

EXTENSION EDUCATION

Annual Report

Year : 2016-17



જાગૃતિકલા પ્રચારક

NAVSARI AGRICULTURAL UNIVERSITY

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EXTENSION EDUCATION

● ANNUAL REPORT 2016-2017 ●

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Directorate of Extension Education
Navsari Agricultural University
Navsari-396450

ANNUAL REPORT 2016-17

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		
		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	2	1
5	Agriculture Supervisor	1	1	0
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 Farmers/Farm Women /Rural Youths	● Sardar Smruti Kendra	Navsari
	● Advance Training Centre for Soil and Water Management	Navsari
	● Demonstration-cum-Training Centre for Inland Fisheries	Navsari
	● Vegetable and Fruit Demonstration Scheme for Tribal Upliftment	Pariya
	● Tribal Women Training Centre	Dediyapada
	● Extension Wing	Navsari
▶ Training Centres for Extension Workers	● Training and Visit System Sardar Smruti Kendra	Navsari
▶ Advisory Services	● Farm Advisory Services	Navsari
	● Agricultural Technology Information Centre (ATIC)	Navsari
	● Centre of Agricultural Extension Information System	Navsari
	● University Educational Museum	Navsari
	● Farm Publication	All Centres
▶ 1. On-farm testing 2. Frontline demonstrations 3. Trainings to farmers 4. Resource and knowledge centre of the district.	● Krushi Vigyan Kendra	Vyara, Waghai, Navsari, Surat, Dediyapada



Agriculture Educational Museum (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

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

1. Seed production
2. Organic farming
3. Kitchen gardening
4. Farm management
5. Dairy farming
6. Flower dehydration
7. Tissue culture
8. Poultry farming
9. Gender friendly equipments for farm women
10. Farm power machinery
11. Bio-fertilizers & Bio-pesticides
12. Soil-Water-Plant analysis
13. Productive & beneficial insects
14. Commercial Mushroom production technology
15. Artificial insemination
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, Dediypada
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	Krushu Mahotsav Programme, Navsari
8	Krushu Library, Navsari
S.N.	ICAR (07)
1	Krushu Vigyan Kendra, NAU, Vyara, Dist.-Tapi
2	Krushu Vigyan Kendra, NAU, Navsari
3	Krushu Vigyan Kendra, NAU, Dediypada, Dist.-Narmada
4	Krushu Vigyan Kendra, NAU, Surat
5	Krushu Vigyan Kendra, NAU, Waghahi, Dist.-Dangs
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. N.	Extension Programmes	No. of activities	No. of Beneficiaries			
			Farmers	Women	Youths	Total
1.	On campus Training programme	193	4865	2398	589	7852
2.	Off campus Training programme	111	2573	1696	317	4586
3.	Farmers' day/Field day	57	7342	5968	1833	15143
4.	Agril. Exhibition/Agril. Fair	23	15121	13401	2750	31272
5.	Farmer shibir / Farmwomen shibir	42	1975	1805	343	4123
6.	Seminar/Workshop/Symposium-Farmers	46	1423	609	339	2371
7.	Training/Workshop/Interface-Extension Officers	21	461	41	15	517
8.	Farmers' meeting/Krushigosthi	45	2016	1241	622	3879
9.	Front Line Demonstrations	3162	9018	698	312	10028
10.	On Farm Trials	23	147	29	25	201
11.	Educational Tour/Field Visit	81	1624	1478	135	3237
12.	Diagnostic team visit to farmers' field	33	241	41	23	305
13.	NAU campus visit by Farmers, officers, scientists, students <i>etc.</i>	1913	21453	11949	1725	35127
14.	Veterinary Clinic Camp/Animal Husbandry Shibir	35	1642	1308	189	3139
15.	Text SMS on farmers' mobile	226	675615	34811	3337	713763
16.	Telephonic guidance/ Letter correspondence	2027	1763	146	118	2027
17.	Press-notes /Articles in vernacular Newspapers	119	Mass	Mass	Mass	Mass
18.	Radio & TV Programmes	111	Mass	Mass	Mass	Mass
19.	Farm Literature Publication	174	44239	28601	9922	82762

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	3	171
2	Sugarcane Crop	2	122
3	Cotton Crop	2	134
4	Fruit Crops	3	163
5	Flowers	2	128
6	Vegetable Crops	2	119
7	Pulse Crops	3	168
8	Nursery	2	97
9	Integrated Pest Management	4	182
10	Pre Harvest Technology	2	108
11	Post Harvest Technology	3	143
12	Green House Technology	1	41
13	Soil and Water Management	3	137
14	Agriculture farm Machinery	3	136
15	Animal Husbandry	2	119
16	Value Addition	3	111
17	Seed Production	2	89
18	Scientific storage of grain	1	51
19	Fishery and its Marketing	2	105
20	Prawn/Shrimp cultivation and its Marketing	1	47
Total		46	2371

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 3162 FLDs were conducted on farmers' fields under the close supervision of the NAU Scientists.

SN	Crop	No.of Demon.
1	Paddy	1264
2	Sugarcane	97
3	Pigeon pea	462
4	Gram	329
5	Green gram	146
6	Nagli	67
7	Sweet corn	102
8	Okra	163
9	Groundnut	250
10	Maize	84
11	Mango	86
12	Sapota	42
13	Cashew	39
14	Turmeric	31
Total		3162



FLD on new variety of gram



Demonstration field of improved variety of paddy



FLD on IPDM in Cotton

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 2016-17, total 5786 adaptive trials were conducted on the farmer's fields through five KVKs in South Gujarat on newly released varieties of paddy, gram, green gram, pigeon pea, sorghum, groundnut, wheat, Indian bean and mango. Moreover, the trials on brinjal, fruit fly trap, fodder sorghum, mulching, bio-fertilizer, novel organic liquid fertilizer, kitchen garden, SRI, spraying of CaNO₃ & Boron in mango, INM, IPDM, deworming, wheel hoe *etc.* were also conducted.



Adaptive trial on drip with mulch in watermelon



Adaptive trial on new variety of french bean

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 2016	05-04-2016	21
2.	April-June 2016	07-07-2016	24
3.	July-September 2016	14-10-2016	22
4.	October-December 2016	06-01-2017	24



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 two ZREAC Meetings during onset of *kharif* and *rabi* seasons 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 2016-17, the 25th and 26th ZREAC meetings were convened on 14-10-2016 and 04-02-2017, respectively.



Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU addressing the house



Officers of NAU, Line Department and scientists of NAU in the 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 Navsari (Navsari)	02-03-2017
2	KVK Surat (Surat)	02-03-2017
3	KVK Vyara (Tapi)	04-03-2017
4	KVK Waghai (Dangs)	04-03-2017
5	KVK Dediypada (Narmada)	07-03-2017



Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU, 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 eighth meeting of Extension Education Council was held on 6th August, 2016 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, Director of Extension Education and other members in the meeting.

8.9 Review meeting of KVKs

Three Review meetings of Senior Scientist & Head and Scientists 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. Farm visits and field visits were also organized. In the meetings Programme Coordinators and SMSs of KVKs participated.



Dr. C.J. Dangaria, Hon.VC, NAU and Dr. G.R. Patel, DEE, NAU 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 13995 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.*



Shri Radhamohanji, Hon. Minister, Agriculture, Gol garlanding Gandhiji during his visit at Agricultural Educatorium



Shri Parsotam Rupalaji, Hon. Minister(State), Agriculture, Gol visiting Agricultural Educatorium



Shri Chimanbhai Sapariya, Hon. Minister, Agriculture, GoG and Shri Ishwarsinh Patel visiting Agricultural Educatorium



Shri Sanjay Prasad, Principle Secretary, Agriculture, Gujarat visiting Agricultural Educatorium



Shri Vallabhbhai Vaghasiya, Hon. Minister (State), Agriculture, GoG 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 183 farm visits were conducted and 12209 farmers had visited the NAU Campus. Total 7161 farmers and other visitors stayed at Kisanghar-farmers' hostel (6187 from Gujarat state and 974 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 two certificate course on bakery during the year. Visit of different bakery units at Navari, Bardoli and Surat was organized as a part of the course. Total 34 students have participated in the training programme. Another seven skill oriented training programme of one week duration on baking were organized. Total 38 farm women had participated in the one week training programmes. Seven programme of one day duration were also organized, in which 233 farm women had participated.



Practical training on baking during the training programmes

9. NEW INITIATIVES IN EXTENSION PROGRAMMES

9.1 Training for KVK personnel

Training programme under HRD on "Agro textiles for adaptation of climate change" for KVK personnel under the Chairmanship of Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU was organized by Directorate of Extension Education, NAU on 18-07-2016 at KVK, NAU, Navsari. Topic was selected considering the the current situation and effect of climate change on agriculture. Dr. S. Raman, Consultant, Agrotextile delivered lectures on the topic. In the programme total 25 PC and Staff of KVKs participated.



Dr. C.J. Dangaria, Hon. Vice Chancellor addressing the trainees



Dr. S. Raman, Consultant, Agrotextile delivering lecture

9.2 Visit by DEE to KVK

Director of Extension Education, NAU visited KVKs under NAU jurisdiction on different occasions and programmes. During the KVK farm visit and field visits, DEE discussed with KVK scientists about the activities carried out and he made suggestions for improvement of functioning of KVKs.



Dr. G.R. Patel, DEE, NAU interacting with KVK scientists at KVK, Vyara (Tapi)



Dr. G.R. Patel, DEE, NAU interacting with the SHG members-trainees of vocational training course by KVK, Vyara (Tapi)





Dr. G.R. Patel, DEE, NAU interacting with the staff members and trainees at KVK, Dediapada (Narmada)

9.3 Women empowerment fortnight

Women Empowerment Fortnight was celebrated by NAU during 01 to 14th August, 2016. Different extension programmes *viz.*, Mahila Krishi Divas, 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, farm mechanization, kitchen garden, animal husbandry, package of practices of main crops, use of bio-fertilizers, organic farming, drip irrigation, post harvest handling and value addition in fruits *etc.* During the fortnight total 1482 farm women participated and benefitted from the programmes.



Peoples' representatives, NAU officers, KVK scientists and participants during the programmes at different places

9.4 Diploma course for Input Dealers “Diploma in AESID”

Valedictory programme for the “Diploma in Agricultural Extension Services for Input Dealers” was organized on 22 June, 2016 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 40 input dealers from South Gujarat have received Diploma during the programme.



Dr. C.J. Dangaria, Hon. Vice Chancellor addressing the participants during the function



Dr. G.R. Patel, Director of Extension Education distributing certificate to the input dealers

9.5 "Certificate course" for Input dealers

NAU successfully completed the newly started course “Certificate in Agricultural Extension Services for Input Dealers” of six months duration and the Valedictory programme for the first batch was organized on 24 March, 2017 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 40 input dealers from South Gujarat have received Certificate during the programme.



Dr. C.J. Dangaria, Hon. Vice Chancellor addressing the participants during the valedictory function



Group photo of participants in certificate course for input dealers

9.6 MoU Signed for strengthening the extension activities

During the period 2016-17, following four MoUs were signed in order to strengthen the extension activities in the jurisdiction of NAU.

SN	Date	MoU with	Objective
1	16-12-2016	Petroleum Conservation Research Association (PCRA), Mumbai	To promote fuel efficiency of tractors and pump-sets or any other farm equipment by organizing training, workshop, seminar, krushi mela etc. for farmers, tractor drivers and technicians.
2	26-12-2016	CNH Industrial (India) Pvt. Ltd. New Delhi	To initiate and promote skill, knowledge and importance of farm mechanization among farmers, villagers, artisans and technicians.
3	11-01-2017	Development Support Agency of Gujarat, Tribal Development Dept., Gandhinagar	Strategic partnership for Agricultural Services in Integrated Tribal Development Programme Areas for upliftment of tribal farms of South Gujarat.

4	30-01-2017	Agriculture Council of India (ASCI), Haryana	Skill of India Gurgaon,	Skill development training for quality vocation education in agriculture and allied sectors.
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Exchange of MoU between NAU and PCRA officials



Dignitaries, officers and scientists present during the signing of MoU

9.7 MDP for Senior Scientist cum Head at KVK, Navsari

Fourth MDP for Senior Scientist cum Head of KVKs of India was held at KVK, NAU, Navsari during 11th to 20th May, 2016 (10 days). During the 10 days programme, various activities organized for the participants as a part of training and learning. Field visit to different adopted villages of KVK were organized to see the process adopted for implementation of different activities organized by KVK, to see the impact and interaction were also held with the farmers. Five Senior Scientist cum Head of KVKs from West Bengal, Chhattisgarh, Jammu & Kashmir, Assam and Andhra Pradesh had participated in the programme.



Dr. C.J. Dangaria, Hon. VC, NAU interacting with participants



Participants interacting with progressive farmers



Participants interacting with farmers during their field visit



Interaction with farm women during field visit

9.8 Training programme on Brackish water Aquaculture

Training programme on "Brackish water Aquaculture" was jointly organized by College of Fisheries & Agro-ITI during 2 to 4 July, 2016 for the farmers. Different aspects of Prawn / Fish rearing in brackish water were covered during the training with lectures of experts and practical training. Total 30 farmers from Navsari, Surat and Junagadh districts were participated in the programme.



Scientist delivering lecture to the participants



Visit to fish rearing site for hands on knowledge

9.9 Training programme on Goat farming

Training programme on "Scientific approaches for Profitable Goat farming" was jointly organized by Veterinary College, LRS & Agro-ITI during 26 to 30 September, 2016 for the farmers under AIGIP. Different aspects of Goat farming were covered during the training with lectures of experts and practical. Total 37 Goat farmers participated in the programme.



Group photo of Trainees with Dr. G.R. Patel, DEE, NAU, Dr. N.H. Kelawala, Dean, Vet. and other scientists



Practical training on important aspects of goat farming

9.10 Workshop on Fighting for antibiotic resistance

Workshop cum farmers' training programme on "Fighting antibiotic resistance" in fish was organized by Fisheries College at Vanbandhu Veterinary & A.H. College, NAU, Navsari on 28th November, 2016, with the aim of creating awareness on antibiotic resistance amongst the aquafarmers, technicians and students of South Gujarat. Dignitaries present were Dr. G.R. Patel, Director of Extension education, NAU, Er. G. Rathinaraj, Joint Director, MPEDA, Regional centre Valsad, and Dr. N. H. Kelawala, Dean, Vet. College & Fisheries College. A technical note on "An overview of antibiotic resistance", lectures on "Misuse of Antibiotics in shrimp Aquaculture", and "Responsible antibiotic usage in fish farming" were organized. Total 65 participants (Farmers, Students, Technician, Officers / Scientists) participated in the program.



Dr. G.R. Patel, DEE, NAU lighting the lamp during the inauguration function



Scientist delivering lecture during the programme

9.11 Training programme on Poultry rearing

Training programme on "Poultry rearing" for farmers was jointly organized by Veterinary College & Agro-ITI during 2-4th January, 2017 at NAU, Navsari. Different aspects of poultry rearing were covered during the training with lectures of experts and practical. Total 22 farmers participated in the programme.



Dr. G.R. Patel, DEE, NAU delivering inaugural speech during the inauguration function



Group photo of participants in the programme

9.12 Seminar on System of Rice Intensification (SRI)

KVK, NAU, Navsari organized one day interface on "Scientist-Farmer's Interaction on System of Rice Intensification" on 13th June, 2016. Dr. C.J. Dangaria, Hon'ble Vice Chancellor NAU, Navsari, Dr. G.R. Patel, DEE, NAU, Shri Tushar Sumera, DDO, Navsari and other dignitaries grace the occasion. Scientists provided the technical information about SRI and beedback about benefits gain by the farmers. More than 70 farmers were present and benefitted during the programme.



Dr. C.J. Dangaria, Hon.VC, NAU addressing the participants in the presence of Dr. G.R. Patel, DEE and other dignitaries



Scientist delivering lecture on SRI

9.13 Celebration of World Coconut Day

One day training programme on “Production Technology and Value Addition of Coconut” was organized by All India Co-ordinated Research Project (Palms) for Coconut Research, ASPEE College of Horticulture and Forestry, NAU, Navsari at Village: Nargol, Tal. Umargam, Dist. Valsad on the occasion of "World Coconut Day" (2nd Sept., 2016). During training programme, technical sessions were conducted on different topics related to production technology of coconut i.e. importance of crop, varieties, application of fertilizers, irrigation management, cropping systems/multistoried cropping system, IPDM, value additions etc. In the programme 92 coconut growers from South Gujarat had participated.



Dr. B.N. Patel, Principal and Dean, ACHF and other scientists during the training programme



Scientist discussing with participants about value addition in coconut

9.14 Workshop on “Management of Commodity Interest Groups and Farmers Organizations” for KVK and NAU Scientists

Workshop on “Management of Commodity Interest Groups and Farmers Organizations” was jointly organized by Extension Education Institute, Anand and Directorate of Extension Education, NAU at Navsari during 8 to 10th March, 2017 (3 days). Dr. G.R. Patel, Director of Extension Education, NAU has inaugurated the workshop, in the presence of Dr. C.P. Desai, Director, EEI, Anand. Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU remained present in the valedictory function of the workshop. Total, 30 scientists from 7 KVKs and different faculties of NAU had participated in the programme.



Dr. C.J. Dangaria, Hon.VC, NAU during valedictory function of the workshop.



Group photo of NAU faculty members and scientists participated in the workshop

9.15 District level Seminar on Cashew

The district level seminar on cashew nut was organized by Agriculture Experimental Station, NAU, Paria in collaboration with ATMA, Valsad at Sutharpada village of Kaparada Taluka, Dist: Valsad on 24th March, 2017. The programme was graced by Sh. Gourang Makwana, IAS, DDO, Valsad district and other dignitaries. During the technical session, various lectures on different aspects of scientific cultivation of cashew nut, pest and disease management, processing and value addition and various schemes of Govt. of Gujarat and Govt. of India in respect to cashew growers were organized. In the programme more than 1200 farmers were participated from different villages of Kaparad taluka.



NAU Scientist delivering lecture on scientific cultivation of cashew nut



Participants in the seminar organized at Sutharpada, Valsad

10 NATIONAL FLAGSHIP PROGRAMMES / CELEBRATIONS

10.1 "World Soil Day" Celebration

As the Government of India decided to celebrate the "World Soil Day" on 5th December every year, NAU centers and KVKs under the jurisdiction of NAU celebrated the "World Soil Day" on 5th December, 2016. During the programme, 344 Soil Health Cards distributed to the farmers and more than 1820 farmers participated at different seven places. Total 4380 soil samples analyzed during the year by KVKs under NAU jurisdiction.

In addition to KVKs, total 4538 soil samples allotted by Director of Agriculture, Gujarat, also analyzed and SHC prepared by STLs under NAU during the year.



Dignitaries distributing Soil Health Cards to the farmers.



Participants in the programme

10.2 Farmer's fair on Pradhan Mantri Fasal Beema Yojna

Farmer's Fair/Farmer's Sammelan and Krishi Pradrashini on "Pradhan Mantri Fasal Beema Yojana" were organized by 6 KVKs during 31st March, 2016 to 5th April, 2016 in NAU jurisdiction. During the programme Hon. MP, MLA, officers of line departments and other dignitaries of concerned area remain present and provided guidance to the participants. Lectures of scientists, Bank officer and experts were organized on different topics viz., the salient features of PMFBY, effect of climate change on agriculture, package of practices and new technologies of main crops of the area *etc.* Farmer friendly literatures on PMFBY and other technological packages were distributed amongst participating farmers. Exhibition on new technologies were also organized. More than 7000 farmers and farm women participated in these programmes.



Lightening of lamp by Shri Mansukhbhai Vasava, Min., Gol and other dignitaries



Lightening of lamp by Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU and other dignitaries

10.3 Implementation of the Farmer FIRST Programme (FFP)

The Farmer FIRST Programme (FFP) sanctioned by ICAR during 2016-17 to NAU. The FFP project entitled "Ensuring Livelihood Security for Small and Marginal Farmers of South Gujarat" is running in three villages of Navsari district under NAU jurisdiction with 1000 families as partners. One Institute Advisory Committee (IAC), one Project team and module wise six sub teams were formed under the project. Critical inputs were purchased and three training were organized for the farmers from selected for field application.



Dr. C.J. Dangaria, Hon.VC, NAU and Dr. G.R. Patel, DEE during the farmers training programme



Farm women participants in the training programme

10.4 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. N.	Name of activity	No. of activities conducted	No. of farmers participated & benefitted
1.	Visit to village by teams	151	2486
2.	Interface meeting/ <i>Goshthies</i>	138	2863
3.	Training organized	42	1042
4.	Demonstrations conducted	59	71
5.	Mobile based advisories (No.)	1822	2260
6.	Literature support provided	3142	3182
7.	Awareness created	66	9197
8.	Input support provided (q)	16	130
9.	Linkages developed with other agencies (No. of agency)	16 No.	2952
10.	Facilitation for new varieties, seeds, technology	-	-
	i. New varieties (No.)	6 Varieties/50 ha	175
	ii. Technology (No.)	2	137
	iii. Seeds (q)	6.6	112
	iv. New crops (No.)	59 Kits	59
	Total	5526	24666



Field day on paddy



Field day on use of NAVEEN sickle

10.5 Kisan Gosthi on "Jai Kisan Jai Vigyan" diwas in Sansad Adarsh Gram

Govt. of India celebrating "Jai Kisan Jai Vigyan" week during 23rd to 29th December every year 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 Kisan Gosthi on "Jai Kisan Jai Vigyan" diwas on 23rd December, 2016 in Sansad Adarsh Gram of respective districts. Total 475 farmers and farm women participated in the programmes at different places.



Farm women meeting organized as a part of celebration



Programme organized for celebration

10.6 Celebration of "Agriculture Education Day" by KVKs

For the celebration of "Agriculture Education Day" different programmes for the farmers were organized by five KVKs run under NAU on 03/12/2016 at different places. Lectures of scientists / experts on scope & importance of agricultural education, facilities available in NAU, Gujarat state and in India and scope of agriculture development were organized. Total 196 farmers and farm women participated in the programmes.



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



10.7 Sub-Mission on Agriculture Mechanization

In order to popularize the farm mechanization, four KVKs under NAU organized one week training programmes on Agri. Mechanization and Post Harvest Technology in the low mechanized talukas, benefitting 23 and 88 farmers respectively (Total 111 farmers and farm women). Total grant Rs. 3 Lakhs allotted under SMAM to NAU.



Practical training to trainees on post harvest technology under SMAM

10.8 Groundnut demonstrations by ICAR-DGR under TSP

For promoting improved technology of Groundnut production among the tribal farmers, ICAR- Directorate of Groundnut Research (DGR) Junagadh allotted the groundnut demonstrations of improved production technologies under the head Tribal Sub Plan (TSP). Three KVKs under NAU implemented the demonstrations in their districts as under.

Sr. No.	Implementing KVK	Season	No. of demo.	Area (ha)	Grant (Rs.)
1	KVK, Vyara, Dist : Tapi	Kharif	50	20	353800
		Summer	100	40	256000
2	KVK, Navsari	Summer	100	20	256000
3	KVK, Dediapada, Dist: Narmada	Summer	50	20	343000
Total			300	100	1208800



Dr. C.J. Dangaria, Hon.VC, NAU addressing the trainees in the presence of Dr. G.R. Patel, DEE



Demonstration plot of Groundnut

11. MEGA EVENTS ORGANIZED DURING THE YEAR 2016-17

11.1 *Krush*i Mahotsav-2016 Kharif

Krush

i Mahotsav-2016 *Kharif* from 9th May, 2016 to 31st May, 2016 (23 days) was celebrated comprising of the area of five Talukas at District level, with two days programme (Seminar & Exhibition) at 11 places in South Gujarat. In the programme schedule, Farmer's Seminar on both days before and after noon, the team of three Scientists (Agronomy, Horticulture and Animal husbandry) at each programme place and making total of 33 NAU Scientists remain present during the programme and Agri. Exhibition with 10 stalls of NAU out of total 50 stalls during both the days organized with scientists remain present whole days with exhibition stall of University and provide guidance to the farmers.



Shri. Kantibhai Gamit, Hon. Tribal Minister delivering presidential speech at FTC Vyara



Scientist delivering the lecture to participants



Dignitaries present during the Krushi Mahotsav programme



Dr. C.J. Dangaria, Hon. Vice-Chancellor, NAU addressing the farmers



Dignitaries visiting the exhibition stalls during the Krushi Mahotsav programme



Participants during the Krushi Mahotsav programme

11.2 Krushi Mahotsav-2016 Mega event

Mega Agriculture Fair and Exhibition was organized by DEE & Navsari District Administration during 12-13th May, 2016 and inaugurated by Hon. Chief Minister Smt. Anandiben Patel at Play ground, NAU, Navsari on 12th May, 2016 in the presence of Shri. Mangubhai Patel, Minister (Forest & Environment) GoG, Shri R.C. Patel, Deputy Chief Whip and Shri. Bharatsinh Parmar, Mahamantri, Pradesh BJP. In the Exhibition, 100 stall exhibited of Navsari Agricultural University, Line Departments and Input dealers – seed, fertilizer, farm implements and machinery with latest developed technology. Chief Minister also discussed with the farmers, about 16200 farmers visited the exhibition and participated in the fair.



Smt. Anandiben Patel, Hon. Chief Minister inaugurated the Krushi Mahotsav mega event with lightening of the lamp



Smt. Anandiben Patel, Hon. Chief Minister addressing the audience during the Krushi Mahotsav mega event



Smt. Anandiben Patel, Hon. Chief Minister visiting NAU stalls in the Exhibition held during the Krushi Mahotsav mega event



Farmer-Scientist interactions / *Kisan gosthis* were also organized at the premises of Exhibition to provide latest information in detail to the farmers.



Scientists interacting with farmers during the Farmer-Scientist interactions held in the premises of Exhibition during the Krushi Mahotsav mega event programme at NAU, Navsari

During the mega event, four seminars were also organized separately for the specific group of farmers on Animal husbandry, Cooperation, Agriculture & food processing and Horticulture in which total 476 farmers and farm women participated.



Dr. G.R. Patel addressing the participants of seminar on agriculture and food processing organized during the Krushi Mahotsav mega event programme at NAU, Navsari



Expert delivering lecture in the seminar on cooperation organized during the Krushi Mahotsav mega event programme at NAU, Navsari

11.3 International Women's Day- 2017 celebration:

International Women's Day-2017 celebrated at KVK, NAU, Navsari on 18th March, 2017 under the chairmanship of Shri Varjangbhai Jilariya, Surat in the gracious presence of Dr. C. J. Dangaria, Hon'ble Vice chancellor, NAU, Navsari, Kanjibhai Bhalala, Surat, Shri Ajaybhai Undhad, Avadh group, Surat, Smt. Chetna Birla, Navsari, Smt. Shitalben Soni, Navsari, Shri Tushar Sumera, DDO, Dr. P. M. Vaghasiya, SNO, ATMA and Dr. G.R. Patel, DEE, NAU. Progressive farmwomen gave their feedback during the programme and mentioned that women become economically independent through picking up available opportunities, co-operation and guidance of KVK, hard works and struggling hardship. More than 500 women farmers were participated from different talukas of Navsari district and benefitted through inspiring lectures delivered by dignitaries.



Inaugural function in the presence of Dr. C. J. Dangaria, Hon'ble Vice Chancellor, NAU, Navsari, Dr. G.R. Patel, Director of Extension Education NAU, Navsari and other dignitaries



Farm women giving her feedback during the programme regarding empowerment of women

12. AWARDS RECEIVED:

12.1 Best Krishi Vigyan Kendra Award (Zone-VI) 2015

The ICAR had selected KVK, NAU, Navsari as “Best Krishi Vigyan Kendra Awards (Zonal) 2015” in recognition of outstanding contributions in the respective category. On the occasion of 88th ICAR foundation day, the prestigious award was conferred by Shri Parshottam Rupala, Hon. Minister of State, Agriculture & Farmers Welfare, GOI on 16th July 2016 at Vigyan Bhawan, New Delhi.



Dr. G.R. Patel, DEE, NAU and Dr. C.K. Timbadia, PC, KVK, NAU, Navsari receiving award from Parshottam Rupala, Hon. Minister of State, Agriculture & Farmers Welfare, GOI at New Delhi

12.2 FGI Awards for Excellence – 2015

Federation of Gujarat Industries, Vadodara has conferred a Certificate of Merit in the category of "Best innovation work in the field of agriculture development" to KVK, NAU, Navsari. During the presentation ceremony of FGI Awards for Excellence 2015, the certificate was conferred by Shri Manohar Parrikar, Hon. Minister of Defence, GoI on 11th September, 2016 at Vadodara.



Dr. C.J. Dangaria, Hon. Vice-Chancellor, Dr.G.R. Patel, DEE, NAU and Dr. C.K. Timbadia, PC, KVK, NAU, Navsari receiving award from Shri Manohar Parrikar, Hon. Minister of Defence, GoI on 11th September, 2016 at Vadodara.

13. PUBLICATIONS

13.1 Farm publications

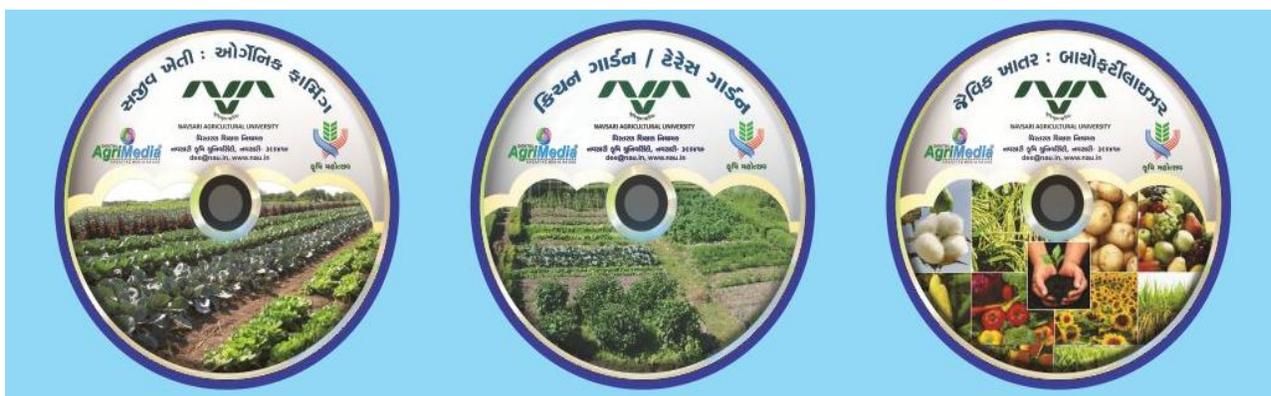
Directorate of Extension periodically publishes folders, leaflets and booklets on package of cultivation practices of main crops, diversified crops, newly released technology etc. of the area to make available to the farmers and extension workers as ready reference at very low cost or no cost.

Other publications–news letter/reports

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

Farm VCD Publication

With a view to disseminate new agricultural technology through e-farm literature, theme based VCDs on 30 subjects mainly on package of practices of major crops of south Gujarat were published. Total 1200 VCDs were prepared and distributed to the farmers during Krushi Mahotsav-2016.



University publication:

1) Book/booklets	: 24	5) Vision document	: 1
2) Folders	: 142	6) Abstract book	: 3
3) Training manual	: 1	7) Calendar	: 1
4) Compendium	: 1	8) Telephone Directory	: 1

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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

