EXTENSION EDUCATION

Annual Report

Year: 2019-20



Directorate of Extension Education Navsari Agricultural University Navsari-396 450 (Gujarat)

Phone: 02637-282026, Fax : 02637-282706, E-mail: dee@nau.in, Website: www.nau.in

EXTENSION EDUCATION

• ANNUAL REPORT 2019-2020 •

INDEX

S.N.	Topic	Page
1	Introduction	1
2	Vision	1
3	Mission	1
4	Mandate	2
5	Functions and Activities	2
6	Staff Strength	3
7	Transfer of Technology Centres & Extension schemes	3-5
8	Salient Extension Activities & Achievements	6-13
9	New Initiations In Extension Programmes	13-14
10	National Flagship Programmes / Celebrations	15-21
11	Mega Events	21-22
12	Awards Received	23-24
13	Publications	25-29
14	Impact of Extension Programmes	30-31

Directorate of Extension Education Navsari Agricultural University Navsari-396450

ANNUAL REPORT 2019-20

1. INTRODUCTION

Navsari Agricultural University is a pioneer institute in the South Gujarat region for transferring the agricultural technology to the farmers to increase their agricultural production. The Directorate of Extension Education is actively involved in transfer of latest technologies to the farmer's field and giving its feed back to the research workers. The Directorate of Extension Education has started functioning in 1972 during erstwhile Gujarat Agricultural University. Later on, as a consequence of the separation of Gujarat Agricultural University into four new universities in the State, Navsari Agricultural University (NAU) has come into existence on May 1, 2004. NAU encompasses seven districts, viz., Valsad, Navsari, Dangs, Surat, Tapi, Bharuch and Narmada of South Gujarat.

Geographically, the jurisdiction is stretched over 170 km. seashore on the western side and hilly terrain with dense forest on the eastern side enclosed with high fertile land and ample natural resources. Thus, presently the NAU serves to 4 districts of hills and 3 districts of plains in South Gujarat region. With varied geographical, biophysical and socio economic conditions of the region, the work of validation of newly developed technologies and transfer of technology has become very challenging. The Directorate undertakes extension activities through 5 KVKs (working at grass root level), Training Units (Sardar Smruti Kendra & Training and Visit System) at head quarter, ATIC, extension departments at different colleges along with the State Agricultural Management and Extension Training Institute (SAMETI), Gujarat assisting in extension reform programme.

2. VISION

To make the extension system 'Farmer-Driven' and 'Market-led' for augmenting production, productivity and income of the farming community.

3. MISSION

- 1. To bridge up the agricultural technology gap at grass root level.
- 2. To educate rural people to attain/participate in development.
- 3. To create awareness about health, hygiene, environment and bio-diversity conservation for sustainable development.
- 4. To link farmer with newly emerging globalized world by providing them information and guidance.
- 5. To develop a system of effective research and extension linkages.
- 6. To generate employment in the field of agriculture and allied disciplines.
- 7. To integrate IT in rural system for their development.

4. MANDATES

- 1. Facilitating planning, implementation, execution and monitoring of extension programmes carried out in South Gujarat region.
- 2. Emphasizing participatory technology generation, dissemination and utilization.
- 3. Offering training and field services to public, private, NGOs and corporate sectors.
- 4. Enhancing the agricultural vocations in the region.
- 5. Promoting the 'Market-led Extension'.
- 6. Organizing farm advisory services at the doorsteps of the farmers.
- 7. Encouraging women to work in groups at the grass root level.
- 8. Networking of extension and development systems through ICT-mode.

5. FUNCTIONS AND ACTIVITIES

- 1. Facilitating planning, coordinating, guiding, executing, implementing, monitoring, supervising, evaluating and reporting the various extension programmes carried out in South Gujarat region.
- 2. Liaison with State Government, Central Government, ICAR, District Development Departments, SAUs, Cooperatives, NGOs etc. for carrying out NAU Extension Programmes.
- 3. To assist and complement to state government department of agriculture, public sector and voluntary organizations in effective management of extension education systems.
- 4. To transfer the innovative technology through Krishi Vigyan Kendras.
- 5. To organize training programmes at headquarters.
- 6. To serve as a single window system for providing all information regarding agriculture, providing inputs like seeds & planting material through Agricultural Technology Information Center (ATIC).
- 7. To act as mediator for researchers by updating them with field problems of farmers and to help them in developing "Demand Driven Technology."
- 8. To publish extension literature and its distribution among farmers & extension functionaries.
- 9. To handle various collaborative extension projects for transfer of technology.

6. DETAILS OF TECHNICAL STAFF WORKING UNDER EXTENSION UNIT

S.N.	Designation		No. of Posts	
S.IV.	Designation	Sanctioned	Filled	Vacant
1	Director of Extension Education	1	1	0
2	Training Associate	1	1	0
3	Assistant Extension Educationist	4	4	0
4	Agricultural Officer	3	3	0
5	Agriculture Supervisor	1	0	1
6	Agricultural Assistant	2	2	0
	Total	12	11	1

7. TRANSFER OF TECHNOLOGY (ToT) CENTRES & EXTENSION SCHEMES

7.1 ToT Centres: NAU Transfers agricultural technology to the farmers through ToT Centres..

	Type	Name of Centre	Location
	Training Centres for	Sardar Smruti Kendra	Navsari
	Farmers/Farm Women	Advance Training Centre for Soil and	Navsari
	/Rural Youths	Water Management	
		Demonstration-cum-Training Centre	Navsari
		for Inland Fisheries	
		Vegetable and Fruit Demonstration	Pariya
		Scheme for Tribal Upliftment	
		Tribal Women Training Centre	Dediyapada
		Extension Wing	Navsari
>	Training Centres for	Training and Visit System	Navsari
	Extension Workers	Sardar Smruti Kendra	
	Advisory Services	Farm Advisory Services	Navsari
		Agricultural Technology Information	Navsari
		Centre (ATIC)	
		Centre of Agricultural Extension	Navsari
		Information System	
		University Educational Museum	Navsari
		Farm Publication	All Centres
	1. On-farm testing	Krushi Vigyan Kendra	Vyara,
	2. Frontline demonstrations		Waghai,
	3. Trainings to farmers		Navsari,
	4. Resource and knowledge		Surat,
	centre of the district.		Dediyapada





Agriculture Educational Museaum (Educatorium)

Agricultural Technology Information Centre (ATIC)

7.2 Vocational Certificate Courses for Rural Youth & Women:

S.N.	Name and location of the courses	Type	Duration	Intake capacity
1.	School of Baking: Navsari	Certificate	20 Weeks	16+16
2.	Landscaping and Gardening training centre: Navsari	Certificate	6 Months	20
3.	Nature and Wild life photography: Navsari	Certificate	1 Year (Weekly)	20
4.	Plant tissue culture training centre for women: Surat	Certificate	6 Months	10
5.	Turf grass management: Navsari	Certificate	6 Months	20
6.	Agro ITI: Navsari	Certificate	1 to 3 Months	20
7.	Certificate in Agricultural Extension Services for Input dealers: Navsari	Certificate	6 Months (Weekly)	40
8.	Certificate course in First Aid in Avian Health Management	Certificate	Five months Saturday (First, Third and Fifth)	

7.3 Short duration Agro ITI courses for Skill Development in Rural Youths:

- 1. Seed production 9. Gender friendly equipments for farm women
- 2. Organic farming 10. Farm power machinery
- 3. Kitchen gardening 11. Bio-fertilizers & Bio-pesticides
- 4. Farm management 12. Soil-Water-Plant analysis
- 5. Dairy farming 13. Productive & beneficial insects
- 6. Flower dehydration 14. Commercial Mushroom production technology
- 7. Tissue culture 15. Artificial insemination
- 8. Poultry farming 16. Micro irrigation system

7.4 Ongoing Extension Schemes: Extension activities through 33 Schemes

S.N.	Plan Schemes : Development Charges (12)			
1	Strengthening of the Directorate of Extension Education, Navsari			
2	Upgrading of the existing Sardar Smruti Kendra, Navsari			
3	Establishment of Centre for Agril. Extension Information System, Navsari			
4	Agricultural Technology Information Centre (ATIC), Navsari			
5	Establishment of Agro ITI Centre for Agricultural & Horticulture, Navsari			
6	Establishment of University Educational Museum, Navsari			
7	Testing of University technologies on farmers' fields through adaptive trials, Navsari			
8	Demonstration-cum-Training Centre for Inland Fisheries, Navsari			
9	Vegetable & Fruit Crops Demon. Scheme for Tribal Upliftment, Paria			
10	Strengthening of Soil and Water Management Training Centre, Navsari			
11	Strengthening of Tribal Women Training Centre, Dediyapada			
12	Strengthening of Extension Wing, Navsari			
S.N.	Non-Plan Schemes : Standing charges (06)			
1	Directorate of Extension Education			
2	Establishment of Sardar Smruti Kendra, Navsari			
3	Establishment of Farm Advisory Services, Navsari			
4	Establishment of School of Baking, Navsari			
5	Upgrading of School of Baking, Navsari			
6	Bal Mandir, Navsari			
S.N.	Other Agency (08)			
1	Training & Visit System, Navsari (Non-Plan), Navsari			
2	Training & Visit System, Navsari (Plan), Navsari			
3	Soil Health Card Training, Navsari			
4	Green/Net house Farmers' Training, Navsari			
5	Diploma in Agricultural Extension Services for Input Dealers, Navsari			
6	Certificate in Agricultural Extension Services for Input Dealers, Navsari			
7	Krushi Mahotsav Programme, Navsari			
8	Krushi Library, Navsari			
S.N.	ICAR (07)			
1	Krushi Vigyan Kendra, NAU, Vyara, DistTapi			
2	Krushi Vigyan Kendra, NAU, Navsari			
3	Krushi Vigyan Kendra, NAU, Dediyapada, DistNarmada			
4	Krushi Vigyan Kendra, NAU, Surat			
5	Krushi Vigyan Kendra, NAU, Waghai, DistDangs			
6	Providing support to DEE for knowledge empowerment, technological			
	backstopping, HRD and overseeing of KVKs, Navsari			
7	Farmer FIRST Programme			

8. SALIENT EXTENSION ACTIVITIES & ACHIEVEMENTS

8.1 Extension activities carried out: for the dissemination of new technology to farmers

S.	Extension Drogrammes	No. of		No. of Beneficiaries			
N.	Extension Programmes	activities	Farmers	Women	Youths	Total	
1.	On campus Farmers' Training programme	284	5894	5579	434	11907	
2.	Off campus Farmers' Training programme	169	4258	3847	267	8372	
3.	Training for Extension functionaries	22	438	256	122	816	
4.	Seminar / Workshop / Symposium for Farmers	65	1729	1662	218	3609	
5.	Seminar / Workshop / Interface / Symposium for Extension Officers	15	347	160	86	593	
6.	Farmers' day / Field day	87	2516	2398	261	5175	
7.	Agril. Fair / Agril. Exhibition	48	21343	22595	2023	45961	
8.	Farmer shibir / Farm women shibir	89	3297	3388	568	7253	
9.	Farmers' meeting/Krushi gosthi	147	3908	3755	474	8137	
10.	Front Line Demonstrations (KVKs)	1084*	2764	911	252	3927	
11.	Adaptive trials (NAU technologies)	917*	4717	1155	683	6555	
12.	On Farm Trials	33	187	66	18	271	
13.	AICRP Demonstrations	296*	702	163	93	958	
14.	Demonstrations (Research Stations)	147*	381	78	32	491	
15.	Exposure visit of the farmers	26	414	508	99	1021	
16.	Diagnostic team visit on farmers' field	217	803	210	141	1154	
17.	Veterinary Clinic Camp/ Animal Husbandry Shibir	31	1743	1465	231	3439	
18.	Text SMS sent on farmers' mobile	402	20348	4766	2217	27331	
19.	Telephonic / e-mail guidance	5273	4027	801	445	5273	
20.	Press-notes / Articles in vernacular Newspapers	192	Mass	Mass	Mass	Mass	
21.	Radio & TV talk	44	Mass	Mass	Mass	Mass	

22.	Farm Literature Publication	264	72757	52519	12909	138185
23.	Visitors (dignitaries, officers, farmers, students)	1672	14916	14119	2332	31367

^{*} Area in Ha.

8.2 Seminar/Symposium/Interface organized for farmers: for capacity building of farmers

S. N.	Subject/Topic	No. of Programm	No. of Beneficiaries
1	Paddy Crop	6	439
2	Sugarcane Crop	2	129
3	Cotton Crop	3	151
4	Fruit Crops	4	196
5	Flowers	3	132
6	Vegetable Crops	4	217
7	Pulse Crops	4	225
8	Nursery	2	91
9	Integrated Pest Management	3	183
10	Pre Harvest Technology	3	129
11	Post Harvest Technology	6	355
12	Green House Technology	1	37
13	Soil and Water Management	2	117
14	Agriculture farm Machinery	2	93
15	Animal Husbandry	5	342
16	Value Addition	6	334
17	Seed Production	3	148
18	Scientific storage of grain	3	175
19	Fishery and its Marketing	2	79
20	Prawn/Shrimp cultivation and its Marketing	1	37
	Tota	65	3609

8.3 Front-line Demonstrations:

The main objective of Front-Line Demonstrations is to demonstrate newly released crop production and protection technologies and its management practices in the farmers' field under different agro-climatic regions and farming situations. While demonstrating the technologies in the farmers' field, the scientist studies the factors contributing higher crop production; field constrains of production and thereby generates production data and feedback information. Total 3927 FLDs in 1084 ha. and 1449 other demonstrations in 443 ha. were conducted on farmers' fields under the close supervision of the NAU Scientists.

SN	Crop	No.of Demon.
1	Paddy	1572
2	Sugarcane	149
3	Pigeon pea	517
4	Gram	427
5	Green gram	203
6	Nagli	94
7	Sweet corn	76
8	Okra	231
9	Groundnut	149
10	Maize	174
11	Mango	158
12	Sapota	45
13	Cashew	68
14	Turmeric	64
	Total	3927



FLD on soybean variety







FLD on greengram variety GM 6

8.4 Adaptive Trials on University Technologies:

Adaptive or minikit trial is a method of determining the suitability or otherwise a new practice in the farmers' situations. This may be regarded as the on-farm participatory technology development (PTD) process which requires the farmers' choice and opinion about the practice as important. The main purpose of these trials was to test the new and promising practice under the local resources, constraints and abilities of the farmers.

During the year 2019-20, total 7964 adaptive trials were conducted on the farmer's fields through five KVKs in South Gujarat on newly released varieties of paddy, gram, pigeon pea, Sorghum, turmeric, Indian bean, sweet potato, smooth gourd, pointed guard, mango were conducted. Demonstration on INM, Novel plus, pest control, Bypass Fat, Deworming and Mineral Mixture, Kitchen garden, Paddy thresher, Wheel hoe, Solar cooker were also conducted.



Adaptive trial on turmeric variety



Adaptive trial on paddy variety NAUR-1

8.5 ATMA Convergence Quarterly Meetings: An interface between ATMA, KVKs & NAU Scientists

The Directorate of Extension Education convened the "ATMA Convergence" quarterly meetings under the Chairmanship of Hon. Vice-Chancellor of NAU for facilitating an interface between KVKs, PDs (ATMA), DAOs and Scientists of NAU. The details of the meetings are given in the following Table.

S.N.	Quarter	Date of Meeting	No. of Officers Participated
1.	January-March 2019	04-04-2019	23
2.	April-June 2019	04-07-2019	26
3.	July-September 2019	10-10-2019	24
4.	October-December 2019	24-12-2019	25



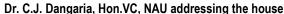


Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU, Dr. G.R. Patel, DEE, DAOs, PD ATMA and staff of KVKs of South Gujarat in the quarterly convergence meetings

8.6 Zonal Research and Extension Action Committee (ZREAC) Meetings:

Directorate of Extension Education organized one ZREAC Meeting to review the work done in last season and to make the planning for forthcoming season in convergence mode. District wise agriculture status and feedback pertaining to problems faced by the farmers in adoption of new technology at grass root level were presented by the concerned District Officer. During the year 2019-20, the 30th ZREAC meeting was convened on 04-10-2019.







Members and NAU Scientists during the ZREAC meeting

8.7 Scientific Advisory Committee (SAC) Meetings of KVKs:

In order to review the activities carried out by KVKs and to seek the suggestions for better planning and implementation of activities for next year, the meetings of Scientific Advisory Committee of five KVKs run under NAU were organized as under:

S.N.	Name of KVK	Date of SAC
1	KVK Dediyapada (Narmada)	01-02-2020
2	KVK Waghai (Dangs)	23-01-2020
3	KVK Vyara (Tapi)	31-01-2020
4	KVK Navsari (Navsari)	25-01-2020
5	KVK Surat (Surat)	24-01-2020





Dr. G.R. Patel, DEE and members during SAC meetings

8.8 Extension Education Council meeting

Extension Education Council is a statutory body consisting of the Vice-Chancellor as its chairman and Director of Extension, Director of Research, Deans, University Officers, Heads of the Line Departments, Extension Educationist, Innovative Farmers and Experts in the field of extension as the members. The council meets at least once in a year to review the work, discuss and deliberate the policy issues on extension system and formulate the technical programme for different units of the Directorate of Extension Education. During the year, the eleventh meeting of Extension Education Council was held on July 11, 2019 at Navsari under the chairmanship of Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU.





Dr. C.J. Dangaria, Hon.VC, Dr. G.R. Patel, DEE and other members in the meeting

8.9 Review meeting of KVKs

Five Review meetings of Senior Scientist & Head and Scientists and one Pre Action Plan meeting of KVKs under NAU jurisdiction were organized during the year. During the meetings, the activities carried out against target for the month and planning for the next month was discussed in detail.





Dr. G.R. Patel, DEE, NAU, Navsari interacting with the KVK Scientists

8.10 Agricultural Educatorium (University Educational Museum)

Agricultural Educatorium situated at Navsari is a one of the best agricultural Museums in India providing basics of agriculture to all walks of people. During the period, total 4864 visitors (farmers, dignitaries, scientists, students *etc.*) had visited the museum and got basic knowledge and information related to agriculture and allied subjects through various display media viz., storytelling board, kiosks, press button board, diorama, murals, show case, models, specimens etc.





Dignitaries, farmers and students visiting Agricultural Educatorium

8.11 Campus Visit and Comfortable Homely Stay of the Farmers

Large numbers of farmers from Gujarat, Maharashtra and Rajasthan States are visiting NAU Navsari campus round the year to see and learn about new technologies developed and demonstrated on NAU farms. During the year, total 77 farm visits were conducted and 4749 farmers had visited the SSK and 4126 visitors had visited farms at NAU Campus. Total 5149 farmers and other visitors stayed at Kisanghar-farmers' hostel (4759 from Gujarat state and 390 from other states).

8.11.1 Campus Visit





Farmers visit to different units at Navsari campus

8.11.2 Amenities in Kisan hostel



Clean and Comfortable Kitchen & Rooms in Kisan Hostels

8.12 Certificate courses on Bakery

Bakery Unit, DEE, NAU, Navsari organized 20-week duration one certificate course (27/06/2019 to 11/11/2019) on bakery during the year. Total 18 students have participated in the training programme. Another three skill oriented training programme of one week duration on baking were organized. Total 28 youth and farm women had participated in the one week training programmes.





Trainees doing practical on bakery product making during different courses

9. NEW INITIATIVES IN EXTENSION PROGRAMMES

9.1 "Certificate course" for Input dealers

NAU successfully completed the fifth batch of "Certificate in Agricultural Extension Services for Input Dealers" course of six months duration and the Valedictory programme was organized on 4 May, 2019 under the Chairmanship of Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU in the presence of Dr. G.R. Patel, Director of Extension Education, NAU, Navsari. Total 39 input dealers from South Gujarat have received Certificate during the programme.



Dr. C.J. Dangaria, Hon. Vice Chancellor distributing certificate to the participants



Group photo of participants in certificate course for input dealers

9.2 "Certificate course" for Input dealers

Valedictory function of sixth batch of "Certificate in Agricultural Extension Services for Input Dealers" of six months duration was organized on November 19, 2019 under the Chairmanship of Dr. C.J. Dangaria, Hon'ble Vice Chancellor of NAU in the presence of Dr. G.R. Patel, Director of Extension Education, NAU, Navsari. Total 39 input dealers received the certificate during the programme at NAU, Navsari.



Dr. C.J. Dangaria, Hon.VC distributing certificates to the participants in the presence of Dr. G.R. Patel, DEE



Participants in certificate course for input dealers

9.3 Special training programme on "Protected cultivation: Green House/Net House"

Directorate of Extension Education, Navsari Agricultural University, Navsari has organized 15 days training programme on "Protected cultivation: Green House/Net House" in collaboration with Gujarat Horticulture Mission, Gandhinagar during 13 to 27th May, 2019 at ATIC, NAU, Navsari. The inaugural function of the programme was held under the chairmanship of Dr. G.R. Patel, Director of Extension Education. In this training programme, 41 field staff of line department and farmer participants has participated.





Dr. G.R. Patel, Director of Extension Education during the inaugural function.

Trainee visiting green house

9.4 Special Training programme on "Protected cultivation: Green House/Net House"

Directorate of Extension Education, Navsari Agricultural University, Navsari has organized 15 days training programme on "Protected cultivation: Green House/Net House" in collaboration with Gujarat Horticulture Mission, Gandhinagar during 20th August to 3rd September, 2019 at ATIC, NAU, Navsari. In this training programme, 17 farmer trainees have participated.



Dr. G.R. Patel, Director of Extension Education distributing the certificates to the trainees



Trainee visiting green house

10 NATIONAL FLAGSHIP PROGRAMMES / CELEBRATIONS

10.1 Women empowerment fortnight

Women Empowerment Fortnight was celebrated by NAU during August 1-14, 2019. Different extension programmes *viz.*, Women empowerment shibir, women training programme *etc.* were organized by KVKs of NAU in the presence of dignitaries. Experts from various fields delivered lectures on different topics *viz.*, role of women in agriculture, kitchen garden, animal husbandry, package of practices of main crops, organic farming, value addition in fruits *etc.* During the fortnight total 539 farm women participated and benefitted from the programmes.





KVK scientists delivering lecture to the participants during the programme at KVK Dediapada and Vyara

10.2 Swachhta Hi Sewa 2019 (11th September to 2nd October, 2019)

The KVKs running under NAU organized various activities under Swachhta Hi Sewa 2019 (SHS) campaign from 15th September to 2nd October 2019 as a part of 150th birth anniversary celebration of Mahatma Gandhi. Various activities were organized by KVKs during the programme *viz.*, short film on the biography of Mahatma Gandhiji, film on disadvantages of single use plastics, campaign on single use plastic free campus, quiz competition, poem on different life events of Mahatma Gandhiji and exhibition of different charts on Gandhiji's quote *etc*. Total 2267 farmers and farm women participated in the programmes at different places.







Participants during the swachchhata programme at KVK
Surat

10.3 Swachhta Pakhawada-2019

The KVKs running under NAU organized various activities under Swachhta Pakhwada during 16-31 December, 2019. The theme for Swachhta Pakhawada-2019 was 'Plastic Se Raksha-Swachhata Hi Suraksha'. Various activities were organized by KVKs during the programme *viz.*, Awareness programmes, meeting, Mahila/ Khedut shibir on Community health, sanitation & hygiene, vermicompost preparation and Swachhata Shramdan, cleaning of KVK premises, farm and taking Swachhata sapath during celebration. Total 2824 farmers and farm women participated in the programmes at different places.





Participants taking Swachchhata oath during the programme at KVK Tapi

Participants in rally organized during the swachchhata Pakhawada celebration at KVK The Dang

10.4 Fertilizer Application Awareness Programme

Live telecast of Inaugural Function of programme on Fertilizer Application Awareness Programme for farmers was organized on October 22, 2019 at KVKs of NAU, aiming judicious use of fertilizers from both health and environment perspective and to disseminate knowledge on optimum usage of fertilizer nutrients based on various parameters and integrated nutrient management to sustain the agriculture productivity. Total 403 farmers and farm women took part in the programme and become benefited at different places.





Gracious presence of Dr. C.J. Dangaria, Hon.VC, NAU and Dr. G.R. Patel, DEE during the programme at KVK Narmada

10.5 National Animal Diseases Control Programmme

The programme was launched by Hon'ble Prime Minister Shri. NarendraModi from Mathura, Uttar Pradesh. Live webcasting for launching of National Animal Diseases Control Programme (NADCP) for FMD & Brucellosis, Nationwide Artificial Insemination Programme (NAIP), PradhanMantri Kisan SammanNidhiYojana (PM-KISAN) and Swachhta Hi Sewa by Hone'ble PM of India was organized on September 11, 2019 at KVKs of NAU. Total 680 farmers and farm women participated in the programmes at different places.



Participants viewing the Live webcasting during the programme at KVK Surat



Participants during the programme at KVK Dediapada

10.6 Constitution Day celebration

Constitution Day was celebrated during November 26, 2019 and December 23, 2019 by KVKs operational under NAU with objective as Fundamental duties are intended to serve as a constant reminder to every citizen and it also requires citizens to observe certain basic norms of democratic conduct and democratic behaviour because rights and duties are co-relative. Scientists explained the fundamental rights as well as fundamental duties of citizen article 51-A of the Indian constitution during lecture to create awareness about Constitution and its importance among students and farmers. Question answer session, reading of preamble of Constitution were also organized. Total 333 farmers, farm women and students participated in the programmes at different places.



Scientist delivering lecture during the Constitution day celebration programme at KVK Tapi



Reading of preamble of Constitution by Participants during the programme at KVK Tapi

10.7 Vigilance Awareness week celebration (29th October, to 3rd November, 2019)

The Central Vigilance Commission (CVC) observes the Vigilance Awareness Week every year during the week in which the birthday of Sardar Vallabhbhai Patel (31st October) falls to motivate stakeholders to collectively participate in the fight against corruption and also aims at raising public awareness regarding the detrimental consequences of corruption. This year, the Vigilance Awareness Week is being observed from 29th October to 3rd November, 2019. Various activities were organized by KVK, The Dangs working under NAU and total 124 farmers and farm women participated in the programmes.





Participants taking oath during the Vigilance Awareness week celebration programme at KVK The Dangs

Scientist delivering lecture during the Vigilance Awareness week celebration programme at KVK The Dangs

10.8 Celebration of "Agriculture Education Day" by KVKs

For the celebration of "Agriculture Education Day" (December 3, 2019) different programmes for the farmers were organized by KVK Narmada run under NAU. Lectures of scientists / experts on scope & importance of agricultural education, scope of agriculture development, competitions were organized. Total 165 students, farmers and farm women participated in the programmes.





KVK Scientists delivering lecture to the participants during Agriculture Education Day celebration

10.9 "World Soil Day" Celebration

As the Government of India decided to celebrate the "World Soil Day" on 5th December every year, KVKs operated under the NAU celebrated the "World Soil Day" on December 5, 2019. During the programme 1521 farmers and farm women participated at different places.





Shree S. B. Gamit, DAO Tapi delivering lecture related to Soil Dignitaries during the programme at KVK, Dediapada, Dist:
Health and agriculture schemes Narmada

10.10 Jay Kisan Jay Vigyan week celebration (23rd to 29th December, 2019)

Govt. of India celebrates "Jai Kisan Jai Vigyan Week" every year during 23rd to 29th December on the birth anniversary of Shri Atal Bihari Vajpayee and Late Shri Chaudhary Charan Singh, two former Prime Ministers of India keeping in view of their immense contribution for promoting use of science for the welfare of farmers. KVKs of NAU organized different activities during December 23-29, 2019 to celebrate the week. Total 2304 farmers and farm women participated in the programmes at different places





Scientist delivering lecture during the celebration of "Jai Kisan Jai Vigyan" week

10.11 Farmer FIRST Programme

Farmer FIRST project (FFP) entitled 'Ensuring Livelihood Security for Small and Marginal Farmers of South Gujarat'is being implemented in Pathri, Hansapore and Chijgam villages with six modules. Different activities were organized during the period *viz.*, Trainings, visit to demonstration fields and distribution of critical inputs to the participating farmers under the project viz., sugarcane setts (CoN- 13073), bio-fertilizers- P.S.B. and Acetobacter with *Trichoderma viride, Trichogramma* cards, seeds of Indian bean, lucern (Anand-2 TF), planting material of Drumstick (PKM-1) and Little gourd (GNLG-1), calf starter *etc*.



Dr. C.J. Dangaria, Hon.VC, NAU and Dr. G.R. Patel, DEE remain present and guided the farmers



Participants during the training programme under the Farmer FIRST project





on live stock based module (17/10/2019)

Dr. G. R. Patel, DEE addressing the trainees during training Distribution of critical inputs-seeds under the Farmer FIRST project

10.12 Implementation of "Mera Goan Mera Gaurav" programme

"Mera Goan Mera Gaurav" programme launched by the Hon'ble Prime Minister on 25th July, 2015 at Patna, Bihar has been implemented by NAU. Total 41 teams of NAU Scientists were formed. Each team comprised of 4 Scientists for 5 villages. Total 164 Scientists were assigned the work in 205 villages selected under the programme.

Activities organised by Navsari Agricultural University, Navsari under MGMG

S.	Name of activity	No. of activities	No. of farmers participated				
N.		conducted	& benefitted				
1.	Visit to village by teams	82	406				
2.	Interface meeting/ Goshthies	28	1168				
3.	Training organized	11	357				
4.	Demonstrations conducted	17	118				
5.	Mobile based advisories (No.)	614	614				
6.	Literature support provided	42	1372				
7.	Awareness created	15	589				
8.	Input support provided (q)	-	-				
9.	Linkages developed with other agencies	28	608				
	(No. of agency)						
10.	Facilitation for new varieties, seeds,						
	technology						
	i. New varieties (No.)	03	246				
	ii. Technology (No.)	18	678				
	iii. Seeds (q)	4	16				
	iv. New crops (No.)	01	07				
	Total 863 6179						





Field day

Diagnostic visit by Scientists

11. MEGA EVENTS ORGANIZED DURING THE YEAR 2019-20

11.1 Kharif Krishi Mahotsav-2019

Kharif Krishi Mahotsav-2019 was organized during 16-17 June, 2019 at different 44 Taluka places in all the Districts of South Gujarat. During this one-day programme, the service of 3 NAU Scientists at different 44 places (total 132 Scientists) were assigned for providing technical guidance to the farmers. Exhibitions of latest technologies in NAU stalls at 12 places were also organized in which Scientists in each stall were deputed to provide the guidance to the farmers.



Scientists delivering lecture during the Krushi Mahotsav 2019 at Chikhali, Dist: Navsari



Scientists delivering lecture during the Krushi Mahotsav 2019 at Gadat (Gandevi), Dist: Navsari



Shri Mohanbhai Dhodia, MLA, Mahuva, addressing farmers during the Krushi Mahotsav 2019 at Bardoli, Dist: Surat



Scientists delivering lecture during the Krushi Mahotsav 2019 at Bardoli, Dist: Surat

11.2 One day training workshop programme for SPNF master trainers

One day training workshop for master trainers of Subhash Palekar Natural Farming (SPNF) was organized by Navsari Agricultural University, Navsari jointly with ATMA, Gandhinagar under the guidance and gracious presence of Hon'ble Governershri Acharya Devvratji at Playground, NAU Campus on 09/02/2020. Total 4105 master trainers from seven districts of South Gujarat participated in the programme.



सिलाप पालेडर आइतिक अंती"वी तांतीय विशेष पारत है स्वारों शिक्ष हिस्स्विश्च सार्वाचे पुर्वे प्रशिक्ष पालेड प्रशिक्ष सार्वाचे प्रशिक्ष स्वारों प्रशिक्ष स्वारों है। स्वारों है।

Hon'ble Governershri Acharya Devvratji lightening the lamp during the SPNF Master Trainer workshop at Navsari



Hon'ble Governershri Acharya Devvratji guiding the participants during the workshop at Navsari



Master trainers attentively listening the dignitaries during the SPNF Master Trainer workshop at Navsari

12. AWARDS RECEIVED:

12.1 Farmer Award

Vasava Ushaben Dineshbhai At: Mandir Faliya, Village: Pachpipri, Tal: Sagbara, Dist: Narmada received PANDIT DEEN DAYAL UPADHYAY ANTYODAYA KRISHI PURUSKAR -2018 (National) during ICAR Foundation Day 2019 on 16th July, 2019 at New Delhi.



Smt. Vasava Ushaben Dineshbhai receiving award from Dr. Trilochan Mohapatra, Hon'ble Director General of ICAR, New Delhi on 16th July, 2019

12.2 Best Extension Scientist Award

Dr. C.K. Timbadia, Senior Scientist and Head, KVK Navsari received "Best Extension Scientist Award" sponsored by Society of Extension Education Gujarat on the occasion of National symposium on Pragmatic Perspectives of Agricultural Development Programmes in Present Scenario on 9th June 2019 at Navsari.





Dr. C.K. Timbadia, Senior Scientist and Head, KVK Navsari receiving award from dignitaries at Navsari

12.3 Best Young Scientist

Prof. Arti. N. Soni has been awarded Late Champaben Vallabhbhai Mayani Best Women Scientist during National Syposium on 'Pragmative perpectives of agricultural development programmes' jointly organized by Society of Extension Education Gujarat and Navsari Agricultural University on 9th June, 2019 at Navsari.



12.4 Best Oral Presentation Awards

Dr. C. D. Pandya has been awarded Second Prize for Best Oral Presentation during National Syposium on 'Pragmative perpectives of agricultural development programmes' jointly organized by Society of Extension Education Gujarat and Navsari Agricultural University on 9th June, 2019 at Navsari.



12.5 Best Oral Presentation Award

Best oral presentation award to Dr. P.B. Patel, Associate Research Scientist, SWMRU, NAU Navsari for "Biofortified rice variety Gujarat Rice-15 (GR-15)" presented in National seminar on "Biochemical and Molecular Biology Intervention for Nutritional Security and Food Safety" from 12th -13th December, 2019 organized by Department of Soil Science & Agricultural Chemistry, NMCA, NAU, Navsari.

13. PUBLICATIONS

13.1 Farm publications

Directorate of Extension periodically publishes folders, leaflets and booklets on package of cultivation practices of main crops, diversified crops, newly released technology etc. of the area to make available to the farmers and extension workers as ready reference at very low cost or no cost.

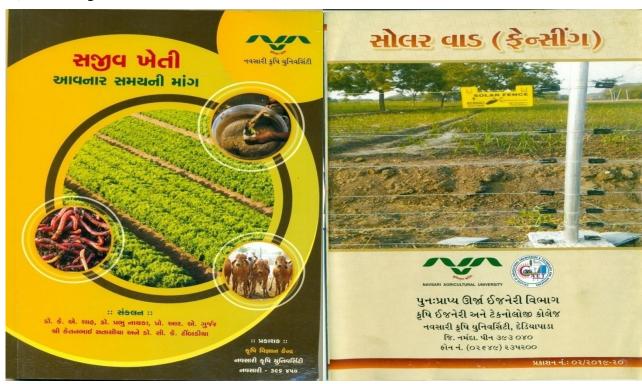
Other publications-news letter/reports

- Research Accomplishments and Recommendations (Gujarati)
- Souvenirs
- Booklets on new emerging issues/technology

University publication:

Book/booklets : 26 5) Souvenir : 1 1) Video film 2) **Folders** : 119 6) : 6 Practical manual 7) Crop calendar : 1 3) : 97

4) Training manual : 13



Books



Folders



Other publications

13.2 Research Papers

- 1. Borse, D. K., Usadadia, V. P. and Thorave D. S. Nutrient management in wheat under partially reclaimed coastal salt affected soils of South Gujarat. *International J. of Current microbiology and applied sciences* **8**(5):1590-1599.(2019)
- 2. Borse, D. K., Usadadia, V. P. and Patel, M. M. Effect of fertilizer levels on yields and nutrient uptake by wheat under partially reclaimed coastal salt affected soils of South Gujarat. *International J. of Chemicals studies* **7**(3):1062-1064.(2019)
- 3. Patel, M. M., Joshi, H. K., Patel, V. A., Patel, J. M. and Usadadia, V. P. Influence of Organic Nutrient Management on Soil Properties, Growth, Yield and Economics of Garlic (*Allium sativum* L.) in Coastal Salt Affected Soil of Gujarat *J. Indian Soc. Coastal Agric. Res.* 37(1): 69-75 (2019)
- 4. Patel, M. M., Joshi, H. K., Patel, V. A., Patel, J. M. and Usadadia, V. P. Effect of irrigation schedules on growth, yield, WUE and economics of fodder sugar beet (*Beta vulgaris* L.) varieties under coastal salt affected soils. *Forage Res.*, **45** (1): 47-50 (2019)
- 5. Patel, A. R., Patel, M. L., Patel, R. K. and Mote, B. M. (2019). Effect of different sowing date on phenology, growth and yield of rice—a review. *Plant Archives*, **19**(1): 12-16.
- 6. Meenaxi V. T., Poshiya V. K., Jadav H. R. and Raj A. D. (2019). Impact of Training and Demonstration of NADEP. *RJAS*. 11(1): 232-233.
- 7. Modi P. K., Verma P. D. and Chavhan S. M. (2019). Marketing behavior of okra growers in tapidistrict. *Journal of Krishi Vigyan*, 8(1).
- 8. Patel. N. A., Raj A. D., Jinjala V. R. and Patel. D. D. (2019). Effect of different row spacing on hybrids of summer Pearl millet (Pennisetum glaucum L.) under south Gujarat condition. *AGRES-An international e. Journal*. 8(4):274-280

- 9. Poshiya V. K., Jadav H. R. & Raj A. D. (2019). Impact of FLD on Soybean production Technology in Narmada District. *International Journal of Recent Scientific Research*. 10 (7) (H), pp.33807-33808.
- 10. Poshiya V. K, Pandya R. D. (2019). Impact of training programme on knowledge regarding value addition by tribal farmwomen. Gujarat. J. Extension. Education, special issue national saminar:pp. 67-69.
- 11. Poshiya V. K., Tiwari M. V. & Jadav H. R. (2019). Back yard nutritional low drip kitchen gardening in narmada district, *Rashtriya krishi*, 14 (2), pp.53.
- 12. Poshiya V. K, Tiwari M. V. & Jadav H. R. (2019). Scientific cultivation of green gram. *Rashtriya krishi*. 14(2), pp.31-32.
- 13. Poshiya V. K., Tiwari M. V. & Jadav H. R. (2019). Scientific cultivation of red gram, *Rashtriya krishi*,14 (2), pp.17-18.
- 14. Poshiya V. K., Tiwari. M. V. & Khodifad P. B. (2019). Knowledge of tribal farm women about human nutrition in Narmada district. *International Journal of Recent Scientific Research*. 10 (7) (G), pp.33779-33781.
- 15. Raval, J. K., Prasad, M., Parmar, H. C., Patel, J. M., Vihol, P. D., Patel, J. H. and Kalyani, I. H. (2019). Ameliorative of *Eugenia jambolana* seeds aquous extraction diabetes induced oxidative stress in rats. *Haryana Vet.*, 58(2): 232-235. (NAAS Score: 4.99)
- 16. K. R. Jeetendra, M. P. Jignesh, D. V. Priti, C. P. Hitesh, P. Dashrath and H. P. Jatin(2019). Clinico-pathological chances in hepatozoonosis in dogs. *Int. J. Curr. Microbiol. App. Sci.*,8(11): 928-932. (NAAS Score: 5.38)
- 17. Patel, R. K., Sandipan, P. B., Desai, H. R. and Patel, A. D. (2019). Screening of *Gossypiumhirsutum* varieties/breeding materials for resistance to Alternaria leaf spot and bacterial leaf blight diseases under natural and rainfed conditions. *Int. J. Chemical Studies*, 7(6): 1847-1850. (NAAS Score: 5.31)
- 18. Patel, R. K., Sandipan, P. B. and Patel, A. D. (2019). Screening of *Gossypiumarboreum* varieties/breeding materials for resistance to bacterial leaf blight disease under natural and rainfed condition. *Int. J. Curr. Adv. Res.*, 8(10 B): 20195-20197. (NAAS Score: 3.07)
- 19. Desai, H. R., Bhanderi, G. R., Patel, R. D., Sankat, K. B. and Patel, R. K. (2019). High density planting with insecticide resistance management approach for sustainable and profitable cotton production in rainfed region. *J. Ento. Zool. Studies*, 7(5): 453-458. (NAAS Score: 5.53)
- 20. Sandipan, P. B., Patel, R. K., Faldu, G. O. and Patel, D. M. (2019). Status of different diseases of cotton under South Gujarat region of India. *Int. J. Curr. Microbiol. App. Sci.*, 8(10): 2651-2657. (NAAS Score: 5.38)
- 21. Modi P. K., Chavan S. M., Sarvaiya S. N. and Kirti Bardhan (2019). Effect of IBA and its combinations with NAA on propagation of little gourd (Coccinia grandis L. voigit) in Aug troys. International Journal of chemical studies, 7(6): 1023-1027.
- 22. Modi P. K., Verma P. D. and Chavan S. M. (2019). Marketing behaviour of Okra (Abelmoschus esculentus L.) Growers in Tapi district. Journal of Krishi Vigyan, 8(1): 221-225.
- 23. S.A.Aklade, N.M.Thesiya and J.B.Dobariya (2019). Impact of front line demonstration of INM in watermelon. Bioinfolet 15 (3-4): 278-279
- 24. Borse, D. K., Usadadia, V. P. and Thorave D. S. Nutrient management in wheat under partially reclaimed coastal salt affected soils of South Gujarat. *International J. of Current microbiology and applied sciences* 8(5):1590-1599.(2019)

- 25. Borse, D. K., Usadadia, V. P. and Patel, M. M. Effect of fertilizer levels on yields and nutrient uptake by wheat under partially reclaimed coastal salt affected soils of South Gujarat. *International J. of Chemicals studies* 7(3):1062-1064.(2019)
- 26. Patel, M. M., Joshi, H. K., Patel, V. A., Patel, J. M. and Usadadia, V. P. Influence of Organic Nutrient Management on Soil Properties, Growth, Yield and Economics of Garlic (Allium sativum L.) in Coastal Salt Affected Soil of Gujarat *J. Indian Soc. Coastal Agric. Res.* 37(1): 69-75 (2019)
- 27. Patel, M. M., Joshi, H. K., Patel, V. A., Patel, J. M. and Usadadia, V. P. Effect of irrigation schedules on growth, yield, WUE and economics of fodder sugar beet (*Beta vulgaris* L.) varieties under coastal salt affected soils. *Forage Res.*, 45 (1): 47-50 (2019)
- 28. Ahir, N. B., Desai, L. J., Usadadia, V. P., and Patel, H. F. Integrated nitrogen management in maize (Zea mays L.) for profitable production with sustainabilityInternational *J. of Chemicals studies* 7(4): 322-324 (2019)
- 29. Tajane, Diksha, Usadadia, V. P., Jangir, Rameti and Joshi, Neha. Effect of irrigation schedule and nitrogen management on growth and productivity of *rabi* sorghum grown under clay soils of South Gujarat*International J. of Chemicals studies* 7(5):136-138 (2019)
- 30. Usadadia, V. P., Mistri, P. S., Savani, N. G. and Patel, K. K. Effect of different levels of irrigation, nitrogen and foliar application of banana pseudostem sap on drip irrigated sweet corn-green gram cropping sequenceIndian *J. of Pure & applied biosciences* 7(5): 254-258 (2019)
- 31. Tajane, Diksha., Usadadia, V. P., Borse, Dipak and Sawadhkar, Sangita. Effect of irrigation and nitrogen on production potential of *rabi* sorghum (*Sorghum bicolor* L.) under South Gujarat condition *Int. J. Curr. Microbiol. App. Sci.*, 8 (9): 1-6 (2019)
- 32. Bambhaneeya, S. M., Das, A. and Usadadia, V. P. Depth function of stored and sequestered carbon under cotton growing soils of South Gujarat in India *Int. J. Global Warming* 19 (4): 349-363 (2019)
- 33. Patel, M. M., Joshi, H. K., Patel, V. A., Patel, J. M. and Usadadia, V. P. 2019 Influence of Organic Nutrient Management on Soil Properties, Growth, Yield and Economics of Garlic (*Allium sativum* L.) in Coastal Salt Affected Soil of Gujarat. *J. Indian Soc. Coastal Agric. Res.* 37(1): 69-75
- 34. Pagar, R.D., Arvadia, M.K., Patel, M.M. and Barkha. 2019 Residual effect of INM and direct fertilizer levels on growth, growth indices and yield of summer rice (SRI) under South Gujarat condition. *Green Farming* 10 (5):545-550
- 35. Pagar, R.D., Arvadia, M.K., Barkha and Patel, M.M. 2019 Effect of integrated nutrient management on growth, biomass production, nitrogen uptake and soil status of Sunnhemp (*Crotalaria juncea*) and *dhaincha*(*Sesbaniaaculeata*). International Journal of Chemical Studies: 7(4): 3217-3219
- 36. Lakum, M. B., Ghoghari, P. D. and Chaudhari, S. D. (2019) Efficacy of different acaricides against rice sheath mite, *Steneotarsonemusspinki* Smiley on rice crop. *Journal of Entomology and Zoology Studies*, 2019, 7(4):111-115
- 37. Ghoghari, P. D., Chaudhari, R. L., Patil, V. A. and Kavad, N. K. (2019) Bio-efficacy of insecticides against rice stem borer, *Scirpophaga* spp. *International Journal of Entomology Research*, 2019, 4(4):59-65
- 38. Ghoghari, P. D., Kavad, N. K. and Patil, V. A. (2019) Evaluation of insecticides against rice gundhi bug, *Leptocorisaacuta*(Thunberg) in South Gujarat. *Journal of Entomology and Zoology Studies*, 2019, 7(4):1411-1417

- 39. Kishan Kumar Sharma, Vijay Patil, DikshaNayak and Satyendra Kumar Gupta (2019). Evaluation of efficiency of bio-control agents against *Rhizoctoniasolani*Kuhn, an incitant of sheath blight of rice. *Journal of Pharmacognosy and Phytochemistry* 2019; 8(6): 1365-1368 (Published in 09-10-2019) NASS rating- 5.17
- 40. Makawana K V, Patel R C, Gajjar S N, Patil V A and Mali S C (2019) Eavaluation of Sugarcane Genotypes Resistance to Red rot pathogen. DSTA Annual Convention (2019).

13.3 Extension Literature:

1. Chawda, S.K., Naik, B.M., Rathod, J.H., Panchal, B.B. and Bisne k.D. (2019). Kelnosukaro (Panama wilt)-navinsamasya. NAU, Pub. No. 35/2019-20.

13.4 Book/Booklet

- ૧. કાલરીયા જી.બી. અને ઘેટીયા એલ. વી. (૨૦૧૯) કાજુ પાકની જીવાતો અને વ્યવસ્થાપન, કૃષિ જીવન, ફેબ્રુઆરી, પાના નં. ૧૩–૧૫.
- ર. એરવાડીયા એલ. કે., આરદેશણા આર. બી. અને કાલરીયા જી.બી. (૨૦૧૯) હવામાન ફેરફાર પરિસ્થિતીમાં સંકલિત ખેતી પધ્ધતિ, કૃષિ જીવન, ફેબ્રુઆરી, પાના નં. ૧*૬*–૧૮.
- ૩. કાલરીયા જી.બી.(ર૦૧૯–ર૦) ગ્રીન હાઉસ / નેટ હાઉસ અંગેની તાલીમ વ્યાખ્યાન નોંધ, પ્રકાશકઃ વિસ્તરણ શિક્ષણ નિયામકશ્રી, નવસારી કૃષિ યુનિવર્સિટી, નવસારી, યુનિ. પ્રકાશન નં. પ/ર૦૧૯–ર૦ પાના નં. ૧–૧૨૨.
- ૪. કાલરીયા જી.બી. (૨૦૧૯) ખેડૂતોપયોગી સંશોધન ભલામણોલ–૨૦૧૯ પ્રકાશકઃ વિસ્તરણ શિક્ષણ નિયામકશ્રી, નવસારી કૃષિ યુનિવર્સિટી, નવસારી, પ્રકાશન નં.૩૭/૨૦૧૯–૨૦.
- પ. કાલરીયા જી.બી. (૨૦૧૯) રવિ ૠતુ પૂર્વેની તાલીમ અને મુલાકાત યોજના માટે નિષ્ણાંત વ્યાખ્યાન નોંઘ, તારીખઃ ૦૯–૧૦ ઓકટોબર, ૨૦૧૯.
- 5. કાલરીયા જી.બી. (૨૦૧૯) શેરડીની જીવાતોનું સંકલિત વ્યવસ્થાપન, રાષ્ટ્રીય ખાધ સુરક્ષા મિશન–રોકડીયા પાકો અંતર્ગત એક દિવસીય ખેડૂત તાલીમ માટે નિષ્ણાંત વ્યાખ્યાન નોંધ, મુખ્ય શેરડી સંશોધન કેન્દ્ર દ્વારા આયોજીત કાર્યક્રમ, તારીખઃ ૨૧ ઓકટોબર, ૨૦૧૯.
- 7. Arti N. Soni, Dipal N. Soni, Priti V. Thakkar. Swa-Sahay Juthni rachna, Pravrutio and Safalvartao; in Kheduto Udyog Sahasik Bane. Published by DEE, AAU, Anand pp. 57-59.

13.5 Popular article

- 1. Dr. Sachin M. Chavan, Dr. P. D. Verma (Aug., 2019). Khedut mitro, jano makayna pakma dakhal thayel navi deshi aakramak jivat punchhde char tapkavali lashkari eyal vishe. GUJARAT RAKSHA, Dated: 5/8/2019.
- 2. Dr. S. M. Chavan "Uchchal ane Nizar Talukama Makai na Pakne nuksan pahochadti Jivato" Agro-Sandesh. Dated:09/09/2019.
- 3. Dr. J. B. Butani and Dr. U. N. Tank (Nov., 2019). Untadina dudhnu ayurvedik drastiae mahatva. Krushigividya-AAU, Volume7(859), pg.:29-30.
- 4. Prof. A. N. Soni and Dr. P. D. Verma (Oct., 2019). Aadivasi Mahilano Aayurvedik Keshtel Banavat dwara Udyog sahsikta Vikas. Volume 52(4), pg. 29-30.
- 5. Prof. A. N. Soni and Dr. N. V. Soni (Oct., 2019). Khavapivama Vaparata plastic dabbaona upyogthi bachie. Volume 72 (6), pg. 35-37.

14. IMPACT OF EXTENSION PROGRAMMES

14.1 Spread of new technology in farming community

- 1. New crop-sweet corn has been introduced in tribal area of Vansda Taluka, which increases 65 per cent more income.
- 2. More than 74.00 % farmers adopted the new recommended varieties of paddy (NAUR-1, GNR-2, GNR-3) because of higher yield as compared to other.
- 3. More than 61 per cent farmers adopted yellow vein mosaic resistant variety meha of green gram.
- 4. About 570 ha. of area under paddy has been covered under HYVs of paddy replacing conventional varieties in Tapi District.
- 5. SRI technology in paddy being adopted by many farmers in the area.
- 6. Around 70.00 percentages of farmers and farm women trainees adopting kitchen garden at their own backyard also getting income through selling the surplus vegetables.
- 7. Awareness among women of adopted villages increased about health due to training on nutrition education.
- 8. Tailoring proved as better option for Self Employment and better Source of income for Tribal Women, which increased the income by 70%.
- 9. About 21.00 percentages of trainee farm women are preparing mango pulp, jam, and masalas at their home rather than buying it from market.
- 10. Area under drip and sprinkler systems of irrigation increased in South Gujarat in the crops like banana, fruit and vegetables, paired row planted sugarcane etc increased from 1.0 lakh ha to 13.0 lakh ha during last decade.
- 11. Adoption rate of MIS is up very fast in the crops like sugarcane, banana, vegetables, sapota, mango *etc*. as area increased from 1.0 lakh to 13.0 lakh ha during last decade.
- 12. As an impact of soil and water management, 42.00 percentages of farmers adopted the land configuration in Gram, Wheat and Pigeon pea crops.
- 13. Installation of piped subsurface drainage system by more than 61 farmers (132 ha) by bearing 100.00 % cost of the system.
- 14. The knowledge level of farmer about scientific cultivation of vine crops increased by 83% as a result of KVK intervention which was earlier 55%.
- 15. Farmers become aware about orchard management and getting 22.00 and 20.00 percentages higher yield in mango and sapota respectively.
- 16. Some of the technologies adopted by the farmers on large scale are: black plastic mulching in banana, papaya, water melon, *etc*.
- 17. Increased awareness about ill effect of pesticide, hence 30.00 % cost have been reduced in plant protection measures.
- 18. Total 13 unproductive village fish ponds of about 42 ha. adopted by KVK Navsari and farmers were provided with finger lings and trainings on various aspects of fish production.

- 19. Due to continuous efforts by KVK, Navsari, farmers now feeds the fish with balanced nutrients with food ingredients like ground nut oil cake, rice bran, fish meal, and wheat flour and vitamin mineral mixture *etc*.
- 20. About 50-60 per cent livestock owners are practicing scientific feeding & management of cows and timely feeding of colostrums to their new born calves.
- 21. Milk production has increased around 2 lit per day and fat content about 1.00 to 1.50 % per day due to the proper feeding and scientific management of the animals.
- 22. Problem of mastitis in lactating animals is reducing 58% by proper management of the animals.
- 23. The inter calving period in majority of the cows was reduced by 2-3 months and reach to near about 15 month.
- 24. Repeat breeding problems reduced around 52.00 %.

14.2 Successful cases of larger adoption in farming community

- 1. Short duration improved varieties of major crops of the area
- 2. Drip irrigation
- 3. Organic farming, Vermi-composting
- 4. INM in cotton & vegetables
- 5. Integrated pest management Fruit fly traps in mango & cucurbits vegetables
- 6. Popularized pigeon pea variety Vaishali for dual purpose
- 7. SRI method in rice cultivation
- 8. Small scale nursery, Low cost green house
- 9. Inland aquaculture
- 10. Rejuvenation of old mango orchard
- 11. INM and ICM in export oriented okra cultivation
- 12. Sweet corn with marketing facility
- 13. Pitcher Irrigation
- 14. Short duration varieties of vegetables i.e. brinjal, chili, etc.
- 15. Urea treated silage feeding to animals
- 16. Kitchen gardening, Wadi yojana
- 17. Watermelon cultivation
- 18. Women Self Help Groups (SHGs) for economically self reliance.
- 19. Technology adoption through farm science club
- 20. Nutritional diet for prevention of anemia

