

# EXTENSION EDUCATION

## Annual Report

Year : 2021-22



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NAVSARI AGRICULTURAL UNIVERSITY

**Directorate of Extension Education  
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# EXTENSION EDUCATION

• ANNUAL REPORT 2021-2022 •

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**Directorate of Extension Education**  
**Navsari Agricultural University**  
**Navsari-396450**

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**ANNUAL REPORT 2021-22**

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## **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	0	1
2	Training Associate	1	1	0
3	Assistant Extension Educationist	4	3	1
4	Agricultural Officer	3	3	0
5	Agriculture Supervisor	1	1	0
6	Agricultural Assistant	2	2	0
	<b>Total</b>	<b>12</b>	<b>10</b>	<b>2</b>

## 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
	● Agro ITI	Navsari
▶ Training Centres for Extension Workers	● Training and Visit System	Navsari
	● 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
8.	Certificate Course on Integrated Nutrient Management for Fertilizer dealers	Certificate	15 Days	40
9.	Certificate course on Insecticides Management for Insecticides Dealers/ Distributers	Certificate	12 week	40
10.	Certificate course in First Aid in Avian Health Management	Certificate	Five months Saturday (First, Third and Fifth)	20

## 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.	<b>Plan Schemes : Development Charges (12)</b>
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.	<b>Non-Plan Schemes : Standing charges (05)</b>
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
S.N.	<b>Other Agency (09)</b>
1	Training & Visit System, Navsari (Non-Plan) , Navsari
2	Training & Visit System, Navsari (Plan) , Navsari
3	Green/Net house Farmers' Training, Navsari
4	Diploma in Agricultural Extension Services for Input Dealers, Navsari
5	Certificate in Agricultural Extension Services for Input Dealers, Navsari
6	Certificate Course on Integrated Nutrient Management for Fertilizer dealers
7	Certificate course on Insecticides Management for Insecticides Dealers/ Distributers
8	Krushu Mahotsav Programme, Navsari
9	Krushu Library, Navsari
S.N.	<b>ICAR (07)</b>
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 Farmers' Training programme	456	7843	10137	2677	20657
2.	Off campus Farmers' Training programme	314	5157	3918	914	9989
3.	Training for Extension functionaries	33	708	264	89	1061
4.	Seminar / Workshop / Symposium for Farmers	35	3760	2422	637	6819
5.	Seminar / Workshop / Interface/ Symposium for Extension Officers	15	841	74	86	1001
6.	Farmers' day / Field day	75	854	1192	294	2340
7.	Agril. Fair / Agril. Exhibition	22	3625	3103	714	7442
8.	Farmer shibir / Farm women shibir	115	2736	2891	491	6008
9.	Farmers' meeting/Krushgi gosthi	100	1532	1113	261	2906
10.	Front Line Demonstrations (KVKs )	1149*	2465	1157	374	3996
11.	Adaptive trials (NAU technologies)	1373*	2448	2974	551	5973
12.	On Farm Trials	37*	151	89	27	267
13.	AICRP Demonstrations	87*	183	53	24	260
14.	Demonstrations (Research Stations)	238*	286	138	51	475
15.	Exposure visit of the farmers	21	403	467	47	917
16.	Diagnostic team visit on farmers' field	348	2075	317	215	2607
17.	Veterinary Clinic Camp/ Animal Husbandry Shibir	7	838	682	127	1647
18.	Text SMS sent on farmers' mobile	872	243765	33828	29991	307584
19.	Telephonic / e-mail guidance	4788	13473	7073	2426	22972
20.	Press-notes / Articles in vernacular Newspapers	604	Mass	Mass	Mass	Mass
21.	Radio & TV talk	42	Mass	Mass	Mass	Mass
22.	Farm Literature Publication	134	38253	36285	8607	83145
23.	Visitors (dignitaries, officers, farmers, students)	1547	16006	17261	3225	36492

\* 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	2	93
2	Sugarcane Crop	1	41
3	Fruit Crops	4	1161
4	Flowers	2	173
5	Vegetable Crops	3	727
6	Pulse Crops	2	402
7	Integrated Pest & Disease Management	4	946
8	Post Harvest Technology	3	376
9	Green House Technology	1	122
10	Soil and Water Management	1	215
11	Agriculture farm Machinery	1	157
12	Animal Husbandry	2	214
13	Value Addition	2	364
14	Natural / organic farming	5	1742
15	Fishery and its Marketing	1	45
16	Prawn/Shrimp cultivation and its Marketing	1	41
<b>Total</b>		<b>35</b>	<b>6819</b>

## 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 3996 FLDs in 1149 ha. and 735 other demonstrations in 325 ha. were conducted on farmers' fields under the close supervision of the NAU Scientists.

SN	Crop	No.of Demon.
1	Paddy	1563
2	Sugarcane	117
3	Pigeon pea	538
4	Gram	486
5	Green gram	337
6	Nagli	87
7	Sweet corn	59
8	Okra	273
9	Groundnut	146
10	Maize	128
11	Mango	89
12	Sapota	51
13	Cashew	65
14	Turmeric	57
<b>Total</b>		<b>3996</b>



FLD on Paddy GNR-3



FLD on Soybean NRC-37



FLD on Fodder management

## 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 2021-22, total 5973 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, soybean, Fodder Sorghum, turmeric, tomato, chilli, Indian bean, Elephant foot, greater yam, sweet potato, Little Guard, Dragon fruit, Drumstick, mango, Banana, Conocorpus, Ajwain were conducted. Demonstration on ICM, INM, IPDM, Novel organic liquid nutrient, Liquid Bio-fertilizer, Mineral Mixture, Kitchen garden, Poultry, Paddy thresher, Mushroom Rubber Mat, Punjethi (Rack), Winnowing Fan, Plastic Jari, Stalk Puller were also conducted.



Adaptive trial on ICM in Gram GG-5



Adaptive trial on Cotton H-12



Adaptive trial on Turmeric Sugandham



Adaptive trial on Paddy GNR-6



## 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. One meeting (30<sup>th</sup>) was organized during the period (on 23/11/2021, 21 participants).



Dr. C. K. Timbadia, Director of Extension Education, NAU and members during 30th ATMA Convergence Quarterly Meeting

## 8.6 Bimonthly workshop

The Directorate of Extension Education organizes Bimonthly workshop under broad base extension training programme for agriculture and horticulture line department staff. During the period Bimonthly workshop were organized as under:

S.N.	Activities	Place	Date	Beneficiaries
1	Bimonthly workshop, Jan. - Feb., 2022	Ganesh Sugar Factory, Vatariya	01/01/2022	32
2	Bimonthly workshop, March. - April., 2022	ATIC, NAU	22-23/02/2022	24



Dr. C.K. Timbadia, DEE, NAU, Navsari discussing with the participants during workshop

## 8.7 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 Department for all the seven Districts of South Gujarat. During the year 2021-22, the 32<sup>nd</sup> ZREAC meeting was convened through Google meet (online) on 05-10-2021.



Hon'ble Vice Chancellor, Dr. Z.P. Patel, addressing the house during 32nd Zonal Research and Extension Action Committee meeting

## 8.8 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:

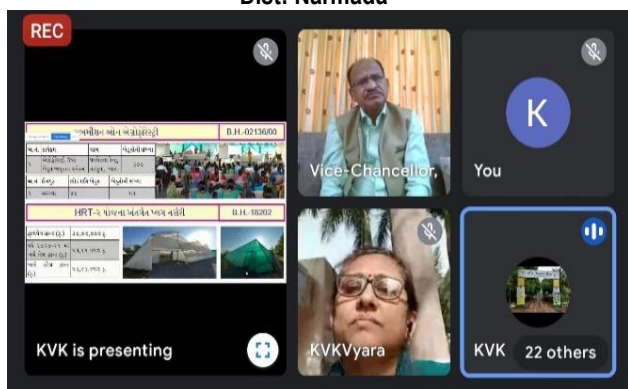
S.N.	Name of KVK	Date of meeting
1	KVK, Vyara (Tapi)	24-01-2022
2	KVK, Waghai (Dang)	24-01-2022
3	KVK, Navsari (Navsari)	25-01-2022
4	KVK, Surat (Surat)	25-01-2022
5	KVK, Dediapada (Narmada)	29-01-2022



Scientific Advisory Committee Meeting of KVK Dediapada, Dist: Narmada



Scientific Advisory Committee Meeting of KVK Surat



Scientific Advisory Committee Meeting of KVK Vyara, Dist: Tapi



Scientific Advisory Committee Meeting of KVK Dang

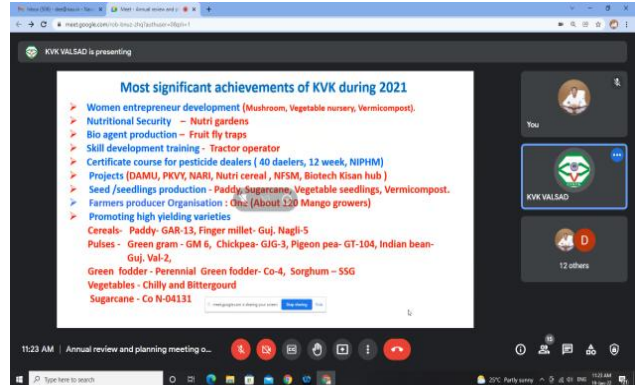


## 8.9 Review meeting of KVKs

Two Review meetings of Senior Scientist & Head and Scientists of KVKs under NAU jurisdiction were organized during the year (using Google meet). During the meetings, the activities carried out against target for the month and planning for the next month was discussed in detail.



Dr. C.K. Timbadia, DEE, NAU, Navsari discussing with participants during the Review meeting



Presentation by KVKs during the Review meeting

## 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 4156 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.*



Dignitary offering garland to Mahatma Gandhiji during his visit to Agricultural Educatorium



Farmers visiting Agricultural Educatorium



Farmers from other state visiting Agricultural Educatorium



Farm women visiting Agricultural Educatorium



## 8.11 Campus Visit and Comfortable Homely Stay of the Farmers

Large numbers of farmers from Gujarat, Maharashtra, Uttarpradesh 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 128 farm visits were conducted and 7863 farmers had visited the SSK and 2757 visitors had visited farms at NAU Campus. Sardar Krushikar bhawan allotted for Covid Care Centre during COVID-19 pandemic situation, total 300 patients, medical staff and 2447 officers, farmers and other visitors stayed at Kisanghar-farmers' hostel.

### 8.11.1 Campus Visit



Visitors visiting units at NAU Campus



Visitors visiting SSK at NAU Campus



Visitors visiting units at NAU Campus



### 8.11.2 Amenities in Kisan hostel



Clean and Comfortable Kitchen & Rooms in Kisan Hostels

## 8.12 Certificate courses on Bakery

Bakery school, DEE, NAU, Navsari organized 20 week duration two certificate courses on bakery during the year. Total 34 students have participated in the training programme, an exposure visit to BREAD LINER: South Gujarat's largest Bakery Chain, Surat was also conducted to provide skill based knowledge to design the custom cake and demonstrate the bakery products to the students. Another three skill oriented training programme of one week duration on baking were organized. Total 37 youth and farm women had participated in the one week training programmes.



Dr. Z.P.Patel, Hon'ble Vice Chancellor addressing the trainees of the course during Inugration of Bekary certificate course



Students preparing bakery product

## 8.13 HRD programme for Scientists of KVKs and NAU faculties

Extension Education Institute, AAU, Anand and Directorate of Extension Education, NAU, Navsari jointly organized an off campus training programme on "Recent Extension Approaches for Effective Transfer of Technology" during 20-22 October 2021 (3 days) at Agricultural Technology Information Centre (ATIC), NAU, Navsari. In which total 43 Scientists were participated. Training was inaugurated by Director of Extension Education Dr. C. K. Timbadia, Principal & Dean Dr. R.D. Pandya, Course Director Dr. K.V. Gardhariya, Training Associate Dr. G.B. Kalriya & Course Co-ordinator Dr. R.M. Bhuva. Impart the knowledge by Scientists of EEI on Social Media-a digital Approach, Indigenous Technological Knowledge, e-Extension Through video Conferencing, PPP & Contract Farming, FPOs and Basic of Graphics Designing for Electronic Media.



Training programme for Scientists Organized by EEI, Anand & DEE, NAU, Navsari



## 8.14 Twelve week Certificate course on pesticides Management

Agriculture Technology Information Centre (ATIC), DEE, NAU, Navsari organized 12 week "Certificate course on Insecticides Management for Insecticides dealers/Distributors" during 27/09/2021 to 21/01/2022 under the guidance of Dr. C. K. Timbadia, Director of Extension Education for South Gujarat region. Total 32 Dealers completed the first batch. Second batch started from 4<sup>th</sup> Feb., 2022.



Dr. C.K. Timbadia, Director of Extension Education, NAU, Navsari addressing the trainees



Group photo of trainees of 12 week Certificate course on pesticides Management for Input Dealers

## 8.15 Vocational Training on “Gaushalanu Aayojan” under AGRO ITI

Training on “Gaushalanu Aayojan” was organized under Agro ITI during 4<sup>th</sup> to 8<sup>th</sup> October 2021 at Educational Museum, NAU, Navsari in which 31 farmers and farm women were participated. Training was inaugurated by Director of Extension Education Dr. C. K. Timbadia, Course Co-ordinator Dr. R.M. Bhuva & Scientists of Veterinary College. They impart the knowledge on first aids in animals, planning of dairy farm, estimation of approximate weight and age in dairy animals, assistance schemes of animal husbandry department year 2021-22, toxic principles in fodder and prevention of its toxic effects in cattle farm management and primary treatment in animal diseases through medicinal plants.



Dr. C. K. Timbadia, DEE, NAU addressing the trainees during Training on “Gaushalanu Aayojan”



## 8.16 Training on “Cultivation of edible Mashroom on Commercial basis”

Training on “Cultivation of edible Mashroom on Commercial basis” was organized under Agro ITI during 4<sup>th</sup> to 6<sup>th</sup> January, 2022 at Educational Museum, NAU, Navsari in which 11 farmers were participated. Training was inaugurated by Director of Extension Education Dr. C. K. Timbadia, Course Co-coordinator Dr. R.M. Bhuva, head of Pathology Department Dr. K.B. Rakholiya & different scientists of pathology department. They gave technical lectures methods of making oyster mushroom, substrates preparation of oyster mushroom & practical session on spawn production of oyster mushroom, bag filling of oyster mushroom & making culture and spawn of oyster mushroom on cultivation of edible mushroom on commercial basis.





**Training on establishment of Agro ITI Center for Agriculture and Horticulture**



**Training on "Cultivation of edible Mashroom on Commercial basis"**

## 9. NEW INITIATIVES IN EXTENSION PROGRAMMES

### 9.1 Workshop on Wall Painting

The 75 years of progressive India's Independence celebrated as 'Azadi Ka Amrut Mahostav'. Hon'ble Prime Minister Shree Narendra Modiji inaugurated the curtain raiser and flag off the Freedom March or 'Padyatra' from Sabarmati Ashram, in Ahmedabad. On the occasion of celebration, NAU, Navsari organized 'Wall Painting Workshop' on 4 April, 2021 in cooperation with ' Banas Katha General Workers Seva Sang', in which 25 participants taken part and they painted the outside wall of NAU boundary with Agricultural and Scientific thoughts and ideas.



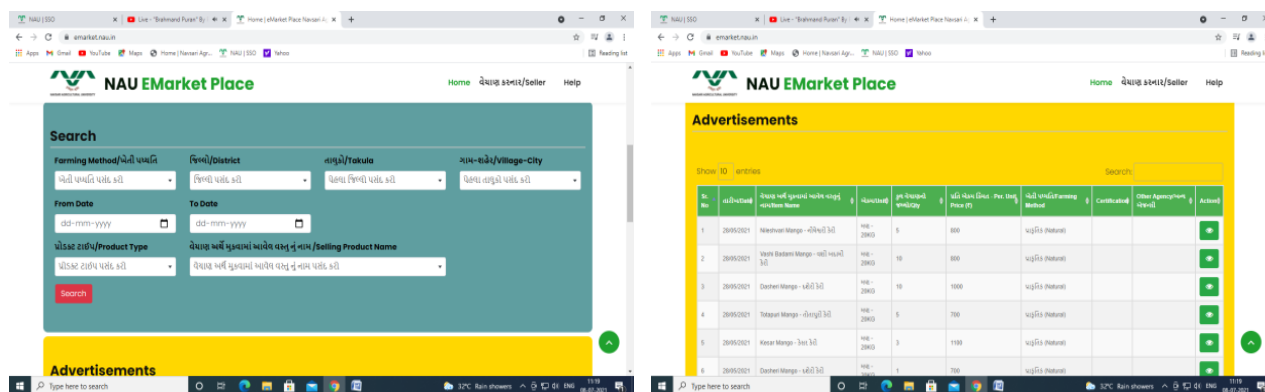
Dr. C.K. Timbadia, DEE, NAU, Navsari welcomed Pad yatri



Dr. C.K. Timbadia, DEE, NAU, Navsari addressing participants during the workshop

### 9.2 Training on NAU eMarket portal for KVK Scientists

DEE and IT Department, NAU, Navsari jointly organized online training programme on NAU eMarket portal for Senior Scientist & Head and Scientists of KVKs working under NAU on 26 May 2021, Chaired by Dr. C.K. Timbadia, Director of Extension Education, NAU, Navsari. During the training, importance of the portal for the farmers and other technical aspects viz., registration of the farmers, uploading of information etc. were explained by Mr. Chirag Desai. Queries from the participants were also discussed and answered satisfactorily. Total 28 Senior Scientist & Head and Scientists of KVKs participated in the training.



NAU eMarket portal screen shots



### 9.3 Memorandum of Understanding signed:

#### 9.3.1 MoU between Digital AgriMedia, Gandhinagar & NAU, Navsari

MoU between Digital AgriMedia, Gandhinagar & NAU for dissemination of technology of agriculture and allied fields among farmers through AgriMedia TV App - a delivery mechanism for Information, Services & Technology and marketing platform made on 2<sup>nd</sup> June, 2021.

#### 9.4 Activities to mitigate the after effect of Tauktae cyclone

As per the guideline of Government of Gujarat, service of NAU Scientists in team were provided in the three districts of South Gujarat viz., Navsari, Valsad and Surat to provide guidance to the farmers to reduce the loss of Agricultural and horticultural crops viz., Mango, Banana, Sapota, Papaya, vegetable crops etc. due to Tauktae cyclone occurred on 17/05/2021. Team of Scientists guided the farmers regarding techniques to rejuvenate/re-establish the affected tree, value addition of fruits and other options for field crops, and NAU also issued/provided the advisories through literature, press and electronic media. In addition to that, Service of Scientists was also provided as team members for survey of damage in crops in Navsari, Dangs and Valsad districts, conducted by office of respective District Agriculture Officers.

S. N.	Activities	District	Period	No of scientists participated	Demost rations	Benefi ciaries	Note
1	Allotment of Scientists team for Tauktae cyclone survey work	Navsari Valsad	20- 29/05/2021	Navsari -12 Dangs-6 Valsad-12	-	-	Work as survey team member
2	Allotment of Scientists team for Information under Tauktae cyclone	Surat Navsari, Valsad	22- 25/05/2021	Surat-12- Navsari-12, Valsad-12 <b>Total= 54</b>	148	1582	Provided Guidance



Damage to crops due to Tauktae cyclone

## 9.5 *Kharif Pak Parisamwad*

As a part of celebration of Azadika Amrut Mahotsav, *Kharif Pak Parisamwad* was organized jointly by Kribhco and NAU, Navsari under the chairmanship of Shri Dileepbhai Sanghani, President, National Cooperative Union of India, Chairman, GUJCOMASOL, Vice-Chairman, IFFCO and inaugurated by Dr. Z. P. Patel, Vice Chancellor, NAU, Navsari on 12 August, 2021 at NAU, Navsari.

Shri Dileepbhai in his speech emphasized on the quality produce and value addition in the different farm produce to earn more income. He also made suggestions to make cooperative more effective for rural development. Dr. Z.P. Patel, Vice Chancellor, NAU, Navsari emphasized on the development of new technologies and innovative products viz., Sapota jaggari, waffer from jack fruits, pineapple etc. by the Scientists. He also advised to reach to the farming community with farmer friendly approach and suggested to make more efforts on marketing options and packing and labelling of the farm produce. Shri P.V. Kachhadia, Sr. Area Manager, KRIBHCO described about the importance and use of biofertilizers in agriculture. Dr. C.K. Timbadia, DEE, NAU, Navsari informed the house about efforts made by NAU for marketing support to farmes viz., marketing place during Covid-19 pandemic situation, Organic Krushak Bazar for direct marketing and development of eMarket portal.

Lectures on new technologies of Paddy, Sugarcane and Post harvest technology were delivered by NAU Scientists with presentation. Exhibition cum selling stalls were organized by the Self employed farm women/SHG members and exhibited the produce and value added products prepared by them. More than 200 participants including cooperative leaders, farmers and SHG members/farm women from the nearby districts were enthusiastically participated in the programme.



Shri Dileepbhai Sanghani addressing the participants during kharif pak parisamwad



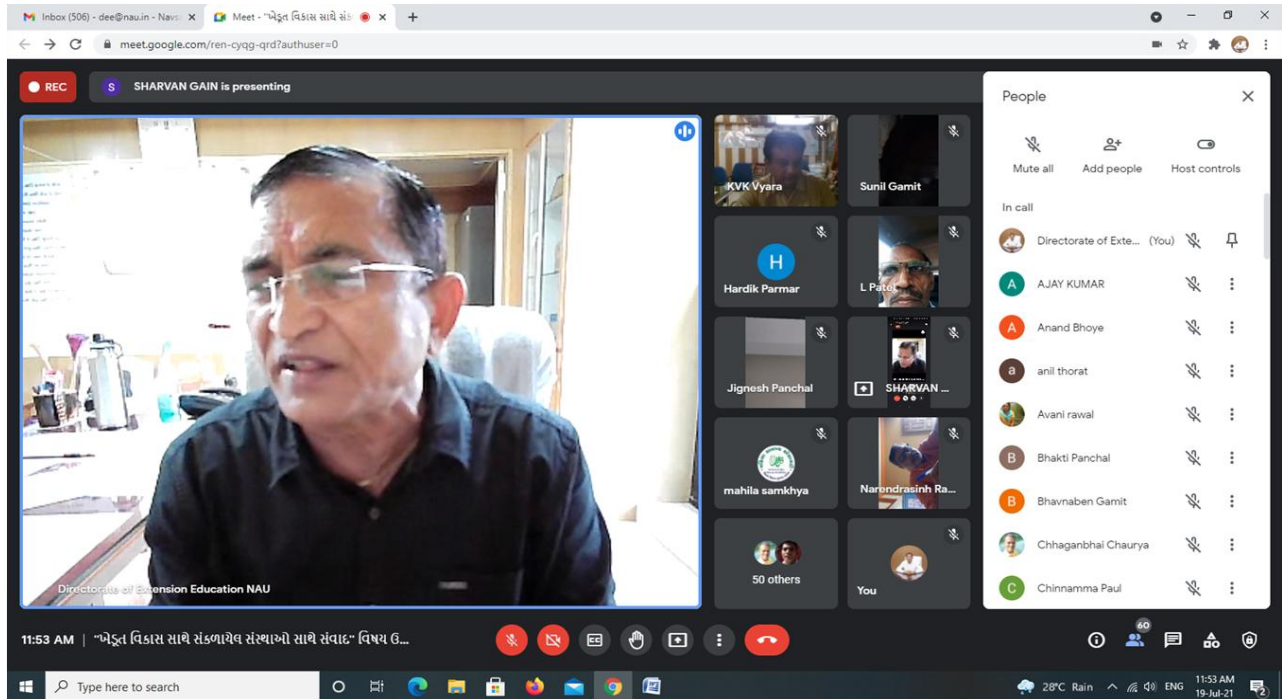
Participants during kharif pak parisamwad at NAU, Navsari

## 9.6 *Webinar on Dialogue with the Organizations working for the farmers' development*

Directorate of Extension Education, NAU, Navsari organized a webinar on "Dialogue with the Organization working on the farmers' development in seven districts of South Gujarat" under the chairmanship of Dr. C.K. Timbadia, DEE on 19 July, 2021 with the objective to strengthen the agriculture/rural development and to Doubling the farmers' income with effective and collective efforts of organization working in the field of farmers development, women empowerment, FPOs, Women federation, SHG etc. Participants presented details of the activities carried out by them, which motivated others to organize more activities. Dr. C.K. Timbadia, DEE in his speech urged to take benefit of the new technologies developed by the Research stations under NAU by organizing visit to stations,



and mentioned that working together by KVK Scientists and organizations will result in betterment of the farming community and doubling the farmers' income. He also emphasised on getting additional income through post harvest technology. Total 63 participants joined the webinar including 7 KVKs and 45 organizations.



Dr. C.K. Timbadia, DEE addressing the participants

## 9.7 Capacity Building Workshop on NF for Technical Staff of KVKs

Directorate of Extension Education and Krishi Vigyan Kendra, NAU, Navsari jointly organised a workshop on capacity building programme on Natural Farming for KVK Scientists of South Gujarat during 23 to 25 Sept., 2021 in the gracious presence of Dr. C.K. Timbadia, Director of Extension Education, NAU, Navsari, Shri Prafulbhai Senjalia, Pujya Swami Shri Kaivalya Swarupdas, Nilkant Dham, Poicha, Pujya Swami Shri Mangal Swarupdas, Nilkanth Dham and other dignitaries. Lectures of Experienced Resource persons and farmers were organized on Natural Farming. International folk artist Shri Sairam Dave perform the Cultural program 'Dayra' during the workshop sponsored by an NGO. In the programme, 62 participants including Senior Scientist & Head, Scientist and Technical staff of seven KVKs of South Gujarat were enthusiastically participated.



Dignitaries lightning the lamp during the inauguration of Workshop



Dr. C.K. Timbadia, Director of Extension Education, NAU, Navsari addressing the participants



Participants attentively listening the resource persons during the workshop



Dr. C.K. Timbadia, DEE, NAU, Navsari expressing his feeling during the 'Dayra' by Shri Sairam Dave

## 9.8 “Vanijya Utsav- Capacity Building Programme

On the occasion of Azadika Amrut Mahotsav Navsari Agricultural University, Navsari in collaboration with APEDA and Horticulture department jointly organized “Vanijya Utsav- Capacity Building Programme for FPOs/Cooperative societies/Farmers and New Entrepreneurs for Exports” through Hybrid mode at NAU, Navsari on September 26, 2021. The programme was inaugurated by Dr. C.K. Timbadia Director of Extension Education as a president, Shri Man Prakash Vijay, AGM APEDA, Shri D.K. PADALIYA Deputy Director, Horticulture, Shri N. N. Patel, Deputy Director, Horticulture, Tapi, Shri Jacob Augustine, Assistant Director DGFT, Shri Chandrashekhar S. Naik, Shri Mrinal Sharma, Assistant Director NPPO, Kandla and Shri Gaurav Kumar, Assistant Director, NABARD. Main aim of this capacity building programme was aware the farmers about demand based quality production and enhances export of fruit and vegetables. Dr. C.K. Timbadia emphasize that farmers of south Gujarat getting more benefit by produce and export of scheduled product as compare to the local market. Official and exporters from APEDA, NPPO, NABARD provided guidance and encouraged farmers to export banana and mango. Total 488 farmers and farm women participated in these programme among them 226 participated offline and 262 online.



“Vanijya Utsav - Capacity Building Programme for FPOs / Cooperative societies / Farmers and New Entrepreneurs for Exports”



## 9.9 Farmers Feedback programme for Research issue

Agriculture Technology Information Centre (ATIC), Navsari organized farmers' feedback meeting under T & V System through online mode on August 24, 2021 in the presence of Hon'ble Vice-Chancellor Dr. Z. P. Patel, Dr. C. K. Timbadia-Director of Extension Education; Dr. G. B. Kalariya-Training Associate, ATIC, Dr. S. D. Kavad, Associate professor, DEE office, Head & scientists of all KVKs under NAU and farmers of South Gujarat region.



**Hon'ble Vice-Chancellor, Dr. Z. P. Patel and Dr. C. K. Timbadia, DEE interacted with the farmers during Farmers interaction for research feedback**



## 10 NATIONAL FLAGSHIP PROGRAMMES / CELEBRATIONS

### 10.1 Celebration of 93rd ICAR Foundation Day

Krishi Vigyan Kendra, Surat celebrated “93<sup>rd</sup> ICAR Foundation Day” on July 16, 2021. The team of KVK and Navsari Agricultural University Scientists guided to farmers on different subject *viz.*, vegetable farming, organic farming, plant protection and animal husbandry. During this program about 278 farmers & farmwomen were participated.



Dr. Z.P. Patel, Hon'ble Vice Chancellor, NAU, Navsari addressing the participants during the programme



Scientist delivering lecture to the participants during the programme

### 10.2 Celebration of Parthenium Awareness week

16<sup>th</sup> Parthenium Awareness Week (16 to 22 August 2021) celebrated by all KVKs NAU, Navsari. Various activities were organized by KVKs. Total 446 farmers and farm women participated in the programmes at different places. KVK Scientists delivered lectures on all the aspects for creating awareness about parthenium weed. How it can be identify, He highlighted on how to control, and also its hazardous effects on human beings.



Celebration of Parthenium Awareness Week at KVK, Navsari



Scientists delivering lecture during the programme, KVK, Surat

### 10.3 National Nutrition Month celebration

Govt. of India celebrates National Nutrition Month during 1 to 30 September, 2021. All the KVKs running under NAU also celebrated the month at KVK campus and at the villages in their jurisdiction. Various activities were organized by KVKs during the programme *viz.*, Poshan jagruti shibir, training on nutrition garden management, nutri thali competition, In-service training for Anganwadi workers, method demonstration, prize distribution, distribution of nutri-kitchen garden kit, seeds and seedlings etc. Total 1762 farm women participated in the programmes at different places.





Dr. C. K. Timbadia, DEE, NAU, Navsari addressing the participants during the programme



Celebration of "Nutritional and food security campaign" at KVK, Waghai

## 10.4 Celebration of Poshan Vatika Mahaabhiyan and Plantation Day

Krishi Vigyan Kendra, Navsari celebrated one day program on poshan Vatika Mahaabhiyan and Plantation Day on the occasion of birth anniversary of Hon'ble Pradhanmantri Shri Narendra Modi Sir on 17 September, 2021. The Live program was inaugurated by Shri Narendra Singh Tomar, Hon'ble Union Minister of A & FW on "International Year of Millets 2023". Total 739 Farmers & farmwomen participants benefited.



Celebration of "Poshan vatika mahaabhiyaan and plantation programme" at Waghai



Plants distribution to farmers at KVK, Tapi

## 10.5 Swachhta Hi Sewa 2021 (1 to 31 October, 2021)

The KVKs running under NAU organized various activities under Swachhta Hi Sewa 2021 (SHS) campaign during 1 to 31 October 2021 as a part of 150<sup>th</sup> birth anniversary celebration of Mahatma Gandhi. Various activities were organized by KVKs during the programme viz., village Cleanliness and sanitation, Swachhata rally, Campaign, Mahila Goshthi, Composting of kitchen and home waste materials, Awareness about green demo & Hand wash, Market & Public Place cleaning, and taking Swachhata etc. Total 1741 farmers and farm women participated in the programmes at different places.





Rally organized in the village during the Swachhata programme



Participants taking Swachhata oath during the programme

## 10.6 Celebration of Mahila Kisan Divas and Women in Agriculture Day

The KVKs running under NAU celebrated Mahila Kisan Divas and Women in Agriculture Day on 15 October, 2021 and 4 December, 2021. Various activities were organized by KVKs during the programme viz., Lecture, competitions, group discussion, inputs distribution and Prize distribution etc. Total 261 farm women participated in the programmes at different places.



Dignitary addressing the participants during Mahila Kisan Divas



Scientist from KVK Dang delivering lecture to the participants

## 10.7 "World Soil Day" Celebration

Government of India celebrates the "World Soil Day" on 5<sup>th</sup> December every year, KVKs operated under the NAU celebrated the "World Soil Day" on December 5, 2021. Lectures of dignitaries and Scientists and farm visits were organized during the celebration. During the programme 219 farmers and farm women participated at different places.



Member Board of Management delivering lecture to the participants at KVK Navsari



Scientist from KVK Dang delivering lecture to the participants



## 10.8 Swachhta Pakhawada-2021 celebration

The KVKs running under NAU organized various activities under Swachhta Pakhawada during 16-31 December, 2021. Various activities were organized by KVKs during the programme viz., Adopted village Cleanliness and sanitation, Swachhata (Sanitation) rally, Awareness programme, Campaign, *Mahila Shibir*, Training on kitchen garden, Green waste management, cleaning of KVK premises, farm and taking Swachhata saphath during celebration. Total 9039 farmers and farm women participated in the programmes at different places.



Cleaning of KVK farm under celebration of Swachhta Pakhawada



Scientist from delivering lecture to the participants during celebration of Swachhta Pakhawada

## 10.9 Celebration of Kisan Day

The KVKs running under NAU celebrated Kisan Day on 23 December, 2021. Various activities were organized by KVKs during the programme viz., Lecture on Kisan day, Farm Visit and Group Discussion, Kisan gothi and information about Pradhanmatri Kishan Nidhi etc. Total 275 farmers and farm women participated in the programmes at different places.



Scientist addressing the participants regarding importance of farmers for Indian economy and overall growth



## 10.10 Celebration of World Pulse Day

All KVKs Celebrated of World Pulses Day under Azadi Ka Amrit Mahotsav on 10th February 2022 with theme of “Atmanirbhar Bharat- Harnessing potential pulses for import substitution”. Total 830 farmers and farm women participated in the programmes.



Dr. Z.P. Patel, Hon'ble Vice Chancellor, NAU, Navsari addressing the participants



Scientist delivering lecture to the participants at KVK Vyara, Dist: Tapi

### 10.11 Celebration of International Women's Day' 2022

International Women's Day (IWD) being celebrated all over the world on 8<sup>th</sup> March. KVKs working under NAU, Navsari also celebrated the IWD 2022 on 8<sup>th</sup> March 2022 in the presence of dignitaries. The theme of the programme was empowering the women farmers. Speech of dignitaries, Lecture of experts and different activities viz., Importance of Women in Agriculture, Cultural Events organized to encourage farm women, Awareness cum training, Farm Visit and Group Discussion, Mahila Shibir, World Women's Day, Khedut Mahila Shibir etc. were organized. More than 547 farm women were actively participated in the programme at different places.



Dr. Z.P. Patel, Hon'ble Vice Chancellor, NAU, Navsari addressing the participants during the programme



Celebration of International women's day at KVK, Waghai

### 10.12 Celebration of World Water Day

KVKs working under NAU, Navsari celebrated the "World Water Day" on March 22, 2022 in the auspicious presence of dignitaries. The main theme of program was "Valuing the water". Scientists delivered lectures on importance of water for better productivity of crops, irrigation technology, watershed management for sustainable livelihood and agriculture etc. Oath was taken by the participants for saving of water. Total 194 participants including farmers, farm women and extension officers remained present at different places.





Scientist delivering lecture to the participants during the programme at KVK Narmada and Dang

### 10.13 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 of Navsari district with six modules under the Directorate of Extension Education since 2016-2017. Different activities were organized during the period viz., Trainings and distribution of critical inputs to the participating farmers under the project.

#### 10.13.1 Key Outcomes of Farmer FIRST Programme 2016-2020

ICAR-National Academy of Agricultural Research Management, Hyderabad and Division of Extension Education, ICAR, New Delhi conducted collaborative assessment of “Key Outcomes of Farmer FIRST Programme 2016-2020”. In a published report, the performance of FFP, NAU, Navsari was recognized at National Level among 52 FFP Center. The major Outcomes of the programme by FFP interventions has contributed in doubling of farmer’s income through improvement in yield, increase cropping intensity, change in improved inputs use and increase in the income sustainability. Hon. Vice Chancellor Dr. Z. P. Patel recognized the performance and congratulated FFP Nodal and DEE Dr. C. K. Timabadia, Principal Investigator, Dr. Alpesh Leua former DEE Dr. G. R. Patel and Co-PI’s of different modules Dr. Hitesh Viradia, Dr. J. M. Patel, Dr. N. V. Patel, Dr. L. K. Arvadia and Dr. Rajesh Bhuvra with a team from DEE office.



Report handed over to Dr. Z. P. Patel, Hon. Vice Chancellor, NAU, Navsari

### 10.13.2 Training on “Value addition of Sapota”

Organized training on “Value addition of Sapota” under dated 11/02/2022 at Centre of Excellence on Post harvest technology, N.A.U., Navsari in the Presence of PI and Co-PI of Farmer FIRST Programme. Dr. Jilen Mayani practically demonstrated detailed process of making Chiku butter dip and Chikujam. A total 30 women farmers from Chijgam, Pathari and Hansapore village had participated in the programme.



Training on “Value addition of Sapota

### 10.14 Implementation of "Mera Goan Mera Gaurav" programme

"Mera Goan Mera Gaurav" programme launched by the Hon'ble Prime Minister on 25<sup>th</sup> 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	52	361
2.	Interface meeting/ <i>Goshthies</i>	25	932
3.	Training organized	10	342
4.	Demonstrations conducted	19	123
5.	Mobile based advisories (No.)	632	632
6.	Literature support provided	42	1003
7.	Awareness created	14	489
8.	Input support provided (q)	-	-
9.	Linkages developed with other agencies (No. of agency)	26	791
10.	Facilitation for new varieties, seeds, technology		
	i. Boi- fertilizer	32	38
	ii. Technology (No.)	12	432
	iii. Seeds (q)	8	30
	iv. New crops (No.)	-	-
	<b>Total</b>	<b>875</b>	<b>5173</b>



**ICM in Groundnut (GG-20)**



**Field day on Rice**



## 11. MEGA EVENTS

### 11.1 Subhash Palekar Natural Farming (SPNF) Training workshop

Navsari Agricultural University, Navsari, Atma Project, Gujarat State and Natural Farming Coordinating Committee jointly organized Subhash Palekar Natural Farming Training Workshop during 25 to 27/12/2021 (three days) at Samarpan Ashram, At. Dandi, Dist. Navsari. Inauguration Ceremony of Training Workshop was held in the persuasive presence of Shri Acharya Devvratji, Hon'ble. Governor, Gujarat on 25/12/2021. During the inauguration ceremony, Shri Mukeshbhai Patel, Hon. Minister of Agriculture, State Level, Gujarat, Dr. S.R. Chaudhary, Hon. Director of Research, NAU, Navsari, Shri Bhikhubhai Ahir, President, District Panchayat, Navsari, Mahatma Shri Prafuldada Senjaliya, State Coordinator, Prakritik Krishi, State of Gujarat, Shri Kaivalya Swaroop Swamiji, Sant Shri, Nilkanth Dham, Dr. C.K. Timbadia, Director of Extension Education, NAU, organizations, other dignitaries as well as progressive farmers were remain present.

Hon'ble. Governorshri guided the farmers with inspiring speech with quoting his experiences about natural farming. Hon'ble. Governorshri felicitated the farmers engaged in natural farming as well as the Karmayogis of Atma Project and KVK, Navsari involved in the promotion and dissemination of Natural Farming, during the program. During the training workshop, Shri Kaivalya Swaroop Swamiji, Sant Shri, Nilkanth Dham, Poicha provided interesting guidance on natural farming for three consecutive days. The farmers engaged in natural farming also shared their experiences. More than 3100 participants including farmers and farm women engaged in natural farming, master trainers/farmer friends, ATMA project staff and KVK staff from seven districts of South and Central Gujarat, Navsari, Surat, Valsad, Tapi, Dang, Bharuch and Vaghodia districts.



Inauguration of Natural farming programme by Shree Acharya Devvratji, Hon'ble Governor, Gujarat



Felicitating progressive farmers by Shree Acharya Devvratji, Hon'ble Governor, Gujarat



3rd day of Subhash Parlekar Natural Farming workshop/Training





## 12. AWARDS RECEIVED:

### 12.1 Farmer Award

#### 12.1.1 Nari Shakti Puraskar

Smt. Vasava Ushaben Dineshbhai, Village: Panchpipri, Ta: Sagbara, Dist: Narmada awarded as “Nari Shakti Puskar-2020” for organic farming and social worker, the prestigious award was presented by Shree. Ramnath Kovid, Hon’ble President of India, on 8<sup>th</sup> March 2022 at New Delhi.



Hon. President of India, presenting award to Smt. Vasava Ushaben Dineshbhai at New Delhi



Group photo of Smt. Vasava Ushaben Dineshbhai with Hon'ble Prime Minister Shri. Narendra Modi

#### 12.1.2 IARI Fellow Award

Sh. Dhirendrakumar Bhanubhai Desai, At. Panetha, Ta. Jhaghadiya, Dist. Bharuch recieved IARI Fellow Award 2021 sponsored by IARI, New Delhi during Pusa Krishi Vigyan Mela, organized at New Delhi 25-27/02/2021.



Sh. Dhirendrakumar Bhanubhai Desai receiving the award



Award certificate

### 12.1.3 Jagjivan Ram Abhinav Kisan Puruskar

Sh. Dhirendrakumar Bhanubhai Desai, At. Panetha, Ta. Jhaghadiya, Dist. Bharuch recieved Jagjivan Ram Abhinav Kisan Puruskar/ Jagjivan Ram Innovative Farmer Award (National) 2020 with cash Rs. 1,00,000/-, Certificate and Citation sponsored by ICAR, New Delhi on 16/07/2021 (Online).



Sh. Dhirendrakumar Bhanubhai Desai

### 12.1.4 Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar

Mr Arunbhai J. Patel Village: Karadi, Dist: Navsari received Pandit Deendayal Upadhyay Antyodaya Krishi Puraskar 2020: Certificate and Citation for IFS Model under Small and Marginal farmer Categories by Indian Council of Agricultural Research, New Delhi during 16th July 2021.





### 12.1.5 Best Innovative Farmer Award

The progressive farmers of Krishi Vigyan Kendra, Surat Mrs. Jamnaben Maganbhai Nakum and Mr. Shaileshbhai Sailor awarded with “Best Innovative Farmer Award” by Society of Extension Education of Gujarat on 24<sup>th</sup> June, 2022 for the year 2019-20 and 2020-21, respectively.



### 12.2 Yong scientist award

H. A. Prajapati, Scientist at KVK, NAU, Waghai, Dist: Dangs received "Yong scientist award" award given/sponsored by Astha foundation for Fruit science on July 2021.



### 12.3 Best Presentation Award

12.3.1 Krishi Vigyan Kendra , NAU, Navsari received “Best Presentation Award -2020” For Presentation of APR-2020-21 in Online Annual Zonal workshop of KVKs (Maharashtra, Gujarat & Goa) organized by ICAR-ATARI, Pune held during 4-6 August, 2021.



**12.3.2** KrishiVigyan Kendra, NAU, Surat received “Best Presentation Award” For Presentation of APR-2020-21 in Online Annual Zonal workshop of KVKs (Maharashtra, Gujarat & Goa) organized by ICAR-ATARI, Pune held during 4-6August, 2021.



## 12.4 Innovative Article Award

**12.4.1** Prof. Bhakti B. Panchal, Scientist (Horticulture), KrishiVigyan Kendra, Surat awarded with innovative article award by Agriculture and Food e-Newsletter in the year 2021.



**12.4.2** Prof. Soni.A.N, KVK, NAU, Vyara, Dist: Tapi received ""Best Article" award For Article “Tamari Rogpratikarak Shkti Vadhari Corona Same Raxan Melvo. Krushigovidhya, APRIL, 2021by AAU, Anand.

## 13. PUBLICATIONS

### 13.1 Farm publications

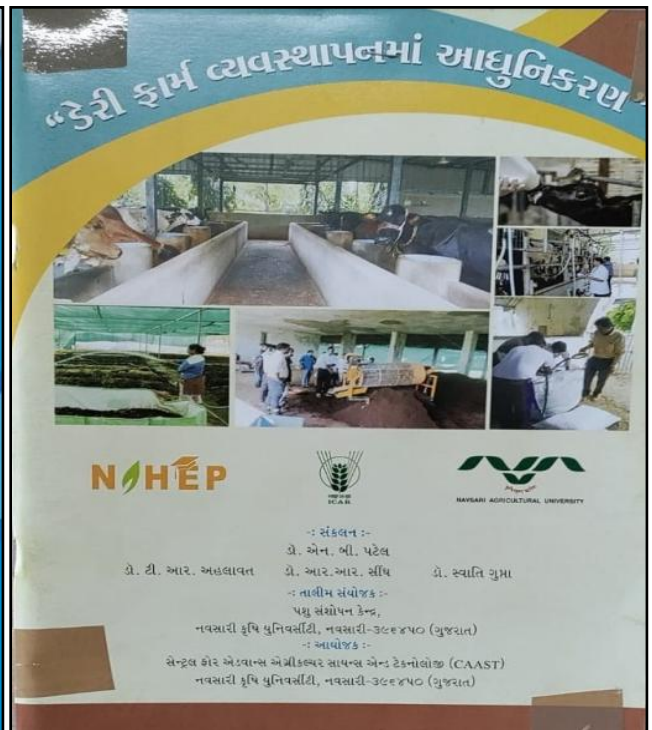
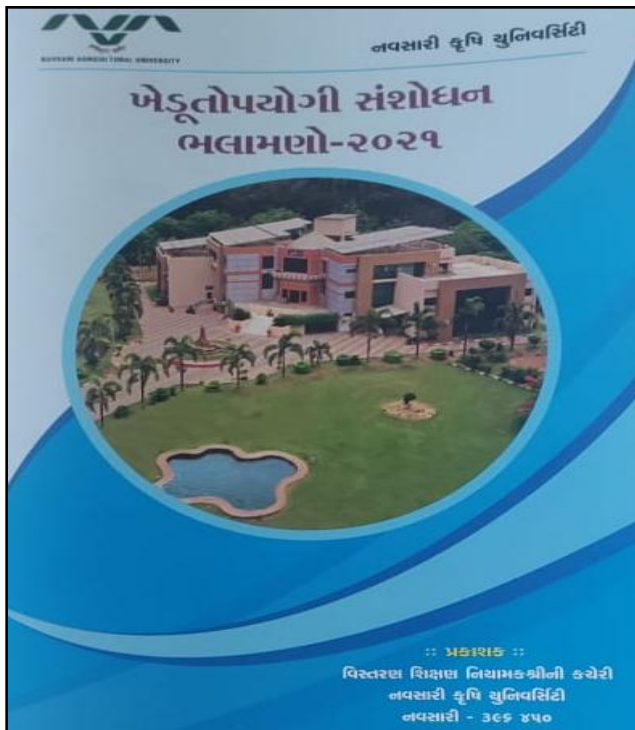
Directorate of Extension periodically publishes folders, leaflets and booklets on package of cultivation practices of main crops, diversified crops, newly released technology etc. of the area to make available to the farmers and extension workers as ready reference at very low cost or no cost.

#### Other publications–news letter/reports

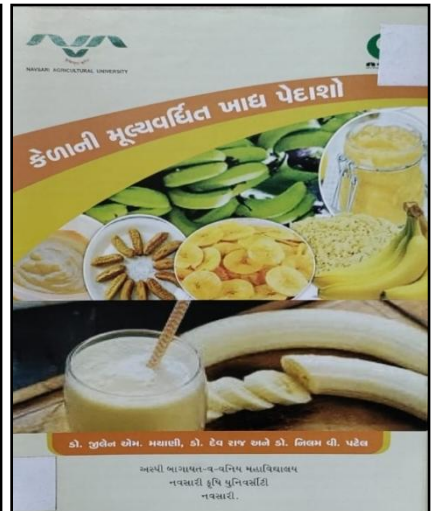
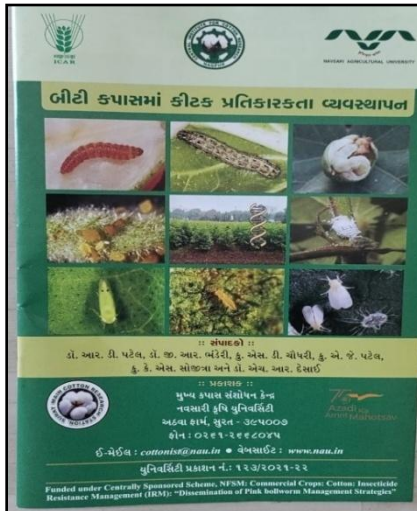
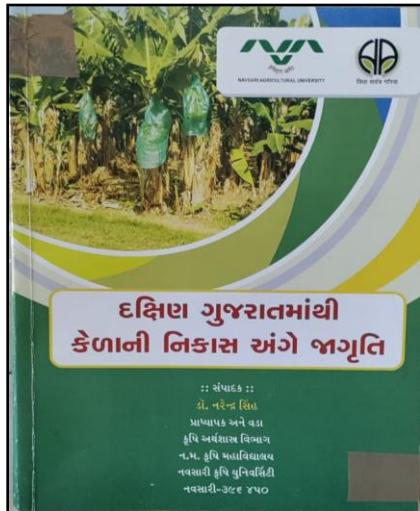
- Research Accomplishments and Recommendations (Gujarati)
- Souvenirs
- Booklets on new emerging issues/technology

#### University publication:

1) Book/booklets	: 21	4) Annual report	: 1
2) Folders	: 101	5) Crop calendar	: 3
3) Training manual	: 7	6) Magazine	: 1



#### Books



#### Booklet/Folders



## 13.2 Research Papers

1. D. B. Bhinsara, P. D. Verma, J. J. Pastagia and Hitesh Parmar (2021). Study on Knowledge of Owners of Milch Animals about Animal Breeding in Tribal Area of South Gujarat, *Int.J.Curr.Microbiol.App.Sci.*, Vol.10, Issue-03.
2. Dr. M. V. Tiwari, Prof. V. K. Poshia and Dr. P. D. Verma (2021). Performance of Twin Wheel Hoe in Narmada District, *International Journal of Scientific Engineering and Applied Science*, Vol.7, Issue-7.
3. Nitin N. Gudadhe, Vijay Poshia, Y. A. Garde, P. D. Verma, C. K. Timbadia and V. P. Usadaida (2021). Potential of zinc seed treatment in improving yield and grain bio fortification of maize: A success story, *Agri journal world*, Vol.1, Issue-2, pp.6-11.
4. Dr. M.V. Tiwari, V.K Poshia, N.V Chaudhary and Dr. P.D Verma (2022). Assess the incidences of water, sanitation and hygiene among tribal women in Narmada district, *The Pharma Innovation Journal*. Vol. 11(4): 183-185.
5. V. K. Poshia, Dr. M. V. Tiwari, and Dr. P. D. Verma (2021). Constraints faced by recommended pigeon pea cultivation practices in Narmada district, *International Journal of recent Scientific research*, Vol.13, Issue-3, pp-292-293.
6. V. K Poshia, Maheshwaran, M and R. D. Pandya (2022). Adoption level of mitigating strategies by progressive farmers of climate change in south Gujarat. *The Pharma Innovation Journal*. Vol. 11(7): 3376-3378.
7. J. B. Dobariya, S. A. Aklade & C. K. Timbadiya, 2021. Competence of educated youth for agricultural enterprises of Gujarat state. *Journal of plant development science*, 13(8):627-631.
8. R. A. Gurjar, S. L. Chawla, D. P. Patel, R. D. Pawar and T. R. Ahir (2021). Interaction Effect of Land Configuration and Nutrient Management on Growth, Quality and Yield of Chrysanthemum (*Dendrathera grandiflora* Tzvelev) var. *International Journal of Current Microbiology And Applied Sciences*. Volume 10 Number 01 :1429-1435, ISSN: 2319-7706
9. T. R. Ahir, S. L. Chawla, S. T. Bhatt, Dipal S. Bhatt, G. D. Patel and R. A. Gurjar (2021). Response of various Planting Dates and Varieties on Performance of China Aster under South Gujarat. *International Journal of Current Microbiology And Applied Sciences*. Volume 10 Number 02 2025-2033
10. R.D. Pawar, S.L. Chawla, S.J. Patil, Sudha Patil and R.A. Gurjar (2021). Physiological studies in chrysanthemum genotypes 22. *Journal of Ornamental Horticulture*. 24(1) 22-27
11. Prabhu Nayaka, K.A. Shah and A.N. Lad and C.K. Timbadiya (2022). Influence of potassium silicate on paddy (*Oryza sativa* L) stem borer, Sheath mite, lodging and yield attributes. *Frontiers incrop improvement Journal*, Vol 10.
12. A.N. Lad, K.G. Patel, R.A. Gurjar, P.H. Nayaka and K.A. Shah (2022). Performance of different levels of NADEP manure Nutrients content and quality of different organically grown crops. *Journal of Krishi Vigyan* Vol. 11(1).
13. A.N. Lad, K.G. Patel, A.M. Patel and Prabhu Nayaka and Z. N. Zala (2022). Survey and Prospects of yield stability of organic produce in Nvsari District. *The Pharma Innovation Journal* SP-11(9):177-179. ISSN (P): 2349-8242, ISSN (E): 2277-7695

14. K.A.Shah, Prabhu Nayaka and A.N.Lad (2022). Effect of foliar spray of potassium silicate on growth and yield of paddy (*Oryza sativa*). *Annals of Plant and Soil Research* 24 (3): 476-480.
15. Patel, B. K., Sandipan, P. B., Chawada, S. K. and Patel R. K. (2021). Evaluation of various combi product fungicides for the control of wilt (FOV) disease of cotton under in vitro condition of south Gujarat (India). *Int. J. Chem. Stud.*, 9(1): 2992-2995.
16. Patel, B. K., Sandipan, P. B., Patel R. K. and Chawada, S. K. (2021). Screening of different fungicides and biocontrol agents against *Fusariumoxysporum* f. sp. *vasinfectum* (FOV) under pot condition. *Int. J. Chem. Stud.*, 9(1): 1005-1007.
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### 13.3 Extension Literature:

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### 13.4 Book/Booklet

૧. કાલરીયા જી.બી. (૨૦૨૧) ખેડૂતોપયોગી સંશોધન ભલામણોલ-૨૦૨૦ પ્રકાશક: વિસ્તરણ શિક્ષણ નિયામકશ્રી, નવસારી કૃષિ યુનિવર્સિટી, નવસારી, પ્રકાશન નં. ૪૫/ ૨૦૨૦-૨૧ અને વેબસાઈડ પર મુકેલ છે.
૨. કાલરીયા જી.બી. (૨૦૨૧) ખરીફ ઋતુ પૂર્વેની તાલીમ, તાલીમ અને મુલાકાત યોજના અંતર્ગત નિષ્ણાંત વ્યાખ્યાન નોંધ તા. ૧૭-૧૮/૦૬/૨૦૨૧, પ્રકાશન નં. ૦૩/ ૨૦૨૧-૨૨.
૩. કાલરીયા જી.બી. (૨૦૨૧) રવીઋતુ પૂર્વેની કાર્યશાળા, તાલીમ અને મુલાકાત યોજના અંતર્ગત નિષ્ણાંત વ્યાખ્યાન નોંધ તા. ૨૩-૨૪/૧૧/૨૦૨૧, પ્રકાશન નં. ૦૩/ ૨૦૨૧-૨૨.
૪. કાલરીયા જી.બી. (૨૦૨૧) ખેડૂતોપયોગી સંશોધન ભલામણોલ-૨૦૨૧ પ્રકાશક: વિસ્તરણ શિક્ષણ નિયામકશ્રી, નવસારી કૃષિ યુનિવર્સિટી, નવસારી, પ્રકાશન નં. ૬૫/ ૨૦૨૧-૨૨ અને વેબસાઈડ પર મુકેલ છે.
૫. કાલરીયા જી.બી. અને એલ. વી. ઘેટીયા(૨૦૨૧) શેરડીમાં જીવાતોનું જૈવિક નિત્રણ, સોવેનિયર: 'જીવાતો અને રોગોના જૈવિક નિયંત્રણ દ્વારા બાગાયતી અને ખાદ્ય પાકોની ગુણવત્તા અને સલામતીની જાણવણી' દબજભ.દહબબકત ૬ ..બન નવસારી દ્વારા આયોજીત રાજ્ય કક્ષનો પરીસંવાદલ, ડિસેમ્બર ૩૦, ૨૦૨૧, યુનિ. પ્રકાશન નં. ૯૧/૨૦૨૧-૨૨. પા.નં. ૭૭-૮૦.

### 13.5 Popular article

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