Mango	Available	Novel liquid	51	129	92.5	74	25.0
11	Kharif-18	Little Gourd	GNLG-1	Introduction of new variety	4	64	210	180	16.67
12	Kharif-18	Bottle gourd	GABH-1	Introduction of new variety	10	19	220	210	4.76
13	Kharif-18	Tomato	GAT-3	Introduction of new variety	2	6	200	180	11.11
14	Kharif-18	Mango	Available	Tricoderma use	70	155	100	97	3.09
15	Kharif-18	Guvar	Available	Introduction of new variety	8	35	85	82	3.66
16	Rabi-18	Brinjal	Available	Novel liquid	6	20	195	170	14.71
17	Kharif-18	Tomato	Available	Novel liquid	5	20	180	160	12.50
18	Kharif-18	Chilli	Available	Use of PSB, KMB, Azto bio fertilizer	2	20	650	590	10.17
19	Kharif-18	Kitchen garden	Available	pesticide residue free nutritious food	5	500	2.75	2.5	10.00

Fisheries

19	2018-19	Fish farming IMC & Chinese carp	Catla, Rohu, Mrigal, Grass carp	To demonstrate stocking density of fish seed & species ratio	27	112	1018	640	59
20	2018-19	Fish farming	Catla, Rohu, Mrigal, Grass carp	To demonstrate fish feed nutrition & method of feeding	42	136	2436	1830	33
21	2018-19	Cage Farming	Pungasino cat fish	To demonstrate pungasino culture in cage farming	6X4 mt. 2 cage	05	1500 kg per cage	----	--
22	2018-19	Fish seed rearing	Catla, Rohu, Mrigal, Grass carp	To demonstrate fish seed rearing from fish fry to yearlings	0.5	7	32000 Nos.	20000 Nos.	60
				TOTAL	291.5	1905			

New FLD April-2019 to December-2019

Sr. No.	Season	Crop	Variety	Objective	Area (ha)	No. of farmers	Average Production qt/ha		Percent increase
							Demo.	L.C.	
Crop Production									
1	Kharif-2019-20	Paddy	NAUR-1	To popularize the new high yielding variety	60	273	48.63	42.17	15.32
2	Kharif-2019-20	Paddy	GNR-2	To popularize the new high yielding variety	28.30	120	45.77	42.17	8.54
3	Kharif-2019-20	Paddy	GNR-3	To popularize the new high yielding variety	88.4	334	52.18	44.21	18.03
4	Kharif-2019-20	Paddy	GNR-4	To popularize the bio fortified variety	1.0	3	38.48	34.72	10.83
5	Kharif-2019-20	Paddy	GNR-5	To popularize the new high yielding variety	9.2	45	46.04	42.17	9.18
6	Kharif-2019-20	Paddy	GNR-6	To popularize the new high yielding variety	20.80	98	45.64	40.24	13.42
7	Kharif-2019-20	Paddy	GNR-7	To popularize the new high yielding variety	5.80	17	44.55	39.87	11.74
8	Kharif-2019-20	Turmeric	GNT-2	To popularize the new high yielding variety	0.4	40	Crop is standing		Results awaited
9	Kharif-2019-20	Pigeon pea	Vaishali	To popularize the new high yielding variety	35.0	323	Crop is standing		Results awaited
10	Kharif-2019-20	Pigeon pea	GNP-2	To popularize the new high yielding variety	20.0	125	Crop is standing		Results awaited
11	Kharif-2019-20	Chick pea	GG-5	To popularize the new high yielding variety	20.0	200	Crop is standing		Results awaited
12	Kharif-2019-20	Greengram	Co-4	To popularize the new high yielding variety	1.6	12	Crop is standing		Results awaited

13	Kharif-2019-20	Indian bean	G.Indian bean-2	To popularize the new high yielding variety	4	45	Crop is standing		Results awaited
14	Kharif-2019-20	Turmeric	Sugandham	To popularize the new high yielding variety	0.20	10	Crop is standing		Results awaited
Plant Protection									
15	Kharif-19	Paddy	Available	Integrated pest & disease management	10	20	Crop is standing		Results awaited
16	Kharif-19	Pigeon pea	Vaishali	Use of bio pesticide in pest & disease management	5	10	Crop is standing		Results awaited
17	Kharif-19	Paddy	Available	Use of bio agent	10	20	Crop is standing		Results awaited
18	Rabi-20	Mango	Available	Fruit fly control	5	20	Crop is standing		Results awaited
Fisheries									
19	Kharif to whole year	Fresh water fish farming	IMC (Catla, Rohu, Mriagal) Grass carp, fresh water prawn (<i>Macrobrachium rosenbergii</i>)	<ul style="list-style-type: none"> • To encourage fish farming activities in village tanks and khet talavadi, so employment opportunities and nutrition security in rural area can be evolved. • To demonstrate fish farming technologies such as fish stocking density and species ratio along with fish nutrition for higher production. 	26.24 ha	82	Continue.....		
Horticulture									
20	Kharif-20	Mango	Available	Use of PSB, KMB, Azto bio fertilizer	36	325	Continue.....		
21	Kharif-20	Mango	Sonpari	Introduction of new variety	2	500	Continue.....		
22	Rabi-20	Mango	Available	Novel liquid	70	140	Continue.....		

23	Rabi-20	Sapota	Available	Novel liquid	10	20	Continue.....
24	Kharif-20	Little Gourd	GNLG-1	Introduction of new variety	10	44	Continue.....
25	Kharif-20	pointed Gourd	GNPG-1	Introduction of new variety	2	9	Continue.....
26	Kharif-20	Sweet potato	C-71	Introduction of new variety	1	3	Continue.....
27	Rabi-20	Brinjal	Available	Novel liquid	2	10	Continue.....
28	Rabi-20	Chilli	Available	Novel liquid	2	10	Continue.....
29	Kharif Rabi-20	Kitchen garden	Available	pesticide residue free nutritious food	7	707	Continue.....
				TOTAL	492.94	3565	

3. Demonstration conducted under NFSM project 2018-19 and 2019-20

NFSM Project : 2018-19

1. FLD Organized

Sr. No	FLD organized			Area (ha)	Beneficiaries		
	Crop	Variety	Season		SC/ST	Others	Total
1	Pigeon pea	BSMR-853	Kharif-18	31	37	126	163
2	Chick pea	GG-5	Rabi-18	10	65	15	80
3	Chick pea	GG-3	Rabi-18	10	79	0	79
4	Green gram	Meha	Summer-19	21	74	93	167
5	Green gram	GM-6	Summer-19	10	73	15	88
TOTAL				82	328	249	577

2. Training on pulses

Sr. No.	Date	Title of training	No. of Beneficiaries						Grand Total
			SC/ST		Other		Total		
			M	F	M	F	M	F	
A : Kharif pulses									
1	25/05/18	Integrated nutrient and weed management in pigeon pea	69	02	00	00	69	02	71
2	04/06/18		31	13	01	00	32	13	45
3	11/06/18	Scientific cultivation practices of Pigeon pea crops	06	00	13	08	19	08	27
4	13/06/18		03	00	06	14	09	14	23
5	12/07/18		18	11	01	00	19	11	30
6	13/07/18		21	13	00	00	21	13	34
7	21/07/18		14	13	01	00	15	13	28
8	03/08/18		19	22	00	00	19	22	41
Sub-total-A			181	74	22	22	203	96	299
B : Rabi pulses									
9	17/10/18	Key steps to increase the production and productivity of chickpea	41	29	1	0	42	29	71
10	19/10/18		18	21	0	0	18	21	39
11	20/10/18	Scientific cultivation practices of Rabi pulses	24	26	3	0	27	26	53
12	22/10/18		23	44	0	0	23	44	67
13	26/10/18		39	00	3	4	42	04	46
Sub-total-B			145	120	7	4	152	124	276
C : Summer pulses									
14	18/01/19	Scientific cultivation practices of summer green gram	0	0	21	56	21	56	77

15	19/01/19	Important steps to increase the productivity of summer pulse	15	57	0	13	15	70	85
16	24/01/19	Scientific cultivation practices of summer green gram	27	14	07	06	34	20	54
17	14/02/19	Important and benefits of summer pulses in cropping system	0	0	20	14	20	14	34
Sub-total-C			42	71	48	89	90	160	250
Gran total (A+B+C)			368	265	77	115	445	380	825

3. Field day on *Rabi* pulses (Rabi) 2018-19

Sr. No.	Date	Crop	Variety	SC/ST		Other		Total		Grand Total
				M	F	M	F	M	F	
1.	18/5/18	Greengram	Meha	18	9	0	0	18	9	27
2.	18/5/18	Greengram	Meha	6	18	0	0	6	18	24
3.	27/10/18	Pigeonpea	Vaishali	12	7	28	32	40	39	79
4.	31/10/18	Pigeonpea	Vaishali	34	36	3	0	37	36	73
5.	17/12/18	Pigeonpea	Vaishali	32	6	0	0	32	9	41
6.	17/10/18	Chickpea	GG-3	27	17	7	5	34	12	56
7.	18/1/19	Chickpea	GG-3	50	10	0	0	50	10	60
8.	19/1/19	Chickpea	GG-3	0	0	18	52	18	52	70
9.	24/1/19	Chickpea	GG-3	3	13	15	45	18	58	76
10.	2/2/19	Chickpea	GG-3	48	8	2	12	50	20	70
Total				230	124	73	146	303	263	576

4. Field visit of pulses crop

Sr. No.	Date	Name of village	No. of Beneficiaries						Grand total
			SC/ST		Other		Total		
			M	F	M	F	M	F	
1	3/8/18	Sindahi	2	5	0	0	2	5	7
2	7/9/19	Sindahi, Bhanr Dhanori	6	5	2	0	8	5	13
3	9/9/10	Dhanori	0	0	5	0	5	0	5
4	15/9/18	Kharjai	2	2	0	0	2	2	4
5	1/10/18	Bartad	3	1	0	0	3	1	4
6	23/10/18	Bedmal	2	1	0	0	2	1	3
7	1/12/18	Upsal	3	1	0	0	3	1	4
8	13/12/18	Changa	0	0	3	0	3	0	3
9	15/12/18	Bedmal	5	1	0	0	5	1	6
10	17/12/18	Bartad	5	1	0	0	5	1	6

		Bamanva							
11	21/12/18	Sindhai	2	2	0	0	2	2	4
12	08/01/19	Aankalach Unai charvi	3	3	0	0	3	3	6
13	21/01/19	Kharji Sindhai	2	6	0	0	2	6	8
14	28/01/19	Aankalach	0	2	0	0	0	2	2
15	4/02/19	Upsal and Unai charvi	3	3	0	0	3	3	6
16	25/02/19	Bedmal & Aankalach	2	2	0	0	2	2	4
		Total	40	35	10	0	50	35	85

5. Visit of CFLDs/Study tour

Sr. No.	Date of cluster FLDs visit	Name of Visitor	Designation	FLDs
1	11-09-18	Shri Lalit Sharma	Assistant Director, Directorate of Millet Development, Jaipur	Cluster FLDs Pigeon pea visited
2	11-01-19	Dr. C. K. Timbadia	Senior Scientist & Head, KVK, Navsari	Gram FLDs visited

6. Technical Parameters:

(A) Performance of Demonstration:

Name of the crop	Demos (No.)	Variety		National average yield (q/ha)	State average yield (q/ha)	District average yield (q/ha)	Potential yield of the demo variety (q/ha)	Yield gap – I (%)	Yield gap – II (%)
		Check	Demo						
Kharif Pulses									
Pigeon pea	163	Local (Desi)	BSMR-853 (Vaishali)	859	1044	931	1500	27.4	21.39
Rabi pulses									
Gram (GG-3)	80	Local (Dahod Yellow)	GG-3	951	1300	780	1500	14.6	20.60
Gram (GG-5)	79	Local (Dahod Yellow)	GG-5				1800	14.9	33.61
Summer pulses									
Green gram	167	G. green gram 1/2	Meha	500	439	433	1000	16.6	29.73
Green gram	88	G. green gram 1/2	GM-6	500	439	433	1200	24.0	35.74

(B) Yield performance of CLFDs on pulses

Sr. No.	Name of crop and variety demonstrated	Yield obtained (q/ha)						Yield increase (%)
		Check			Demo			
		Max.	Min.	Av.	Max.	Min.	Av.	
Kharif pulses								
1	Pigeon pea BSMR-853 (Vaishali)	9.78	5.48	8.56	12.18	6.75	10.89	27.21
Rabi pulses								
2	Gram (GG-3)	11.84	8.53	10.17	13.94	9.84	12.81	25.96
3	Gram (GG-5)	11.84	8.53	10.17	16.43	12.62	15.32	50.64
Summer pulses								
4	Green gram (Meha)	7.62	4.94	5.86	8.94	7.11	8.34	42.34
5	Green gram (GM-6)	7.62	4.94	5.86	10.23	7.84	9.12	55.63

(C) Economic parameters of CLFDs on pulses

Sr. No.	Name of crop and variety demonstrated	Expenditure and returns (Rs./ha)								Net returns increase (%)
		Demo				Check				
		Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	
Kharif pulses										
1	Pigeon pea (BSMR-853)	27650	47946	20296	1.73	27050	60997	33947	2.26	67.25
Rabi pulses										
2	Gram (GG-3)	26990	55528	28538	2.05	28480	69942	41462	2.45	45.29
3	Gram (GG-5)	26990	55528	28538	2.05	28480	83647	55167	2.93	93.31
Summer pulses										
4	Green gram (Meha)	27650	44536	16886	1.61	26450	63384	36934	2.39	118.72
5	Green gram (GM-6)	27650	44536	16886	1.61	26450	69312	42862	2.62	153.83

Photo graph of CFLDs under NFSM project 2018-19



Growth state of pigeon pea



Branching stage of pigeon pea



Flower initiation stage of pigeon pea



Pod initiation stage of pigeon pea



Field day on Pigeon pea



Rabi Chickpea Photograph



Chickpea GG-3



Chickpea GG-3



Chickpea GG-5



Chickpea GG-5





Field day on Chick pea



Summer Green gram Meha



Summer Green gram GM-6



Field day Summer Green gram

FLDs plots visited by ATARI /Special officers



Shri Lalit Sharma, Assistant Director, Directorate of Millet Development, Jaipur visited the CFLDs of pigeon pea plots



Shri, Ram Narayan Ahirwar Senior Technical Assistant, Directorate of Millet Development, Jaipur visited the CFLDs of green gram plots

Successful Case or Success Story of Chick pea (2018-19)

Profile			
Name	: Manjulaben Anilbhai Patel	Age	: 52
Village	: Singhay	Education	: 10 th Pass
Taluka	: Vansda	Land holding	: 7 vigha
Dist.	: Navsari	Farming Experience	: 20 year
Mo. no	: 9874787970	Crops grown	: Green Gram, Paddy, Chick pea, Black Gram and Pigeon pea

BEFORE CONTACT WITH KVK

Since more than 12 year back, she is cultivated Chick pea traditionally but it wilted after emergence as results of this, the cost of cultivation is increased and potential yield is not obtained.

AFTER KVK GUIDANCE ADOPTED TECHNOLOGY

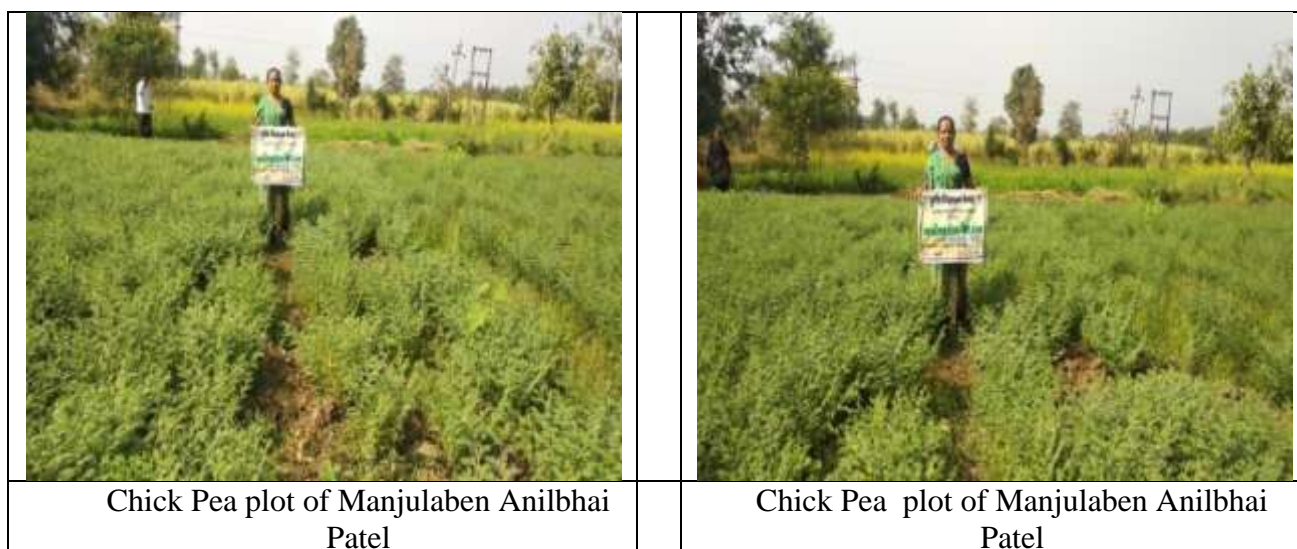
Area	-	1 vigha
Variety	-	Gujarat Chick Pea - 5
Spacing	-	30 cm
Seed Treatment	-	Thairum @ 3 gm/kg seed Rhizobium, PSB and KMB each @ 10-20 ml/kg seed
Seed rate	-	60 – 70 kg/ha
Nutrient management	-	20:40:00 kg NPK/ha
Weeding	-	2 time weeding



- **After KVK intervention**
 - Adaption of short durations and wilt resistance high yielding variety
 - Integrated nutrient management in crop
 - Scientific method of cultivation practices adopted
- **Area of adaptive of technology**
 - Started chickpea cultivation 1 vigha
- **Result of this technology**
 - ✓ Seed requirement is decreased
 - ✓ Yield is increased
 - ✓ Mortality of plant is reduced
 - ✓ More than 35.67 % additional income
- **Yield performance of Chick Pea Plot (GG-5)**

Yield (kg/ha)		% increase over check
Demo.	Check	
1368	1097	24.07

- **Income from this**
 - Total income of Rs. 68400 /ha during 105 days only.
- **Horizontal spread**
 - About 57 farm family in the village and surrounding village adopted this technology.



Successful Case or Success Story of Chick pea (2018-19)

Profile			
Name	: Vijaybhai Natvarlal Desai	Age	: 58
Village	: Endhal	Education	: 12 th Pass
Taluka	: Gandevi	Land holding	: 9 vigha
Dist.	: Navsari	Farming Experience	: 10 year
Mo. no	: 9375982185	Crops grown	: Paddy, Chick pea, Green Gram, sugarcane and Vegetables

BEFORE CONTACT WITH KVK

Since more than 24 year back, he is cultivated Chick pea traditionally, but it wilted after emergence as results of this potential yield is not obtained and, the cost of cultivation is increased.

AFTER KVK GUIDANCE ADOPTED TECHNOLOGY

Area	-	1.5 vigha
Variety	-	Gujarat Cheak Gram-5
Spacing	-	30 cm
Seed Treatment	-	Thairum @ 3 gm/kg seed Rhizobium, PSB and KMB each @ 10-20 ml/kg seed
Seed rate	-	60 – 70 kg/ha
Nutrient management	-	20:40:00 kg NPK/ha
Weeding	-	2 time weeding



• After KVK intervention

- Adaption of short durations and wilt resistance high yielding variety
- Integrated nutrient management and seed treatment with fungicide and biofertilizers in crop
- Scientific method of cultivation practices adopted

• Area of adaptive of technology

- Started chickpea cultivation 1.5 Vigha

- **Result of this technology**
 - ✓ Seed requirement is decreased
 - ✓ Yield is increased
 - ✓ Mortality of plant is reduced
 - ✓ More than 48.53 % additional income

- **Yield performance of Chick peaPlot**

Yield (kg/ha)		% increase over check
Demo.	Check	
2098	1563	34.23

- **Income from this**
 - Total income of Rs. 94410 /ha during 105 days only.
- **Horizontal spread**
 - About 36 farm family in the village and surrounding village adopted this technology.



Chick pea plot of Vijaybhai Natvarlal Desai

Chick pea plot of Vijaybhai Natvarlal Desai

NFSM Project:-2019-20

1. FLD Organized

Sr. No	Fld organized			Area (ha)	Beneficiaries		
	Crop	Variety	Season		SC/ST	Others	Total
1	Pigeon pea	GNP-2	Kharif 2019	20	113	12	125
2	Chick pea	GG-5	Rabi-2019	20	198	2	200
TOTAL				40	311	14	325

2. Training on CFLDs on Pulses (2019-20)

Sr. No.	Date	Title of training	No. of Beneficiaries						Grand Total
			SC/ST		Other		Total		
			M	F	M	F	M	F	
A:Kharif pulses (On campus)									
1	1/6/19	Integrated nutrient and weed management in pigeon pea	65	3	3	3	68	6	74
2	4/6/19		23	0	0	0	23	0	23
3	12/6/19	Scientific cultivation practices of Pigeon pea crops	0	0	6	12	6	12	18
4	26/6/19		14	8	24	34	38	42	80
Kharif pulses (Off campus)									
5	9/6/19	Scientific cultivation practices of Pigeon pea crops	24	0	0	0	24	0	24
6	13/6/19		0	2	19	0	19	0	21
7	14/6/19		11	20	0	0	11	20	31
8	21/6/19		48	11	0	0	48	11	59
9	4/9/19		8	26	0	0	8	26	34
Sub-total :-A			193	70	52	49	245	117	364
B: Rabi pulses (On campus)									
9	10/10/19	Key steps to increase the production and productivity of chickpea	80	0	0	0	0	0	80
10	19/10/19		19	72	0	0	19	72	91
11	20/10/19	Scientific cultivation practices of Rabi pulses	15	14	0	0	15	14	29
12	8/11/19		15	50	2	0	17	50	67
Sub-total-B			129	136	2	0	51	136	267
Gran total (A+B)			322	206	54	49	296	253	631

3. Field visit of CFLDs of Pulses

Sr. No.	Date	Name of village	No. of plots visited	No. of Beneficiaries						Grand total
				SC/ST		Other		Total		
				M	F	M	F	M	F	
A: Summer 2019 (Green gram)										

1	16/3/19	Naranpor	4	4	0	0	0	4	0	4
2	18/3/19	Mohanpor	4	0	0	4	0	4	0	4
3	25/3/19	Sindahi	9	2	7	0	0	2	7	9
4	25/3/19	Kevadi	4	3	1	0	0	3	1	4
5	1/4/19	Kharjai	7	2	5	0	0	2	5	7
6	1/4/19	Unai Charvi	4	3	1	0	0	3	1	4
7	2/4/19	Vedacha	3	0	0	2	1	2	1	3
8	2/4/19	Sindahi	3	3	0	0	0	3	0	3
9	8/4/19	Bartad	4	3	1	0	0	3	1	4
10	8/4/19	Aankalach	5	5	0	0	0	5	0	5
11	1/5/19	Bartad	2	2	2	0	0	2	2	4
	Sub Total-A		49	27	17	6	1	33	18	51
	B: Kharif 2019 (Pigeon pea)									
12	4/9/19	Sindhahi	2	4	0	0	0	4	0	4
13	4/9/19	Bhinar	4	6	0	0	0	6	0	6
14	18/9/19	Dharamपुरi	5	1	7	0	0	1	7	8
15	28/9/19	Limazar	7	3	8	0	0	3	8	11
16	28/9/19	Bartad	4	6	3	0	0	6	3	9
17	10/10/19	Kharjai	2	1	1	0	0	1	1	2
18	10/10/19	Kevadi	2	0	2	0	0	0	2	2
	Sub Total-B		26	21	21	0	0	21	21	42
	Grand total (A+B)		75	48	38	6	1	54	39	93

4. Field Day organized:-

Sr. No.	Date	Village	Field day organized on crop	SC/ST		Other		Total		Grand Total
				M	F	M	F	M	F	
A: Summer pulses (2019)										
1	2/4/19	Sindhahi	Field day on Greengram	10	9	0	0	10	9	19
2	17/04/19	Naranpor	Field day on Greengram	14	18	2	1	16	19	35
3	1/5/19	Bartad	Field day on Greengram	26	2	0	0	26	2	28
	Sub total-A			50	29	2	1	52	30	82

B: Kharif pulses										
1	19/10/19	Dharamपुर	Field day on pigeon pea	11	34	0	0	11	34	45
Sub- Total-B				11	34	0	0	11	34	45
Gran Total				61	63	2	1	63	64	127

5. Visit of CFLDs/Study tour

Sr. No.	Date of cluster FLDs visit	Name of Visitor	Designation	FLDs
1	-	-	-	-

6. Technical Parameters:

(A) Performance of Demonstration:

Name of the crop	Demos (No.)	Variety		National average yield (q/ha)	State average yield (q/ha)	District average yield (q/ha)	Potential yield of the demo variety (q/ha)	Yield gap – I (%)	Yield gap – II (%)
		Check	Demo						
Kharif Pulses									
Pigeon pea	125	Local (Deshi)	BSMR-853 (Vaishali)	859	1044	931	1500	(Result are awaited)	
Rabi pulses									
Gram (GG-5)	200	Local (Dahod Yellow)	GG-5	951	1330	780	2000	(Result are awaited)	

(B) Yield performance of CLFDs on pulses

Sr. No.	Name of crop and variety demonstrated	Yield obtained (q/ha)						Yield increase (%)
		Check			Demo			
		Max.	Min.	Av.	Max.	Min.	Av.	
1	Pigeon pea (Vaishali)	(Result are awaited)						
2	Gram (GG-5)	(Result are awaited)						

(C) Economic parameters of CLFDs on pulses

Sr. No.	Name of crop and variety demonstrated	Expenditure and returns (Rs./ha)								Net returns increase (%)
		Check				Demo				
		Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	Gross Cost (Rs/ ha)	Gross return (Rs/ ha)	Net Return (Rs/ha)	B:C ratio	
Kharif pulses										
1	Pigeon pea	(Result are awaited)								
Rabi pulses										
2	Gram (GG-5)	(Result are awaited)								



Initial growth stage of pigeon pea



Branching stage of pigeon pea



Flower initiation stage of pigeon pea



Field day on Pigeon pea
Seed Hub Project:

Creation of Seed Hubs for Increasing Indigenous Production of seeds of pulses in India

1. Separate account opening date as per guidelines: 18/8/17
2. Transfer/deposit of money by host institute (Mention date):
3. Infrastructure created:

Sr. No.	Name of items (Like Godown, Processing equipment)	Allotted Fund (in Lakh)	Expense Fund (in Lakh)	Unutilized Fund (in Lakh)
1	For godown construction the fund was transfer to executive engineer	35.00	29.00	6.00
2	Seed processing machinery equipment	15.00	6.55	8.45
	Total	50.00	35.52	14.48

Latest photograph of infra-structure development



Seed hub godown



Seed processing machinery plant

4. Details of seed production and budget allocation for Seed hubs at KVK, Navsari

State	Name of the centre	Seed production target (q)			Budget allocation (Rs. In Lakh)		
		2016-17	2017-18	2018-19	Seed processing & storage Infrastructure under (2016-17)	Revolving und	
						2016-17	2017-18
Gujarat	KVK, Navsari	450	700	1000	50.00	35.00	65.00

5. Target of quality seed production of pulses by seed-hub (KVK, Navsari) during 2016-17 to 2018-19 is as under

State	Name of the centre	District	Crop / Variety	Quantity of seed production (q)			
				2016-17	2017-18	2018-19	Total
Gujarat	KVK, Navsari	Navsari	Mung bean	150	300	350	2150
			Pigeon pea	300	400	650	
Total				450	700	1000	

6. Crop wise seed production

Season (s)	Crop(s) / Variety	Seed prod. target (in q)	Seed prod. Achievement (in q)	At KVK/ SAUs/ Institute farm		At farmers field in participatory mode		Seed certification agency	Type of seed (breeder / TFL etc.)
				Area (ha)	Qt. (q)	Area (ha)	Qt. (q)		
Summer-18	Greengram (Meha)	300	18.30	0.3	2.6	2.5	15.70	GSCA, Ahmadabad	Certified

Kharif -19	Pigeon pea (Vaishali)	650	260	0.5	5.0	21	255.0	GSCA, Ahmadabad	Certified
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* Seed production of pigeon pea at farmers' field was Truthful.

7. Seed disposal pattern

Season	Crop/Variety	Sold as grain (q)	Stakeholder wise quantity (farmers/NSC/SSC, etc.)	Rate of sale & market rate	Kept as seed for Kharif/Rabi/Summer	Area to be covered
Kharif -2017	Pigeon pea/Vaishali	30	Famers/Stake holders	90/60	-	200 ha
Summer-18	Green gram/Meha	18.30	Famers/Stake holders	90/55	-	70.0 ha

8. Expenditure details

Year	Fund allocation (Rs. In Lakh)	Opening Balance (Rs. In Lakh)	Expenditure (Rs in lakh)	Remaining	Remarks
2016-17	85.00	85.00	35.02	49.98	-
2017-18	53.00	102.98	2.24	100.74	
2018-19	12.00	100.74	9.74	103.00	
2019-20	0	103.00	24.42	78.58	

9. Seed hub field plots visit

Sr. No.	Place visited	Date	Crop	No. of Baneberries		Total
				M	F	
2018-19						
1	Aat & Madir	20/04/18	Green gram	2	2	4
2	Panikhadak	23/4/18	Green gram	3	0	3
3	Kalamkuai	5/9/18	Pigeon pea (Vaishali)	2	0	2
4	KVK/farmer Field	10/9/18	Pigeon pea (Vaishali)	2	0	2
5	Karmad/Osalam	15/9/18	Pigeon pea (Vaishali)	15	0	15
6	Kalamkuai	2/11/18	Pigeon pea (Vaishali)	2	0	2
7	Karmad/Osalam	19/12/18	Pigeon pea (Vaishali)	7	0	7
	Total			33	2	35

Photograph of Seed production of Green gram and Pigeon pea under seed hub project



Shri. Monapara Officer, Gujarat State Seed Corporation Agency visited the Seed production plot of Green gram 2018



Shri Ram Narayan Ahirwar, Senior Technical Assistant, Directorate of Millet Development, Jaipur visited the Seed hubs of green gram plots 2018



Seed production of pigeon pea plots visited by Shri Lalit Sharma Senior Technical Assistance of Directorate of Millet Development, Jaipur

Seed production of pigeon pea plots visited by Dr. K. A. Shah Scientist Agronomy



Shri. K M Patel Officer, Gujarat State Seed Corporation Agency visited the Seed production plot of Pigeon pea 2018

C. On Farm Testing :

Sr. No.	Particulars	No.	Area (ha) / Farmers
	Agronomy		
1	Assessment of new variety in green gram	1	6
	Horticulture		
2	New okra variety in Navsari district	1	6
	Plant protection		
3	Sucking pest management in chilli	1	6
	Fisheries		
4	Stocking density of fingerlings (Catla, Rohu, Mrigal and Grass carp) for production of stunted yearlings in cage culture system	1	20

Crop/enterprise	Farming situation	Problem definition	Title of OFT	No. of trials	Technology Assessed	Parameters of assessment	Data on the parameter	Results of assessment	Feedback from the farmer	Any refinement needed	Justification for refinement
1	2	3	4	5	6	7	8	9	10	11	12
Green gram	Irrigated	Yellow vein mosaic virus infestation in mung bean & small seed of green gram	Assessment of new variety of green gram	1	Gujarat Greengram-6	Seed Weight & yield	5.1 gm of 100 seeds	878 kg/ha	New variety is very good yield & seed size is bold & market price is also good as compared to meha	---	---
					Meha		3.5 gm of 100 seeds	727 kg/ha			

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Variety Meha (Farmer's practice)	Navsari Agricultural University technology	727	kg/ha	27001	1.95
Variety GM-6	Navsari Agricultural University technology	878	kg/ha	38483	2.36

Crop/enter prise	Farmin g situation	Proble m definit ion	Title of OFT	No . of trials	Techn ology Assess ed	Para meter s of assess ment	Data on the parame ter	Resul ts of assess ment	Feedba ck from the farmer	Any refine ment neede d	Justifi cation for refine ment
1	2	3	4	5	6	7	8	9	10	11	12
Chilli Green	Irrig ated	Due to suckin g pests in chilli there will be drastic reducti on in chilli yield and also these suckin g pests acts as vectors in disease transm ission	Suckin g pest managem ent in chilli	6	Seedli ng treatem ent with trichod erma viridi+ V. lecani + M. anisop lae + B. bassia na@ 5 gm/lit + yellow + blue sticky trap @15/h a + Spinos ad @ 0.3 ml/lit	No. of suckin g pests and Yield	No.of thrips /leaf: 3.43 No.of mites /leaf: 7.20 No.of Ahid s /leaf: 4.70 Leaf curl index :0.43 Note: Obse rvatio n on first three leave s on top, middl e and botto m of crop	10870 kg/ha	Biopest icides and bioratio nals are good in managi ng the suckinn g pests and also econo mical compar e to chemic al faming	---	---

Contd..

Technology Assessed	Source of Technology	Production	Please give the unit (kg/ha, t/ha, lit/animal, nuts/palm, nuts/palm/year)	Net Return (Profit) in Rs. / unit	BC Ratio
13	14	15	16	17	18
Indiscrominate use of pesticide(Cypermethrin +spiromesifen+indoxarb) (Farmer's practice)	Farmers technology	9200	kg/ha	143120	2.07
Seedling treatment with trichoderma viridi+V. lecani + M. anisoplae + B. bassiana@ 5 gm/lit + yellow+ blue sticky trap @15/ha + Spinosad @ 0.3 ml/lit	Navsari Agricultural University technology	10870	kg/ha	203970	2.67

D. Other Extension Activities:

Sr. No.	Activity	No.	No. of Beneficiaries (Farmers/Rural Youth)			No. of Extension Functionaries			Grand Total		
			Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Field Day	11	188	269	457	13	4	17	201	273	474
2	Field / FLD visit	73	278	194	472	11	5	16	289	199	488
3	Kisan Mela	1	200	250	450	5	1	6	205	251	456
4	Khedut Shibir/ Mahila shibir	13	1273	1046	2319	21	8	29	1294	1054	2348
5	Kisan Gosthi / Mahila Gosthi	4	227	366	593	15	8	23	242	374	616
6	Film Show	11	320	196	516	10	4	14	330	200	530
7	Agricultural Exhibition	4	1165	1075	2240	19	6	25	1184	1081	2265
8	Educational Tour	1	55	20	75	10	2	12	65	22	87
9	Workshop / Seminar / Meeting attended	52									
10	Group Meeting / Farmer's meeting / Mahila meeting	11	151	45	196	8	2	10	159	47	206
11	Lecture Delivered/ Guest lecture	74	1983	3057	5040	15	6	21	1998	3063	5061
12	Newspaper Coverage	25									
13	Popular Articles	10									
14	Extension Literature (Training Manual)	1	50 copy								

15	Radio Talk	1									
16	TV Talk	3									
17	Telephonic helpline		Mass (4745 Farmers are benefited)								
18	E-KVK Service	48	129882 Farmers are benefited								
19	Scientist Visit to Farmers Field	25	133	85	218	10	3	13	143	88	231
20	Dignitaries visit to KVK	12									
21	Farmers Visit to KVK	134	396	413	809	8	3	11	404	416	820
22	Diagnostic Visit	16	47	6	53	6	1	7	53	7	60
23	Exposure visit	14	259	83	342	10	3	13	269	86	355
24	Soil & water samples analysis	144	75	69	144	2	1	3	77	70	147
25	SHG meeting	2	2	62	64	-	2	2	2	64	66
26	Farmer seminar & workshop	1	50	200	250	5	2	7	55	202	257
27	Awareness Programme	4	331	258	589	15	6	21	346	264	610
28	Rawe Programme	3	45	25	70	6	1	7	51	26	77
29	Day Celebration	9	449	1175	1624	10	6	16	459	1181	1640
30	Method Demonstration	2	6	19	25	3	1	4	9	20	29
31	Dial out Conference	3	95	50	145	3	1	4	98	51	149
32	Organic Farming pak parisavd	2	167	55	222	11	3	14	178	58	236

33	Krishi Mahotsav	3	561	1217	1778	16	6	22	577	1223	1800
34	Swachhta Programme	8	178	150	328	6	2	8	184	152	336
35	Technology week	1	589	906	1495	6	1	7	595	907	1502
	Total	726	9223	11291	20514	244	88	332	9467	11379	20846

Literature Published:

Sr. No.	Items	Number of Publications	Number of copies
1.	Technical Reports	24	190
2.	Extension Literature/Training Manual	25/2	50
3.	Research Papers	12	3
4.	Popular Articles	10	6
5.	Newspaper Coverage	25	20

E. Functional linkages with different Organization

S.N.	Name of the Organization	Nature of Linkage
1.	N.A.U., Navsari	Provides administrative and technical support
2.	Central Government	RKVY Project, Seed village project
3.	Department of Animal Husbandry, Navsari	Collaborative training, extension programmes
4.	Bank of Baroda	Collaborative training programmes
5.	Gandevi Co-operative Multipurpose Society, Gandevi	Organizing Khedut shibirs
6.	Department of Agriculture, Navsari	Collaborative training, extension programmes
7.	Forest Department	Collaborative training programmes on Agro-Forestry
8.	Department of Horticulture, Navsari	Collaborative extension programmes
9.	Department of Fisheries, Navsari	Collaborative training, extension programmes
10.	Veterinary College of Navsari	Collaborative training, extension programmes
11.	State Bank of India	Collaborative extension programmes
12.	Cohesion foundation Navsari, NABARD	Collaborative extension programmes
13.	ATMA, Tapi, Valsad, Surat, Navsari, Chikhali, Jalalpore	Collaborative training and extension programmes

14.	Tribal Sub plan, Vandsa	Collaborative extension programmes
15.	Ramkrishna Cheritable Trust, Surat	Kitchen garden kit
16.	P.P.Savani group, Surat	Collaborative extension programmes
17.	Shri D.L.Patel	Meals of labours of KVK
18.	Tarsadiya foundation	Collaborative training and extension programmes
19.	Brahmakumaries, Navsari	Collaborative training and extension programmes
20.	JCI, Navsari	Collaborative training and extension programmes
21.	Lioness club Navsari	Collaborative training and extension programmes
22.	Manav Kalyankari Trust, Navsari	Collaborative training and extension programmes
23.	Lok Seva Trust, Kharel	Collaborative training and extension programmes
24.	Sneh-setu cheritable trust	Collaborative training and extension programmes
25.	Gujarat State Water Shed Management, Gandhinagar	Collaborative training and extension programmes
26.	ASPEE foundation, Mumbai	Collaborative training and extension programmes
27.	JCB, Mumbai	Collaborative training and extension programmes
28.	Gandhi Memorial project, Gujarat Vidyapeeth, Ahmedabad	Collaborative training and extension programmes
29.	FAI, New Delhi	Collaborative training and extension programmes
30.	IFFCO, Surat	Collaborative training and extension programmes
31.	ASCI, New Delhi	Skill training programmes
32.	New Holland	Collaborative training and extension programmes
33.	Samarpan Dhyam Kendra, Navsari	Collaborative training and extension programmes
34.	Senior Citizen Trust, Navsari	Collaborative training and extension programmes
35.	Anavil Sanskar Trust, Navsari	Collaborative training and extension programmes
36.	Gender Resource Center, Gandhinagar	Collaborative training and extension programmes
37.	Navsari Jilla Panchayat, Navsari	Collaborative programmes
38.	Rotary club of Navsari	Collaborative programm
39.	Lions club of Navsari	Collaborative programm
40.	Reliance foundation	Collaborative programm

(F) Special programmes undertaken by the KVK, during reporting period.

Sr. No	Name of the scheme	Date/ Month of initiation / B.H	Funding agency	Amount received (Rs. in Lakh)
1	Establishment of demonstration-cum-training center for inland fisheries	12943	State Govt.	23.50
2	Strengthening and testing of universities technologies on farmer's field through adoptive trials, Phase-II	12306-A	State Govt.	11.00
3	Cluster frontline demonstrations of Rabi pulses	2105/00	Central Govt.	8.66
4	ARYA Project	18191	Central Govt.	11.17
5	Scheme for Organic farming	18192	State Govt.	44.10
6	Creation of seed hub for increasing indigenous production of Pulses in India Seed Hubs	2704-02-A	Central Govt.	12.00
7	RKVY - Skill development	02113/02	Central Govt.	3.60
8	Turmeric	18930-B	Central Govt.	0.15
9	Mega seed project	2068/C	Central Govt.	0.08
Total				114.26

સેન્દ્રિય ખેતી અંતર્ગત ડેવલપમેન્ટ ડેમોસ્ટ્રેશન અને અવરનેસ પ્રોગ્રામ ઓફ ઓર્ગેનિક ફાર્મિંગ ઇન સાઉથ ગુજરાત પ્રોજેક્ટ અંતર્ગત થયેલ પ્રગતિ અહેવાલ

સજીવ ખેતી પ્રોજેક્ટ અંતર્ગત ફળવાયેલ વપરાયેલ અને બચત ગ્રાન્ટની વિગત ,

અ.ન.	વિગત	ફળવાયેલ ગ્રાન્ટ(.રૂ)	વપરાયેલ ગ્રાન્ટ(.રૂ)	બચત ગ્રાન્ટ(.રૂ)
૧	બાગાયતી પાકોમાં જૈવિક ખાતર અને જૈવિક દવાઓના નિદર્શન	૩૦૦૦૦૦	૨૮૮૭૦૦	૧૧૩૦૦
૨	વિસ્તરણ અધિકારી/કર્મચારીની તાલીમ/ખેડૂત તાલીમ	૫૦૦૦૦	-	૫૦૦૦૦
૩	ખેડૂતોની તાલીમ	૧૧૦૦૦૦	૬૨૭૪૭	૪૭૨૫૩
૪	સાહિત્ય છાપકાપ	૨૦૦૦૦૦	૨૮૦૨૬	૧૭૧૯૭૪
૫	પ્રેરણા પ્રવાસ	૫૫૦૦૦૦	૧૫૮૦૦૦	૩૯૨૦૦૦
૬	મોડેલ ફાર્મ ૩૦૦ વર્મીબેડ નિદર્શન	૧૫૦૦૦૦૦	-	૧૫૦૦૦૦૦
૭	કન્ટીજન્સી ૧ સીનીયર રીસર્ચ ફલો) ૨૫૦૦૦ +૧૦ % HRA પ્રતિ માસ (૩૫૦૦૦૦	૧૯૨૫૦૦	૧૫૭૫૦૦
	કન્ટીજન્સી ૨ ખેતી મદદનીશ	૨૦૦૦૦૦	૬૯૬૪૦	૧૩૦૩૬૦
૮	વાહનવ્યવહાર ભથ્થું	૧૫૦૦૦૦	-	૧૫૦૦૦૦
૯	કન્જુમેબલ ,ઈનપુટ બનાવટ ખર્ચ ,મજુર ખર્ચ , જળ જમીન પૃથકરણ ખર્ચ	૫૦૦૦૦૦	૧૧૧૦૦	૪૮૮૯૦૦
૧૦	કન્ટીજન્સી કવોલીટી ટેસ્ટીંગ ,ઓપરેટીંગ કોસ્ટ ,	૫૦૦૦૦૦	૨૪૨૬૦૩	૨૫૭૩૯૭
	કુલ	૪૪૧૦૦૦૦	૧૦૫૩૩૧૬	૩૩૫૬૬૮૪

કૃષિ વિજ્ઞાન કેન્દ્ર નવસારી દ્વારા સજીવ ખેતી પ્રોજેક્ટનાં અમલીકરણ અંતર્ગત હાથ ધરવામાં આવેલ વિવિધ કાર્યક્રમો/પ્રોગ્રામની વિગતો

સજીવખેતી અંગેની ખેડૂત તાલીમ ઓન કેમ્પસ (કેન્દ્ર ખાતે)

અ.ન.	તાલીમનો વિષય	સ્થળ	તારીખ	લાભાર્થીની સંખ્યા						કુલ
				SC/ST		OTHER		TOTAL		
				M	F	M	F	M	F	
૧	બાગાયતી પાકોમાં સજીવખેતી અને તેનું મહત્વ	કેવિકે નવસારી	૨૯૧૯/૪/	-	-	૭૧	-	૭૧	-	૭૧
૨	જૈવિક જતુંનાશકની બનાવટ અને તેના ઉપયોગ	કેવિકે નવસારી	૧૩૧૯/૬/	૪૮	૧૦	-	-	૪૮	૧૦	૫૮
૩	ચીકુ પાકમાં ફળમાખીનું નિયંત્રણ	કેવિકે નવસારી	૨૦૧૯/૬/	-	-	૦૫	૫૧	૦૫	૫૧	૫૬

૪	સજીવ ખેતીની અનુકુળતા તથા વ્યાપ અને પોષણક્ષમ ઉત્પાદન	કેવિકે નવસારી	૧૭ ૧૯/૮/	-	-	૩૭	-	૩૭	-	૩૭
	કુલ			૪૮	૧૦	૭૬	૫૧	૧૨૪	૬૧	૨૨૨

૨(કેન્દ્ર બહાર) સજીવખેતી અંગેની ખેડૂત તાલીમ ઓફ કેમ્પસ .

અ. નં.	તાલીમનો વિષય	સ્થળ	તારીખ	લાભાર્થીની સંખ્યા						કુલ
				SC/ST		OTHER		TOTAL		
				M	F	M	F	M	F	
૧	નાડેપ કમ્પોસ્ટ બનાવવાની રીત , ફાયદા અને તેનું મહત્વ	બારતાડ	૧૧૯/૫/	૪૧	૩	-	-	૪૧	૩	૪૪
૨	નાડેપ કમ્પોસ્ટ બનાવવાની રીત , ફાયદા અને તેનું મહત્વ	અંકલાઇ	૧૧૯/૫/	૨૨	૩	-	-	૨૨	૩	૨૫
૩	બાગાયતી પાકોમાં સજીવખેતી અને તેનું મહત્વ	લાઇકડી	૧૬૧૯/૫/	૧૦૦	-	-	-	૧૦૦	-	૧૦૦
૪	વિવિધ જૈવિક જતુંનાશકની બનાવટ અને તેના ઉપયોગ	મરોલી	૧૭૧૯/૬/	-	-	૪૫	-	૪૫	-	૪૫
૫	સજીવ ખેતીમાં રોગ અને જીવાત નિયંત્રણ	માનકુનીયા	૨૧૧૯/૬/	૯૪	૦૨			૯૪	૦૨	૯૬
૬	આંબા અને ચીકુ પાકમાં ફળમાખીનું નિયંત્રણ	ધનોરી	૨૯૧૯/૬/			૭૫	૦૨	૭૫	૦૨	૭૭
	કુલ			૨૫૭	૦૮	૧૨૦	૦૨	૩૭૭	૧૦	૩૮૭

૩સેમિનાર/સજીવ ખેતી પરિસંવાદ .

અ. નં.	પરિસંવાદ/સેમિનારનો વિષય	સ્થળ	તારીખ	લાભાર્થીની સંખ્યા						કુલ
				SC/ST		OTHER		TOTAL		
				M	F	M	F	M	F	
૧	સજીવખેતી અને ફેમિલી	વેજલપોર	૪૧૯/૬/	-	-	૧૪૯	૧	૧૧૯	૧	૧૨૦

	ફાર્મર જાગૃતિ અભિયાન અંતર્ગત ગાય આધારિત પ્રાકૃતિક ખેતી										
૨	સજીવખેતી અને વિશ્વ પર્યાવરણ દિવસ	કેવિકે , નવસારી	૫૧૯/૬/	-	-	-	૨૧૩	-	૨૧૩	૨૧૩	૨૧૩
૩	બાગાયતી પાકોમાં સજીવખેતી અને તેનું મહત્વ	ચારણવાડા	૧૦૧૯/૬/	૧૩	૮૭	-	-	૧૩	૮૭	૧૦૦	૧૦૦
૪	ખેતીવાડી પાકોમાં સજીવખેતી અને તેનું મહત્વ	મોહનપુર	૨૫૧૯/૬/	-	-	૬૩	૭૦	૬૩	૭૦	૧૩૩	૧૩૩
૫	ગૌરક્ષા એ જ ભૂરક્ષા	કેવિકે , નવસારી	૩૦૧૯/૭/	-	૫૦૦	૨૦૦	-	૨૦૦	૫૦૦	૭૦૦	૭૦૦
૬	અમૃત માટી અમૃત , જળની બનાવટ અને સજીવ ખેતીમાં તેનો ઉપયોગ	પાથરી	૧૭૧૯/૯/	-	-	૧૬૦	૧૦	૧૬૦	૧૦	૧૭૦	૧૭૦
૭	ધરતી કહે પુકારકે તેમજ પ્રાકૃતિક ખેતી અને પર્યાવરણ જાગૃતિ કાર્યક્રમ	ટાટા હોલ નવસારી	૧૬૧૯/૧૧/	-	-	૫૬૦	૨૪૦	૫૬૦	૨૪૦	૮૦૦	૮૦૦
	કુલ			૧૩	૫૮૭	૧૧૩૨	૫૩૪	૧૧૧૫	૧૧૨૧	૨૨૩૬	૨૨૩૬

૪સજીવ ખેતી પ્રેરણા પ્રવાસ .

અ. ન.	પરિસંવાદ/સેમિનારનો વિષય	સ્થળ	તારીખ	લાભાર્થીની સંખ્યા						કુલ
				SC/ST		OTHER		TOTAL		
				M	F	M	F	M	F	
૧	બાગાયતી પાકોમાં સજીવખેતી અને તેનું મહત્વ	બુહારી	૪૧૯/૫/	-	-	૩૦	-	૩૦	-	૩૦
૨	ગાય આધારિત પ્રાકૃતિક ખેતી	વલસાડ (અબ્રામા)	૨૨૧૯/૫/	-	-	૧૨	-	૧૨	-	૧૨
૩	ગાય આધારિત પ્રાકૃતિક ખેતી	સુરત	૮૧૯/૬/	-	-	૨૦	૬	૨૦	૬	૨૬
૪	સજીવ ખેતી જીલ્લો આહવા ડાંગ નો પ્રેરણા પ્રવાસ (કેવીકે) અને .એફ.એન.બી.આઈ ,વધઈ હળદર ખેતી કરતા ખેડૂતની	નવસારી જીલ્લાના વિવિધ ગામ નાં	૨૦- ૧૯/૭/૨૧	-	-	૩	૫૩	૩	૫૩	૫૬

	(મુલાકાત	ખેડૂતો								
૫	સુરત ખાતે સજીવ ખેતી કરતા ખેડૂત નાં ખેતરની મુલાકાત	આટ , અબ્રામા ચીજગામ કલથાન	૨૩ ૧૯/૭/ થી ૨૬ ૧૯/૭/	-	-	૯	-	૯	-	૯
૬	આંણદ ખાતે સજીવ (.યુ.એ.એ) ખેતી અને બીજ ઉત્પાદનની તાલીમ	સિણધઈ , ખરજઈ	૨૩ ૧૯/૭/ થી ૨૬ ૧૯/૭/	-	-	૨૦	-	૨૦	-	૨૦
૭	પુને સજીવ ખેતી (મહારાષ્ટ્ર) અંતર્ગત જૈવિક જંતુનાશકો તેમજ જૈવિક ખાતર ઉત્પાદન યુનિટ ની મુલાકાત	નવસારી જીલ્લાના વિવિધ ગામ નાં ખેડૂતો	૨૨ ૧૯/૮/ થી ૨૩ ૧૯/૮/	-	-	૧૫	-	૧૫	-	૧૫
૮	ઈન્દોર સજીવ (મધ્યપ્રદેશ) ,ખેતી અંતર્ગત અમૃત માટી અમૃત જળ નિદર્શન યુનિટ તેમજ સજીવ ખેતી ખેતરની મુલાકાત	નવસારી જીલ્લાના વિવિધ ગામ નાં ખેડૂતો	૨૫ ૧૯/૮/ થી ૨૮ ૧૯/૮/	-	-	૩૦	-	૩૦	-	૩૦
૯	જુનાગઢ એગ્રીકલ્ચર યુનિવર્સિટી આયોજિત ગાય આધારિત સજીવ ખેતી કરતા ખેડૂતોને સુભાષ પાલેકર શિબિરમાં ભાગ લેવા	નવસારી જીલ્લાના વિવિધ ગામ નાં ખેડૂતો	૧૩ ૧૯/૯/ થી ૧૬ ૧૯/૯/		૩૦	-	-	-	૩૦	૩૦
	કુલ			-	૩૦	૧૩૯	૫૯	૧૩૯	૮૯	૨૨૮

*** નાડેપ કમ્પોષ્ટીંગ નિદર્શન માટે ખેડૂતોની પસંદગી થઈ ગયેલ હોય , તૈયાર થયેલ નિદર્શનોની ચકાસણી કાર્યરત હોય જેથી નાડેપ નિદર્શનનું ચૂકવણું કરવાનું બાકી છે .**

On Campus Training on Organic Farming



Chief Guest : **Pratulbhai Senjaliya (Leader Organic Farmers association, Gujarat)**

Off Campus Training On Organic Farming





Seminar On Organic Farming



Chief Guest :Kapilbhai Shah (MD, Jatan Trust, Vadodara)

Seminar On Organic Farming



Chief Guest :**Dr. Vallabhchai Kathiriya** (National Kamdhenu Seva Aayog New Delhi)

Seminar On Organic Farming





Chief Guest :Dipakbhai Sachde Maal-pani Trust Bajwada, M.P.

Seminar On Organic Farming



Chief Guest : Dr. C.J. Dangariya Vice Chancellore NAU, Navsari

Exposure Visits at Farmer's Field



Exposure Visit Place :

Buhari ,
Abrama (Valsad)
Surat (Family Farming Abhiyaan)

Exposure Visits at Farmer's Field





Exposure Visit Place :

Anand Agricultural University, Anand

Exposure Visits at BVG Life science PVT LTD Pune



Exposure Visit Place :

BVG Lifescience PVT LTD, Pune

Exposure Visits at Maal-Pani Trust Bajwada M.P.



Exposure Visit Place :

Maal-Pani Trust, Bajwada M.P.

Preparation, process of Panchgavya, Jivamrut and Bijamrut





Note : Method demonstration at KVK farm

Preparation of vermicompost and NADEP Compost



Note : NADEP and Vermi composting at KVK and Farmer's field

Preparation of vermicompost and NADEP Compost



Note : NADEP and Vermi composting at Farmer's field

Demonstration Unit at KVK, Navsari

- ✓ Low cost Green house
- ✓ Kitchen Garden
- ✓ Wadi Model
- ✓ Water harvesting structure
- ✓ Tubewell recharge by building water harvesting.
- ✓ Fish pond
- ✓ Fish aquarium
- ✓ Seed production plot.
- ✓ Drip irrigation & mulch

Seed produced at KVK, Navsari

Sr. No.	Name of crop		Qty. (Kg)	Income generated (Rs.)
1	Paddy	GNR-3	8200	To be sell in Kharif-20
2	Paddy	GNR-7	19000	
Total			27200	

Saplings produced at KVK, Navsari

Sr.No.	Name of crop	Qty. (no.)	Income generated (Rs.)
1	Brinjal	2075	1245
2	Tomato	1000	600
3	Chilly	145	105
4	Cabbage	25	15
TOTAL		3700	1965

Vegetables and other crop produced at KVK, Navsari

Sr.No.	Name of crop	Qty. (kg)	Income generated (Rs.)	Sr.No.	Name of crop	Qty. (kg)	Income generated (Rs.)
1	Brinjal	121	2420	14	Cabbage	34.5	690
2	Tomato	76.5	1530	15	Drum stick	340	492
3	Ridge gourd	127.5	2550	16	Watermelon	2067.6	51690
4	Smooth gourd	220	4400	17	Fish	1225	122500
5	Okra	77.75	1555	18	Brocoli	18.5	740
6	Bitter gourd	11.75	235	19	Turmeric	124.5	3735
7	Indian bean	13.75	275	20	Green leafy vegetables	193	545
8	Bottle gourd	47.25	945	21	Onion	3	60
9	Little gourd	14	280	22	Green gram	310	24800
10	Pointed gourd	4.25	85	23	Mango	420	16800
11	Sweet corn	934	18680	24	Muster	72	3600
12	Gram	331	16550	25	Cucumber	18.75	375
13	Red beet	32	160	26	Guvar	4.75	95
TOTAL		2010.75	49665	TOTAL		4831.6	226122
Grand total = 275787.00 i.e. Two Lakh Seventy Five Thousand Seven Hundred Eighty Seven only							

Inputs availability and Marketing help to the farmers. (2018-19)

Sr. No	Name of Input Marketing through KVK	Qty.
1	Honey	149 kg
2	Turmeric powder	83 kg
3	Moringa leaf powder	20 bottle
4	Wheat grass powder	20 bottle
5	Ginger powder	80 kg
6	Gulkand	75 bottle
7	Garam Masala	70 Packet
8	Tea Masala	250 Packet
9	Hair Oil	56 bottle
10	Rose Water	30 bottle
11	Face Pack	40 Packet
12	Coriander & cumin powder	12 Packet
13	Methi	120 kg
14	Green gram	20 kg
15	Nagali Biscuit	25 Packet
16	Groundnut oil	360 kg
17	Aachar masala	20 Packet
18	Simple Diya (Kodiya)	18 dozen
19	Decorated diya (Kodiya)	10 dozen

(H) Remarkable activities carried out by KVK, Navsari :

[1]

CELEBRATION OF TECHNOLOGY WEEK

Technology week was celebrated on 5-9th March, 2019 at KVK, Navsari. The programme was scheduled as below.

1 st day	Seminar on Agro Forestry project planning & Management
2 nd day	Seminar on Scientific cultivation Mango and Sapota
3 rd day	Seminar on Agriculture Service Provider
4 th day	Seminar on "Pre Rabi Farmers Sammelan" And International Women's Day - 2019
5 th day	Seminar on Organic farming in Mango and use of bio-pesticides



[2]

International women day (Rabi crop summit and Agriculture fair)
"PRE RABI FARMERS SAMMELAN" AND INTERNATIONAL WOMEN'S DAY – 2019

To create awareness among the farmers on Rabi crops a "Pre Rabi Farmers S sammelan" was organized by Krishi Vigyan Kendra, Navsari, Navsari Agricultural University, Navsari. The function was inaugurated by Chief Guest Shri Anant Patel, MLA, Vansda, Smt. Arunaben. G Patel, Sarpanch, Singhdai, Dr. C.K. Timbadia, Senior Scientist and Head, KVK, NAU, Navsari and Dr. G.R Patel DEE, NAU, Navsari and was President of this function. Shri Gamanbhai patel, Chairman vasudhara dairy, Navsari; Shri Vipul patel, Director Mahuva Sugars, Dr. S.C. Mali, Research Scientist and Unit Head, Main Sugar Research Station, NAU, Navsari; Dr. Digvijaya Chauhan, Senior Scientist, NAU, Navsari; Progressive farmers and different officers of Line Department were also present as invitee members of this function. Total 12 officers & extension functionaries and 600 farmers & farm women were participated in this function. Lecture was delivered on: scientific cultivation of rabi maize (Sweet corn) and gram; Use and importance of bio-fertilizers in rabi crops; IPM and IDM in Rabi Crops; Mechanization in rabi crops.

KVK also organized short film shows, provided extension literature related to agricultural technologies, displayed exhibits, posters, photographs, digital prints, display boards, sample trays, etc.

Smt.Arunaben. G Patel, Sarpanch, Singhdai, Shri. Rajashreeben Karadi lioness Club, Navsari was also graces the function on the occasion of International women's day. As an health awareness; club organized the " Free diabetic check up" and also promoted the women farmers who were preparing and marketing the Gulkand (rose), Mango pulp, Ragi biscuits, Varieties of Pickles, Condiments and Spices.



Seminar on Organic farming in Mango and use of bio-pesticides

Preamble:

The use of chemicals (fertilizers and pesticides) has taken over crop production these days. Crops have lost their natural resistance and stamina and become susceptible to disease due to the use of chemical fertilizers. Organic farming is the only recourse for farmers, to save both livelihood and the health of the soil. Organic farming methods enable farmers save money. It is possible to turn one's own farmyard waste into value-added products for increasing crop production. We will thereby avoid poisoning our land. Our soil will get enriched. We will be able to provide healthy food crops for our own consumption and for sale. Our environment will be saved. Diseases can be averted. Farmers will not have to be dependent on agri-business companies for seeds, fertilizers and pesticides. Our self-reliance is thus preserved.

Inaugural Session and Dignitaries speech

Dr. C.K Timbadia, Senior Scientist and Head, KVK, NAU, Navsari has emphasized that organic certificate is a mandatory requirement for export purpose but in domestic market it is not required. He also suggested that in organic farming, on farm input production as well suitable combination of different component of organic farming has great importance as it reduces the cost as well as threat of environmental pollution. He has opined that there is an urgent need to identify the crop as well as soil suitable for organic farming.

Shri. Deepakbhai Naik, President Co-op society, Amalsad mentioned in his speech that Agnihotra is an unique gift of great Indian Vedic Sciences to human kind for bio energy, medicine, agriculture and climate engineering. He said that Agnihotra is a process of purification and harness the solar energy through participation of fire, lit in pyramid like structure made up of copper tuned to biorhythm of sunrise/sunset and it has to improve soil, water and environmental quality as it reduce the microbial, metal and gaseous pollution.

Shri. Jayntibhai, president organic farming, Navsari opined that there is great scope of organic farming as the awareness of health and environment protection increased among the people. Based on experience of organic farming he said that nutrient base organic farming gave yield equivalent to conventional farming and crops grown under organic farming superior quality than their conventional counterpart.

Scientists Interaction

Dr. K.A.Shah, Scientist, Agronomy He pointed out significant scope of organic farming .Under nutrient management, he discussed about various preparation techniques of solid, liquid formulations of organic compost and their uses. He has also presented modified vermiwash technology for commercial preparation and applications,

Dr. Prabhu Nayaka, Scientist, Plant protection he dealt about pest and disease management by judicious use of cow urine, fermented butter milk and plant extracts such as *Ghaneri*, *Lantana*, *Darek*, which are used as repellent and anti-feedant.

Use of Biopesticides - *Trichoderma viride* or *T. harazianum* or *Pseudomonas fluorescence* formulation @ 4gm/kg seed either alone or in combination, manage most of the seed borne & soil borne diseases. There are other formulations viz. *Beauveria bassiana*, *Metarizium anisopliae*, *Numeria rileyi*, *Verticillium* sp, which are available in the market and can manage their specific host pest. Bt. has been used in the management of diamond back moth on crucifers and vegetables @ 0.5-1.0 kg Formulation per ha.

Viral biopesticides of baculovirus group viz. granulosis viruses (GV) and nuclear polyhedrosis viruses provided a great scope in plant protection field. Spray of nuclear polyhedrosis viruses (NPV) of *Helicoverpa armigera* (H) or *Spodoptera litura* (S) @ 250 larval equivalents are very effective tools to manage the *Helicoverpa* sp. or *Spodoptera* sp. respectively.

Botanical pesticides

Many plants are known to have pesticidal properties and the extract of such plants or its refined forms can be used in the management of pests. Among various plants identified for the purpose, neem has been found to be most effective.

Neem (*Azadirachta indica*) – Neem has been found to be effective in the management of approximately 200 insects, pests and nematodes. Neem is very effective against grasshoppers, leaf hoppers, plant hoppers, aphids, jassids, and moth caterpillars. Neem extracts, are also very effective against beetle larvae, butterfly, moth and caterpillars such as Mexican bean beetle, Colorado potato beetle and diamondback moth. Neem is very effective against grasshoppers, leaf minor and leaf hoppers such as variegated grasshoppers, green rice leaf hopper and cotton jassids. Neem is fairly good in managing beetles, aphids and white flies, mealy bug, scale insects, adult bugs, fruit maggots and spider mites.

Some other pest control formulations

Many organic farmers and NGOs have developed large number of innovative formulations which are effectively used for control of various pests. Although none of these formulations have been subjected

to scientific validation but their wide acceptance by farmers speak of their usefulness. Farmers can try these formulations, as they can be prepared on their own farm without the need of any purchases. Some of the popular formulations are listed below:

Cow urine – Cow urine diluted with water in ratio of 1: 20 and used as foliar spray is not only effective in the management of pathogens & insects, but also acts as effective growth promoter for the crop.

Fermented curd water – In some parts of central India fermented curd water (butter milk or *Chaach*) is also being used for the management of white fly, jassids aphids etc.

Dashparni extract – Crush neem leaves 5 kg, Vitex negundo leaves 2 kg, Aristolochia leaves 2 kg, papaya (*Carica Papaya*) 2 kg, Tinospora cordifolia leaves 2 kg, Annona squamosa (Custard apple) leaves 2 kg, Pongamia pinnata (Karanja) leaves 2 kg, Ricinus communis (Castor) leaves 2 kg, Nerium indicum 2 kg, Calotropis procera leaves 2 kg, Green chilly paste 2 kg, Garlic paste 250 gm, Cow dung 3 kg and Cow Urine 5 lit in 200 lit water ferment for one month. Shake regularly three times a day. Extract after crushing and filtering. The extract can be stored up to 6 Months and is sufficient for one acre.

SEMINAR ON ORGANIC FARMING IN MANGO AND USE OF BIO-PESTICIDES



[4]

KHEDUT SHIBIR ON COW BASED AGRICULTURE- A STEP TOWARDS ECONOMIC STABLE

Krishi Vigyan Kendra Navsari , Navsari Agriculture University , Navsari has held an Awareness programme on **“Cow Based Agriculture- A Step towards Economic Stable”** on dated **30th July 2019**. The main purpose of this programme was to give information to farmer for cow based agriculture, dairy products and organic farming and its effect on soil health and economic improvement. The inaugural function of this programme was graced by the chief guest chairman National Kamdhenu Ayog, New Delhi, Dr. Vallabhbhai Kathiria, Hon’ble Vice-Chancellor Dr. C.J.Dangaria Navsari Agricultural University, Shree Nareshbhai Patel M.L.A. Gandevi, Dr. G.R.Patel, Director of Extension Education, NAU, Navsari, Dr.C.K. Timbadia, Senior Scientist and Head, Krishi Vigyan Kendra, Navsari. Dr. Vallabhbha Kathiria Chairman, National Kamdhenu Ayog, New Delhi. He motivated to youth for adopt cow’s based business like dairy products and waste products businesses. He also told that people’s need to aware about cow’s benefits in the agriculture, animal husbandry and nutrition.

Honb’le Vice Chancellor Dr. C.J. Dangaria, N.A.U. Navsari, He was also delivered a inspiring lecture on cow based organic farming and its importance and cow based dairy products and improving economic by cow and cow based organic farming and its importance.



[5]

EXPOSURE VISITS FOR FARMERS

Farmers of South Gujarat were taken to different places to visit and make awareness regarding organic farming. These kinds of exposure visits facilitate the farmers and scientists to development demonstration and awareness about organic farming.

Surat, Hat Bazar Visit. on dated: 23/7/2019



AAU, Anand OF farm on dated: 23-27/07-2019



OF in Dang district on dated: 20/07/2019



World Environment Day 05/06/2019

KVK navsari celebrate world environment day in presence of more than 150 farmers. Dr. C.K. Timbadia and others scientist of KVK navsari were interact farmers.



National Nutrition week Programme 2019/09/07

Krishi Vigyan Kendra Navsari, organized National Nutrition week was inaugurated by B K Gitadidi. More than 55 vanagi were nominated in the competition by farm woman and out of them best five were selected by expert and farm woman were felicitated by Hon VC NAU Dr. C. J. Dangaria sir , Rishida Thakur and 100 farm woman participated in the program. All farm women enriched spiritually and enjoyed day.



Innovative Farm Woman's Meet 07/06/2019

Innovative farm woman meet on organic farming and ARYA orientation programme was organized at KVK Navsari . Shri Prafulbhai Senjalia, Shri Lalitbhai Thumar, Pravinbhai Asondaria and more than 90 farm women were participated. Shri Prafulbhai Senjalia had delivered very good lecture on natural farming and motivated 45 farm woman to adopt it. Mrs Dipal Soni home scientist was honoured by leaders and KVK staffs. Rashmikantbhai Gurjar also organized mango computation among innovative farm woman.



International Yoga Day 21/06/2019

International Yoga Day celebrated at KVK, Premises with active participation of 200 participants from school and staff. During this programme the participants were enlightened with importance of the day and yoga for healthy life and society. Few postures were also demonstrated by Dr. Satishkumar Sinha and Dr. C. K. Timbadia sir, Senior scientist and Head, NAU, Navsari.



Krushi Mahila Divash 06/08/2019

KVK, Navsari Celebrated Krushi Mahila Divash in collaboration of District Panchayat at KVK training Hall. Hon District president Dr Amitaben Patel preside over the function and felicitated six farm woman foe their achievement. She also explained her experience about her journey from ground to become president and encouraged farm woman present in the programme. Dr B N Patel principal ASPEE college, Mrs Shital Soni, Director Suraxa Samiti of the state, Rajshreeben Kharadi, Chetanben Birla, Falguniben,Dr Prajapati, Dr Atul Gajera DAO Navsari and Krishna Patil had participated the function Farm woman had expressed their views behind the success more than 200 woman had participated in the programme.



Web telecast of F&M Disease of animal awareness programme 11/09/2019

Krishi Vigyan Kendra Navsari, organized Web telecast of F&M Disease of animal awareness programme in collaboration of dept of animal husbandry. Hon MP shri C.R .Patil sir had visited KVK Navsari. Hon. MLA and deputy whip GOG R. C.Patel , Hon. VC NAU Dr. C J Dongaria and DDO shri R.G Gohil graced the function. Dr Prajapati DDAH, veterinarians and livestock owners had participated in the programme. 112 farmers participated in this programme.



Composting Prepared from Pujapo and Flowers 13/09/2019

Krishi Vigyan Kendra Navsari, Prepared from Pujapo and Flowers used for Lord Ganesh utsav are collected by Rotary club, Navsari and Vijalpor nagarpalika and rotary club and deposited at KVK. KVK staff and RAWE students took pain for segregation and preparing bed



Fertilizer Application Awareness Program 22/10/2019

Krishi Vigyan Kendra organized fertilizer application awareness program in presence of Dr. M.K.Arvidia sir, Principal and Dean, N.M. Collage of agriculture, Navsari. Shri. Gamanbhai Patel, Vasundara dairy Chairman, Chikhali, Dr.S.D.Kavad Association professor, DEE office, Dr.K.G.Patel sir, professor and head, Soil and chemistry, N.M.C.A.NAU. Dr. Rakholia sir association professor, department of plant pathology. Dr.K.A.Shah sir, Scientist KVK Navsari , Pritesh patel , deputy director ATMA Navsari and Shri. Vakeria sir, marketing office, GNFC, Navsari. In this programs 400 farmers were present.



Natural Farming and Environment Awareness Programme 16/11/2019

Krishi vigyan Kendra, Navsari organized off campus programme with TARANG electrical vehicles Surat and Patidar agro Vyara District Tapi sponsored a programme prakrutik kheti and paryavaran jagruti for farmers and farm women at TATA hall Navsari. Hon Dr Amitaben Patel District president has spared valuable time. She emphasized on organic farming to save our planet. Hon VC NAU had honored new appointed BOM NAU Mr Lalit Thumar, Manojbhai shekhpur and Prafulaben Naik Kaccholi and appreciated programme SP Navsari Dr Girish Pandya , DE Dr G R Patel, Dr C K Timbadiasir, Madhubhai, Dipakbhai Naik Amalsad mandali, Satishbhai and many more dignitaries with more than 900 farmers had enjoyed the programme. All experts realized importance of prakriti and its status.



World Soil Day Programme 05/12/2019

Krishi vigyan kendra organized off campus programme on celebrated World Soil Day at village Dambhar Ta Jalalpor in collaboration with KRIBHCO Mr P V Kachhadia sir and Dr C K Timbadia explain soil management throught microbes. Mr Kiranbhai Naik, Dharmesh Patel and Jatinbhai expressed their views and shared effective experience among farmers. All farmers group realize importance of soil health. 53 farmers were participated



Training on Entrepreneurship development through Fish value addition among farm woman 11/12/2019

KVK, Navsari organized training programs on Fish value addition. To promote pangasius fish farming and sustaining market it is essential to develop value addition options. So fish filleting and its products preparation skill training under ARYA has been conducted. About 45 farm woman participated and prepared various fish dishes such as fish sticks, fish Manchurian, shrimp lollipop, fish cutlets, and shrimp Manchurian farm woman can start their own small scale restaurant of fish products.



Distribution of Organic manure kits Prepared from waste Material of Pujapa collected During Lord Ganeshotsav Programme 11/12/2019

KVK, Navsari organized distribution of organic manure kits with help of rotary club , navsari in presence of District Governor Sri Shah and Rotary club of Navsari ex President Sri Lalitbhai Thumar, Mrs Desy Bodhanwala and many more Rotarians had participated and distributed organic manure kits (prepared from waste material of pujapa collected during Lord Ganeshotsav)



Innovative Farmers Meet Krishi Sangam 2019: 20/12/2019

Innovative farmers meet Krishi Sangam 2019 programm was sponsored by CII Mumbai and it was organized by KVK Navsari. Hon collector Mrs Adra Agraval graced the function and suggested three importance points to double the farmer's income and assured to meet KVK farmers frequently. DEE Dr G R Patel, Mr Ravindra ARYA , Dean Dr M K Arvadia, Manoj Patel and Kanu Baldania, Dr C K Timbadia sir were on the stage. Five progressive farmers were felicitated for their achievement. Different technical lecture were delivered by NAU scientists. KVK team worked hard for grand success. More than 250 farmers participated in this programm.



Suvarn Jayanti Mahotsav Programme 21/12/2019

Suvarn jayanti mahotsav at village Agasi, Ta Vansda Late Sri Dhirubhai Manibhai Desai Gandhian philosophy follower had established in 1969 Late Sri Jugatram Dave, Ravishankar Maharaj and Morarji Desai had inaugurated. Sri Ashokbhai Desai and many more dignitaries with parents and students participated the programme.



Award received

Best Extension Education Award 2019 (Dr.C.K.Timbadiya)

Dr. C.K. Timbadia Senior scientist and Head, KVK Navsari receive “ Best Extension Education Award” by Society of Extension Education Gujarat on the occasion of National symposium on Pragmatic Perspectives of Agricultural Development Programmes in Present Scenario on 8-9 June 2019.



Best KVK Scientist Awards (Dr. Sumit R. Salukhe)

Dr.Sumit Salunkhe, Scientist (Extension Education) KVK, Navsari. Got Best KVK Scientist Awards for the year 2019 at National seminar, Bikaner, Rajasthan organized by Indian society of extension education, New Delhi.



Activities carried out under Soil Testing Laboratory 2019-20 at KVK, Navsari

Month	Soil samples analyzed in KVK Lab	Water samples analyzed in KVK Lab
March-19	17	2
April-19	10	1
May-19	25	9
June-19	13	7
July-	14	5
August-19	1	10
September-19	2	1
October-19	7	2
November-19	4	5
December-19	5	4
Grand total	98	46

Success stories:

Successful Case or Success Story of Green Gram (2018-19)

Profile			
Name	: Vijaybhai Natvarlal Desai	Age	: 58
Village	: Endhal	Education	: 12 th Pass
Taluka	: Gandevi	Land holding	: 9 Vigha
Dist.	: Navsari	Farming Experience	: 10 year
Mo. no	: 9375982185	Crops grown	: Paddy, Pigeon pea, Chick pea, Green Gram, sugarcane and Vegetables

BEFORE CONTACT WITH KVK

Since more than 24 year back, he is cultivated Chick pea traditionally, but it wilted after emergence as results of this potential yield is not obtained and, the cost of cultivation is increased.

AFTER KVK GUIDANCE ADOPTED TECHNOLOGY

Area	-	2.5 vigha
Variety	-	Green Gram - CO4
Spacing	-	45 x10 cm
Seed Treatment	-	Thairum @ 3 gm/kg seed Rhizobium, PSB and KMB each @ 10-20 ml/kg seed
Seed rate	-	25 kg/ha
Nutrient management	-	20:40:00 kg NPK/ha
Weeding	-	2 time weeding



• After KVK intervention

- Adaption of *rabi* green gram good yielding variety

- Integrated nutrient management in crop
- Scientific method of cultivation practices adopted
- **Area of adaptive of technology**
 - Started Green gram cultivation 2.5 Vigha
- **Result of this technology**
 - ✓ Seed requirement is decreased
 - ✓ Plant growth is improved
 - ✓ Yield is increased
 - ✓ More than % additional income
- **Yield performance of Green Gram Plot**

Yield (kg/ha)		% increase over check
Demo.	Check	
904	736	22.82

- **Income from this**
 - Total income of Rs. 63280/ha during 110 - 115 days only.
- **Horizontal spread**
 - About 49 farm family in the village and surrounding village adopted this technology.



Green Gram plot of Vijaybhai Natvarlal Desai



Green Gram plot of Vijaybhai Natvarlal Desai

Successful Case or Success Story of Paddy (GNR-7) (2019-20)

Profile			
Name	: Nanubhai Chhimabhai Gavit	Age	: 54
Village	: Chaundha	Education	: 10 th Pass
Taluka	: Vasda	Land holding	: 4 Vingha
Dist.	: Navsari	Farming Experience	: 22 year
Mo. no	: 9586561315	Crops grown	: Paddy, Pigeon pea, Chick pea, Vegetable and Black Gram

BEFORE CONTACT WITH KVK

Since more than 30 year back, he is cultivated paddy traditionally and uses hybrid variety as results of this, the cost of cultivation is increased and potential yield is not obtained.

AFTER KVK GUIDANCE ADOPTED TECHNOLOGY

Area	-	0.10 ha.
Variety	-	Paddy (GNR-7)
Spacing	-	20 x 15 cm
Seed Treatment	-	Thairum @ 3 gm/kg seed Azosrillum, PSB and KMB each @ 10-20 ml/kg seed
Seed rate	-	25-30 kg/ha
Nutrient management	-	120:30:00 kg NPK/ha
Weeding	-	1 time weeding



• After KVK intervention

- Adaption of improve and moderate resistance to pest and disease medium durations high yielding variety
- Integrated nutrient management in crop
- Scientific method of cultivation practices adopted

• Area of adaptive of technology

- Started chickpea cultivation 0.10 ha

• Result of this technology

- ✓ Seed and chemical fertilizers requirement are reduced
- ✓ Yield is increased
- ✓ Cost on seed purchasing on every is reduced
- ✓ More than 34.57 % additional income

• Yield performance of Paddy (GNR-7) Plot

Yield (kg/ha)		% increase over check
Demo.	Check	
5534	4589	20.59

• Income from this

- Total income of Rs. 83310 /ha during 115 days only.

• Horizontal spread

- About 66 farm family in the village and surrounding village adopted this technology.





Paddy plot of Nanubhai Chhimabhai Gavit




Paddy plot of Nanubhai Chhimabhai Gavit

Use of novel in Mango

Name	Pinaben Hirjibhai Patel	 	
Address	A-25, Gayatri Sankul Society, Vijalpore Road, Navsari		
Mobile No	9825760079		
Age	50		
Education	M.Sc. Microbiology		
Land Holding	5 ha		
Farming Experience	7 Years		
Crops Grown	Sugarcan, Mango		
Livestock	Nil		
Before Contact With KVK	No awareness about use of novel banana Sap.		
After KVK Guidance	She became aware and habituate about use of novel banana foliar sap spray at four critical stage of reproductive phase.		
Production Detail			
Result to adopt this technology			
<ul style="list-style-type: none"> ➤ Quality fruits ➤ Minimum fruit drop of Mango 	Mango		
		Check	Banana Novel sap spray
	Area	1.0 ha	1.0 ha
	Yield	65 q	70 q
	Price (q)	3500	3500
	Income	227500	245000
	Cost	38000	40000
Profit (12 month)	189500	205000	

New variety of Little gourd GNLG-1

Profile Name	: Santubhai Devalbhai Chavaria	
Address	: Ankalachha, Vansada	
Mo.no	: 8141073512	
Age	: 45 year	
Education	: 8 th Pass	
Occupation	: Farming	
Farming Experience	: 20 Year	
Land holding	: 20 Guntha	
Live stock	: No	
Problem	: Low yield in Little guard	
Before contact with KVK	:	<ul style="list-style-type: none"> Plants were grown without proper distance. He used to apply fertilizers without soil sample analysis. He was not aware about new high yielding variety Gujarat Navsari Little Gourd-1. He was not aware about benefits of use of novel banana sap foliar fertilizer.
After KVK intervention	:	<ul style="list-style-type: none"> He became aware about importance of soil analysis based application of fertilizer & manure which reduced cost of cultivation. Proper fertilizer at proper stage & use of novel liquid organic fertilizers at reproducing phase. Proper grading of produce helped for easy marketing & high remunerative price.
Effect of KVK intervention	:	<ul style="list-style-type: none"> Farmers became aware about importance of soil analysis. Farmers became aware about new high yielding variety. "Gujarat Navsari Little Gourd-1" compared to local variety. Farmer became habituate for use of recommended dose of fertilizer on basis of soil analysis. NPK (50:50:50) proper distance among plants. biocontrol methods like light trap and biological control of fruit fly by culture .
Economics	Check	GNLG-1
AREA	10 Guntha	10 Guntha
YIELD	1500 Kg	2000 Kg
PRICE	25 Rs/Kg	25Rs / Kg
INCOME	37,500 Rs	50,000 Rs
COST	17,000 Rs	17,000 Rs
PROFIT	20,500	33,000 Rs

IMPACT OF VARIOUS TRAINING PROGRAMMES

TRIBALS' RAGI BOOSTS LIVELIHOOD

Name of Farmer women	Asmitaben Ashokbhai Patel
Village	Soldhara
Taluka	Chikhli
District	Navsari, Gujarat
Mobile No	8140686838
Age	38 years
Education	B. A.



Before contact with KVK :

- Ragi commonly used only for *Rotla* preparation in Tribal area.
- Unaware about nutritional value and value addition of Ragi.
- Small scale farming was only source of income.

• After KVK intervention (Technology and Marketing) :

- Aware about importance and benefit of Ragi in our diet.
- Being a rich source of calcium, Ragi helps people of different age groups for bone formation and its strength.
- Technology adoption of Ragi's value added products such as Biscuits, Papad, Papadi, etc.
- Benefited by market linkage provided through KVK.

• Effects of KVK intervention:

- Fresh and hygienic Ragi products available at low cost.
- Adulterant free product.
- Providing earning skill development of other tribal farm women through guidance.
- Other products like Amala candy, Chiku chips, Pickles, Squash, etc were prepared.
- Improved socio-economic status.
- Honeybee productions along with eco tourism at village level improved her social status.
- Integration of fish farming along with chicks and ducks inspires rural youth for livelihood earning opportunity.
- Multi disciplinary and extra ordinary activities.
- More than 3000 people visit her farm on annual basis.

• Income generated:

Rs. 50000/ month



MICRO ENTERPRISE PROMOTION- JAI AMBE SHG, NAVSARI

Name of self help Group	Jai Ambe KVK SHG
Village	Pathari
Taluka	Gandevi
District	Navsari, Gujarat
Group Leader	Sakuntalaben Bhagubhai Patel
Mobile No	8758662829
Age	52 years
Education	10 th pass



Before contact with KVK :

- Unaware of different types of homemade masala
- Lack of Knowledge about how to prepare Masala/receipies
- There was no income for the group

After KVK intervention :

- Adoption of technology by using fresh and hygenic spices and condiments in a proper quantity to prepare masalas
- Started using their own agricultural produce as raw material

- Learnt to prepare different recipes of masala
- Live their life with a sense of self worth, respect and dignity

- **Effects of KVK intervention:**

- Fresh and hygienic masalas.
- Adulterant free spices of better qualities.
- Improved knowledge about preparation of different types of masalas *viz., tea masala, garam masala, pav-bhaji masala, chhole masala, sambhar masala, fruit masala, pulav masala, chat masala, etc.*
- Save the money, time and improved the health of family member.
- Rural farm women are inspired for masala making training.
- Upliftment of financial status of the group.
- Positive effect on social status.

- **Income generated:**

Rs. 30000/ month



CREATIVITY LIGHTS THE LIFE

Name of Farmer women AlpanabenMaheshbhai Patel
Village Vasan
Taluka Gandevi
District Navsari, Gujarat
Mobile No 9408188115
Age 47 years
Education Post Graduate



Before contact with KVK:

- Simple '*Diyas*' (a traditional earthen lamp) were used for selling.
- No idea about decorated '*Diyas*'.

❖ After KVK intervention :

- Got opportunity to visit at Surat through KVK, Navsari in Agricultura Exhibition and visited one stall of decorated '*Diyas*'.
- Got the idea about creativity in '*Diyas*' from there.

❖ Effects of KVK intervention:

- Creativity in simple raw '*Diyas*'.
- Increased knowledge about different colorful '*Diyas*'.
- Supplement the household income.
- Income generation to SHG women.
- Attractive packing increase selling price.
- Foreign countries (China) dumped their products in India which destroyed our market; these types of activities enhance Indian market.

❖ Income generated :

- Rs. 30,000 /month



1. SUCCESS STORY OF YUVAK MANDAL(FISH CULTURISTS) OF MOTI KAKRAD VILLAGE



Moti kakrad (10 members)

Leader of Group: Rajnishbhai Patel

At.& Post: Moti kakrad Ta: Jalalpor

Dist: Navsari

Mobile No. 9725164888

Age : 22 to 48

Education : Most of them are educated engaged with animal Husbandry, agriculture and other jobs.

Land holding : Few are small land holder and many of them are land less farmers

Farming experience : Majority of them have experience of agriculture, animal husbandry and welding activities on small scale.

Crops grown : Fresh water fish Indian Major carps and exotic carps culture in village tank of size 0.40 ha.

Live stock : two or three(buffalos/goats)

Thematic Area :

Fresh water Aquaculture

Before contact with KVK.

-Not engaged in fish culture activities, they are engaged with small scale crop cultivation, paddy, kitchen gardening, and animal husbandry and minor industries workers.

Earning of individual members is hardly 72000 per annum. Available village tank was unused and infested of aquatic weeds and algae.

After KVK intervention

1. Adaption of technology:

- Manuring and fertilization as per required dose have been done for the natural food production.
- Adopted rate of stocking @ 6000 numbers fingerlings (40 to 60 mm) per ha. in 2:4.5:2.5:1 :: Catla:Rohu: Mrigal:Grass carp ratio.
- Adopted Grass carp introduction in village tanks to keep the pond free from grass and reared about 2 to 3.8 kg of fish with in 14 month.
- Followed fish farming practices as per the guidance of KVK Scientist.
- Used bag feeding method.
- Fish fed with the floating and sinking types of feed containing protein level 18to 32% of 2mm to 4 mm size of pellet as per recommended rate (3% to 1%) after calculating available biomass.
- Adopted natural periphyton production for natural fish food using bundle of paddy straws in village tank.

2. Area of adaptive of technology: 0.40 ha

3. Results to adopt this technology:

Harvested about 1480 Kg fish from 0.40 ha area worth rupees 1.80 lakh. Maximum weight about 3.8 kg of Catla , 3.6 kg of rohu and 3.6 kg of Grass carp have been grown in 14 month of culture period

4. Income from this adoption of technology:

- Gross Income about Rupees 1.80 Lakh.
- Net profit. Rs 1.10 Lakh.
- About Rs. 11000/- net profit earned by each member.
- FCR (Food conversion ratio 1.42 :1:: Food : Fish
- BC ratio 2.57

5. Horizontal spread:

At present Inland aquaculture activities are being carried out through KVK in 42 village tanks of Navsari district. It has encouraged and built up the confidence among farmers of surrounding more than 40 villages and about 43 ponds are actively engaged in fish farming.



Success story on Fresh water fish farming in village tanks, khet talavadi, court yard tanks and water harvesting ponds.

1. **Objectives** :
 - I. To increase fish production and evolve livelihood and nutritional security sources for rural youth through imparting fish farming technology in village tanks, khet talavadi, courtyard tanks and water harvesting ponds constructed in salt affected coastal area.
 - II. To create awareness and encourage rural unemployed youth about efficient utilization of unused available water resources for fish culture.
 - III. To keep the water body clean and free from excess aquatic weeds and algal blooms.

2. **Technology imparted** :
 - i. **Fish seed stocking density and species ratio.**
 Fish stocking density range from **3000 - 10000** numbers of advanced **fish fingerlings of size 60-70 mm** depending upon productivity of water body, water retain capacity and water quality. **Yearlings size fish seed @ 1500-5000/ ha** are being stocked where water remain for a period of 7 to 8 months of the year. **Species ratio for higher production- Catla: Rohu: Mrigal: Grass carp:: 2:4.5:2.5:1.**
 - ii. **Fish feeding methods and nutritional management**
Bag feeding and Broadcasting methods are recommended to minimize feed waste. To maintain nutritional requirement and profitable venture of fish farming fish feed include 70% rice bran , 20% floating feeds of protein contents varies from 32-20% and lipid 3-4% and 10% sinking pelleted feeds of 20-22% proteins of total ration requirement are recommended and demonstrated for higher production with attractive FCR 1.2 to 1.5.

3. **FLD arranged in villages of Navsari district** : **Aat, Karadi, Mohanpur, Soldhara, Moti kakarad, Tejlav, Matwad, Machhad, Onjal, Mohanpur, Ancheli.**

4. **Total Area of fish farming demonstration** : 14.07 ha.

5. **Total demonstrations units** : Total 22 of which 5 village tanks of 1.5 to 2 ha area, 3-khet talavadi , 5 water harvesting structure in coastal area and 5 courtyard tanks

- of 0.005 to 0.001 ha.
6. **Numbers of farmers benefited** : 115 including 89 SEBC and 26 ST of which 28 female and 87 male farmers.
 7. Age of farmers : 22-58 years
 8. Average fish production per unit area. : 2469 kg per ha
 9. Local check (Fish Production) : 1680 kg per ha
 10. Increase in yield : 46.96%
 11. Impact of FLD :
 - Before intervention mean annual income of individual was Rs. 46000 per year.
 - Moreover average Rs. 29000 is being earned by individual from fish culture activities and income increased by 63%.
 - Nutritional security of household. About 110% fish consumption is increased by individual member of household. Before FLD per capita mean fish consumption was 12 kg per year now it is about 27 kg per year. Fish is the excellent source of nutrition increase in consumption certainly secures nutritional requirements of individual.

Thus Fish farming activities in village tanks not only create employment opportunity it also keeps the water body free from infested aquatic weeds and protects from being polluted by organic load. As a result clean water will be available for domestic purpose throughout the year.
 12. Development works in village by fish culture activities : Yuvak Mandals in many villages such as Motikakarad, Soldhara, Aat (Roopan Talav), Aat (Mandir falia), Mandaria have initiated village development works such as street lighting, Roads, construction and maintenance of cricket play ground, purchase of cricket match kits, Water drinking tanks for cattle with shed and cloth washing platform at village tanks through the income of fish farming.



Impact of extension activities (Trainings/Demonstration)

Agronomy:

- Increased in knowledge and awareness about new varieties of paddy (NAUR-1, GNR-3, GNR-4).
- 79% farmers adopted these new varieties.
- 62% farmers adopted new varieties in gram and Tur crops.
- 16% farmers adopted weed management in sugarcane crop.
- 26% farmers adopted intercrop cultivation in sugarcane crop
- 18% farmers adopted integrated nutrient management technologies.
- 76% farmers shown keen interest in bio-fertilizer, organic manure and green manure.
- 62% farmers adopted yellow vein mosaic resistant variety meha of green gram.
- Increase in income of farmers by 65% adopting sweet corn in tribal region and spread in about 292 ha area.
- Adoption of SRI technologies in paddy and 76% increase in productivity.

Plant protection:

- Increased knowledge of the farmers regarding major insect-pest infestation and its control measure for sugarcane, paddy, mango, sapota, and vegetables.
- Increased awareness of farmers regarding judicious use of pesticide.
- Farmers have realized the importance of bio-control.
- 26% farmers aware about IPDM technology
- Reduced the cost of Plant protection and increased awareness about ill effect of pesticide.
- Farmers are aware about the importance of healthy seed and seed treatment for reducing seed born diseases.

Home Science:

- Through training on nutrition education, women of adopted villages become conscious about the health of their family.
- With the help of training on kitchen garden, farm women have adopted kitchen garden concept at their own backyard.
- Farm women are now preparing mango pulp, jam, and spices at their home rather than buying it from the market.

Fisheries:

- Increase in grass carp adoption rate in village ponds
- Increase in fish production in village pond fish farming system
- Increase in fresh water prawn fishing capture and Profit using one way trap
- SHG group of women are working well in many villages.
- Fish farming activities have been spread extensively.

Capacity building:

- Enriched the knowledge level of field functionaries.
- Increased convergence among different department through strong coordination with line departments.
- Because of linkages, it became possible to conduct various extension activities.
- Due to the follow-up by the functionaries, demonstration and technologies have become effective.
- In general, the area, production, and productivity increased in the district.

Feedback:

Research need:

S. No	Crop	Feed Back
1	Paddy	<ul style="list-style-type: none">• High yielding, medium duration varieties/hybrids.• Less irrigation requirement paddy varieties/hybrids there by reduction in soil salinity & maintenance soil health• Reduce cost of cultivation by developing pest & disease tolerant varieties/hybrids.

2	Pigeon pea	<ul style="list-style-type: none"> • Development organic pest modules for pigeon pea • Increase in yield. • Develop early maturing and high yielding pigeon pea variety.
3	Sapota	<ul style="list-style-type: none"> • Keeping quality of sapota fruit • Uniformity in size of the fruit • Weight of fruit.
4	Mango	<ul style="list-style-type: none"> • Branches of mango or sometime mango plant die in month of September-October. • Stem cracking or bark splitting was found in mango
5	Kitchen garden	<ul style="list-style-type: none"> • Terrace gardening, Box gardening and hanging pot kitchen gardening popularization. And also availability of vegetables throughout the year on season basis. • To develop new variety of hybrid vegetables.
6	Animal Feed	<ul style="list-style-type: none"> • Cost of feeding animals to be reduced
7	Fish	<ul style="list-style-type: none"> • Experiment on amur common carp need to be conducted
8	Fish	<ul style="list-style-type: none"> • Experiment on cage culture in big village tanks need to be conducted
9	Organic farming	<ul style="list-style-type: none"> • Preparation and testing of amrutmittii, amrutjal, jivamrut and panchgavya for different crops • Preparation and testing of herbal pesticide for controlling pests and diseases • Testing of cow dung and cow urine for enhancing growth and controlling pests and diseases • Module for pesticide free productions • Availability of country seeds • Develop salt reclamation bio fertilizers.

Infrastructure development:

- Mini Bus
- Latest multi media/laptop/tablet equipments for effective transfer of technologies should be provided to each and every scientist.
- Strengthening of farmers hostel with more intake capacity.
- Extension functionaries for effective follow up for technology transfer, impact studies and gaps finding.

Strategies of extension development:

- Identification of leader and capacity build up for effective transfer of technologies.
- Innovative farmers meet.
- Continuous follow up use of latest multimedia technologies and IT tools in extension activities

Line Department:

Line Departments appreciated the works, extension strategies and stands KVK for agricultural development in the district by collecting feedbacks from innovative and successful farmers and the same has been certified.

Farmers and stake holders:

Farmers are most significant clients for our KVK. KVK along with our team members are living in the heart of farmers. Farmers' success and development are the most prime and urgent tasks for KVK. Innovative, successful farmers and stake holders appreciated and happy with the work pattern, style and treatment extended by KVK and accordingly they certified the same.

Status in the District:

Looking to the transparent, farmers' interested and Agriculture development oriented works and activities being carried out by KVK, The District authorities Hon'ble Executive magistrate & Collector, DDO and other main responsible authorities have appreciated KVK efforts and certified the same. They are also interested to implement many agriculture development projects through KVK. Thus KVK becomes the synonyms of Agriculture development in the district

Overview for KVK development:

For strengthening and extending vast working area with new era of development in agriculture and allied sectors efficiently and accurately active and efficient follow up extension functionaries with latest multimedia operation technologies need to be established.

10.3 Presentation on Action Plan of April-2020 to March-2021

A. THRUST AREAS identified by KVK (Approved by competent Authority in meetings/workshop)

THRUST AREA	
I.	Crop production management (Paddy, Sugarcane, Vegetables, Pulses , Mango, Sapota, Banana, Flower crops and Fisheries)
II.	Conservation of natural resources
III.	Cost effective techniques for natural resources conservation and soil health
IV.	Arid horticulture development / Diversification of Agriculture
V.	Low cost technology / Input efficient technology
VI.	Organic farming
VII.	Self employment to Rural youth and farm women
VIII.	Women empowerment
IX.	Management of dairy animals
X.	High tech agriculture
XI.	Freshwater fish farming through cages
XII.	Fish value addition
XIII.	Freshwater fish seed rearing
XIV.	Value addition of local farm produce

B. Adopted Villages

Sr.No.	Taluka	Village	Village	Village
Intensive operational area				
1.	Jalalpore	Dambhar	Abrama	Bhutsad
2.	Navsari	Posara	Khadsupa	Kachhol
3.	Gandevi	Mohanpore	Kachholi	
4.	Chikhali	Degam	Agasi	Sadakpore
5.	Vansada	Satimal		
6.	Khergam	Rojvani	Chimanpada	

C. Training Programmes

S.N.	Discipline	Total On campus Training		Off campus training		EF/Inservice training		Vocational training		GT
		No.	Beni.	No.	Beni.	No.	Beni.	No.	Beni.	
1.	Crop Production	4	100	4	100	1	20	-	-	9
2.	Horticulture	4	100	4	100	1	20	1	20	10
3.	Home Science	3	100	3	100	1	30	1	25	8
4.	Plant Protection	3	60	3	60	0	0	0	0	6
5.	Extension Education	4	100	4	100	1	25	0	0	9
6.	Fisheries	4	100	5	100	1	20	1	20	11
	Total	22	560	23	560	5	115	3	65	53

D. Frontline Demonstrations

Sl. No.	Crop	Variety	Thematic area	Technology for demonstration	Critical inputs with cost (Rs.)	Season and year	Area (ha)	No. of farmers/ demon.	Parameters identified
1	Little guard	GNLG-1	New Variety	Introduction of new variety	63000	Rabi-20	1.25	25	Improved package of practice
2	Pointed guard	GNPG-1	New Variety	Introduction of new variety	63000	Rabi-20	1.25	25	Improved package of practice
3	Mango	Available	Nutrient management	Novel	1,04,000	Rabi-20	4	100	Improved package of practice
4	Sapota	Available	Nutrient management	Novel	1,04,000	Rabi-20	4	100	Improved package of practice
5	Little guard	Available	Nutrient management	Novel	13,000	Rabi-20	2.5	50	Improved package of practice
6	Pointed guard	Available	Nutrient management	Novel	13,000	Rabi-20	2.5	50	Improved package of practice
7	Mango	Sonpari	New Variety	Introduction of new variety	50000	Kharif-20	10	50	Improved package of practice
8	Mango	Bio fertilizer	Available	PSB, KMB, Azto.	20,000	Kharif-20	4	100	Improved package of practice
9	Sapota	Bio fertilizer	Available	PSB, KMB, Azto.	20,000	Kharif-20	4	1000	Improved package of practice
10	Fresh water fish farming	Catla, Rohu, Mrigal, Grass carp	Inland Fisheries	Stocking density & feeding management	500000	Kharif-20	15	100	Fish growth and production per unit area
11	Fresh water fish farming	Catla, Rohu, Mrigal, Grass carp	Inland Fisheries	Seed rearing	20000	Kharif-20	1	10	Survival of seeds and size of seeds
12	Fresh water fish farming	<i>Pungasius</i>	Cage farming	High stocking density in cage farming	100000	Kharif	1	10	Fish growth and production per unit area
13	Fresh water fish farming	<i>Pungasius</i>	Pond culture	High stocking density pond culture	100000	Kharif	5	40	Fish production per unit area
14	Pulse crop		Drudgery reduction	Twin wheel hoe	40000	Rabi-20	25	25	Labour saving per ha.
15	-	-	Natural resource conservation	Solar cooker	45000	Summer-21	15	15	Fuel saving per year
16	Paddy	GNR-5	Integrated crop management	Variety + seed treatment with bio fertilizer	15000	Kharif-20	10	40	Reduction in stem borer infestation and increase in yield
17	Paddy	GNR-6	Integrated crop management	Variety + seed treatment with	15000	Kharif-20	10	40	Reduction in stem borer

				bio fertilizer					infestation and increase in yield
18	Paddy	GNR-3	Integrated crop management	Variety + seed treatment with bio fertilizer	35000	Kharif-20	25	100	Reduction in stem borer infestation and increase in yield
19	Paddy	GNR-4	Integrated crop management	Variety + seed treatment with bio fertilizer	1500	Kharif-20	1	4	Reduction in stem borer infestation and increase in yield
20	Paddy	GNHR-1	Integrated crop management	Variety + seed treatment with bio fertilizer	7500	Kharif-20	5	20	Reduction in stem borer infestation and increase in yield
21	Paddy	GNR-7	Integrated crop management	Variety + seed treatment with bio fertilizer	30000	Kharif-20	20	80	Reduction in stem borer infestation and increase in yield
22	Chickpea	GG5	Integrated crop management	Variety + seed treatment with bio fertilizer	30000	Rabi-20	20	100	INM and Increase in yield
23	Pigeon pea	GNP-2	Integrated crop management	Variety + seed treatment with bio fertilizer	60000	Kharif-20	10	50	Introduction of new variety
24	Green gram	GM 6	Integrated crop management	Variety + seed treatment with bio fertilizer	80000	Summer-21	20	100	INM and Increase in yield
25	Sugarcane	Intercrop	Production	Variety	15000	Rabi-20	2	10	Intercropping
26	Sorghum	CSV-21	Fodder Production	Variety	15000	Rabi-summer	2	10	
27	Paddy	Available	IPDM	Introduction of IPDM technologies	Pheromone trap, Trichoderma, neem based biopesticide	Kharif-19	10	20	Improved package of practice
28	Pigeon pea	Vaishali	Use of bio pesticides	Use of biopesticide in pest & disease management	B.T., biopesticide, Profenofos, DDVP	Kharif-19	5	10	Introduction of new variety
29	Mango	Available	Fruit fly control	Use of nauroji trap	Nauroji trap	Rabi-20	5	20	Popularized canopy management

E. On Farm Testing

No.	Particulars	Numbers	Area (ha)/Farmers
1	To varietal evaluation of green gram	6	6 (3 ha)
2	Sucking pest management in chilli	6	1.2
3	New variety in Brinjal (NSRP 1) (Recommendation year 2016)		
4	To evaluate stocking density of pangasins in cage farming	1	1 ha

F. Extension Activities (including activities of FLD programmes)

Sr.No.	Nature of Extension Activity	No. of activities
1.	Field Day	6
2.	Kisan Mela	2
3.	Kisan Ghosthi	4
4.	Exhibition	3
5.	Film Show	22
6.	Farmers Seminar	2
7.	Workshop	4
8.	Group meetings	4
9.	Lectures delivered as resource persons	6
10.	Newspaper coverage	10
11.	Radio talks	4
12.	TV talks	4
13.	Popular articles	10
14.	Extension Literature	12
15.	Advisory Services	1
16.	Scientific visit to farmers field	32
17.	Farmers visit to KVK	5
18.	Diagnostic visits	5
19.	Exposure visits	4
20.	Ex-trainees Sammelan	1
21.	Soil health Camp	1
22.	Animal Health Camp	1
23.	Agri mobile clinic	1
24.	Soil test campaigns	-
25.	Farm Science Club Conveners meet	1
26.	Self Help Group Conveners meetings	2
27.	Mahila Mandals Conveners meetings	2
28.	Celebration of important days (specify)	7
29.	Krishi Mohostva	1
30.	Krishi Rath	-
31.	Pre Kharif workshop	1
32.	Pre Rabi workshop	1
33.	PPVFRA workshop	1
34.	Any Other (Specify)	-
	Total	160

10.4 Presentation of Budget Position

Utilization of KVK funds during the year 2019-20 (April-2019 to December-2019)

S. No.	Particulars	Sanctioned (Lakh)	Released (Lakh)	Expenditure (Lakh)
1	Pay & Allowances	98.00	93.43	76.91
2	T.A	1.00	1.00	0.73
3	Recurring Contingencies	12.00	8.95	7.31
4	Non-recurring Contingencies			
5	Vehicle	8.00	8.00	-
6	Library			
	Total	119	111.38	84.95

Status of revolving fund (Rs. in lakhs) (April-2019 to December-2019)

Opening balance as on 1 st April	Income during the year	Expenditure during the year	Closing balance
5.01	7.25	5.20	7.06

10.5 Suggestions and discussion to make Krishi Vigyan Kendra, Navsari more effective

- 1) Timely grant should be released.
- 2) Need of minibus for training purpose.
- 3) Need of Farm equipments for farm development.
- 4) Need of infrastructure facilities like go down and more capacity of hostel.
- 5) One agriculture Assistant on contract basis needed.
- 6) Laptop and computers as all facilities became old and take more maintenance.

10.6 Any other related matters with the permission of the chairperson