Azadi Ka Amrit Mahotsav

NAVSARI AGRICULTURAL UNIVERSITY

ANNUAL REPORT
2020-21

Navsari Agricultural University
Navsari - 396 450, Gujarat, India
www.nau.in

NAU SYMBOL

		Green colour
		Brown colour
	NAVSARI AGRICULTURAL UNIVERSITY	Black colour

THIS IS A SYMBOLIC REPRESENTATION OF A GRAIN OF RICE CROP

N STAND FOR NAVSARI

A STAND FOR AGRICULTURE

U SYMBOLIZES UNIVERSITY

THIS GIVES THE FORM OF AN OPEN BOOK

THIS SHOWS GROWTH AS WELL AS FRESHNESS OF FLOWER

THE GREEN COLOUR SHOWS AGRICULTURE

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- Director of Extension Education
- Registrar
- Principal, N. M. College of Agriculture
- Principal, ASPEE College of Horticulture
- Principal, ASPEE College of Forestry
- Principal, Vanbandhu College of Veterinary Sci. & A.H.
- Principal, ASPEE Agri-business Management Institute
- Principal, College of Fisheries Science
- Principal, College of Agriculture, Bharuch
- Principal, College of Agriculture, Waghai
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NAVSARI AGRICULTURAL UNIVERSITY

Navsari Agricultural University
Navsari - 396 450

FOREWORD

The Navsari zone of erstwhile GAU had attained the status of independent State Agricultural University (SAU) with the promulgation of Gujarat Agricultural University Act 2004 on May 1, 2004 heralding formation of Navsari Agricultural University (NAU) with Navsari as head quarter. NAU's jurisdiction covers seven districts of South Gujarat *viz.*, Surat, Navsari, Bharuch, Valsad, Narmada, Tapi and Dangs. At present, there are 10 Colleges imparting various degree programmes in the faculty of Agriculture, Horticulture, Forestry, Veterinary Sciences, Agribusiness Management, Agricultural Engineering, Agricultural Biotechnology and Fisheries Science. Further, there are various research centers at 15 locations to carry out need based research and 5 KrishiVigyanKendras to undertake dissemination of newer technologies to end users of seven districts of South Gujarat.

I am pleased to submit before you the fifteenth Annual Report for the year 2020-21 of Navsari Agricultural University, Navsari. The University has admitted a total of 428 UG students in seven UG degree programmes. Besides, the University admitted 375 students in Masters and Doctoral degree programmes. University also admitted 249 students in four diploma courses offered by seven Polytechnics. During the period under report, 44 UG students qualified ICAR-JRF and 33 PG students qualifies ICAR-SRF examinations conducted by ICAR, New Delhi. The AICRP on IFS, NMCA, Navsari, received Excellent Performer Award for conduction AICRP(s) trails during 2020 by PC-ICAR-AICRP. NAU also awarded best Performing Center Award-2020 to AICRP on Banana, Sapota& Papaya, Gandevi Centre. Father Indian Centre for Academic Rankings and Excellence (ICARE) has rated NAU as a 4 star Institute**.**

The NAU pays unique attention to research component and as a result scientists developed 13 new varieties of 11 crops including 2 varieties of rice (GR-20 and GNR-9), 2 varieties of adenium (GNAd-3 and GNAd-4) and 1 each from sugarcane (GNS-12), turmeric (GNT-3), mango ginger (GNMG-2), okra (GNO-1), finger millet (CFMV-2), little millet (GV-4), rabi-sorghum (GJ-101), cotton (GN.Cot.27) and niger (GNIG-4).The University also developed 88 technologies for farmers including 13each in the field of Crop Improvement &Natural Resource Management, 12 in Horticulture, 4 in Forestry, 24 in Plant Protection, 09 in Agricultural Engineering, 4 in Animal Production & Fisheries, 3 in Animal health,4 in Social Science and 2 in Basic Science for farming community.

Under Mega Seed Project, NAU has produced 3026.74q of breeder, foundation, truthful and certified seeds, 61,530 tissue culture plantlets of sugarcane and banana. Further, faculty members of the University published 415 research papers in international and national journals and 27 books/ book chapters.The University organized National Level Twenty-One Days Virtual Training, *KrishiMela* and PM *Kisan* Money and also deputed 555 faculty members for attending seminar/symposium/conference, including faculty members for attending summer and winter school and for attending workshop/short term trainings under HRD programme.

Various extension activities like FLDs in **1,072 ha area and** benefiting **3991** farmers, **93**farmer's day/field day, **Farmers/Farm women *Shibir* (69), Educational tour/Field visits (19), Farmer's meeting/*KrishiGosthi*(89), Seminar & Workshop for farmers (30)**, 33 on farm trials and 07 veterinary clinical camps for benefitting more than 1269 farmers and farm women were organized by the University.

I express deep sense of gratitude to Government of Gujarat, Indian Council of Agricultural Research, New Delhi and other agencies for providing financial support and Board of Management and various councils for providing continuous support. Lastly, I congratulate Nodal officer, Publication Cell and entire team for bringing Fifteenth Annual Report in time. I also thank all Deans, Directors, University Officers and scientists for providing valuable information.

(Z. P. Patel)

Vice Chancellor

NAVSARI AGRICULTURAL UNIVERSITY

નવસારી કૃષિ યુનિવર્સિટી સોંગ

(માલકોશ)

હરિ ઓમ... હરિ ઓમ... હરિ ઓમ...

હૈ સમસ્ત રિદ્ધિ કૃષિમૂલમ્, ઘન ધાન્ય ઔષધિ સંપન્નમ્,

કૃષિ સંસ્કૃતિ જન મંગલમ્, કૃષિકાર યશ આયુર્બલમ્.

દક્ષિણ ગાથા ગુર્જરી, ગીરીકૂંજ વનસૃષ્ટિ ભરી.

ભુમિ સ્નેહ શિતલ સાક્ષરી, સાગર સુમન સરિતા ભરી,

સંજાણ ઉદવાડા સ્મૃતિ, જરથોસ્ટ્ર આતશ સંસ્કૃતિ,

ઉભરાટ તિથલ આહવા, ઔર ડાંગ ડુમસ વેડછી.

મુનશી મીઠુ મોરારજી, દાદા રતન કલ્યાણજી,

ટંડેલ ડાંગી ખારવા, હળપતિ અનાવિલ પારસી.

દાંડી નમક સત્યાગ્રહી, ગાંધી ગીરા ગરૂડેશ્વરી,

સરદાર સરોવર નર્મદા, હૈ કંકરા સબ શંકરા.

ડૉ. બાલકૃષ્ણ જોષી

CONTENTS

1. Executive Summary

The Agricultural Education Division, ICAR, New Delhi had declared Ranking of Agricultural Universities 2019 on the occasion of ICAR Foundation Day *i.e.* July 16, 2020. Among all SAUs, CAUs and DUs, Navsari Agricultural University, Navsari bagged the XLII position at the national level.

Educational Achievements

- **Convocation:** Sixteenth Annual Convocation was organized on February 9, 2021. Shri. Acharya Devvratji Governorshri of Gujarat and Chancellor of the University presided over the function and Dr. R. C. Agarwal, DDG, Education, (ICAR) *Krishi Bhavan*, New Delhi acted as Chief Guest and Hon'ble Minister of Agriculture, Rural Development and Transport, Government of Gujarat, Shri. R.C. Faldu acted as Guest of Honour during the convocation ceremony.
- **Degree Awarded:** During the Sixteenth Convocation, NAU awarded various degrees to 690 students including Bachelor's degree to 461 students, Masters' degree to 178 students and Doctorate degree to 51 students.
- **Medals Awarded:** During the Sixteenth Convocation, a total of 37 medals including 14 medals for PG studies and 23 medals for UG studies were awarded. Out of 37 medals, 12 girls meritorious student get 15 medals and 13 boys get 22 medals.
- **Best Teacher Award** was also conferred to one outstanding faculty of NAU.
- **Best Researcher Award** was introduced from the 2021 in the university.
- **Admission:** During the year 2020-21, total of 808 students were admitted to six various degree programmes offered by NAU. Four twenty eight students admitted to UG degree programme, whereas, 375 students were admitted to masters' and doctorate degree programmes. Thus, overall admission to various degree programme was increased from 391 (2010-11) to 803 (2020-21) students and rise in admission was recorded about more than two folds.
- A total of 249 students were also admitted to seven Polytechnics (a three year programme) during the year 2020-21.
- **Student's Success:** The students of NAU qualified national level competitive examinations like ICAR-JRF (44) and ICAR SRF (34) during the period under report.
- **Placement cell**: This cell of University played a vital role in placement of 181 UG and PG and polytechnic students of various faculties in Government and Non-Government sectors and Banks.
- **Library**: During last year, 4045 new books purchased escalating the total number of the books to 79,799. Further, 11327 periodicals, 3161 theses, 6555 reports and 166e-books were also added into the repository of library. Twenty five international journals and 10 online databases have been made available in the University library.

Awards

AICRP on IFS, NMCA, NAU, Navsari received **Best Performing Center Award-2020** for outstanding performance in validation of Integrated Farming Systems Technologies during 2019-20 on December 18, 2020. NAU also awarded best Performing Center Award-2020 to **AICRP on Banana, Sapota & Papaya, Gandevi Centre**. Further, Indian Centre for Academic Rankings and Excellence (ICARE) has rated NAU as a 4 star Institute. Besides, 27 faculty members of University also received Young Scientist Awards/ recognitions, 11 faculties conferred best oral presentation awards and 07 faculties learned best poster presentation awards for scientific contributions by various scientific societies/ organization.

HRD

- **Seminar/ Symposium/*Krishi Mela* Organized:** During the period under report, NAU organized three mega events *viz*., National Level Twenty-One Days Virtual Training on "Sustainable Development of Secondary Agriculture: Economical, Food-Nutritional and Livelihood Perspective", *Krishi Mela* and PM *Kisan* Money.
- **Participation of Faculty:** NAU sponsored faculty members of University for attending seminar/symposium/conference (555) including 21 days trainings/workshops/short term trainings during year 2020-21.

Research Achievements

- **New Varieties:** During the year 2020-21, NAU has released 13 new varieties of 11 crops including 2 varieties of rice (GR-20and GNR-9), 2 varieties of adenium (GNAd-3and GNAd-4) and 1 each from sugarcane (GNS-12), turmeric (GNT-3), mango ginger (GNMG-2), okra (GNO-1), finger millet (CFMV-2), little millet (GV-4), *rabi*-sorghum (GJ-101), cotton (GN.Cot.27) and niger (GNIG-4).
- **Technologies Developed:** The University also recommended 88 technologies for farmers. Technologies were developed in the field of Crop Improvement (13), NRM (13), Horticulture (12), Forestry (04), Plant Protection (24), Agricultural Engineering (09), Basic Science (02), Social Science (4) and Animal Production & Fisheries (04) and Animal health (03).
- During the period under report, 262 new technical programmes were approved by Research Sub-Committees for implementation at NAU, Navsari for the year 2020-21.
- **Seed Production:** Under Mega Seed project, NAU produced 3026.74 quintals of Breeder, Foundation and Certified/Truthful seeds of mandate crops. Simultaneously, planting materials of sugarcane single eye bud (56,780 Nos.) and Tissue culture plantlets of sugarcane (4750) were also produced and distributed to needy farmers of south Gujarat during the period under report.
- **Research Schemes:** A total of 264 research schemes including Plan (122), Non plan (42), ICAR (21), NHM/RKVY/Other state govt. (26), GoI (10) and other agencies (43) were operating in the University in the year 2020-21.
- **Publications:** During the period under report, faculties of NAU published 415 research papers in International and National Journals and 27books/ book chapters for compilation of books.

Extension Activities

- **Trainings**: To disseminate latest technologies for adoption by farmers, 243 on campus and 285 off campus trainings were organized for the benefit of 21385farmers.
- **FLDs and Other Activities:** During the year, University conducted Front Line Demonstrations (FLDs) in 1,072 ha area and 3991farmers were benefited. Similarly, Farmers' day/Field day (93), Farmers/Farm women *Shibir* (69), Educational tour/Field visits (19), Farmer's meeting/*Krishi Gosthi* (89), Seminar & Workshop for farmers (30), On-farm trials conducted in 34 ha area benefiting 312 farmers (33), Veterinary clinical camps(07) were also organized by NAU for benefitting more than 1269farmers and farm women.
- **Mass Communication:** Extension services were also provided using electronic media for mass communication like telephonic contacts (5499), farm literature publication (132), agriculture literature and press notes (326) and TV and radio talks (72).
- **Mass Messaging:** NAU also utilized 'Mass Messaging' using facility of e-connectivity centre for communicating information on improved agricultural practices in time.

Budget

- During the year under report, NAU received total grant of Rs.148.44 crore from various sources *viz.* Plan (Rs.83.63 crore), Non-plan (Rs. 34.39 crore), ICAR (Rs.12.68 crore) and Other Agencies (Rs.17.74 crore).Additionally, University generated receipt of Rs. 11.59

crore at its own by means of selling of farm produce, seeds, plantlets, planting materials and bio-fertilizers.

- Expenditure of allotted budget was done for research (Rs. 61.39 crore), education (Rs. 53.38 crore) and extension (Rs.37.17 crore) activities of the University.

Constructions

- **Works completed:** During the period under report, construction of various buildings of Construction of Parent Guest House at CoA, Waghai, Construction of Pesticide Residue Laboratory at NAU, Navsari, Construction of U.G Boys Hostel at Dediapada, Construction of Fisheries College Building at Navsari and Strengthening of Existing Farm Road for MCR at Surat have been completed.

2. About the University

Introduction

Navsari Agricultural University (NAU) was established by the Government of Gujarat vide Gujarat Act No.5 of 2004, by carving four agricultural universities out of the erstwhile Gujarat Agricultural University (GAU).

The jurisdiction of NAU is comprised of seven districts of South Gujarat *viz.*, (1) Navsari (2) Surat (3) Bharuch (4) Valsad (5) Dang (6) Tapi and (7) Narmada.

Geographical Location

The head quarter of the University is at Navsari, which is located near historical place Dandi known for Salt Movement in Indian pre independence history. Navsari campus is very well connected by railways (Ahmedabad-Mumbai railway line), road surface transport (National Highway No. 8) and airways (Surat airport).

South Gujarat is located on west coast of India and situated between longitudes 72˚54'east and latitude 20˚ 57' north. The operational area is broadly categorized into two major agro-climatic zones *viz.*, South Gujarat heavy rainfall zone with annual rainfall of 1592-2534 mm in 65-95 rainy days and South Gujarat zone with annual rainfall of 798-1655 mm in 31-71 rainy days (Agro-climatic zone-XIII, 3.1, 3.2). The soils of South Gujarat are predominantly clay in texture with more than 40 % clay content. South Gujarat has diverse agro-climatic conditions *viz.*, heavy and medium rainfall area, fertile and saline land, undulating hilly tract, irrigated and rain fed cultivated land, forest area and industrialized area. Out of seven districts, four districts namely Dang, Narmada, Valsad and Tapi are tribal dominated. The total geographic area of South Gujarat is 22.63 lakh, whereas, cultivable area is 13.05 lakh ha, out of which 5.89 lakh ha (45.12%) area is irrigated with 109.51% cropping intensity. However, rest of the three districts *viz.*, Surat, Bharuch and Navsari are very well developed and even industrialized.

South Gujarat is surrounded by Arabian Sea on the west (300 km coastal area), Maharashtra on the South and east and central Gujarat on the north. The jurisdiction of the University is blessed with eleven major and many minor rivers including Narmada, Tapi, Purna, Ambika, Kaveri, Daman-ganga, Khapardi, Gira, Par and also has dams like Sardar Sarovar dam on Narmada, Ukai and Kakarapara dams on Tapi, Keliya dam on Kaveri and Mabhuban dam on Daman-ganga rivers.

Historical Background

The agricultural education in South Gujarat region started way back in 1965 with the establishment of N.M. College of Agriculture at Navsari. The college was initially affiliated to Gujarat University, Ahmadabad from 1965 to 1968 and then to South Gujarat University from 1968 to 1972. The first Agricultural University of the state *i.e.* Gujarat Agricultural University was formed in June, 1972 and the affiliation of N.M. College of Agriculture was transferred to GAU. Another milestone was the establishment of ASPEE College of Horticulture and Forestry in the year 1988 at Navsari.

Navsari zone of erstwhile GAU had attained the status of independent State Agricultural University (SAU) with the promulgation of Gujarat Agricultural University Act 2004 on May 1, 2004 heralding formation of Navsari Agricultural University (NAU) with Navsari as the head quarter. Consequently, the affiliated colleges became the constituent colleges of Navsari Agricultural University. After formation of NAU, other colleges like ASPEE Institute of Agri-Business Management (2007), Vanbandhu College of Veterinary Science and Animal Husbandry (2008) at Navsari, College of Agriculture at Bharuch and Waghai and ASPEE SHAKILAM Agricultural Biotechnology Institute at Surat have been started during the year 2012. Further, the College of Agricultural Engineering & Technology at Dediapada (2013) and College of Fisheries Science at Navsari (2015) were also established at NAU.

The foundation of agricultural research had been laid down way back during the year 1896 by establishing Main Cotton Research Station at Surat, Regional Cotton Research Station (1913) at Bharuch, Regional Rice Station (1934) at Vyara and Fruit Research Station (1935) at Gandevi by British Government before independence of India. Further after independence, Hill Millet Research Station (1954) at Waghai, Agricultural Research Station (1959) at Tanchha, Main Sorghum Research Station (1962) at Surat, Cotton Wilt Breeding Station (1964) at Hansot, Cotton Sub-Research Station (1964) at Achhalia, Regional Horticulture Research Station (1965) at Navsari, Soil & Water Management Research Unit (1965) at Navsari, Soil Salinity Research Station (1966) at Danti-Ubharat and Sugarcane Research Station (1968) at Navsari were established by Department of Agriculture, Gujarat State. These nine research stations were then transferred to newly established Gujarat Agricultural University during the year 1972 and research activities were also started at Navsari center. Later on, Agricultural Experimental Station (1972) at Paria, Livestock Research Station (1978) at Navsari, Wheat Research Station (1980) at Bardoli, Niger Research Station (1990) at Vanarasi established by GAU and all research centers were transferred to NAU, Navsari during the year 2004. Then NAU has established research stations *viz*., Floriculture Farm (2004) Agricultural Research Station (2008) at Mangrol and Agricultural Research Station (2009) at Dediapada.

For developing medium skilled human resource in agricultural and allied fields to work at grass root level Agriculture Diploma Schools were established at Vyara (1982) and at Waghai (1984) under GAU, whereas after formation of NAU, Navsari Polytechnic in Agricultural Engineering (2009) at Dediyapda, Polytechnic in Horticulture (2010) at Navsari. Earlier established Agriculture Diploma Schools were upgraded as Polytechnic in Agricultural (2010) at Bharuch and Vyara and new Polytechnic in Agricultural Marketing, Cooperation and Banking (2010) at Waghai, Polytechnic in Animal Husbandry (2012) at Navsari and Polytechnic in Horticulture (2012) at Paria have been established. Further, Polytechnic in Agricultural Marketing, Cooperation and Banking established at Waghai during 2010 was converted to Polytechnic in Agricultural during the year 2013.

Chronology of Development of Navsari Agricultural University, Navsari

Year	Centre Established
1896	Research Farm for Cotton at Surat which was later on converted to Main Cotton Research Station (1904)
1913	Research Station for cotton at Bharuch later on converted to Regional Cotton Research Station
1934	Sugarcane Research Station at Vyara, which is changed to Regional Rice Research Station
1935	Research Farm at Gandevi which is designated as Tropical Fruit Research Station
1954	Hill Millet Research Centre and Scheme on Paddy at Waghai
1959	Agricultural Research Station Tanchha
1962	Main Sorghum Research Station, Surat
1964	Cotton Wilt Breeding Station, Hansot
1964	Cotton Sub- Research Station, Achhalia
1965	Regional Horticulture Research Station, Navsari
1965	N. M. College of Agricultural, Navsari
1965	Soil and Water Management Research Unit, Navsari
1966	Soil Salinity Research Station, Danti- Ubharat
1968	Sugarcane Research Station, Navsari
1970	Agricultural Diploma School, Bharuch
1971	Agricultural Diploma School, Navsari
1972	Formation of Gujarat Agricultural University
1972	Fruit Research Station, Paria
1978	Livestock Research Station, NAU, Navsari

1978	Saradar*Smruti Kendra*, Navsari
1980	Wheat Research Station, Bardoli
1980	Bakery School, Navsari
1982	Agricultural Diploma School, Vyara
1984	Agricultural Diploma School, Waghai
1985	*Krishi Vigyan Kendra*, Waghai
1986	Livestock Inspector Training Centre, Navsari
1988	ASPEE College of Horticulture and Forestry, Navsari
1990	Niger Research station, Vanarasi
1999	Gardeners' (Mali) Training Centre, Navsari
2000	*Krishi Vigyan Kendra* at Zonal Agricultural Research Station, Vyara
2004	Formation of Navsari Agricultural University
2004	Floriculture Farm, Navsari
2007	Institute of Agri-Business Management, Navsari
2007	Agricultural Technology Information Center, Navsari
2007	*Krishi Vigyan Kendra*, Dediapada
2008	College of Veterinary Sciences and A.H., Navsari
2008	*KrishiVigayn Kendra*, Navsari
2008	Agricultural Research Station, Mangrol
2009	Agricultural Research Station, Dediapada
2009	Polytechnic in Agricultural Engineering, Dediapada
2010	Polytechnic in Horticulture, Navsari
2010	Polytechnic in Agriculture, Bharuch &Vyara
2010	Polytechnic of Agricultural Marketing, Co-operative & Banking, Waghai
2011	*Krishi Vigayn Kendra*, Surat
2012	College of Agriculture, Bharuch
2012	College of Agriculture, Waghai
2012	Gujarat Agricultural Biotechnology Institute, Surat
2012	Polytechnic in Animal Husbandry, Navsari
2012	Polytechnic in Horticulture, Paria
2012	Educatorium (Agricultural Museum), Navsari
2013	College of Agricultural Engineering & Technology, Dediapada
2013	Polytechnic of Agricultural Marketing, Co-operative & Banking, Waghai (converted to Polytechnic in Agriculture)
2014	College of Fisheries Science, Navsari

Mandate of the University

1. Making provision for imparting higher and lower education in different faculties *viz.*, Agriculture, Horticulture, Forestry, Veterinary Sciences and Animal Husbandry, Agribusiness Management, Agricultural Engineering and Technology and other fields of Agriculture and allied sciences like Food Processing Technology, Biotechnology, Fisheries, *etc.*
2. Further advancement of education and location specific research in agriculture and allied sciences for all farmer's related problems.
3. Implement innovative extension education programmes for transfer of technology.
4. Such other academic and research programmes as the University may initiate from time to time, based on the location specific need and demands including modern sciences.

Vision

Transform Navsari Agricultural University into a Knowledge Power Centre

Mission Statement

Attain excellence in education, relevance in research and outreach in extension education.

Goals

- Diversification of educational programmes
- Strengthening of Central and College Libraries
- Counseling and Placement through campus interviews
- Enhance *Total Factor Productivity* of mandated crops of South Gujarat
- Reduction in the cost of cultivation to improve profit margin
- Value addition and by product utilization
- Evolving Remunerative and Sustainable farming systems

Objectives

Education

- Generate demand and need based qualified, competent and confident scientific manpower in the field of agriculture and allied sciences.
- Make agricultural education responsive to the growing and time bound needs of the stakeholders in view of Globalization scenario.
- Impart entrepreneurial and business skills in order to develop professionalism in the graduates and diploma holders.
- Holistic development of students' personality by nurturing competitive spirit and public service motive.

Research

- Broaden and strengthen the research base of the University.
- Enhancement of genetic yield potential through conventional and biotechnological tools.
- Evolve need based location specific market oriented, remunerative, productive, sustainable, eco-friendly and scale neutral technologies for different agro-eco-socio economic situations of south Gujarat.
- Develop technologies for rejuvenation, reclamation and conservation of natural resources including bio-diversity.
- Evolving modern agricultural practices, value addition and processing technologies for increasing the **T**otal **F**actor **P**roductivity of various agriculture occupations like Horticulture, Floriculture, Animal husbandry and Inland Fisheries.
- Design and set up viable mechanisms for developing situation specific management models/modules for different production systems based on changing needs and demands.
- Production of Breeders', Foundation and Certified seeds/grafts/seedlings/ of the mandate crops to assure higher yield, pest and disease resistance and quality.

Extension Education

- Generate middle level technicians in the fields of agriculture, horticulture, livestock management, bakery, gardening and landscaping and other agro-related courses.
- Conduct Training and Demonstration to the Officers of the Line Departments/Corporates/Cooperatives/NGOs and other extension functionaries.
- Upscale farmers' skills in modern agriculture and horticulture for green field employment.
- Frontline extension through FLDs and OFTs.
- Assume greater role in technology dissemination and agriculture development especially in the tribal areas of South Gujarat.

Functioning of the University

The Governor of Gujarat is the Chancellor of University and by virtue of post he/she is the head of the University. The other powers as conferred upon him/her by the University Acts and Statutes are exercised as and when required.

The Vice Chancellor or *Kulpati* is the whole time officer of the University and appointed by the Chancellor. Vice-Chancellor is the principal executive and academic officer of the University and ex-officio member and Chairman of the BoM, Academic, Research and Extension Council. Further, he is empowered to convene the meetings of BoM and academic council. He presides over the convocation of the University in the absence of Chancellor. Vice Chancellor is responsible for the due maintenance of discipline and has full control over affairs of the University. He is also responsible for presentation of annual financial estimates and annual accounts and balance sheet of the University to the BoM. Vice Chancellor is responsible for proper administration of the University and for close co-ordination and integration of teaching, research and extension education.

Director of Research and Dean PGS monitors research activities, PG admission and PG studies of the University. He is responsible for coordination of Post Graduate studies in all faculties of the University, supervision and maintenance of records pertaining to PG courses, instruction and students. In the capacity of Director of Research, he coordinates research of University in close cooperation with the Deans of faculties, research scientists and other officers of University. He also supervises and ensures efficient working of the research stations of the University. He is the chairman of PG Board of Studies.

Director of Extension Education caters the need of dissemination of useful and latest technology to the farmers. He also plan and execute extension programme based on needs of farmers. Further, he is responsible for publicity of important events through media.

The Registrar of the University is due custodian of the records of academic performance of students of the University including course taken, grades obtained, degrees and diploma awarded, prizes and other distinction won and the common seal of the University. He is also ex-officio secretary to the BoM and Academic council.

Director of Student's welfare looks after arrangements of boarding and lodging facilities for the students, providing counseling to the students, supervising extracurricular and alumni activities. He is also responsible for placement of graduates and post graduates.

The comptroller of the University is responsible for management of properties, funds and the investment of the University. He prepares budget and statement of accounts of the University under the supervision of Vice - Chancellor.

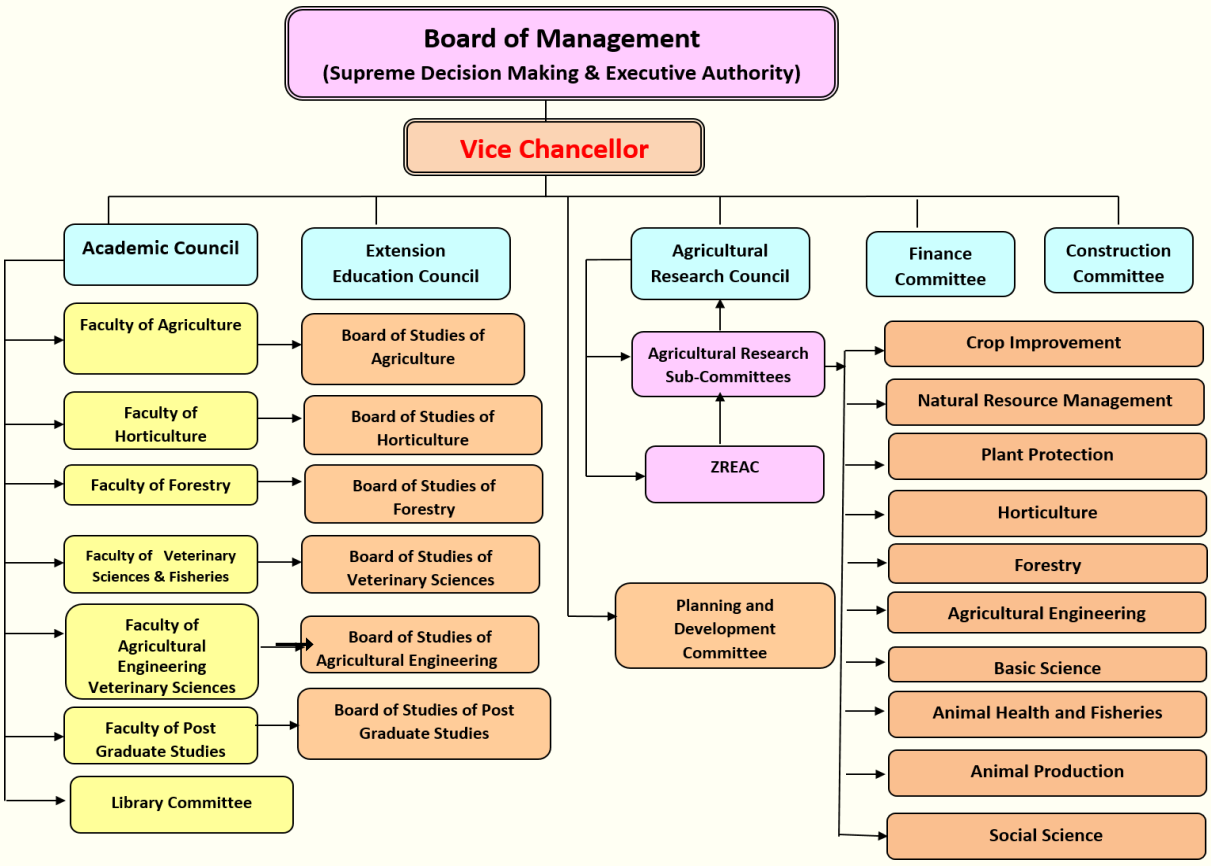
The Executive Engineer heads Department of Construction who is responsible for construction, maintenance of building, water supply, roads , fences and guest houses in the main campus as well as sub-centers.

The librarian is responsible for all matters concerning the library *i.e.* purchase, cataloguing, maintenance of books, journals and operation of the library. Each individual faculty is headed by Dean, who also acts as Chairmen of the Board of Faculties. Dean is responsible for teaching, research and extension work of various departments of the college and each department has Head, who looks after all round departmental activities. Each faculty of the University has various departments approved by BoM and meeting the national standards.

The Academic council is the highest authority for the academic affairs of the University and responsible for maintenance of education standards, system of examination and defining criteria for award of various degrees. It also determines the award of various medals to the meritorious students of the University. Council meets at every four month and as and when needed.

The Research Council is apex body for research affairs of the University and responsible for acceptance, modification and rejection of research proposals. It also monitors progress of the research projects and gives necessary suggestion as and when required.

Extension Education Council is a statutory body 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.



Board of Management Committee

SN	Name	Designation	Position
1	Dr. Z. P. Patel	Hon'ble Vice-Chancellor, NAU, Navsari	Chairman
2	Shri. Manish Bharadwaj (IAS)	Secretary, Agriculture Farmers Welfare and Co-operation Department, Gandhinagar	Member
3	Dr. P. M. Vadhasiya	Directorate of Horticulture, Gujarat State Krishi Bhavan, Gandhinagar (Online)	Member
4	Shri. K. D. Panchal	*Sameti* Directorate and Nodal Officer, Gandhinagar (Online)	Member
5	Dr. S. R. Chaudhary	DR & Dean, PG Studies, NAU, Navsari	Member
6	Dr. Jerambhai Gomanbhai Patel	Agriculture Scientist, Retd. Professor and Head, Narayana Vidhyalaya, Bharuch	Member
7	Shri. Narendrabhai Dahyabhai Modi	Agriculture Scientist, Retd. Associate Research Scientist, Sayan, Taluka: Volapad, D: Surat	Member
8	Shri. Manojbhai Naranbhai Patel	Progressive Farmer, Shekhapur, Taluka: Kamaruj, D: Navsari	Member
9	Smt. Prafullaben N. Desai	Women Social Worker, Kacholi, Taluka: Gandevi, Dist: Navsari	Member
10	Shri. Lalitkumar Dungarbhai Tummar	Agriculture Entrepreneur, Vijalpore, Navsari	Member
11	Dr. P. G. Patel	ICAR Representative, Director, Research Institute of Cotton on Technology, Matunga, Esta Mujab	Member

12	Shri. Manoj Vadh	Deputy Secretary (Higher Education), Education Department, Gandhinagar	Member
13	Shri. Roopavanth Singh	Secretary, Finance Department, (Expenditure)	Member
14	Dr. B. M. Modi	Directorate of Agriculture, Gujarat State *Krishi Bhavan*, Gandhinagar	Member
15	Dr. Falghuni S. Thakar	Directorate of Veterinary, Gujarat State *Krishi Bhavan*, Gandhinagar	Member
16	Dr. H. V. Pandya	Registrar, NAU, Navsari	Secretary

Academic Council Committee

SN	Name	Designation	Position
1	Dr. Z. P. Patel	Hon'ble Vice-Chancellor, NAU, Navsari	Chairman
2	Dr. S. R. Chaudhary	DR & Dean, PG Studies, NAU, Navsari	Member
3	Dr. C. K. Timbadiya	Director of Extension Education, NAU, Navsari	Member
4	Dr. R. M. Naik	Director of Students Welfare, NAU, Navsari	Member
5	Dr. P. K. Shrivastava	Dean, ASPEE College of Horticulture & Forestry, Navsari	Member
6	Dr. K. G. Patel	Dean, College of Agriculture, NAU, Bharuch	Member
7	Dr. Ruchira A. Shukla	Dean, ASPEE Agribusiness Management Institute, Navsari	Member
8	Dr. M. K. Arvadia	Principal, N.M. College of Agriculture, NAU, Navsari	Member
9	Dr. J. J. Pastagia	Principal, College of Agriculture, NAU, Waghai	Member
10	Dr. P. K. Shrivastava	Principal, College of Forestry, NAU, Navsari	Member
11	Dr. V.B. Kharadi	Dean, College of Veterinary Science, NAU, Navsari	Member
12	Dr. R. M. Patel	Principal, ASPEE SHAKILAM Agril. Biotechnology Institute , NAU, Surat	Member
13	Er. S. H. Sengar	Principal, College of Agricultural Engineering & Technology, NAU, Dediapada	Member
14	Dr. K. A. Patel	Professor, NAU, Navsari	Member
15	Dr. Sandya Chaudhari	Professor & Head (Vet. Physiology), College of Veterinary Science & A.H., NAU, Navsari.	Member
16	Dr. R. D. Pandya	Professor & Head, Department of Extension Education, NMCA, NAU, Navsari.	Member
17	Dr. B. P. Brahmkshtri	Professor & Head,(Instructional Livestock), College of Veterinary Science & A.H., NAU, Navsari.	Member
18	Dr. J. R. Desai	Retd. Professor, NAU, Navsari	Member
19	Dr. M. B. Patel	Retd. Professor & Head, Agril. Entomology, NMCA, NAU, Navsari	Member
20	Dr. H. C. Pathak	Retd. DR, NAU, Navsari	Member
21	Dr. N. L. Patel	Retd. Principal, ASPEE College of Horti.	Member

		& Forestry, Navsari	
22	Dr. P. R. Bhatnagar	Head of Institution, Central Soil & Water Conservation Research & Training Institute, ICAR, Vasad Centre, Anand	Member
23	Shri. Kiran Patel	MD, ASPEE Agricultural Research & Development Foundation, Mumbai	Member
24	Shri, L. D. Thummar	Chairman, Rotary Club, Navsari	Member
25	Dr. B. G. Solanki	Retd. Scientist (Cotton), NAU, Surat	Member
26	Dr. J. G. Patel	Retd. Professor, NAU, Bharuch	Member
27	Dr. D. U. Patel	Retd. Research Scientist, NAU, Navsari	Member
28	Dr. R. V. Borichangar	Assoc. Professor, College of Fisheries, NAU, Navsari	Member
29	Dr. H. V. Pandya	Registrar, NAU, Navsari	Secretary

Research Council Committee

SN	Name	Designation	Position
1	Dr. Z. P. Patel	Hon'ble Vice Chancellor, NAU, Navsari	Chairman
2	Dr. S. R. Chaudhary	Director of Research and Dean PG Studies, NAU, Navsari	Secretary
3	Dr. C. K. Timbadia	Director of Extension Education NAU, Navsari	Member
4	Dr. V. R. Naik	Associate Director of Research (Agri.) NAU, Navsari	Member
5	Dr. T. R. Ahlawat	Associate Director of Research (Horti.), NAU, Navsari	Member
6	Dr. K. G. Patel	Dean, Faculty of Agriculture NAU, Bharuch	Member
7	Dr. P. K. Shrivastava	Dean, Faculty of Horticulture & Forestry, NAU, Navsari	Member
8	Dr. V. B. Kharadi	Dean, Faculty of Veterinary Science, NAU, Navsari	Member
9	Dr. P. B. Patel	Convener (Crop Improvement) & Associate Research Scientist, Main Rice Research Station, NAU, Navsari	Member
10	Dr. J. D. Thanki	Convener (NRM) & Professor and Head, Dept. of Agronomy, N.M.C.A., NAU, Navsari	Member
11	Dr. D. R. Bhanderi	Convener (Horticulture) & Professor, Dept. of Horticulture, NMCA, NAU, Navsari.	Member
12	Dr. R. P. Gunaga	Convener (Forestry) & Associate Professor, College of Forestry, NAU, Navsari	Member
13	Dr. K. B. Rakholiya	Convener (Plant Protection) & Associate Professor, Dept. of Plant Pathology, NMCA, NAU, Navsari	Member
14	Dr. P. K. Shrivastava	Convener (Agril. Engg.) & Principal, College of Forestry, NAU, Navsari	Member
15	Dr. Ruchira A. Shukla	Convener (Social Science) & Professor, AABMI, NAU, Navsari	Member
16	Dr. A. V. Narwade	Convener (Basic Sci.) & Associate Professor, Dept. of Genetics and Plant Breeding, NMCA, NAU, Navsari	Member
17	Dr. B. P. Brahmkshtri	Convener (Animal Prod.) Professor and Head,	Member

		Dept. of AGB, VCVS &AH, NAU, Navsari	
18	Dr. C. V. Savalia	Convener (Animal Health) & Professor and Head, Dept. of VPH, VCVS&AH, NAU, Navsari	Member
19	Dr. M. C. Patel	Research Scientist, Main Cotton Research Station, NAU, Surat.	Member
20	Dr. C. G. Intwala	Research Scientist, Main Sugarcane Research Station, NAU, Navsari	Member
21	Dr. V. P. Usadadiya	Research Scientist, Soil and Water Management Research Unit, NAU, Navsari	Member
22	Dr. S. J. Patil	Research Scientist, Agricultural Experimental Station, NAU, Paria	Member
23	Dr. Alka Singh	Professor and Head, Dept. of FLA, ACHF, NAU, Navsari	Member
24	Dr. A. N. Sabalpara	Rtd. Director of Research Navsari Agricultural University, Navsari	Member
25	Dr. Anil R. Chinchmalatpure	Principal Scientist and Head, ICAR-CSSRI, Regional Research Station, Bharuch, Gujarat.	Member
26	Rajeshbhai Bhikhubhai Patel	Progressive Farmer, At. Duvada, Ta. Gandevi, Dist. Navsari	Member
27	Dr. B. M. Modi	Director of Agriculture, Gujarat state	Member
28	Dr. P. M. Vaghasiya	Director of Horticulture, Gujarat state	Member
29	Dr. F. S. Thakar	Director of Animal Husbandry, Gujarat state	Member

Extension Education Council committee

SN	Name	Designation	Position
1	Dr. Z. P. Patel	Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari	Chairman
2	Dr. S. R. Chaudhary	Director of Research & Dean P.G. Studies, NAU, Navsari	Member
3	Dr. K. G. Patel	Dean, College of Agriculture, NAU, Bharuch	Member
4	Dr. P. K. Srivastava	Dean, Aspee College of Horticulture & Forestry, NAU, Navsari	Member
5	Dr. V. B. Kharadi	Dean, Vanbandhu College of Veterinary Science & Animal Husbandry, NAU, Navsari	Member
6	Dr. Ruchira A. Shukla	Dean, ASPEE Agri Business Management Institute, NAU, Navsari	Member
7	Er. S. H. Sengar	Principal, College of Agricultural Engineering & Technology, NAU, Dediapada, Dist.-Narmada	Member
8	Dr. R. M. Patel	Dean, ASPEE SHAKILAM Agricultural Biotechnology Institute, NAU, Surat	Member
9	Dr. R. D. Pandya	Professor & Head, Department of Extension Education, N.M. College of Agriculture, NAU, Navsari	Member
10	Dr. R. M. Naik	Director of Student Welfare and Associate Professor, Dept. of Extension Education, N.M. College of Agriculture, NAU, Navsari	Member
11	Dr. Mahaveer Chaudhary	Principal, Agriculture Polytechnic, NAU, Waghai, Dist: Dang	Member
12	Dr. C. D. Pandya	Senior Scientist and Head, Krushi Vigyan	Member

		Kendra, NAU, Vyara, Dist: Tapi	
13	Dr. S. C. Mali	Assoc. Research Scientist, Main Sugarcane Research Station, NAU, Navsari	Member
14	Shri Bharatbhai Nanubhai Patel	*Nandanvan Gir Gaushala* and Charitable Trust (*Nandanvan Prakrutik Krushi Kendra*), At: Sanvalla, Ta: Mahuva, Dist: Surat	Member
15	Dr. Tulsibhai L. Mavani	President, Dr. Ambedkar *VanvasiKalyan* Trust, Near Choksi Wadi, Rander Road, Surat.	Member
16	Shri Bharatbhai Naranji Desai	Shri Umarsadi Anavil *Pragati Mandal* (Mumbai), At. & Po. Umarsadi, Dipli Falia, Ta. Pardi, Dist. Valsad	Member
17	Director of Agriculture	*Krishi Bhavan*, Sector - 10 A, 'CH' Road, Gandhinagar- 382 010	Member
18	Director of Horticulture	*Krishi Bhavan*, Sector - 10 A, 'CH' Road, Gandhinagar- 382 010	Member
19	Director of Animal Husbandry	*Krishi Bhavan*, Sector - 10 A, 'CH' Road, Gandhinagar- 382 010	Member
20	Shri Dharmeshbhai Bhagubhai Patel	At: Chijgam, Ta: Jalalpore, Dist: Navsari	Member
21	Smt. Nishaben Shaileshbhai Chaudhary	At: Parvat, Ta: Mandvi, Dist: Surat	Member
22	Dr. S. D. Kavad	Associate Professor (Extension), Directorate of Extension Education, NAU, Navsari	Member
23	Dr. C. K. Timbadia	Director of Extension Education, Navsari Agricultural University, Navsari	Member Secretary

Planning and Development Committee

SN	Name	Designation	Position
1	Dr. S. R. Chaudhary	I/c Vice Chancellor, NAU, Navsari	Chairman
2	Dr. S. R. Chaudhary	Director of Research & Dean PGS, NAU, Navsari	Member
3	Dr. K. A. Patel	Director of Extension Education, NAU, Navsari	Member
4	Dr. C. V. Savaliya	Director of Students Welfare, NAU, Navsari	Member
5	Dr. H. R. Pandya	Registrar, NAU, Navsari	Member
6	Shri. D. T. Chaudhari	Comptroller, NAU, Navsari	Member
7	Er. H. T. Bhalshod	Executive Engineer, NAU, Navsari	Member
8	Dr. K. G. Patel	Dean, Faculty of Agriculture	Member
9	Dr. P. K. Shrivastava	Dean, Faculty of Horticulture	Member
10	Dr. V. B. Kharadi	Dean, Faculty of Veterinary	Member
11	Dr. Ruchira A. Shukla	Dean, Faculty of ABM	Member
12	Dr. P. R. Pandey	Dean, Faculty of Agril.Engg.	Member
13	Dr. K. D. Tandel	Librarian, NAU, Navsari	Member
14	Dr. D. Z. Patel	Retd. Joint Director of Agriculture	Non-official Member
15	Dr. Anil Chinchmalatpure	Director CSSRI, Bharuch	Non Official Member
16	Dr. M. B. Patel	Retd. Prof. & Head Entomology	Non Official Member
17	Dr. Suraj D. Savalia	Paston food Industry, Navsari	Non Official Member

18	Dr. A. N. Sabalpara	Retd. Director of Research	Non Official Member
19	Dr. M. K. Arvadiya	Principal, College of Agriculture, Navsari	Co-opt Member
20	Dr. P. K. Shrivastava	Principal, College of Forestry, Navsari	Co-opt Member
21	Dr. J. J. Pastagia	Principal, College of Agriculture, Waghai	Co-opt Member
22	Dr. R. M. Patel	Principal, Aspee Sakilam Biotechnology Institute, Surat	Co-opt Member
23	Dr. K. A. Patel	Associate Director of Research, NAU, Navsari	Co-opt Member
25	Dr. T. R. Ahlawat	Associate Director of Research, NAU, Navsari	Co-opt Member
26	Dr. V. M. Thumar	Planning Officer	Member Secretary

SC/ST Committee

SN	Name	Designation	Position
1	Dr. V. K. Parmar	Professor, ASPEE College of Horticulture and Forestry, NAU, Navsari	Chairman
2	Dr. Gautambhai R. Parmar	Assistant Professor, ASPEE Agri. Business Management Institute, Navsari	Member-Secretary
3	Dr. Mukesh R. Parmar	Assistant Professor, ASPEE College of Horticulture and Forestry, NAU, Navsari	Member
4	Shri. Bhavesh D. Chaudhary	Assistant Professor, ASPEE Agri. Business Management, NAU, Navsari	Member
5	Shri. Hiteshbhai T. Patel	Senior Clark, Controller Register, NAU, Navsari	Member
6	Dr. Ajaykumar P. Patel	Assistant Professor, College of Agriculture, NAU, Waghai	Member
7	Shri. Arpit J. Dhodiya	Assistant Professor, KVK, NAU, Vyara	Member
8	Shri. Valajibhai T. Parmar	Agriculture Officer, Principal, College of Agricultural, NAU, Bharuch	Member
9	Shri. S. B. Chaudhary	Senior Clark, ASPEE SHAKILAM College, NAU, Surat	Member

Gender Committee

SN	Name	Designation	Position
1	Dr. Alka Singh	Professor, ASPEE College of Horticulture & Forestry, NAU, Navsari	Chairperson/ Nodal Officer
2	Dr. John Priya	Associate Professor, Department of Plant Pathology, N.M. College of Agriculture, NAU, Navsari	Member
3	Dr. Manjushree Singh	Assistant Professor, N.M. College of Agriculture, NAU, Navsari	Member
4	The topper student of the concerned faculty	The topper student of the concerned faculty	Member
5	Smt. Patel Kuntaben Mohanbhai	Sr. Clerk, Principal, N.M. College of Agriculture, NAU, Navsari	Member
6	Head of Unit to which the case relates. In case involving the Non-teaching employees, the Registrar or his nominee shall be the member.		Member
7	Smt. Harshaben	*Gram Seva* Trust Kharel, Ta. Gandevi,	Member

	Shah	Dis. Navsari	
8	Dr. Sonal Tripathi	Associate Professor, N.M. College of Agriculture , NAU, Navsari	Secretary

Important Meetings and decisions

Board of Management

During the year under report two meetings of Board of Management were held and important decisions taken were as under –

XV special meeting of BoM (2.2.2021)

To Approve the minutes of the XLIII meeting of Board of Management held on Dt. 13.12.2019

Report on the action taken on the minutes of the XLIII meeting of Board of Management held on Dt. 13.12.2019

It is hereby resolved to award' the Chancellor's Gold Medals to the following candidates for the year 2019-20

Sr. No	Name of the student with Registration Number	Degree
1	Ravindra Kumar Dhaka 1030316002	Ph. D. (Forestry)
2	Kaldate Supriya Bhimrao 2010117045	M.Sc. (Agri.)

It is hereby resolved to award "**Vice Chancellor's Gold Medal**" to the following students for theyear 2019-20.

Sr. No	Name of the student and Registration Number	Faculty
1	Vadodariya Himani Pravinbhai (3010116104)	Agriculture
2	Sojitra Gopi Arjanbhai (3020216048)	Horticulture
3	Preeti (3030316029)	Forestry
4	Meenal (3040415032)	Veterinary Science and Animal Husbandry
5	Mirali Roy (3060816014)	Agril. Biotechnology
6	Panchani Nishad Pradipbhai (3050916011)	Agri. Engineering
7	Halpati Reena Prakashbhai (3111016003)	Fisheries Science

It is hereby resolved to award "**Gold Plated Silver Medals**" to the post Graduate Students in the subjects of B.Sc. (Agriculture), B.Sc. (Horticulture), B.Sc. (Forestry) and B. V. Sc. and A. H. (Veterinary) for the year 2019-20**.**

It is hereby resolved to award "**Gold Plated Bronze Medals**" to the Post Graduate Students of the M.Sc. and Ph.D. in the faculty of Agriculture, Horticulture and Forestry for the year 2019-20.

It is hereby resolved to award "**Matrushree Sukhiben lallubhai Patel Gold Medal**" to the Post Graduate Students faculty of Agriculture, PATEL RIMABEN HASMUKHBHAI Registration No 2010117085 for the year 2019-20**.**

It is hereby resolved to award "**Gold Plated Silver Medals**" to the Under Graduate Students in the subjects of B.Sc. (Agriculture), B.Sc. (Horticulture), B.Sc. (Forestry) and B. V. Sc. and A. H. (Veterinary) for the year 2019-20.

It is hereby resolved to award of "**Gold Plated Bronze Medals**" to the **Under Graduate Students** in the subjects of B.Sc. (Agriculture), B.Sc. (Horticulture) and B.Sc. (Forestry) for the year 2019-20.

It is hereby resolved to award of "**Dr. Jayantilal V. Majmudar Gold Medal**" to the Under Graduate Student **Vadodariya Jaimin Mansukhbhai** Registration No**. 3010116105** of the B.Sc. (Agriculture) for the year 2019-20".
It is hereby resolved to award **"Matrushree Sukhiben Lallubhai Patel Gold Medal"** for the post graduate student of Agriculture faculty, Navsari Agricultural University as per the regulations from academic year 2018-19.
It is hereby resolved to award **"ASPEE Foundation Gold Medal"** for the student of B.Sc.(Hons) Agriculture, Navsari Agricultural University as per the regulations appended herewith, from academic year 2018-19.
It is resolved that the Dr. Tushar U. Patel, Assistant Professor, Dept. of Agronomy, College of Agriculture, NAU, Bharuch from Agriculture faculty of Navsari Agricultural University, Navsari is approved for the **"Best Teacher Award"** for the Year 2019-20**.**
It is resolved that Dr. D. A. Chauhan, Associate Research Scientist, Nodal Officer and Unit Head, Pulses and Castor Research Station, NAU, Navsari from Navsari Agricultural University, Navsari to accord approval for the **"Best Researcher Award**" for the Academic year 2019-20.
"The Board of Management hereby approved the results of different faculties for the Academic year 2019-20"
The Board of Management here by approve the list of 691 students of Under-graduate and Post-graduate and recommend for the award of degree certificates during Sixteenth Annual Convocation.
આથી ઠરાવવામાં આવેછે કે, પ્રવર્તમાન કોરોના મહામારીને ધ્યાને લઈ નવસારી કૃષિ યુનિવર્સિટીનો સોળમો પદવીદાન સમારંભ ફકત ઓનલાઈન (વર્ચુઅલ) ગોઠવવો તેમજ પદવી મેળવનાર દરેક વિદ્યાર્થી પાસેથી એક સમાન ફી `૫૦૦/- વસુલી અને તેમના પદવી પ્રમાણપત્ર તેમના એડ્રસ પર મોકલી આપવા માટેની મંજુરી સંચાલક મંડળ આપે છે.
આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટીના સને 2019-20 (તા.01-04-2019 થી તા.31-03-2020) ના વાર્ષિક હિસાબને આગળની કાર્યવાહી માટે મંજુરી આપવામાં આવે છે.
આથી ઠરાવવામાં આવે છે કે, ગુજરાત કૃષિ યુનિવસિટીઓ અધિનિયમ–૨૦૦૪ ની કલમ ૪૮(૫) અનુસાર નવસારી કૃષિ યુનિવસિટી, નવસારીના સને ૨૦૧૪-૧૫ ના વર્ષનો ઓડિટ અહેવાલ અને તેના પર લીધેલ પગલાની નોધ ગુજરાત સરકારશ્રીને ગુજરાત વિધાનસભા સમક્ષ રજૂ કરવા ભલામણ કરવામાં આવે છે.

LXIV Meeting of Board of Management (26.02.2021)

To Approve the minutes of the XV Special meeting of Board of Management held on Dt. 2.2.2021.
Report on the action taken on the minutes of the XV Special meeting of Board of Management held on Dt. 2.2.2021.
આથી ઠરાવવામાં આવેછે કે, નવસારી કૃષિ યુનિવર્સિટી, હસ્તકની વિકાસખર્ચ (પ્લાન) ની ચાલુ યોજનાઓ માટે નાણાંકીય વર્ષ ૨૦૨૦-૨૧ માટે કુલ `૮૩૮૯.૫૨ લાખની સુધારેલ અંદાજ પત્રીય જોગવાઇ ને સરકારશ્રીમાં રજુકરવાની કાર્યોત્તર મંજુરી આપવામાં આવે છે.
આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તકની વિકાસ ખર્ચ (પ્લાન) ની નાણાંકીય વર્ષ ૨૦૨૧-૨૨ માટે ચાલુ યોજનાઓ માટે `૮૭૮૧.૦૪ લાખની

તેમજ સ્થાયી ખર્ચની યોજનાઓ માટે `૧૨૧૮૧.૩૧ લાખની અંદાજપત્રીય જોગવાઇને સરકારશ્રીમાં રજુકરવાની કાર્યોત્તર મંજુરી આપવામાં આવે છે.

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક વિકાસ ખર્ચ હેઠળ આગામી વર્ષ ૨૦૨૧-૨૨ની અંદાજ પત્રિય જોગવાઇમાં સુચિતન વાબાંધકામો સરકારશ્રીમાં રજુકરવાની કાર્યોત્તર મંજુરી આપવામાં આવે છે.

આથી ઠરાવવામાં આવેછે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક વિકાસ ખર્ચ યોજનાની આગામી વર્ષ ૨૦૨૧-૨૨ની અંદાજ પત્રીય જોગવાઇમાં મુકવાના થતા ` ૫.૦૦ લાખ કે તેથી વધુ કિંમતના નોનરીકરીંગ સાધનોને સરકારશ્રીમાં રજુકરવાની કાર્યોત્તર મંજુરી આપવામાંઆવે છે.

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક વર્ષ ૨૦૨૧-૨૨ની અંદાજ પત્રીય જોગવાઇમાં વિકાસ ખર્ચ હેઠળ વિભાગ-૧ અંતર્ગત મુકવાના થતા સૂચિતનવા કાર્યક્રમોને સરકારશ્રીમાં રજુ કરવાની કાર્યોત્તર મંજુરી આપવામાં આવે છે.

આથી ઠરાવવામાં આવેછે કે, નવસારી કૃષિ યુનિવર્સિટી ,નવસારીના ચાલુ નાણાંકીય વર્ષ: ૨૦૨૦-૨૧ના વાર્ષિક વિકાસ કાર્યક્રમ અંતર્ગત વિકાસખર્ચ (Development charges) હેઠળ કૃષિ શિક્ષણ, વિસ્તરણ શિક્ષણ અને સંશોધનની વિવિધ ચાલુ બાબતોના `૮૧૧૫.૦૬, લાખ ચાલુ બાંધકામના `૪૮.૦૦ લાખ તેમજ નવા કાર્યક્રમો અને બાંધકામના `૨૨૬.૪૬ લાખ માટેની કુલ અંદાજ પત્રીય જોગવાઈ `૮૩૮૯.૫૨ લાખની મર્યાદામાં હાથ ધરવા માટેના "વાર્ષિક વિકાસ કાર્યક્રમ ૨૦૨૦-૨૧"ને કાર્યોત્તર મંજુરી આપવામાં આવે છે.

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટીના, સને ૨૦૨૦-૨૧ના વર્ષની વિકાસ ખર્ચ યોજનાઓની મંજુર થયેલ અંદાજપત્રિય જોગવાઈ `૮૧૬૩.૦૬ લાખ અને સ્થાયી ખર્ચ યોજનાની અંદાજપત્રીય જોગવાઈ `. ૬૮૬૬.૬૭ લાખ એમ બંને મળીને કુલ `૧૫૦૨૯.૭૩ લાખની અંદાજપત્રીય જોગવાઈ સ્વીકારવામાં આવે છે અને મંજુર થયેલ જોગવાઈની મર્યાદામાં ખર્ચ કરવા તથા રીએપ્રોપીએશન કરવાની સત્તા માન. કુલપતિશ્રીને આપવામાં આવે છે.

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક વર્ષ ૨૦૨૦-૨૧ ની અંદાજપત્રીય જોગવાઇમાં વિકાસ ખર્ચ હેઠળ વિભાગ-૧ અંતર્ગત મંજુર થયેલ નવા કાર્યક્રમો `૨૬.૪૬ લાખને સરકારશ્રીમાંથી વહીવટી હુકમો આવ્યેથી તેમજ નવા બાંધકામો `.૨૦૦.૦૦ લાખને અમલ કરવાની કાર્યોત્તર મંજુરી આપવામાં આવે છે.

આથી ઠરાવવામાં આવેછે કે ડીન, અસ્પી એગ્રી બીઝનેશ મેનેજમેન્ટ ઈન્સ્ટીટયુટ, નવસારી કૃષિ યુનિવર્સિટી, નવસારીનાં નિયંત્રણ હેઠળ કાર્યરત વિકાસ ખર્ચ યોજના (પ્લાન) "Establishment of Information Technology Center at Navsari" બ. સ. ૧૨૯૮૮ને તા. ૧/૦૪/૨૦૨૦ની અસરથી કુલ સચિવશ્રી, નવસારી કૃષિ યુનિવર્સિટી,નવસારીના સીધા નિયંત્રણ હેઠળ મુકવાની આથી મંજુરી આપવામાં આવે છે.

The Board of Management resolved to approve the remuneration rate of external referees/ Examiner's for thesis evaluation / thesis *viva*/ prelim *viva* at post-graduate level at NAU, Navsari as per details given below.

SN	Particulars	Rs.
1	Honorarium for thesis evaluation of M.Sc. student	1500/-
2	Honorarium for thesis *viva-voce* examination of M.Sc. student	1000/-
3	Honorarium for thesis evaluation of Ph.D. student	2500/-
4	Honorarium for thesis *viva-voce* examination of Ph. D. student	2000/-
5	Honorarium for Preliminary *viva-voce* examination of Ph.D. student	1500/-

It is hereby resolved to accord *post-facto* approval for MoUs signed by NAU, Navsari with various government institute and private companies/NGOs.

It is hereby resolved to accord *post-facto* approval for implementation of research projects, submitted and financed by other agencies (**private sector**) at N.A.U, Navsari during the year 2019 and 2020-21 having a total outlay of Rs. 8.00 and 16.00 lakhs, respectively.

It is hereby resolved to accord *post-facto* approval for implementation of research projects, submitted and financed by other agencies (**public sector**) at N.A.U, Navsari during the year 2019-20 and 2020-21 having a total outlay of Rs. 9.60 and 86.51 lakhs, respectively.

The fellowship rate of **'NAU Girl's fellowship scheme'** is revised from Rs. 500/-to Rs.3000/- per month ***at par*** with ICAR-NTS fellowship and Rules & Regulations w.e.f. Academic Year 2020-21.

The fellowship rate of **'NAU PG Fellowship scheme'** is revised from Rs.1200/- to Rs.5000/- per month for Master's degree, and Rs.1500/- to Rs.5000/- per month for Ph.D. degree ***at par*** with ICAR-NTS fellowship and Rules & Regulations *w.e.f.* Academic year 2020-21.

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, ભરૂચ મુકામે બોઈઝ હોસ્ટેલ ફોર પોલિટેકનિકના બાંધકામની સ્ટેચ્યુટ એ-૧૨૧ આઇટમ નં.૮૮(૧)(૧) થી મળેલ સત્તા મુજબ સંચાલક મંડળ `૩૦૦.૦૦ લાખની વહીવટી મંજુરી આપવાનું સર્વાનુંમતે ઠરાવે છે .

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, વઘઇ મુકામે બોઈઝ હોસ્ટેલ ફોર પોલિટેકનિકના બાંધકામની સ્ટેચ્યુટ એ-૧૨૧ આઇટમ નં.૮૮(૧)(૧) થી મળેલ સત્તા મુજબ સંચાલક મંડળ `૩૦૦.૦૦ લાખની વહીવટી મંજુરી આપવાનું સર્વાનુંમતે ઠરાવે છે.

આથી ઠરાવવામાં આવે છે કે, નિયામક મંડળના બે નોન ઓફિસિયલ સભ્યો સર્વશ્રી લલિતકુમાર ડુંગરભાઈ ઠુમ્મરને તા.૩૦.૦૯.૨૦૨૨ સુધી તથા ડૉ.જેરામભાઇ ગોમનભાઇ પટેલને તા.૩૦.૧૨.૨૦૨૨ સુધી યુનિવર્સિટી કક્ષાની ખરીદ સમિતિમાં નોન ઓફસિયલ સભ્ય તરીકે નિમણૂંક આપવા માટે આગામી નિયામક મંડળની બેઠકની મંજૂરીની અપેક્ષાએ કાર્યપાલક ઇજનેરની કચેરીની નોંધ ઉપર નિયામક મંડળના અધ્યક્ષ અને માન.કુલપતિશ્રી આપેલ મંજૂરીને સર્વાનુમતે બહાલી આપવામાં આવે છે.

આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારીનું સને 2021-22 ના વર્ષનું સ્થાયી ખર્ચ (Standing Charges) યોજનાઓનો કુલ અંદાજ ` 9792.78 (લાખ) પૈકી યુનિવર્સિટીની સૂચિત આવક `535.84 (લાખ) બાદ કરી નેટ અંદાજ `9256.94 (લાખ)

સરકારશ્રીમાં રજુ કરવા ભલામણ કરવામાં આવે છે.

નવસારીકૃષિયુનિવર્સિટી, નવસારીના સને 2020-21 ના વર્ષની સ્થાયી ખર્ચ યોજનાઓની અંદાજપત્રની મંજુર જોગવાઈ `6887.53 (લાખ) નાણાં વિભાગ દ્વારા મંજુર કરેલ છે, જેને સ્વીકારવામાં આવે છે અને મંજુર જોગવાઈની મર્યાદામાં નાણાંકિય વર્ષ 2020-21 માં ખર્ચ કરવા અનુમતિ આપવામાં આવે છે.

આથી ઠરાવવમાં આવે છે કે, નવસારી કૃષિ યુનિવર્સીટી, નવસારીના નાણા સમિતિના નોન ઓફિસીયલ સભ્ય તરીકે શ્રી એલ.ડી.ઠુમ્મરની તા.૧૦.૦૬.૨૦૨૦ થી તા.૦૯.૦૬.૨૦૨૧ સુધી નિમણુંક આપેલ છે તેને બહાલી આપવામાં આવે છે.

Academic Council meetings

During the year under report two meetings of Academic Council were held and important decisions taken were as under –

The XLII meeting of the Academic Council (21.09.2020)

To Approve the minutes of the XLI meeting of Academic Council held on 09.12.2019.
Report on the action taken on the minutes of the XLI meeting of the Academic Council held on 09.12.2019 at Navsari.
નવસારી કૃષિ યુનિવર્સિટીના સને ૨૦૨૦–૨૧ના વર્ષ માટે સ્નાતક કક્ષાએ પ્રવેશ ક્ષમતા મંજૂર કરવામાં આવે છે.
The Academic Council resolved to approve the intake capacity of PG students for the academic year 2020-21 as per for PG degree programs of various faculties offered by NAU, Navsari.
The Academic Council resolved to approve the revised format for synopsis and thesis of Post Graduate students of NAU, Navsari *w.e.f.* 2020-21.
The Academic Council resolved to approve the revised Eligibility criteria and Admission procedure for MBA (ABM) programme and Ph. D. (ABM) Programmes from the academic year 2020-21.
The Academic Council resolved to approve for splitting the course of Ag. Ento. 5.4: "Pests of Field crops and stored grains and their management (1+1) and Ag. Ento 6.5: Pests of Horticultural crops and their management (1+1) in next V and VI semester. To maintain the credit load, subject Envs. 6.1 Environmental studies and Disaster Management (2+1) shifted from sixth semester to Fifth semester as Envs. 5.1(2+1)*w.e.f.* academic year 2020-2021.
The Academic Council resolved to approve the taxonomy of below mentioned plant pathogenic fungi to be taught instead of whole plant pathogenic fungi in UG syllabus Pl. Patho course 1.1 (2+1) (a) Important pathogen of plant :- (i) Phylum: Glomeromycota e.g. Rhizopus, Mucor. (ii) Phylum: Ascomycota e.g. Taphrina, Saccharomyces, Mycosphorella, Venturia, Erysiphe, Hypocrea and Glomerella. (iii) Phylum: Basidiomycota: e.g. Puccinia, Uromyces, Ustilago, Tolyppsporium, Tilletia, Agaricus. (iv) Anamorphic fungi:- Alternaria, Cercospora, Helminhthosporium, Pyricularia,

Fusarium, Colletotrichum, Phoma, Glomus, Aschoyta. (v) Other fungi: Pythium, Phytopthora, Albugo, Sclerosopra, Perenospora, Plasmopara, Oidium, Sclerotium. It is also resolved to approve the revision in UG syllabus plant pathogenic 1.1 (2+1).
The Academic Council resolved to approve post facto sanction of the online examination for the Polytechnic, Graduate and Post Graduate courses conducted in all the faculties during the year 2020 due to Covid-19 global pandemic.
ગુજરાત સરકારશ્રીની SHODH યોજના માટે પી. જી. વિદ્યાર્થીની રિસર્ચ એડવાઈઝરી કમિટીને, રીસર્ચ ડેવલોપમેન્ટ કમિટી (RDC) તરીકે માન્યતા આપવા અને ફેરફાર કરેલ છે તે મુજબનું RDCનું પ્રફોર્મા માનનીય સંચાલક મંડળને માન્ય કરવા વિદ્યાપરિષદભલામણ કરે છે.
The Academic Council resolved to accord the post-facto approval of internal assessment (theory) for New VCI (Regulation MSVE-2016) and semester end internal theory and practical examinations for old VCI (Regulation MSVE-2008) through online mode due to COVID-19 global pandemic.
The Academic Council resolved to accord the post-facto approval to conduct of Annual theory and practical examinations for students of first, second and third professional years (Regulation MSVE-2016) and fourth year old VCI (Regulation MSVE-2008) through online started from August 17, 2020 due to COVID-19 global pandemic.
The Academic Council resolved to recommend to SAUs council of Gujarat for adoption and implementation of modified common academic regulations for B.V.Sc. and A.H. in context with revised MSVE-2016.
The Academic Council resolved to approve and implementation the Counseling and Placement Guidelines of Navsari Agricultural University.
The Academic Council to approve to inter change of the course No., subjects namely 'Refrigeration and Equipment Engineering' and 'Freezing Technology' in IIIrd and IVthsemester of 'Bachelor of Fisheries Science (B.F.Sc)' Degree.
The Academic Council resolved to recommend the Board of Management for approval to provide stipend minimum Rs. 3000/- per month per student from recurring contingency of plan scheme sanctioned by Government of Gujarat during Rural Fisheries Work Experience Programme (RFWEP) to students of College of Fisheries Science, NAU, Navsari.
The Academic Council resolved to recommend the Board of Management for approval to include 'Bachelor of Fisheries Science (B.F.Sc)' degree in Gujarat State Agricultural Universities Services (Recruitment of Non-Teaching Staff) Rules, 2011 for direct selection of Lab-Technician/Lab-Assistant.
The Academic Council resolved to approve the Logo of College of Agriculture, NAU, Waghai (Dangs).

The XLIII meeting of Academic Council held on 22.01.2021

The proceedings of the XLII meeting of the Academic Council, NAU, Navsari held on 21.09.2020 was presented and approved.
Report on the action taken on the minutes of the XLII meeting of Academic Council held on 21.09.2020 at Navsari.
Academic Council recommend to the Board of Management for approval of results of different faculties of U.G. and P.G. as per of the Agenda.
" આથી ઠરાવવામાં આવે છે કે, પ્રવર્તમાન કોરોના મહામારીને ધ્યાને લઈ નવસારી કૃષિ યુનિવર્સિટીનો સોળમો પદવીદાન સમારંભ ફકત ઓનલાઈન (વર્ચ્યુલ) ગોઠવવો તેમજ પદવી મેળવનાર દરેક વિદ્યાર્થી પાસેથી એક સમાન ફી રૂા.૫૦૦/– વસુલી અને તેમના પદવી પ્રમાણપત્ર તેમના એડ્રેસ પર મોકલી આપવા માટેની જરૂરી કાર્યવાહી કરવા વિદ્યાપરિષદ નિયામક મંડળને ભલામણ કરે છે."

Agriculture Research Council

During the year under report one meeting of Agriculture Research Council was held and important decisions taken were as under –

XIII Meeting of Agricultural Research Council (January 01, 2021)

	Research Council approved the minutes of the XII Meeting of the Agricultural Research Council held on December 09, 2019 at Navsari.
	Action Taken Report on Minutes of the XII Meeting of the Agricultural Research Council held at Navsari on December 09, 2019 was presented and approved by the Council.
	Details regarding recommendations for farmers and scientific communities as well as New Technical Programs approved during XV and XVI Combined Joint AGRESCO Sub-Committee meeting of SAUs of Gujarat were presented and noted by the Council.
	"The Research Council hereby resolved to recommend the Board of Management of NAU to accord *Post-facto* approval for implementation of four research projects, submitted and financed by public sector (other agencies) at NAU, Navsari during the year 2019-20 and 2020-21 with a total outlay of Rs. 9.60 and 86.51 lakhs, respectively".
	"The Research Council hereby resolved to recommend the Board of Management of NAU to accord *Post-facto* approval for implementation of three research projects, submitted and financed by other agencies (private sector) at NAU, Navsari during the year 2019-20 and 2020-21 having a total outlay of Rs. 8.00 and 16.00 lakhs, respectively ".
	All past and newly appointed conveners of different AGRESCO Sub-Committees of NAU, Navsari were given the responsibility to identify and prioritize thrust areas of the research and submit to the Director of Research for compilation.

Extension Education Council

During the year under report one meeting of Extension Education Council was held and important decisions taken were as under –

XII Meeting of Agricultural Research Council (26.02.2021)

	ક્ર	**નવસારી કૃષિ યુનિવર્સિટીની વિસ્તરણ શિક્ષણ પરિષદની અગિયારમી બેઠક તા.૧૧/૦૭/૨૦૧૯ના રોજ નવસારી ખાતે મળેલ હતી, જેની કાર્યનોંધ અંગે ચર્ચા કરીને મંજૂર કરવામાં આવી.**
	ક્ર	નવસારી કૃષિ યુનિવર્સિટીની વિસ્તરણ શિક્ષણ પરિષદની અગિયારમી બેઠક તા.૧૧/૦૭/૨૦૧૯ના રોજ નવસારી ખાતે મળેલ હતી, જેની કાર્યનોંધ અન્વયે લેવાયેલ પગલાંની સભ્યશ્રીઓ દ્વારા સમીક્ષા કરીને તેની નોંધ લેવામાં આવી.
	:	ભારતીય કૃષિ અનુસંધાન પરિષદ, નવી દિલ્હી તરફથી વર્ષ ૨૦૨૦–૨૧ દરમ્યાન કૃષિ વિજ્ઞાન કેન્દ્ર, વ્યારા, જિ. તાપી ખાતે "Atmosphere & climate research-modelling observing systems and services (ACROSS)"અંતર્ગત "District Agro Met Unit (DAMU)"નામની યોજના નીચેની વિગતે મંજૂર થયેલ છે.

અ.નં.	કેન્દ્રનું નામ	ગ્રાન્ટ (રૂા.લાખમાં)
૧	કૃષિ વિજ્ઞાન કેન્દ્ર, વ્યારા, જિ. તાપી	૧.૨૦
	કુલ રૂા. લાખમાં	**૧.૨૦**

સદરહુ યોજનાનો મુખ્ય હેતૂ હવામાનને લગતી રોજબરોજની માહિતી રાષ્ટ્રિય કક્ષાએ એકત્રિત કરીને કૃષિ વિકાસ માટે ઉપયોગી થવાનો છે. આ યોજનામાં નીચે કોઠામાં દર્શાવ્યા મુજબનો કરાર આધારિત સ્ટાફ (Contractual staff) મંજૂર થયેલ છે.

S. N.	Manpower	Qualification	No. of post sanctioned	Salary as per 6th CPC
1	SMS (Agro-	Post-Graduation in Agrometeorology / Meteorology	1	Rs.15600-39100

		meteorology)	/ Agronomy / Agriculture Physics but preference may be given to candidates with Agrometeorology qualification		(GP-Rs.5400/-)
		2 Agromet Observer	10+2 in Science stream along with the basic knowledge of computer operations	1	Rs.5200-20200 (GP Rs.2000/-)
			Total Posts	**2**	

ભારતીય કૃષિ અનુસંધાન પરિષદ, નવી દિલ્હી તરફથી વર્ષ ૨૦૨૦–૨૧ દરમ્યાન કૃષિ વિજ્ઞાન કેન્દ્ર, વ્યારા, જિ. તાપી ખાતે નવી મંજૂર થયેલ "District Agro Met Unit (DAMU)"યોજનાના અમલીકરણની તથા તેમાં કરાર આધારીત મંજૂર થયેલ કુલ ૨ (બે) કોન્ટ્રાકચ્યુલ સ્ટાફની ભરતી કરવાની સંચાલક મંડળ મંજૂરી આપે તે માટે વિસ્તરણ શિક્ષણ પરિષદના સભ્યશ્રીઓ સંચાલક મંડળને સર્વાનુમતે ભલામણ કરે છે.

- નાયબ બાગાયત નિયામકશ્રી, વ્યારા, જિ. તાપી દ્વારા HRT-2 યોજના હેઠળ પ્લગ નર્સરી ઉભી કરવા માટે વર્ષ ૨૦૧૯–૨૦ દરમ્યાન કૃષિ વિજ્ઞાન કેન્દ્ર, વ્યારા, જિ. તાપી ખાતે "Production of vegetable seedlings through plug technology"નામનો પ્રોજેકટ નીચેની વિગતે મંજૂર કરવામાં આવેલ છે.

અ. નં.	યોજનાનું નામ	બ.સ.	પ્રોજેકટનું નામ	નાણાકિય ફાળવણી (રૂા.લાખમાં)
૧.	HRT-2યોજનામાં પ્લગ નર્સરી	૩૪૦/૧૮૨૦૨	Production of vegetable seedling through plug technology	૩૦.૦૦

- નાયબ બાગાયત નિયામકશ્રી, વ્યારા, જિ. તાપી તરફથી વર્ષ ૨૦૧૯–૨૦ દરમ્યાન કૃષિ વિજ્ઞાન કેન્દ્ર, વ્યારા, જિ. તાપી ખાતે નવા મંજૂર થયેલ "Production of vegetable seedlings through plug technology"પ્રોજેકટના અમલીકરણ માટે સંચાલક મંડળ મંજૂરી આપે તે માટે વિસ્તરણ શિક્ષણ પરિષદ સર્વાનુમતે ભલામણ કરે છે.
- વિસ્તરણ શિક્ષણ નિયામકશ્રીની કચેરી હેઠળ કાર્યરતબેકરીશાળા ખાતે બનાવવામાં આવતી બેકરી વાનગીઓના નવા વેચાણ ભાવો મંજૂર કરવાની સત્તા એકમના વડા (યુનિટ હેડ) તરીકે વિસ્તરણ શિક્ષણ નિયામકશ્રીને હોવાથી આ મુદ્દો વિસ્તરણ શિક્ષણ પરિષદમાં મુકવાની આવશ્યકતા ન હોવાથી તેને રદ કરવા માટે વિસ્તરણ શિક્ષણ પરિષદના સભ્યશ્રીઓ દ્વારા સર્વાનુમતે નકકી થયું.
- નવસારી કૃષિ યુનિવર્સિટી ખાતેવિસ્તરણ શિક્ષણ પરિષદની મંજૂરીની અપેક્ષાએ શરૂ કરવામાં આવેલ ૧૫ દિવસીય "સર્ટીફિકેટ કોર્ષ ઓન ઈન્ટીગ્રેટેડ ન્યુટ્રીયન્ટ મેનેજમેન્ટ ફોર ફર્ટીલાઈઝર ડીલર્સ"ને ગાઈડલાઈન અને નીતિ નિયમો મુજબ સંચાલક મંડળ અમલીકરણ માટે મંજૂરી આપે તે માટે વિસ્તરણ શિક્ષણ પરિષદના સભ્યશ્રીઓ સંચાલક મંડળને સર્વાનુમતે ભલામણ કરે છે.

3. Events, Awards and Recognition

Sixteenth Annual Convocation

The XVI Annual Convocation of Navsari Agricultural University was held on February 09, 2021 during which 690 students (461 graduates, 178 M.Sc. and 51 Ph.D.) of NAU and 1 student from GAU (total 691 students) were awarded the degrees.

The start of procession for XVI Annual Convocation of NAU held on February 09, 2021

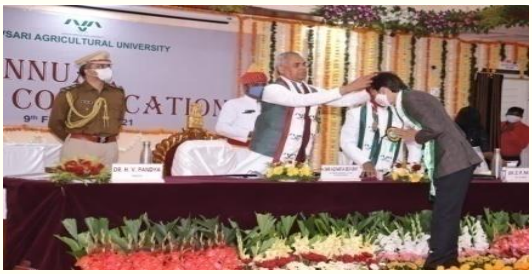
Inauguration of XVI Annual Convocation by Hon'ble Chancellor Shri. Acharya Devvratji

Feliciation of Hon'ble Chancellor Shri Acharya Devvratji, President of Annual Covocation by Hon'ble Vice Chancellor, Dr. Z. P. Patel

Release of 'Placement Brochure 2021' by Hon'ble Chancellor Shri Acharya Devvratji, Hon'ble Vice Chancellor, Dr. Z. P. Patel and Registrar, Dr. H. V. Pandya during XVI Annual Convocation

Medalists

Sojitra Gopi Arjanbhai receiving the Vice-Chancellor's Gold Medal for B.Sc. (Hons.) Horticulture



Henil Dipam Vashi receiving the ASPEE Foundation Gold Plated Silver Medal & Late Sh. Bhulabhai Karsanji Patel Gold Plated Bronze Medal for B.Sc. (Hons.) Horticulture

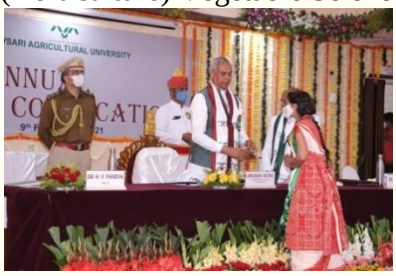
Shah Smit Bhartiben receiving ASPEE Foundation Gold Plated Silver Medal for M.Sc. Horticulture (Vegetable Science)

Sangeetha Priya S receiving ASPEE Foundation Gold Plated Silver Medal for M.Sc. Horticulture (FLA)

Jyoti Uppar receiving Late Mrs. Indumatiben and Dr. Pravinbhai Shukla Gold Plated Bronze Medal for M.Sc. Horticulture (PSMA)

Ganta Koteswara Rao receiving ASPEE Foundation Gold Plated Silver Medal for Ph.D. (Horticulture) Vegetable Science

Raghavendra H R receiving Kalpataru Gold Plated Silver Medal for M.Sc. Horticulture (Postharvest Technology)



Preeti receiving Vice- chancellor's Gold Medal, ASPEE Foundation Gold Plated Silver Medal and Late Dr. Vithalbhai Jeevarajbhai Patel gold plated bronze medal for BSc. (Hons.) Forestry

Ravindra Kumar Dhaka receiving The Chancellor's Gold Medal and ASPEE Foundation Gold Plated Silver Medal for Ph.D. Forestry

Krishi Mela (Agriculture Fair):

The KVK, NAU, Dediapada and ICAR-Central Potato Research Institute, Shimla jointly organized *Krishi Mela* for Tribal Farmers during March 9-10, 2021 under Tribal Sub Plan. Dr. Z.P. Patel, Hon'ble Vice Chancellor, NAU, Navsari inaugurated the Krishi Mela on 9 March, 2021 in the gracious presence of Dr. Lakhan Singh, Director, ICAR-ATARI, Pune, Shri Motising Vasava, Ex-MLA and Dr. Vinod Kumar, Principal Scientist from ICAR-Central Potato Research Institute, Shimla. Scientists and experts delivered lectures on potato cultivation in south Gujarat. Dignitaries stressed on the need to develop market facilities for organic products of the farmers from nearby areas. Exhibition with 40 stalls was also organized. More than 800 tribal farmers and farm women of the area participated and got benefitted through *Krishi Mela* and displayed farm technologies.

Hon'ble Prime Minister's address to the farmers-PM Kisan

Hon'ble Prime Minister's address to the farmers and releasing PM *Kisan* money to farmers was webcasted on December 25, 2020. Five KVKs and other four Extension centres under NAU organized the webcasting for the farmers at different places. Out of 2406 registered farmers, total 1210 farmers have been participated in the programme.

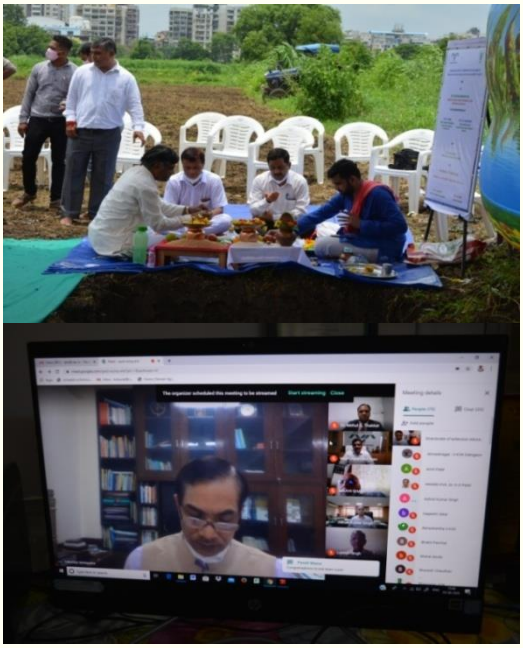
National level Seminars/Conferences/Symposium

National Level Twenty-One Days Virtual Training

The Navsari Agricultural University, Navsari organized a 21 days National Level virtual Training programme under NAHEP-CAAST sub-project on "Sustainable Development of Secondary Agriculture: Economical, Food-Nutritional and Livelihood Perspective" from January 16 to February 05, 2021. Dr. Z. P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari presided over this function and motivated faculties to enhance farm income as well as to develop value added products from agricultural resources. Dr. Mahesh Chander, Joint Director (Extension Education), ICAR-Indian Veterinary Research Institute, Izzatnagar, Uttar Pradesh inaugurated the event as Chief Guest and emphasized the scope and prosperity of secondary agriculture in the era of climate change. Dr. S. R. Chaudhary, DR & Dean PGS, NAU, Navsari acted as Guest of Honour and briefed participants about research activities and achievements of NAU in the agriculture sector. Dr. T.R. Ahlawat, PI & Nodal officer CAAST, NAU welcomed all the dignitaries and participants and elaborated the activities of NAHEP CAAST project. Dr. M.S. Sankanur, Co-PI (CAAST), anchored the training programme. Speakers of national repute and experts in different spheres of secondary agricultural aspects delivered 48 lectures/ demonstrations pertaining to the latest developments in the field of Secondary Agriculture. About178 faculties from SAUs/CAUs/ICAR and other Institutes across the countries participated in the training.

Inauguration of New Facilities

Foundation Stone Laying Ceremony of KVK, Surat



A programme on virtual foundation stone laying of administrative building of *Krishi Vigyan Kendra*, NAU, Surat was held on August 5, 2020 in the online presence of Dr. Trilochan Mohapatra, Director General, ICAR, New Delhi as a Chief Guest. Deputy Director General, ICAR, New Delhi Dr. A. K. Singh and Dr. S. R. Chaudhary, Hon'ble Vice Chancellor, NAU, Navsari were Guest of Honour of the programme. Dr. K. A. Patel, Director of Extension Education, NAU, Navsari welcomed all the dignitaries. Dr. Lakhan Singh, Director, ICAR, ATARI, Pune highlighted the achievements of KVK, Surat and success stories of progressive farmers. Dr. S. R. Chaudhary, Hon'ble Vice Chancellor, NAU, Navsari highlighted the achievement of NAU in the field of Research, Education & Extension.

Dr. A. K. Singh, DDG, ICAR, New Delhi enlightened the participants on work of KVK in future. Dr. Trilochan Mohapatra, DG, ICAR, New Delhi guided the participants and made valuable suggestions about doubling farmers income in selected villages of the district. He suggested to promote high tech farming. He emphasized on attracting rural youths as young professionals in agriculture. He also advised to focus on atomization/mechanization in agriculture.

Inauguration of Tissue Culture Lab, Language Lab and Museum at CoA, Waghai

Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari, Dr. Z. P. Patel inaugurated Tissue Culture Laboratory, Language Lab and Museum at College of Agriculture, Waghai on December 14, 2020 in the gracious presence of newly elected Member of Legislative Assembly, Gujarat, Dang, Shree, Vijaybhai Patel, Director of Research and Dean PG Studies, NAU, Navsari Dr. S. R. Chaudhary, Director of Extension Education, NAU, Navsari Dr. C. K. Timbadia and other dignitaries.

University Awards/Recognitions

ICAR-Ranking of Agricultural Universities

Navsari Agricultural University, Navsari conferred with **Forty-second** position at National level amongst State Agricultural Universities/Central Agricultural Universities and ICAR Institutes of India; Thirty-eighth position among SAUs of India and the Third position amongst the SAUs of Gujarat.

NIRF Ranking

The National Institutional Ranking Framework (NIRF) of MHRD, Govt. of India ranked Navsari Agricultural University between 151-200 band amongst overall Indian Universities during 2020.

GSRFI-Ranking

The Indian Centre for Academic Rankings and Excellence (ICARE) has rated Navsari Agricultural University, Navsari as a **4 star (****) Institute in the category of Universities** on the basis of comprehensive performance metrics as set out in the Gujarat State Institutional Ratings Framework (GSIRF) in 2020.

Appreciation from DMAPR, Boriavi

The Directorate of Medicinal and Aromatic Plants Research, Boriavi, Anand, Gujarat appreciated the Chemical Characterization of several MAPs such as Shatavari, Ashagandha *etc*., done by the Food Quality Testing Laboratory, NAU, Navsari as a part of NAHEP-CAAST activities.

Best Performing Center Award for AICRP (IFS)

The **AICRP on Integrated Farming Systems of NAU, Navsari** was conferred with **Best Performing Center Award-2020** for outstanding performance in validation of Integrated Farming systems technologies during 2019-20 on December 18, 2020 by ICAR-All India Coordinated Research Project, IIFSR, Modipuram.

Best Performing Center Award for AICRP (Banana, Sapota & Papaya)

The AICRP on Banana, Sapota & Papaya, Gandevi Centre awarded as Best Centre of ICAR-AICRP (Fruits) foroutstanding performance in the during the year **2020** during VIII Group Discussion Meeting of ICAR-AICRP on Fruits held in virtual mode during March 3-6, 2021.

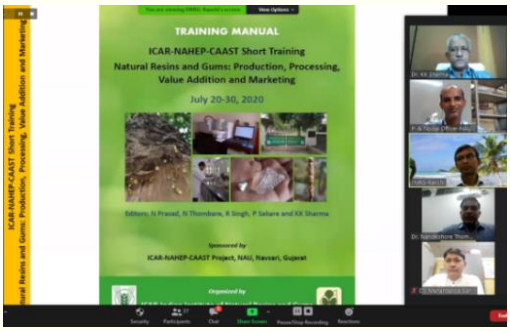
KVK Award

The Krishi Vigyan Kendra (KVK), NAU, Vyara, Tapi district received **"National Best Working Innovative Technology in Agriculture"** award given by *Dhanuka Pvt. Ltd.* under the

category “Various Agricultural Activities by the Institute” on January 9, 2020 at NASC, New Delhi.

Short Trainings/Workshops Organized for Students/Faculties

National Level Short Term Training



National Level short term training on “Natural Resins and Gums: Production, Processing, Value Addition and Marketing” was organized from July 20-30, 2020. Dr. S. R. Chaudhary, Hon’ble Vice Chancellor, NAU, Navsari was a Chief Guest, Dr. K. K. Sharma, Director, IINRG, Ranchi as President of the function on July 20, 2020. A total of 24 participants benefited including 13 PG students, 6 SRFs and 5 faculty members in 10 days national training which included 20 interactive lectures and virtual demonstrations.

Workshop cum Training on Application of RS & GIS in Agriculture and NRM

Three days′ Workshop cum Training on Application of Remote Sensing & GIS in Agriculture and Natural Resource Management was organized by the N.M. College of Agriculture, Navsari Agricultural University, Navsari during March 4-6, 2021 and the programme was inaugurated by the Hon’ble Vice Chancellor, Dr. Z. P. Patel.

Short Trainings/Workshops organized for Farmers & Other Stakeholders

Two Days training on Beekeeping

Two training were organized on "Beekeeping" under NAHEP-CAAST sub-project in association with Horticulture Department, Navsari, Government of Gujarat. The first training was held during January 21-22, 2021. This training programme was inaugurated and graced by Dr. Z. P. Patel, Hon’ble Vice-Chancellor of NAU, Navsari as the President. Also present on this occasion were Mr. D. K. Padaliya, Deputy Director of Horticulture, Navsari, Dr. P. K. Shrivastava, Principal and Dean, ACHF, NAU, Navsari and Dr. T. R. Ahlawat, PI & Nodal officer, NAHEP- CAAST, NAU, Navsari. Dr. T. R. Ahlawat welcomed all dignitaries and farmers to the training programme. During the technical sessions various aspect of beekeeping like its economic significance of beekeeping, importance of bees in pollination, introduction to bee equipment and bee hives, bee foraging plants, queen rearing, role of supplemental feeding,

bee hive inspection- practical, colony capturing of stingless bee colonies, seasonal management of bees, pest and disease managements in honeybees, details of horticulture dept. schemes for farmers, marketing of honey and other bee products were covered. The training consisted of seven talks followed by group discussion on beekeeping. About 60 farmers participated in the training programme. A second batch comprising of 22 farmers were trained on March 17-18, 2021. Apart from six technical lectures, a visit to commercial apiaries was also arranged during the training programme.

One Day Training on "Collection, Storage and Marketing of Mahua Resources"

One day training programme on "Collection, Storage and Marketing of Mahua Resources" was organized under the NAHEP-CAAST sub-project on March 18, 2021. The Hon'ble Vice- Chancellor of Navsari Agricultural University, Dr. Z. P. Patel presided over the valedictory function. Dr. S. R. Chaudhary, DR & Dean PG Studies, Dr. P. K. Shrivastava, Principal and Dean, ACHF, Dr. T. R. Ahlawat, PI & Nodal officer, NAHEP- CAAST& ADR (Hort.), Mr. M.R. Patel, Senior Manager, GSFDC, Gujarat Forest Department also graced the occasion. Dr. T. R. Ahlawat welcomed all the dignitaries, resource persons, faculty members and the participants to the event. He briefed the participants about the objectives behind the organization of the training programme. Mr. M.R. Patel appreciated the efforts made by CAAST team of NAU in organizing a training on non-timber forest product like Mahua. Dr. P. K. Shrivastava elaborated on the importance of training programme in the midst of the Mahua season and opined that this training will definitely help the collectors. Dr. S. R. Chaudhary highlighted the need for research on value addition of Mahua products. Hon'ble VC, NAU, Navsari in his presidential address emphasized the significance of Mahua conservation and its value in the livelihood of the tribal people. Dr. Abhishek Mehta, Associated Scientist, CAAST-Unit 2, NAU presented the Vote of Thanks. The training consisted of four lectures followed by group discussion on future strategies in Mahua utilization and about 28 tribal collectors of Mahua of South Gujarat benefited from this training.

Skill Development Training on "Preparation of Wooden Decorates"

A Skill Development Training Progamme on "Preparation of Wooden Decorates" was organized on March 20, 2021 at College of Agriculture, Waghai campus. The training was held as a part of Capacity Building activity in the NAHEP-CAAST sub-project and was inaugurated by Dr. J. J. Pastagia, Principal, CoA, Waghai along with Dr. T. R. Ahlawat, PI & Nodal Officer, CAAST, NAU, Navsari, Dr. R. P. Gunaga Associate Professor, CoF, NAU, Navsari and Dr. M. S. Sankanur, Assistant Professor, CoF, NAU, Navsari. Dr. M. S. Sankanur welcomed all the dignitaries, farmers and resource persons to the programme. Dr. T. R. Ahlawat, PI & Nodal Officer, NAHEP-CAAST sub-project briefed the participants about the NAHEP-CAAST sub-project activities and achievements. Dr. J. J. Pastagia, Principal, CoA, Waghai emphasized the preparation of contemporary wooden decorates to farmers. The skill development training consisted of three lectures and three hands-on-trainings for preparation of contemporary bamboo decorates for better earnings. Lastly, Dr. H. T. Hegde, Assistant Professor, CoF, NAU, Navsari proposed the Vote of Thanks. About 48 artisans from Ambapada village of Waghai district in South Gujarat benefited from the training.

One Day Training on "Food Safety and Organic Farming"

One day farmers training programme on "Food Safety and Organic Farming" was organized on March 16, 2021under the aegis of NAHEP-CAAST sub-project. Dr. Z. P. Patel, Hon'ble, Vice-Chancellor, Navsari Agricultural University presided over the function. Dr. T. R. Ahlawat, PI & Nodal Officer, NAHEP-CAAST sub-project, NAU, Navsari, Dr. V. R. Naik, Associate Director Research, NAU, Navsari, Dr. K. G. Patel, Professor and Head, Dept. of Soil Science and Agricultural Chemistry, NMCA, NAU, Dr. Susheel Singh, Assistant Professor, FQTL, NAU, Navsari were also present on this occasion. The welcome address was delivered by Dr. Timur Ahlawat. Dr. V. R. Nayak emphasized the importance of organic farming and its potential benefits to farmers. Dr. Z. P. Patel, Hon'ble, Vice Chancellor, NAU, Navsari in his presidential speech appreciated the hard work of NAHEP-CAAST team members in organizing the training programme as well as requested the farmers to grasp the cutting-edge technology and other advances in food safety particularly in organic farming systems. About 58 farmers including 49 men and 9 women of South Gujarat attended this training.

Three Days Training on "Modern Dairy Farming"

A farmers training programme under NAHEP-CAAST sub-project on "Modern Dairy Farming" was organized during March 22 to 24, 2021 which was inaugurated by Dr. Z. P. Patel, Hon'able, Vice-Chancellor, Navsari Agricultural University, Navsari. T. R. Ahlawat, PI & Nodal Officer, NAHEP-CAAST sub-project, NAU, Navsari, Dr. Ruchira A. Shukla, Principal, AABMI, NAU, Navsari, Dr. N. B. Patel, Research Scientist, LRS, NAU, Navsari, Dr. Swati Gupta, Assistant Professor, Dept. of LPT, VCVS & AH, NAU, Navsari and Dr. V. R. Patel, Dept. of Animal Nutrition, VCVS & AH, NAU, Navsari were also present on this occasion. Dr. Timur Ahlawat welcomed all the dignitaries, farmers and resource persons. Dr. V. R. Patel emphasized the importance of dairy farming and its potential benefits to farmers. During the inaugural session, the book entitled "Modern Dairy Farming" depicting the various aspects of scientific dairy farming was released by the dignitaries. Hon'ble, Vice Chancellor, delivered his presidential speech and elaborated on his vision for Navsari Agricultural University and NAHEP-CAAST sub project. The three days training programme comprised of 9 lectures and one exposure visit which was organized to Shree Surat Panjarapore farm, Bhestan, Surat. About 42 farmers (40 females + 2 males) benefitted from this training.

Mushroom Cultivation Awareness Programme

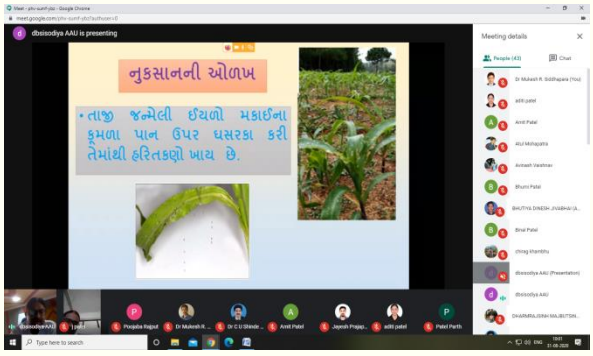
The College of Agriculture, NAU, Waghai, Dist: Dang organized Mushroom Cultivation Awareness Programme on December 14, 2020 under the project on Establishment of Centre of Excellence on Mushroom with gracious presence of Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari, Shri Vijaybhai Patel, MLA Gujarat, Dr. S. R. Chaudhary, DR, NAU, Navsari and

Dr. C. K. Timbadia, DEE, NAU Navsari and other dignitaries. On this occasion, a book in Guajarati entitled "*Mushroom Uccher*" was also released by the dignitaries. The launching of mushroom spawn produced by College of Agriculture Waghai as "NAUROJI Mushroom Spawn" was also done.

Farmers *Shibir* on "Vermicompost"

The KVK, NAU, Navsari organized one day Farmer's *Shibir* on Vermicompost at Talavchora village on September 10, 2020. Navsari, Hon'ble MLAs of Chikhli and Navsari were present during the *Shibir*. Six farmers of the village obtained "GOPCA" organic certificate which was facilitated by KVK. About 204 vermibeds were distributed among the farmers. More than 300 farmers attended the *Shibir* and interacted with the KVK Scientists.

Training programme on "Integrated Management of Fall Army Worm"



Department of Entomology, NMCA, NAU and T&V Scheme, Directorate of Extension Education, Navsari Agricultural University, Navsari has jointly organized an online training programme on integrated management of Fall Army worm on August 31, 2020 at ABM, NAU, Navsari. Lectures on different aspects of Fall Army worm and its control were delivered by the NAU Scientists. Total, 44 farmers participated in the training programme.

Organization of National and State level Webinars

There were 13 National Webinar organized under NAHEP-CAAST sub-project entitled on "Establishment of Secondary Agricultural Unit for Skill Development in Students and Farmers at NAU, Navsari" in each webinar, three eminent speakers across the country delivered lectures on various aspects of Secondary agriculture. In these webinars were attended by 1475 participants across the country from agriculture and allied fields.

SN	Title of the Talks	Resource persons	Date	Beneficiaries
1. National Webinar on "Covid-19 and Indian Livestock Sector"				
i)	Economic impact of Covid-19 pandemic on dairy business	Dr. Subhransu Pan, Prof. & Head-LPM, W.B.U.A. & F.Sc., Kolkata	June 18, 2020	320
ii)	Goat behavior and Production during Covid-19 pandemic	Dr. D. V. Singh, Professor & Head (LPM), GBPUAT, Pantnagar, Uttarakhand		
iii)	Livestock-Lockdown-Later	Prof. (Dr.) N.S.R. Sastry (Retd. Professor), FAVHF, FNAPM, Visakhapatnam, AP		
2. National Webinar on "Scope and Future Prospects of Medicinal and Aromatic Plants"				
i)	Medicinal Plants for Industrial Perspective	Dr. Vinod K. Bisht, Scientist In-Charge, Zandu Foundation for Health Care Ambach, Pardi, Vapi, Gujarat	January 9, 2021	114
ii)	Process for Extraction and Purification of Secondary	Dr. Satyanshu Kumar, Principal Scientist, DMAPR,		

	metabolites from MAPs	Anand, Gujarat		
iii)	Post-Harvest Technology of Medicinal and Aromatic Plants	Dr. Raghuraj Singh, Scientist (FM&P) DMAPR, Anand, Gujarat		
3. National Webinar on Remunerative Dairy Farming: Smallholder Production System				
i)	Present status and future prospects of dairy farming in India with special reference to dairy cooperatives, private players, PPP models and contract dairy farming	Shri Meenesh Shah, Executive Director, National Dairy Development, Anand	January 16, 2021	198
ii)	Strategies for making dairy farming remunerative: managerial interventions, technology options and policy issues	Dr. Subhransu Pan, Prof. & Head-LPM, W.B.U.A. & F.Sc., Kolkata		
iii)	Alternative source of dairy farm income	Prof. (Dr.) N.S.R. Sastry (Retd. Professor), FAVHF, FNAPM, Visakhapatnam, AP		
4. National Webinar on Pesticide Residue Management: Indian Scenario				
i)	Good Laboratory Practices in Pesticide Residue analysis	Dr. Cherkuri Sriniwas Rao (Ex-Director, Pesticide Management-NIPHM) & Professor (Entomology), Agricultural College Acharya N. G. Ranga Agricultural University Bapatla, Guntur, Andhra Pradesh	January 23, 2021	214
ii)	The pros and cons of Pesticide Management Bill 2020	Dr. P.G. Shah, Residue Analyst, AINP on Pesticide Residue Analysis, ICAR-Unit-9, Anand Agricultural University, Anand, Gujarat		
iii)	Pesticide Residue in Food Commodities in India : A Real Time Scenario	Dr. Vandana Tripathi, Senior Scientist, PC-Cell, AINP on Pesticide Residues, New Delhi		
5. National Webinar on "Entrepreneurship Development in Food Processing Sector"				
i)	Entrepreneurship Opportunities in Food Processing	Dr. R. T. Patil, Ex Director, CIPHET, Ludhiana	January 30, 2021	114
ii)	Technical and Legal Prospective for Establishing Food Processing Units	Dr. Satish Kumar Sharma, Professor and Head, Dept of Food Science and Post-Harvest Technology, GBPUAT, Pantnagar		
iii)	Irradiation Technology for Processing and Value addition	Dr. A. K. Sharma, Professor and Head, Dept of Food Process Engineering, College of FPT and BE, AAU, Anand		

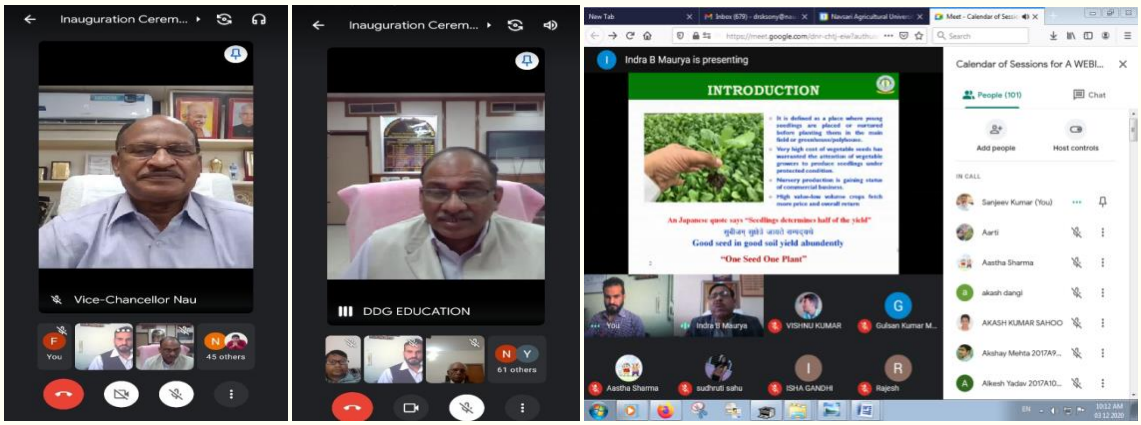
6. National Webinar on "Non-Timber Forest Products as Sources of Secondary Agriculture for Livelihood Security"				
i)	Honey as a Source of Livelihood Security	Dr. Pramod Mall, Professor of Entomology GB Pant University of Agri. & Tech., Pantnagar	February 6, 2021	176
ii)	Non-Timber Forest Product as Source of Livelihood Security	Shri. Pradeep Dubey, General Manager, Gram Mooligal Company Limited, Jabalpur		
7. National Webinar on Environmental Footprint of Dairy Farming: Issues and Approaches				
i)	Holistic feeding strategies for reducing carbon and water footprint in dairy farming	Dr. V. Sridhar, General Manager (Animal Nutrition) NDDB, Anand	February 13, 2021	130
ii)	Breeding Strategy for lower carbon and water footprint in dairy farming	Dr. Amit Kumar, Senior Scientist, IVRI, Izzatnagar, Bareilly.		
iii)	Efficient housing models, structures & general management strategies for reducing carbon and water footprint of milk	Dr. S. S. Lathwal, Principal Scientist, NDRI, Karnal.		
8. National Webinar on "Novel Product Development Opportunities from Horticultural Crops during COVID Era"				
i)	Processing and Value Addition of Tree Born Seed Oil	Dr. Devina Vaidya, Principal Scientist, Department of FST, College of Horticulture, Dr YS Parmar UHF, Nauni Solan	February 20, 2021	10
ii)	Role of Value Addition in Citrus on Secondary Agriculture	Dr. Dinesh Kumar, Principal Scientist (PHT) ICAR-Central Citrus Research Institute Nagpur		
iii)	Processing and Value addition of Mushrooms	Dr B.L. Attri, Principal Scientist, DMR (ICAR), Chambaghat, Solan		
9. National Webinar on "Food Safety Management: Contemporary Scenario and Issues"				
i)	Understanding the ISO 22000-2018 under food safety management systems	Dr. K. Manorama, Principal Scientist (Retd.) Quality Control Laboratory, Prof. Jayashankar Telangana State Agricultural University, Rajendranagar, Hyderabad	February 27, 2021	95
ii)	Cutting edge techniques in food safety: A case study on organic contaminants	Dr. Dashrath Oulkar, Manager, India Customer Solution Center, Thermo Fisher Scientific, National Referral Laboratory, Ghaziabad		
iii)	Method validation and uncertainty measurement based on QuEChERS method for pesticide residue	Dr. Ashok Kumar Maurya, Scientist 'C', National Dope Testing Laboratory, Ministry of Youth Affairs & Sports, GoI,		

	analysis	JLN Stadium, New Delhi		
10. National Webinar on "Advances in Forest Resource Utilization and Management"				
i)	Legal Provisions for NTFPs and concept of Access Benefit Sharing	Dr. Sairam Bhat, Professor of Law & Centre Coordinator Centre for Environmental Law Education, Research & Advocacy National Law School of India University, Bengaluru, Karnataka	March 13, 2021	100
ii)	Ecosystem Services in Agroforestry Systems	Dr. G. M. Devagiri, Professor and Head (NRM) College of Forestry, UAHSS, Ponnampet, Kodagu		
iii)	Forest Certification: An Indian Scenario	Mr. Amresh Deshpande, Country Manager, Forest Stewardship Council		
11. National Level Webinar on "Export Oriented Management of Fresh Fruits and Vegetables"				
i)	Post-Harvest Handling of Fresh Fruits	Dr. D.V. Sudhakar Rao, Principal Scientist, Division of Post-Harvest Technology and Engineering, IIHR- ICAR, Hessarghata, Bengaluru	March 6, 2021	93
ii)	Post-Harvest Handling of Vegetables	Dr. S. K. Jain, Professor PHT & Director Extension Education Agricultural University, Kota		
iii)	Advances in Storage of Fruits and Vegetables	Dr. Ram Asrey, Principal Scientist, Division of Food Science and Post-Harvest Technology, IARI, Pusa Campus, New Delhi		
12. National Level Webinar on "Scope of New Age Technologies in Indian Dairy Farming"				
i)	Biosensors: Application for Dairy Farming	Dr. Praveen Singh, Principal Scientist, Biophysics Section, IVRI, Izatnagar	March 20, 2021	92
ii)	Big Data Analytics: Dairy Farming	Er. Priyansh Gupta, Sr. Data Engineer, Fractal Analytics, Gurugram		
iii)	Status and Scope of Artificial Intelligence in Dairy Farming	Dr. A.P. Ruhil, Principal Scientist, DESM Division ICAR-NDRI, Karnal		
13. National Webinar on "Food Quality and Safety: Indian Perspective"				
i)	Aflatoxin Menace in Food and Feed and its Mitigation Practices: A Case Study in Peanuts	Dr. P. P. Thirumalaisamy Senior Scientist (Plant Pathology), ICAR-NBPGR, Regional Station, Thrissur	March 27, 2021	83
ii)	Bioavailability of Functional Food Components/Nutraceuticals Concepts and Application	Dr. Anil Dahuja, Principal Scientist Biochemistry Division, IARI, New Delhi		

iii)	Detection of Pesticides and Detrimental Chemicals in Farm Produce: A Big Hurdle in Export	Dr. Satish Shukla, Assistant Director Export Inspection Agency, Mumbai		

Motivational Approaches under STUDENT READY-ELP during COVID 19 Pandemic

WEBINAR SERIES (2020-21) under Student READY (EXPERIENTIAL LEARNING PROGRAM): A motivational Initiative leading to Entrepreneurship during COVID 19 Pandemic



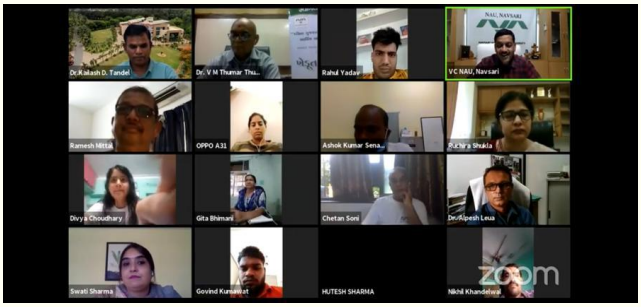
Dr. Z. P. Patel, Hon'ble Vice-Chancellor, NAU, Navsari delivered presidential address in the inaugural ceremony of Webinar Series (2020-21) under Student READY (ELP). Chief Guest Dr. R. C. Agrawal, Hon'ble Deputy Director General (Agri. Education), ICAR, New Delhi addressed the august gathering.

ASPEE College of Horticulture & Forestry, NAU, Navsari took an initiative under the dynamic Leadership of Dr. Z.P. Patel, Hon'ble Vice-Chancellor, Navsari Agricultural University, Navsari to organize a Webinar Series under Student READY-EXPERIENTIAL LEARNING PROGRAM (Rural Entrepreneurship Awareness Development Yojana) on e-platform, which was proposed as a motivational Initiative leading to Entrepreneurship during COVID 19 Pandemic and officially inaugurated on November 06, 2020. The inaugural ceremony of the Series was presided over by Dr. Z.P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari and the Chief Guest was Dr. R. C. Agrawal, Hon'ble Deputy Director General (Agri. Education), ICAR, New Delhi. Padma Shri Prof. Brahma Singh, Former Director, Life Science, DRDO, New Delhi and Dr. Naveen Patle, Additional Commissioner (Horticulture), Government of India, New Delhi, Dr. S. R. Chaudhary, Director of Research, NAU, were the Guest of Honour of this ceremony. Dr. P.K Shrivastava, Principal & Dean cum CEO (Student READY), ASPEE College of Horticulture and Forestry, Dr. T. R. Ahlawat, ELP Coordinator and ADR, NAU, and Dr. Sanjeev Kumar, Series Coordinator of Webinar Series were also joined the stage. The online ceremony of this Series was enlightened by the gracious presence of all the dignitaries. The Sessions under this Webinar Series commenced from November 10, 2020 and continued till December 03, 2020. Total 14 talks were arranged from external experts and they delivered lead lectures on the aspects of basic requirements for project formulation in terms of loan and subsidy for Agri projects, NABARD Initiates on Agri Entrepreneurship, Agriculture Entrepreneurship and Banking Synergy Program, including the technical and practical approaches related to 4 ELP Modules namely Protected Cultivation of High Valued Horticultural Crops, Commercial Production of Horticultural Planting Materials, Post-Harvest Handling and Value Addition in Horticultural Crops, Floriculture and Landscape Architecture of 4 Models being adopted by ASPEE College of Horticulture & Forestry, NAU, Navsari.

Vet NAU Webinar Series-2020

During COVID-19 Pandemic situations, Veterinary College had initiated VET NAU WEBINAR SERIES-2020 from May 23, 2020 and till June 30, 2020. Six technical lectures were delivered on topics of interest for undergraduate and postgraduate students, field veterinarians, private small and large animal practitioners and academicians under VET NAU WEBINAR SERIES 2020 using NAU e-learning facilities. Till now, 4613 students and professionals across the country have taken advantage of these series of lectures till June 30, 2020. Dr. Dipak Suthar, Asst. Professor, Veterinary Surgery and Radiology and Dr. Lalit Modi, Asst. Professor, Veterinary Gynaecology department in collaboration with IT Cell of NAU organized this webinar series.

Webinar on Agricultural MarketingAmidst Covid-19: Issues and Implications



The ASPEE Agribusiness Management Institute, Navsari Agricultural University, Navsari organized a one-day Webinar on the topic " Agricultural Marketing Amidst Covid-19: Issues and Implications" on June 30, 2020. The programme was presided by Hon. Vice Chancellor of NAU, Dr. S. R. Chaudhary who emphasised the importance of agricultural marketing for farmers and urged them to be innovative in marketing their produce considering the Covid-19 pandemic. This webinar was attended by 500 participants from 17 states of the country. As a subject matter expert in this webinar, Dr. K. C. Gummagolmath Director (Monitoring & Evaluation) MANAGE, Hyderabad delivered a very impressive talk and discussed with participants the implications of agricultural marketing reforms. Dr. Ramesh Mittal, Director, CCS National Institute of Agricultural Marketing, Jaipur elaborated on the multitude of opportunities for agri-entrepreneurship and Agristartups during the current pandemic situation.

Webinar on Commodity derivative market in association with NCDEX

ASPEE Agribusiness Management Institute organised a webinar on “Commodity derivative market” in collaboration with NCDEX Institute of Commodity Markets and Research, New Delhi, on June 25, 2020. The programme was presided by Hon. Hon’ble Vice Chancellor of NAU, Dr. S. R. Chaudhary who highlighted the need of Commodity markets for ensuring remunerative prices to the farmers who are the main stakeholders. Mr. Aleen Mukherjee, Executive Vice President of Business, NCDEX , Mr. Neeraj Shukla Senior Economist - Market Intelligence at NCDEX and Ram Gopal Yadav, Deputy Manager, NCDEX, NICR delivered informative sessions on Global and Domestic scenario of commodity exchanges, usefulness for farmers/FPOs, Derivatives & Price Risk Management and functioning and regulation of Commodity Exchanges.

A webinar on "Animal Husbandry in the midst of Covid-19 pandemic"

A webinar on "Animal Husbandry in the midst of Covid-19 pandemic" was organized on May18, 2020in the presence of Dr. G .R. Patel, Director of Extension Education. This webinar was attended by 30 farmers and their queries related to milk production, calves rearing were addressed by scientists.

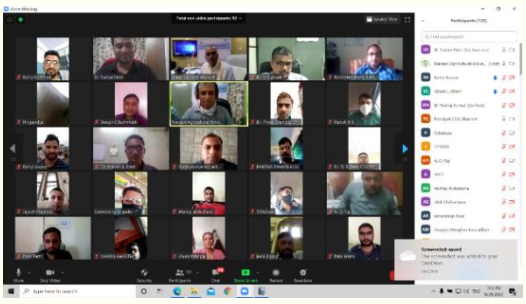
State level webinar

A state level webinar on Covid-19 and Agriculture for Innovative Farmers of different Districts of Gujarat state was organized on August 17, 2020 by KVK, NAU, Navsari. In the webinar, 110 farmers participated and shared their farming knowledge and feedback experience during pandemic situation.

Webinar on *Gujarat ma Musharoom uchherni Shakyatao*

Webinar on *Gujarat ma Musharoom uchherni Shakyatao* was jointly organized by KVK, NAU, Waghai, Dist: Dang, College of Agriculture, Waghai and KVK, NAU, Dediapada on September 16, 2020 under the Chairmanship of Dr. S.R. Chaudhary, Hon'ble Vice Chancellor, NAU, Navsari in the solemn presence of Dr. K.A. Patel, DEE. KVK Scientists delivered lectures on mushroom cultivation. This webinar was attended by 316 farmers.

Webinar on Scope of Agricultural Entrepreneurship Development

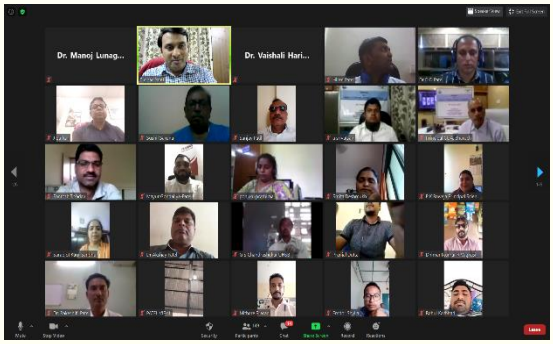


Three days Webinar on "Scope of Agricultural Entrepreneurship Development" was organized by Department of Agronomy, College of Agriculture, NAU, Bharuch during August 19-21, 2021. Total 450 participants were participated and 15 eminent speakers presented their lead talks on various aspects of entrepreneurship development. The webinar was graced and inaugurated by our Hon'ble Vice Chancellor, Dr. S. R. Chaudhary, Navsari Agricultural University, Navsari and addresses the event with discussing the relevance of entrepreneurship in developing societies. He also appreciated for taking initiative to conduct webinar on such a valuable and impactful theme. He also pointed out the recent contributions of the University in the tough times of COVID-19 which includes: revamping of the University's website and making online study possible, many online programs to be launched, TREE initiative, more emphasis on e-learning, importance of entrepreneurship in recent era etc. Lastly, Hon'ble Vice Chancellor congratulated all participants and wish grand success of webinar. Dr. K. G. Patel Dean, Faculty of Agriculture and President of this webinar emphasized that the entrepreneurship development in agriculture that creates employment generation and community empowerment particularly in rural areas.

Webinar on Diagnostics and Remedial Measures for common error in Application of Statistics

Two days webinar on "Diagnostics and Remedial Measures for common error in Application of Statistics" was organized by Department of Agril. Statistics, N. M. College of Agriculture, Navsari and College of Agriculture, NAU, Bharuch during October 20-21, 2020. Total 704 participants were participated and 8 distinguish speakers presented their lead talks. The webinar was graced and inaugurated by our Hon'ble Vice Chancellor, Dr. Z.P. Patel, Navsari Agricultural University, Navsari.

Webinar on Impact of Climate Change on Agriculture

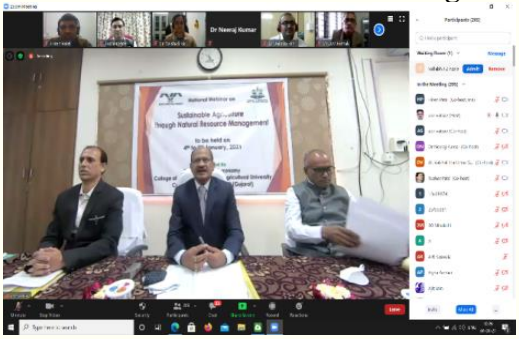


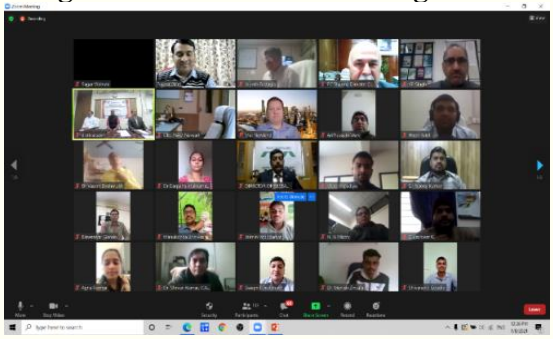
One day Webinar on "Impact of Climate Change on Agriculture" was organized by Department of Agronomy College of Agriculture, NAU, Bharuch during October 28, 2020. Total 250 participants were participated and 3 distinguish speakers presented their lead talks. Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari inaugurated this programme. He emphasized that climate change is an all-encompassing threat, to health, to agriculture, to peace and security, to the very ground millions of people live on, to the global economy. Especially, as agriculture is climate-dependent and thus susceptible to climate change, it is very urgent to prepare adaptation measures against climate change. Proper counter measures drawn based on scientific diagnosis and assessment of the impacts of climate change on agriculture are essential in establishing the vision and administrative policies of future agriculture

National Symposium on Plant Health Management

Three days National Symposium on "Plant Health Management" was organized by Department of Plant Pathology and Department of Entomology, College of Agriculture, NAU, Bharuch during November 2-4, 2020.Total 450 participants were participated and 6 lead papers were presented by 6 speakers from various locations of India. Total 163 abstracts were received and published in Abstract book. The symposium was divided into different 9 themes and more than 100 participants have presented their paper orally or by poster presentation. At presidential speech, Dr. K. G. Patel has more emphasized on use of beneficial microorganisms/biocontrol agents and their biosynthetic capabilities has made them good candidates for solving particularly difficult problems in the agricultural sector. Further, bio pesticides have long been attracting global attention as a safer management strategy than chemical pest control.

National Webinar on "Sustainable Agriculture through Natural Resource Management"





Five days National Webinar on "Sustainable Agriculture through Natural Resource Management" was organized by Department of Agronomy, College of Agriculture, NAU, Bharuch during January 4-8, 2021.Total 378 participants were participated and 21 key speakers and 2 farmers gave their lead talks. Dr. Suresh Kumar Chaudhari, Honorable Deputy Director General (Natural Resource Management), ICAR, New Delhi and Chief Guest of the Inaugural function of the webinar has given brief outline of the importance of NRM for sustainable agriculture. He emphasized that sustainability has its own dimensions in terms of agriculture, natural resources or environment as whole. Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari and Chief Patron of the National Webinar shared his views to the participants and suggested that we should developed the location specific, cost effective, eco-friendly conservation and management technologies for higher input use efficiency, agricultural productivity & profitability without deteriorating natural resource base.

Celebrations

International Yoga Day

International Yoga Day was celebrated by all the constituent colleges of NAU, Navsari on June 21, 2020 in which students and faculty members participated through online mode.

Republic Day

The Republic Day was celebrated on January 26, 2021 at University Stadium, Navsari Agricultural University, Navsari. Dr. Z. P. Patel, Hon'ble Vice Chancellor hoisted the Indian tri colour at 8:50 am in the presence of students and staff members.

Van Mahotsav

The Van Mahotsav: the planting festival was celebrated on September 10, 2020 due to covid pandemic by the College of Forestry. In this programme more than 100 seedlings of Teak were planted at Dandi farm, NAU, Navsari.

World Bamboo Day

Eleventh World Bamboo day was celebrated by College of Forestry on September 18, 2020. This day was celebrated by organizing one day online workshop on "Bamboo cultivation and its value addition" along with bamboo plantation programme and approximately 100 growers participated in both the events.

Constitution Day

Constitution Day was celebrated by all constituent Colleges on 26 November, 2020 by organizing lectures, Quiz and Elocution contest in online mode UG & PG students participated in these events.

Agricultural Education Day

India celebrates the first President of Independent India, Bharat Ratna, Dr. Rajendra Prasad as Agricultural Education Day in India on December 3, of every year. On this occasion, under NSS regular activities, CAET and PAE Dediapada celebrate Agricultural Education Day on 04 December 2020 to prepared different kind of drawing on theme *"Why Dose The World Needs Agriculture Education"* OR *"Future Prospects of Agriculture Education"* at their home place and through drawing through emails.

International Volunteer Day

Students from CAET and PAE Dediapada actively participated in the "Celebration of International Volunteer Day, 2020" on December 4, 2020. About 27 students successfully registered for the webinar and participated in the event.

Mahila Kisan Diwas

The KVKs running under NAU celebrated ***Mahila Kisan Divas*** on 15 October, 2020. Various activities were organized by KVKs during the programme *viz.*, Lecture, competitions, group discussion, inputs distribution and Prize distribution etc. Total 942 farm women participated in the programmes at different places.

FIT INDIA Programme

Fit India Cycloton was organised by Government of India Ministry of Youth Affairs and Sports, from December 7 to 31, 2020. Students from CAET and PAE Dediapada participated in fitness activities from their home. Photographs were shared by students with the creative captions.

World Soil Day

As the Government of India decided to celebrate the "World Soil Day" on December 5 every year, KVKs operated under the NAU celebrated this Day on December 5, 2020. During the programme 344 farmers and farm women participated at different places.

***Kisan* and *Vigyan* Day**

The KVKs running under NAU celebrated Kisan and Vigyan Day on December 25, 2020. Various activities were organized by KVKs during the programme *viz.*, Lecture on Kisan and Vigyan day, Farm Visit and Group Discussion, Kisan Gosthi and information about Pradhanmatri Kishan Nidhi etc. Total 428 farmers and farm women participated in these programmes.

National Nutrition Month

Govt. of India celebrates National Nutrition Month during 1 to 30 September, 2020. 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, biofortified crops, In-service training for *Anganwadi* workers, *POSHAN* pledge, awareness programmes, method demonstration, prize distribution, distribution of nutri-kitchen garden kit, tree plant, vegetable seeds and seedlings *etc*. Total 2285 farm women participated in these programmes at different places.

Technology Week

The KVKs under NAU Navsari celebrated Technology Week at different places by conducting various activities *viz*., Seminar on animal husbandry: Scientific calf rearing and fish farming, Awareness on mango epicotyl grafting, natural farming, farm mechanization and Farmers Day, Field days, ideal dairy management, Farmers' Bill 2020, Nursery Management in *Rabi* Crops, Role of Women in Agriculture, Soil Health Management and IPDM in *Rabi* Crops, etc. were organized. Total 733 farmers and farm women actively participated in the celebration.

World Fisheries Day

On the occasion of 'World Fisheries Day', a one-day seminar on 'Potential of Ornamental backyard fish culture in Ukai' was jointly organized by Centre of Excellence, Kamdhenu University, Ukai, Office of Assistant Director of Fisheries, Ukai and Krishi Vigyan Kendra, NAU, Vyara, Dist, Tapi on November 21, 2020. Information about the schemes related to fisheries was provided to participants. Progressive fishermen from Selud village, shared their experiences about the fishery business with fishermen. Total 60 fishermen from different villages of Tapi district enthusiastically participated in the programme.

National Milk Day

November 26, is celebrated all over India as 'National Milk Day' to mark the birth anniversary of Dr. Varghese Kurien, Father of White Revolution. KVK, NAU, Vyara, Dist: Tapi organized an Animal Health Camp in collaboration with Mahila Samakhya-Tapi and Veterinary Hospital, Songadh at Maiyali village of Songadh block. About 132 dairy animals were treated with reproductive defects, pregnancy diagnosis, ecto-parasitic problems, reduction in milk production etc. and about 40 goats were also given deworming drugs. The *Sarpanch* of the village Mrs. Ankitaben Gamit was present in this camp and encouraged livestock keepers to participate in the camp. Total 46 livestock keepers from Maiyali village enthusiastically participated in this camp.

Trainings/Workshops/Exposure Visits for Students

Orientation cum Training Programme on Agricultural Entrepreneurship and Personality Development

The College of Agriculture, NAU, Waghai has organized six day orientation cum Training Programme on "Agricultural Entrepreneurship and Personality Development for the students of seventh Semester, B.Sc. (Hons.) Agri. Dr. J. J. Pastagia Principal, College of Agriculture, NAU Waghai gave the introductory welcome speech. Honourable Vice Chancellor, Navsari Agricultural University, Navsari Dr. Z. P. Patel sir in his presidential speech narrated the possibilities of agricultural entrepreneurship and motivated the students to become a job giver rather than job seeker. During the training students were exposed to nineteen different agricultural based entrepreneurship by successful entrepreneurs in their respective areas.

First Ever ONLINE In-house 'Campus to Corporate-C_2C'

Post-COVID-19 Placement Season-2021; the University Placement & Counselling Cell, DSW Office of NAU, Navsari organized a Powerful Pre-Placement Preparatory Training Module of the first Ever Online In-house Full Day Career Management Training Programme on **"Campus to Corporate – C_2C"** for MBA (ABM) students of ASPEE Agribusiness Management Institute on December 15, 2020. The Chief Guest Dr. R. M. Naik – Director of Student's Welfare; Presidential Address, the Hon'ble Vice Chancellor, Dr. Z. P. Patel led from the front and inspired the august gathering of 65+ MBA (ABM) students and faculty members of AABMI.

Exposure Visit to Indus Tissue Technologies at Vanzanna

An exposure visit to Indus Tissue Technologies, at Vanzanna, Rankuwa, Ta. Chikhil, Dist. Navsari was made on February 20, 2021. The main purpose of this visit was to foster the spirit of entrepreneurship among students in the field of micropropagation. Nine PG students,

one SRF, eighteen UG final year ELP students, four skilled persons from plant tissue culture lab, Dept. of GPB participated in this exposure visit along with Dr. Ajay V. Narwade, Assoc. Professor & GRM Nodal officer, NAHEP-CAAST sub-project, NMCA. Three hands-on-trainings/demonstrations were conducted during the exposure visit. Indus Tissue Technologies was established by Mr. Rajendrakumar Parsotan Patel, a successful entrepreneur in Plant Tissue Culture Industry from Vanzanna, Rankuwa, Ta. Chikhil, Dist. Navsari. Indus Tissue Technologies has a production capacity of 25, 00,000 with a lab area set up of 4500 sq. ft, greenhouse area of 3500 sqft, and net house area of 3000 sq.ft. Students were sensitized about the production of high-quality tissue culture plantlets and various byproducts from the banana pseudostem waste for sustainable use in domestic and international markets. This exposure visit showcased the opportunities for self-entrepreneurship in the field of plant tissue culture.

Exposure Visit to *Gaushalas* in Saurashtra and Kutch regions

An exposure visit was organized to *Gaushalas* in Saurashtra and Kutch regions of Gujarat Under CAAST sub-project from March 2-6, 2021 to explore the possibilities regarding production of value added products from the by-products of Gaushalas. A team comprising of four members *viz*., Dr. N. B. Patel, Head, LRS, Dr. Durgga Rani V., Assistant Professor, Dept, of Veterinary Extension Education, Veterinary College and 2 CAAST SRFs Mr. Lalji B. Kalasariya and Dr. Sawan Rathwa travelled to Aksharpurshottam Gaushala Trust at Balvada, Botad; Shree Ramkrishna Gaushala Trust at Kukma, Bhuj; Shree Kutch Narayan SarovarGaushala Trust, Narayan Sarovar Bhuj and Ahinsa Pashu Raksha Kendra, Mundra, Bhuj. Aksharpurshottam Gaushala Trust at Balvada, Botad maintained Gir cattle, Jafarabadi buffaloes and Kathiawadi horses at the Gaushala. Vermicompost, vermiwash and biogas were produced from cow dung by the trust. Vermicompost and vermiwash were sold in the local market and biogas was used for cooking in their community kitchen. Ark was produced from cow urine through vaporization and sold, which is claimed to have many medicinal properties. Ramkrishna Gaushala Trust at Kukma, Bhuj maintained Girand Kankrej cattle at the farm and produced many value added products from cow dung like frame of clock and mirror, mementos, idols of Hindu Gods, flower pots, *diyas*, soaps, incense sticks and other handicraft products.

Short visit to Waghai

A short visit was undertaken by Dr. R. P. Gunaga, Associate Professor & Co-PI-CAAST, CoF, NAU, Navsari, Dr. M. S. Sankanur, Assistant Professor & Co-PI-CAAST, CoF, NAU, Navsarialong with one SRF and two skilled trainers to Ambapada village, Waghai under NAHEP-CAAST sub-project on March 10, 2021. The visit was intended to study Kotwalia tribe's bamboo work and identified potential artisans for the training programme under the project. They also visited Vanil Udyog, Navtad and interacted with their staff and witnessed the manufacture of various furniture, decorates, utensils prepared from wood as well as the preparation of Ayurvedic products from important medicinal and aromatic plants.

Short visit to Gujarat Forestry Research Foundation (GFRF), Gandhinagar

A short visit was undertaken by Dr. H. T. Hegde, Assistant Professor & Associate Faculty, CAAST, CoF, NAU, Navsari to Gujarat Forestry Research Foundation, Gandhinagar. In a meeting with the officials and research staff, he briefed them about the objectives and mandate of the CAAST project and its importance. Actives undertaken in the project were appreciated by the House. Potential areas of research on Non-Timber Forest Products (NTFPs) and MAPs were also discussed.

Short visit to South Asian Association for Regional Cooperation Disaster Management Centre (SDMC) and Gujarat Institute of Disaster Management (GIDM)

A short visit to South Asian Association for Regional Cooperation Disaster Management Centre (SDMC) and Gujarat Institute of Disaster Management (GIDM) at Gandhinagar for future training and research was organized on March 03, 2021. During the visit, faculty members interacted with Dr. Sandeep Pandey, Associate Professor cum Sr. Programme Manager about the possible trainings and exposure to disaster risk reductions opportunities in secondary agriculture. It was agreed upon to arrange a visit of CAAST students to SDMC and GIDM so that they develop a better understanding of disaster management. Concurrently, the team also interacted with Gujarat Forest Research Foundation officials and Forest Officers during project proposal appraisal meeting in Aranya Bhawan, Gandhinagar.

Exposure visit to *Adi Aushadhi* Group, Dediapada

An exposure visit was arranged on March 12, 2020 to *Adi Aushadhi* Group, a Dediapada based NGO. This group is involved in the manufacture of herbal medicines and edible products for the socioeconomic development of *Vasavas*-a tribal community of that region. Five students of the CAAST project participated in the visit which was led by Dr. R. S. Chauhan (Assistant Professor) and Dr. H. T. Hegde (Assistant Professor). Mr. Himmat Chauhan, the Co-founder of the group, welcomed and briefed the participants about the genesis, objectives and functioning of the NGO. Mr. Franklin, another Co –founder, demonstrated the making of herbal medicines and herbal edible products like Bramhi Khakhra, Bramhi Khari Biscuit, Mixed Grain Biscuits, Nagli Soyabean Biscuit, Herbal Tea Masala, Khatti Bhindi Sharbat, Mahuda ice-cream *etc*.

Certificate Courses

Certificate course for Input Dealers

The NAU successfully completed the seventh batch of "Certificate in Agricultural Extension Services for Input Dealers". This course is of six months duration. About 26 input dealers from South Gujarat were awarded with certificates on successful completion.

Certificate Course on INM for Fertilizer Dealers

The NAU successfully completed the first batch of "Certificate Course on Integrated Nutrient Management for Fertilizer Dealers" course. In all, 17 dealers were awarded with certificate on successful completion of this 15 days course.

Certificate course on INM for Fertilizer Dealers

NAU successfully completed the second batch of 15 days duration "Certificate Course on Integrated Nutrient Management for Fertilizer Dealers" started from February 15, 2021. Total 25 dealers were awarded with certificate at NAU, Navsari.

Wildlife photography Certificate Conferment Ceremony

A One Year Certificate Course in Nature and Wildlife Photography organized its eighth passing out exhibition during March 20-21, 2021. Hon'ble Vice Chancellor Dr. Z. P. Patel and Dean Dr. P. K. Shrivastava inaugurated the exhibition for students, staffs and visitors. The Certificate Conferment Ceremony was organized on March 22, 2021 and medals and certificates were awarded to the students. During the ceremony Dr. C. K. Timbadia, DEE, Dr. P. K. Shrivastava, Dean and Mr. Nevil Zaveri, Course Guide graced the occasion. 17 students were awarded the course completion certificate

Certificate courses on Bakery

Bakery school, DEE, NAU, Navsari organized 20 week duration one certificate course (13/01/2020 to 21/03/2020 and 28/12/2020 to 06/03/2021 due to COVID-19) on bakery during the year. Total 16 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 two skill oriented training programme of one week duration on baking were organized. Total 32 youth and farm women had participated in the one week training programmes.

Visits of Dignitaries

Dr. Z.P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari visited various Colleges and research stations after joining the University and interacted with faculties and students.

Hon'ble Vice Chancellor, Dr. Z. P. Patel visited Mass production unit of fruit fly trap, Department of Plant Protection, ACHF, NAU, Navsari on October 27, 2020.

Hon'ble Vice Chancellor, Dr. Z. P. Patel visited various departments and farms of ACHF, NAU, Navsari on October 27, 2020.

Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari visited the Bamboo Resource Centre, College of Forestry on November 13, 2020.

Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari visited various departments and CAAST museum at College of Forestry on November 20, 2020.

Dr. Z. P. Patel, Hon'ble Vice Chancellor of NAU Visited Horticulture Polytechnic on November 23, 2020.

Visit of Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari on November 23, 2020 at AICRP (Palms), RHRS, NAU, Navsari

Dr. Z. P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari visited Biodiversity Conservation Centre, College of Forestry on December 01, 2020.

Hon'ble Vice Chancellor along with Director of Extension Education, NAU visited Departmental farm of Genetics and Plant Breeding, N. M. College of Agriculture, Navsari on December 02, 2020.

Dr. Z. P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University, Navsari visited Instructional Farm, Arboretum and On-going Experiments of College of Forestry on December 03, 2020.

Visit of Dr. Z. P. Patel, Hon'ble Vice Chancellor, Navsari Agricultural University at Main Cotton Research Station, Surat on December 07 & 18, 2020.

Dr. Z. P. Patel, Hon'ble Vice Chancellor and Dr. S. R. Chaudhary, Director of Research and Dean PGS, Navsari Agricultural University, Navsari visited Krishi Vigyan Kendra, Athwa farm, Surat on December 07, 2020.

Hon'ble Vice-Chancellor Dr. Z. P. Patel visited Banana Pseudostem Processing Unit along with Dr.V. R. Naik; ADR, NAU, Navsari on December 24, 2020

Hon'ble Vice-Chancellor Dr. Z. P.Patel visited Soil & Water Management Research Unit and Farm with Dr. V. R. Naik; ADR, NAU, Navsari on December 24, 2020

Visit of Monitoring team to NARP, CoA, Bharuch

Monitoring team from SDAU, Dantiwada visited NARP research plots on December 29, 2020. Team leader, Dr. P. R. Patel was satisfied with the management of research plots at NARP, CoA, NAU, Bharuch.

Visit of Dy. DDO, Navsari

Mrs. Drashti Shukla visited display museum of NAHEP-CAAST on December 19, 2020, at University, Bhavan and interacted with Hon'ble Vice Chancellor, NAU, Navsari Dr. Z. P. Patel; concerned scientists and she appreciated the efforts of NAU, Navsari.

Visit of Deputy Secretary (Agricultural Department)

Mrs. Anita P. Zula, Deputy secretary (Agricultural Department) visiting Agricultural Educatorium on Sptember 15, 2020.

Visit of Director of Extension Education, SDAU

Dr. V. T. Patel, Director of Extension Education, SDAU, visiting Agricultural Educatorium on March 20, 2021.

Memorandum of Understanding (MoU)

The Education Division, ICAR had sanctioned a CAAST project entitled "Establishment of Secondary Agriculture Unit for Skill Development in Students and Farmers at NAU, Navsari" under NAHEP to NAU, Navsari on June 13, 2018. In this context, during the period under report CAAST-NAU, Navsari has inked a MoU with a private player of national repute Crafts Melon, Mysuru, Karnataka for training and research purposes on February 26, 2021. Under this, MoU, PG students would be trained on various aspects of stylish wooden art forms and decorates.

Transfer of Technologies

During the period under report, the NAU has signed six MoUs with and Private Companies for transfer of technology for production of organic banana liquid nutrient and its sale.

Other Remarkable Activities

Mango Exhibition cum Selling

The *Krishi Vigyan Kendra*, NAU, Surat; Department of Agriculture, Department of Horticulture and ATMA, Surat jointly organized 'Mango exhibition cum selling' from June 01-06, 2020 at KVK farm, NAU, Surat. The function was graced by Mr. N. K. Gabani, Joint Director of Agriculture & Project Director, ATMA, Surat; Mr. K.S. Patel, District Agriculture Officer, Surat; Mr. D.K. Padalia, Deputy Director of Horticulture and Dr. J. H. Rathod, Senior Scientist and Head, KVK, Surat. The main purpose of this programme was to facilitate direct selling of fresh mango fruit to customers from farmers without any commission agent. Different varieties of mango *viz.*, Rajapuri, Kesar, Langdo, Daseri, Totapuri from various localities were available to customers in ten stalls. In all, 4101 kg of mango fruits were sold during a week. More than 1100 people visited the mango exhibition.

Market Platform during Covid-19 Pandemic

The KVK, NAU, Navsari provided a market platform to farmers during lockdown due to Covid-19 pandemic. More than 85 tons of mangos were sold during the lockdown (April-May 2020) through direct selling to consumers. Dr. S. R. Chaudhary, I/c Vice-Chancellor and Dr. G. R. Patel, DEE appreciated the efforts of KVK, Navsari in this regard.

Thalassaemia checkup and Blood Donation Camp

Thalassemia check-up camp for first year students and blood donation camp was organized by College of Agriculture, Waghai. Faculty members and students donated blood in this camp and in all, 54 units of blood was collected.

Awareness-Cum-Training Programme for Distributors cum Dealers under NFSM

Awareness cum Training programme for distributors and dealers of three taluka (Hansot, Ankleshwar and Bharuch) of Bharuch district was jointly organized by KRIBHCO, Surat; Main Cotton Research Station, NAU, Surat and Yashvantrai Joshi Ginning and Pressing Mills, Hansot at Hansot Ginn Compound on December 15, 2020 at Hansot following strict guidelines under Covid-19 pandemic for 100 participants comprising of 78 dealers and 22 officials. The programme was inaugurated by the Chief Guest Narendrabhai R. Patel, RGB, KRIBHCO under the chairmanship of Narendrabhai Joshi, President of Yashvantrai Joshi Co-operative Agriculture Producers and Processing and Marketing Society Ltd., Hansot. He urged dealers to increase the use of range of bio-fertilizers very useful and effective in South Gujarat Agro Climatic Zone and suggested to establish retail market chain for marketing farmers' produce. Mr. Narendrabhai Joshi thanked organizers for arranging the event and urged them to convince farmers to use water and fertilizers judicially with proper drainage facility as salinity issue is emerging.

Animal Treatment Camp

The KVK, NAU, Vyara, Dist. Tapi in collaboration with Animal Husbandry department jointly organized an animal treatment camp at Ghuntvel village of Songadh block on October 21, 2020. Different types of treatment were provided to about 107 dairy animals, such as reproductive defects,

pregnancy diagnosis, ecto-parasitic problems, reduction in milk production etc by Dr. V. K. Parmar, Veterinary Officer, Songadh block and his team. The camp was successfully managed by the village leader and chairman of village *Dudh Mandali*, Shri Thakorbhai Gamit. Total 37 livestock keepers were benefited from this camp.

Meetings organized

XVI Combined Joint AGRESCO Meeting 2020

The XVI Combined Joint AGRESCO meeting was held from June 18 to July 9, 2020 through online video conferencing by NAU, Navsari. Dr. S. R. Chaudhary, I/c Vice Chancellor of Navsari Agricultural University welcomed all the members of the respective sub committees of four SAU's for Recommendations. Hon'ble Vice Chancellor of NAU emphasized the need for this meeting in online mode owing to prevailing Covid-19 pandemic situation and urged to all the conveners and members for active participation and critical discussion and deliberations on Recommendations. Proceedings of all the sub-committees by the respective conveners were presented, Altogether total 496 New Technical Programmes were presented out of which 475 programme were approved. Total 420 recommendations / release proposals (242 for the farming communities and 178 scientific information) were presented, out of which, 342 recommendations / release proposals (204 for the farming communities and 138 scientific information) were approved. All the Hon'ble Vice Chancellors of SAUs addressed the meeting, congratulated the scientists and expressed satisfaction over the successful organization of XVI Combined Joint AGRESCO through the Video Conferencing.

Meeting on Breeding Policy of NAU

Meeting held trough video conference on September 4, 2020. There were more than forty seven scientists attained the above said meeting and fourteen Heads / Scientists of different crops were presented their current breeding work, achievements during last three years and road map for upcoming five years. After presentation and detailed discussion on breeding policy of different agricultural crops, Rtd. Director of Research, NAU and Invitee member Dr. H. C. Pathak and Dr. S. R. Chaudhary, Director of Research and Dean PG Studies, NAU, Navsari and Chairman, addressed to all scientist drew attention to maintain and testing of variability from a wide agro-ecological/phyto-geographical region as well as for fulfilling the needs of breeders and farmers.

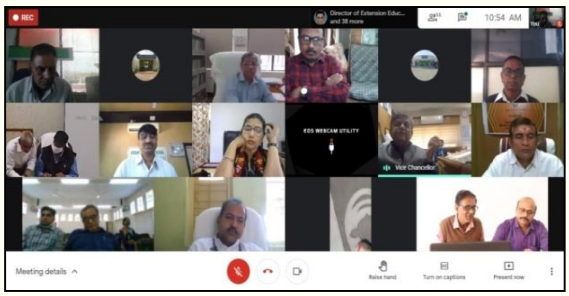
Plan review meeting

Regular monitoring and evaluation of schemes is a continuous process throughout the year with the mechanism of quarterly review meetings. As a part of that process, planning cell evaluates and monitors the development charges schemes of the University in terms of fund utilization and financial as well as physical achievements in quantifiable terms. During this period 2 review meeting held by planning cell first on 06/07/2020 and second on 05/10/2020.

Zonal Research and Extension Action Committee (ZREAC) Meetings

Directorate of Extension Education organized 31st ZREAC Meeting in online mode on October 6, 2020 at ABM, NAU, Navsari to review the work done in last year and to make the planning for forthcoming year 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.

Annual Action Plan Workshop of KVKs of Gujarat



Annual Action Plan Workshop of KVKs of Gujarat was organized in virtual mode on 18th February, 2021 jointly by ICAR-ATARI, Pune and NAU, Navsari. Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari Presided over the inaugural function in the gracious online presence of Chief Guest Dr. A. K. Singh, Deputy Director General (Agril. Extension), ICAR, New Delhi, Dr. V. P. Chovatia, Hon'ble Vice Chancellor of JAU, Junagadh, Dr. R. M. Chauhan, Hon'ble Vice Chancellor, SDAU, SKNagar, Dr. Lakhan Singh, Director, ICAR-ATARI, Pune and DEEs of four SAUs of Gujarat. All the Senior Scientist & Head of 30 KVKs participated online and presented their Annual Action Plan 2021-22.

Scientific Advisory Committee (SAC) Meetings of KVKs

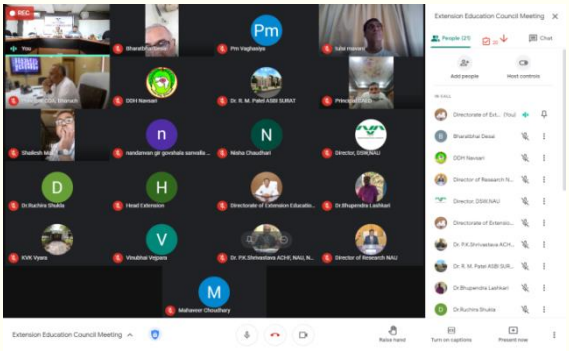
In order to review the activities carried out by KVKs and to make suggestions for better planning and implementation of activities for next year, meetings of Scientific Advisory Committee of five KVKs working under NAU was organized on dates as under:

SN	Name of KVK	Date of meeting
1	KVK Vyara (Tapi)	08-12-2020
2	KVK Dediapada (Narmada)	10-12-2020
3	KVK Waghai (Dangs)	14-12-2020
4	KVK Navsari (Navsari)	16-12-2020
5	KVK Surat (Surat)	18-12-2020

XIII Meeting of Agricultural Research Council

The XIII Meeting of Agricultural Research Council, NAU, Navsari was held through video conference on January 1, 2021 at 10.30 hrs in online mode under the Chairmanship of Dr. Z. P. Patel, Hon'ble Vice-Chancellor, NAU, Navsari. Dr. S. R. Chaudhary, Director of Research and Dean PG Studies, NAU, Navsari addressed the Council about the achievements of NAU with respect to research and tabled the agenda of the meeting. The Research Council recommended the Board of Management-NAU to accord *post-facto* approval for the 22 MoUs signed by NAU with various institutes/private companies/NGOs.

Extension Education Council meeting



Extension Education Council is a statutory body consisting of the Hon'ble 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 twelfth meeting of Extension Education Council was held on February 26, 2021 at Navsari (online) under the chairmanship of Dr. Z. P. Patel, Hon'ble Vice Chancellor, NAU, Navsari.

Notable Activities under NAHEP-CAAST Sub-Project

Online International Lectures Organized

There were nine Online Guest Lectures organized during the period under report by invited experts across the country benefitting about participants including PG Students and faculties of NAU, Navsari. The details of these online interactive lectures are as under:

SN	Title of the Talk	Resource Persons	Date	Participants benefited
1	Dairy Foods-Innovative Processing Technologies	Dr. Nitin Joshi, Vice President-Product Development Dairy Management Inc. (DMI) Plano, Texas, USA	September 09, 2020	106
2	Edible Landscape and Future Food Systems for Healthy Diets	Dr. Chandrashekhar Biradar, Principal Scientist & Head Geoinformatics Unit, International Centre for Agriculture Research in Dry Areas ICARDA-CRIAR, Research Centre, Egypt	August 30, 2020	297
3	Unblocking the Future through Emerging Precision Farming and Post Harvest Technologies	Dr. Kadamb H. Patel, Lead Scientist & Domain Lead (Plant Biotechnology) Centre for Research and Opportunities in Plant Science (CROPS) School of Applied Science, Temasek Polytechnic Singapore	August 30, 2020	282

4	Pulse Electric Field for Food Processing Technology	Dr. Pooja Lakhanpal, Senior R&D Food Scientist, Pearson's Candy Company Minneapolis Saint Paul, Minnesola, US	September 7, 2020	296
5	Edible Films and Coatings to Preserve Horticultural Crops	Dr. Asgar Ali, Director Centre for Postharvest Biotechnology University of Nottingham, Malaysia Campus, Malaysia	September 7, 2020	62
6	The Essentials for Multi-residue Analysis of GC-MS Amenable Pesticides in Food	Richard Fussell, Vertical Marketing Manager, Food & Beverage, Thermo Fisher Scientific, Hemel Hempstead, UK	November 20, 2020	98
7	Routine Trace Residue Quantitation with Comprehensive Workflows: Solutions for Success in Today's Laboratories	Ed George, Senior Application Scientist, San Jose, California, Thermo Fisher Scientific	November 20, 2020	98
8	Use of High Resolution Mass Spectrometry in Food Analysis	Charles Yang, Senior Marketing Specialist for the Environmental, Food and Beverage, San Jose California, Thermo Fisher Scientific.	November 20, 2020	98
9	Impacts of Climate Change and Heat Stress Mitigation in Farm Animals	Dr. Surinder Singh Chauhan, Animal Scientist School of Agriculture & Food Faculty of Veterinary and Agricultural Science Dookie Campus, Dookie College The University of Melbourne, Victoria 3647, Australia	October 08, 2020	70
	Total			**1211**

Distinguished Guest Lecture Series Organized

There were Twelve Distinguished Guest Lectures organized during the period under report by invited experts across the country benefitting about 931 participants including PG Students and faculties of NAU, Navsari. The details of these lectures are as under.

SN	Title of Lectures	Name of Speakers and affiliation	Date/ Duration	Participants benefited
1	Safety Aspects of Fermented Milk Products	Dr. Pradip Behare, Scientist Dairy Microbiology Division, ICAR-National Dairy Research Institute, Karna	October 9, 2020	55
2	Pesticide Residue in Export Oriented Food Commodities	Mr. Vikram Singh, Organic Chemist, Regional Research Station The National Horticultural Research and Development Foundation (NHRDF), Nashik	October 9, 2020	55
3	Food Authenticity : Introduction Scope and Significance	Dr. Raina Jain, Jr. Scienitist - Mol. Biology (R & D Dept.) National Collateral Management Services Ltd., Indore	October 9, 2020	55
4	Food Safety and	Dr. K. Manorama, Retd, Professor and	October	64

	Quality Assurance: Farm to Table	Head; Department of Foods and Nutrition, Post Graduate & Research Centre, Prof. Jayashankar Telangana State Agricultural University, Rajendranagar, Hyderabad	8, 2020	
5	Food Quality and Safety: Significance and Scope in Secondary Agriculture	Dr. Julie D. Bandral, Associate Professor Division Of PHT/Food Science And Technology Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Chatha, Jammu	October 8, 2020	64
6	Environmental Implication in Food Quality and Safety	Dr. Vivek M. Arya Assistant Professor (Senior Grade) Faculty of Agriculture, Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Chatha, Jammu	October 8, 2020	64
7	Regulatory Environment For Safe Use of Agrochemicals in India	Mr. Vijay Jha, Manager (Registration) Rallis India Ltd., New Delhi October 7 at 9:30 AM 2 Online Underutilized Foods For E	October 7, 2020	101
8	Underutilized Foods For Enhancement of Food And Nutritional Security	Dr. K. Aparna, Sr. Scientist (MFPI - Quality Control Laboratory) Prof. Jayashankar Telangana State Agricultural University Rajendranagar, Hyderabad	October 7, 2020	101
9	Role of Honey bee in Food Security	Dr. D. P. Abrol, Dean, Faculty of Agriculture Sher-e-Kashmir University of Agricultural Sciences & Technology of Jammu, Chatha, Jammu	October 7, 2020	101
10	The Growing Concerns of Veterinary Drug Residues in Foods of Animal Origin	Dr. J. K. Malik, Former Joint Director (Research) Indian Veterinary Research Institute, Izatnagar, Bareilly	December 03, 2020	46
11	ICT tools for livestock sector: Present trends and Future Prospects	Dr. Mrs. Rupasi Tiwari, Principal Scientist & I/C ATIC Joint Directorate of Extension Education Indian Veterinary Research Institute Izatnagar, Bareilly (UP)	August 04, 2020	115
12	Certification of Non-Wood Forest Products in India	Dr. Manmohan Yadav, Associate Professor Indian Institute of Forest Management, Bhopal	October 27, 2020	110
Total				**931**

Awards/Recognitions of Faculties and Students

Best Teacher Award

Dr. Tushar U. Patel, Assistant Professor (Agronomy), CoA, Bharuch campus, was conferred with Best Teacher Award-2020 in Higher Agricultural Education-2020 of NAU, Navsari by Acharya Dev Vrat, Hon'ble Chancellor of the University on 09/02/2021 during XVI Annual Convocation of the University.

Best Researcher Award

Dr. Digvijay A. Chauhan, Associate Research Scientist, Nodal officer & Unit-Head, Pulses & Castor Research Station, NAU, Navsari was conferred with **Best Researcher Award (**2019-20) in recognition of outstanding contribution to the research achievements of NAU, Navsari by Acharya Dev Vrat, Hon'ble Chancellor of the University on 09/02/2021 during XVI Annual Convocation of the University.

Recognition of Faculties

1. Dr. Rajesh P. Gunaga, Associate Professor, College of Forestry, NAU, Navsari has participated as **Member of Task Force on Teak**, PPVFRA, New Delhi in the online meeting 03-11-2020 for finalization of DUS characters and test guidelines for teak.
2. Dr. Mehul G. Thakkar, Associate Professor (HRM) and University Placement & Counselling Head, NAU, Navsari recognized as **"Certified National Level Trainer"** by the Management & Entrepreneurship and Professional Skills Council (MEPSC), National Skill Development Corporation (NSDC), Ministry of Skill Development & Entrepreneurship, Govt. of India on March 12, 2021.
3. Dr. Mehul G. Thakkar, Associate Professor (HRM) and University Placement & Counselling Head, NAU, Navsari received the National Level **"Achiever Award-2020"** by the Society for Advancement of Human and Nature (SADHNA), Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan (HP) on February 28, 2021.

Best Oral Presentation Awards

1. Dr. Nitin N. Gudadhe Assistant Professor received **Best Oral Presentation Award** in International Conference on Engineering Biotic Interactions in the Light of Social Applicability Maharadhiraj Uday Chand Womens College, B. C. Road, Burdwan, West Bengalon August 26, 2020.
2. Dr. M. D. Khunt and Dr. B. P. Mehta received second **Best Oral Presentation Award** during National Symposium on Plant Health Management organized by College of Agriculture, Bharuch on November 2-4, 2020.
3. Dr. Swati Sharma received the **Best Oral Presentation Award** for the paper entitled "Consumer Buying Behaviour towards Purchase of Food Items from Organized Retail Outlets of Surat City" in the International Web conference on Global Research Initiatives

for Sustainable Agriculture and Allied Sciences, organized by Astha Foundation during December 28-30, 2020.

4. R. B. Patel, D. R. Patel, J. J. Patel and D.V. Muchhadiya of CoA, Bharuch campus awarded with **Best Oral Presentation Award** (Second position) for the paper entitled "Screening of pigeon pea genotypes against pod borer and pod fly under natural field condition" in the National Symposium on "Plant Health Management" organized by College of Agriculture, Bharuch Campus, NAU, Navsari during 2-4 Nov. 2020.
5. K. N. Panara, R. R. Waghunde and M. R. Shekhda of CoA, Bharuch campus awarded with **Oral Presentation** (Second position) for the paper entitled "*In vitro* evaluation of bio-agents against anthracnose pathogen (*Colletotrichum* sp.) of cotton" in the National Symposium on "Plant Health Management" organized by College of Agriculture, NAU, Bharuch Campus, NAU, Navsari during 2-4 Nov. 2020.
6. R. R. Waghunde, A. J. Deshmukh and S.G. Patel of CoA, Bharuch campus awarded with **Best Oral Presentation** (Second position) for the paper entitled "Application of endophytes for improving plant growth and stress tolerance" in the National Symposium on "Plant Health Management" organized by College of Agriculture, NAU, Bharuch Campus, NAU, Navsari during 2-4 Nov. 2020.
7. Dhaval J. Bhadani and J. J. Patel of CoA, Bharuch campus awarded with **Best Oral Presentation** (First position) for the paper entitled "Population dynamics of pod borer, *Helicoverpa armigera* (Hubner) Hardwick on pigeon pea (*Cajanus cajan* (L.) Millspaugh in relation to weather parameters" in the National Symposium on "Plant Health Management" organized by College of Agriculture, Bharuch Campus, NAU, Navsari during 2-4 Nov. 2020.
8. Priyanka J. Patel and J. J. Patel of CoA, Bharuch campus awarded with **Best Oral Presentation** (Second position) for the paper entitled "Population dynamics of sucking pests on okra in relation to weather parameters" in the National Symposium on "Plant Health Management" organized by College of Agriculture, NAU, Bharuch Campus, NAU, Navsari during 2-4 Nov. 2020.
9. Dr. Vaibhavkumar N. Mehta, Assistant Professor (Nanotechnology) has been awarded as **Best Oral Presentation Award** for his oral presentation entitled "Green synthetic approach for synthesis of fluorescent carbon dots for lisinopril drug delivery system and their confirmations in the cells" which was presented by him at the "Virtual International Conference on Physical Sciences (ICPS-2021)" jointly organized by Applied Chemistry Department, Applied Physics Department and Applied Mathematics and Humanities Department, S. V. National Institute of Technology, Surat during February5-6, 2021.
10. Musmade, N. A., Suthar, K. P., Pawar, R. D. and Mahatma L. adjudged as Third **Best Oral Presenter** for the presentation "Synthesis of chitosan mediated silver nanoparticles ($AgNO_3$) for potential antifungal application" in National symposium on plant Health management organized by the Department of Biotechnology & Crop Improvement, College of Horticulture, GKVK post, Bengaluru, during November 02-04, 2020.
11. N. A. Musmade, K. P. Suthar, R. D. Pawar and Lalit Mahatma adjudged as **Best Oral Presenter** for the presentation "Chitosan mediated silver nanoparticles (AgNPs) with potential antifungal activities in Virtual International Conference on Chemical Sciences in Sustainable Technology and Development, (IC2S2TD-2020) during December 01-03, 2020.

Best Scientist/Young Scientist Awards

1. Dr. Nitin N. Gudadhe Assistant Professor bagged a **project on competitive basis** entitled "Low cost biofortification kit: A sustainable tool for nutrition, yield and income security of farmers" from Department of Science and Technology, GoI, New Delhi of Rs. 25.88 Lakhs under **Young Scientists and Technologists category**.
2. Dr. H. R. Ramani, Assistant Research Scientist (Biochem.), MCRS, NAU, Surat received **"Young Scientist Award"** in the field of Biochemistry in the IV International

Conference held on February 26 to 28, 2021 through online mode (Global approaches in Natural Resource Management for Climate Smart Agriculture during Pandemic Era of Covid-19) organized by Shobhit Deemed University, Modipuram, Meerut, Uttar Pradesh.

3. Dr. K. D. Bisane, Jr. Entomologist, FRS, NAU, Gandevi was conferred **"Young Scientist Award 2020"** in the II National Conference on "Recent Scientific Advances in Agricultural and Environmental Sciences" organized by Dr. B. Vasantharaj David Foundation, Chennai – 600125 on December 5, 2020.
4. Dr. P. K. Modi, Jr. Horticulturist, FRS, NAU, Gandevi was conferred "**Young Researcher Award 2020"** by Institute of Scholar (InSc), Bengaluru, Karnataka.
5. Dr. N. K. Gajre,Assistant Research Scientist,AES, NAU, Paria was awarded as **Young Scientist** by Dr. B. Vasantharaj David Foundation, Chennai.
6. Dr. Swati Sharma received **Young Scientist Award** on the occasion of International Conference on Global research initiatives for sustainable agriculture and allied sciences during organized by Astha Foundation during December28-30, 2020.
7. **Young Plant Breeder Award**, to Dr Rajesh D. Vekariya, Assis. Res. Sci., WRS, NAU, Bardoli for outstanding contribution in field of genetics and plant breeding on occasion of International Web Conference on New Trends in Agriculture, Environmental and Biological Sciences for Inclusive Development (NTAEBSID-2020) during June 21-22, 2020. (Award achieved based on academic CV and PhD thesis work by Agro Environment Development Society (AEDS).
8. Dr. Laxmikanta Behera Assistant Professor received **Agroforestry Scientist Award-2020** for his outstanding contribution and recognition in the field of Silviculture and Agroforestry on the occasion of International Web Conference Perspective on Agricultural and Applied Sciences in COVID-19 Scenario (PAAS-2020) by Agricultural & Environmental Technology Development Society (AETDS), U.S. Nagar, Uttarakhand, India during October 4-6, 2020.
9. Dr. Abhishek Ambashankarbhai Mehta Assistant Professor received **Young Scientist Award-2020** for his outstanding contribution and recognition in the field of Forest Products and Utilization on the occasion of International Web Conference Perspective on Agricultural and Applied Sciences in COVID-19 Scenario (PAAS-2020) by Agricultural & Environmental Technology Development Society (AETDS), U.S. Nagar, Uttarakhand, India during October 4-6, 2020.
10. Dr. M. R. Siddhapara, Assistant Research Scientist, Department of Entomology, N. M. College of Agriculture, NMCA, NAU, Navsari was awarded the **"Young Scientist Award-2020"** in National Conference (online) on "Recent Scientific Advances in Agricultural and Environmental Sciences" organized by Dr. B. Vasantharaj David Foundation at Chennai on December 5, 2020.
11. Dr. Madhu Bala, Assistant Professor, Dept. of Genetics & Plant Breeding, N. M. College of Agriculture, NMCA, NAU, Navsari was awarded the **Young Scientist Award** in the X International Scientist Awards on Engineering, Science and Medicine held on September 26-27,2020, Hyderabad organized by VDGOOD Professional Association.
12. Dr. P. R. Patel, Associate Professor was awarded **Outstanding Agricultural Scientist Award-2020** by Dr. B. Vasantharaj David Foundation, Chennai on December 5, 2020.
13. Dr. Hemant Sharma, Associate Professor was awarded **Scientist Award-2020** from Dr. B. Vasantharaj David Foundation, Chennai on December 5, 2020.
14. Dr. S. M. Bambhaneeya, Assistant Professor of CoA, Bharuch campus received the Certificate of merit for the **"Award of Excellence in Research"** in Agricultural Science under the category of "Soil Science" specialization during the academic year 2020-21 by Novel Research Academy, Pondicherry.
15. Dr. Hemant Sharma received **Research Excellence Award 2020** by Institute of Scholars (InSc), Muddhinapalya, Bengaluru (Karnataka).

Best KVK Scientist Award

1. Mr. J. B. Dobariya, Scientist (Extension Education), KVK, Dang received the **Best KVK Scientist Award**, from Society of *Krishi Vigyan* on September 28, 2020

Best Outstanding Young Researcher International Award

1. Mr. J. B. Dobariya, Scientist (Extension Education), KVK, Dang received the **Best Outstanding Young Researcher International Award 2020**, from Kamarajar Institute of Education and Research Theni, Tamil Nadu on December 30, 2020.

Best Horticulturist Award

1. Mr. Harshadkumar Amrutbhai Prajapati from KVK, Dang received the best Horticulturistaward from Agriculture Technology Development Society (ATDS) Ghaziabad, Uttar Pradesh, India on Feb. 28, 2021.

Young Agronomist Award 2020

1. Dr. Pratik P. Javiya from KVK, Dang received Young Agronomist Award 2020 awarded by Agriculture Technology Development Society (ATDS) Ghaziabad, Uttar Pradesh, India on Feb. 28, 2021.

Best Thesis Awards

1. Dr. M. D. Khunt Assistant Professor was awarded with **Best Doctoral Thesis** for the year 2016-17 for his commendable thesis work at NAU, Navsari by The Gujarat Association for Agricultural Sciences, Ahmedabad on October 03, 2020
2. Dr. Laxmikanta Behera Assistant Professor was awarded with **Best Doctoral Thesis** for the year 2016-17 for his commendable thesis work in the field of Forestry by the Gujarat Association for Agricultural Sciences (GAAS), Ahmedabad, Gujarat during 03 October, 2020.
3. Dr. Neethu T. M. Assistant Professor, Department of Soil Science and Agricultural Chemistry, N M College of Agriculture, NAU, Navsari was awarded the **Best Doctoral Thesis** by Gujarat Association of Agricultural Sciences (GAAS), Ahmedabad on October 03, 2020.
4. Dr. D. K. Patel, Agricultural Officer of CoA, Bharuch campus received the Best Ph.D. Thesis Award in the IV International Conference on "Current approaches in agriculture, animal husbandry and allied sector for successful entrepreneurship (CAAHASSE-2021)" during March 13-15, 2021.

Best paper/poster Awards

1. Dr. H. M. Patel Assistant Professor was conferred **Best Article Award** entitled "The Potential Use of Earthworm Species for making quality Vermicomost" by Agriculture & Food E-Newsletter on November 9, 2020.
2. Dr. S. M. Bambhaneeya, Assistant Professor of CoA, Bharuch campus received **'Outstanding Research Paper Award'** for the paper "Depth function of stored and sequestered carbon under cotton growing soils of South Gujarat in India" published in the International Journal of Global Warming by Novel Research Academy, Puducherry.
3. Dr. C. U. Shinde, Assistant Professor, Department of Entomology, N. M. College of Agriculture, NMCA, NAU, Navsari Presented research paper entitled 'Development of entrepreneurs through establishment of Trichocard production Unit at village level' and received "**Best Poster Presentation Award**" in the National webinar on "Motivation of Youth Towards Agri-entrepreneurship and Innovative farming" held on July4-5, 2020 at Jawaharlal Nehru *Krishi Vishwavidyalaya*, Jabalpur, Madhya Pradesh.
4. Dr. M. R. Siddhapara, Assistant Research Scientist, Department of Entomology, N. M. College of Agriculture, NMCA, NAU, Navsari Presented research paper entitled

'Development of entrepreneurs through establishment of Trichocard production Unit at village level' and received "**Best Poster Presentation Award**" in the National webinar on "Motivation of Youth Towards Agri-entrepreneurship and Innovative farming" held on July4-5, 2020 at Jawaharlal Nehru *Krishi Vishwavidyalaya*, Jabalpur, Madhya Pradesh.

5. Mr. K. M. Patel, Assistant Professor, Department of Entomology, N. M. College of Agriculture, NMCA, NAU, Navsari Presented research paper entitled 'Development of entrepreneurs through establishment of Trichocard production Unit at village level' and received "**Best Poster Presentation Award**" in the National webinar on "Motivation of Youth Towards Agri-entrepreneurship and Innovative farming" held on July 4-5, 2020 at Jawaharlal Nehru *Krishi Vishwavidyalaya*, Jabalpur, Madhya Pradesh.
6. Dr. R. K. Patel, Assistant Professor, was awarded **GAAS Award** as a **Co-worker** for development of Coriander Variety GCO-3 by the Gujarat Association of Agricultural Sciences on October 03, 2020.
7. Dr. H. V. Patel, Assistant Professor (Entomology) has been awarded as **Best Poster Presentation Award** for his poster presentation entitled "Impact of different household processing on reduction of insecticides residue in/on brinjal fruits" which was presented by him at the National symposium on Plant Health Management organized by Department of Plant Pathology, College of Agriculture, N.A.U., Campus Bharuch, during 2nd-4th November, 2020 (Certificate No. COAB/PP/2020/116, dated: 04/12/2020).

Students' Accomplishments / Awards

NAU students cracked AIEEA-JRF and SRF examination

University is giving due attention to impart extra coaching to students for enabling them succeed in national level competitive examinations. In the year 2020-21, 69 students of various faculties of NAU qualified AIEEA-JRF and 37 PG students qualified AIEEA-SRF.

SHODH scheme beneficiaries

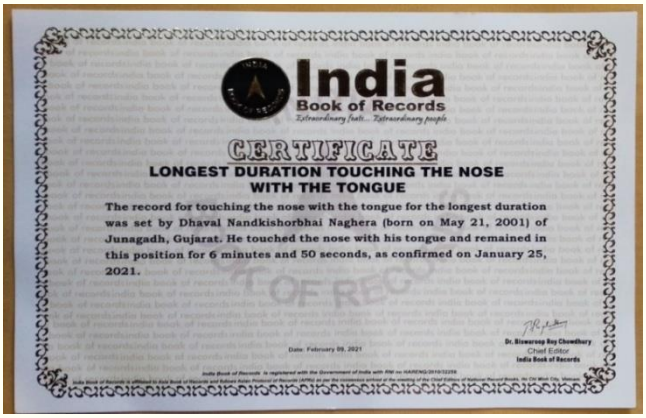
Totally forty seven research scholars benefited from SHODH (Scheme of developing high quality Research, KCG, GoG) including 14 from ACoH and 33 from NMCA for pursuing Ph. D. programme and eligible for two years fellowship Rs.15,000 per month and contingency Rs. 20,000 per annum.

Scientific awards and recognition/ Best PG Thesis Award by research scholars & students

Best paper/poster Awards

1. Mr. H. M. Bhanderi and Dr. M. D. Khunt received first **Best Poster Presentation Award** during National Symposium on Plant Health Management organized by College of Agriculture, Bharuch on November 2-4, 2020.
2. Mr. Purvesh Mendapara and Dr. M. D. Khunt secured third **Best Poster Presentation Award** during National Symposium on Plant Health Management organized by College of Agriculture, Bharuch on November 2-4, 2020.
3. Mr. Amit U. Gojiya, PG student of CoA, Bharuch campus awarded with the **Best PG Thesis Award** by Samagra Vikas Welfare Society, Lucknow during September 24-25, 2020.
4. Mr. Baldaniya Jayeshkumar Babubhai received **Best M.Sc. Thesis Award-2020** for his outstanding contribution and recognition in the field of Silviculture and Agroforestry on the occasion of International Web Conference Perspective on Agricultural and Applied Sciences in COVID-19 Scenario (PAAS-2020) by Agricultural & Environmental Technology Development Society (AETDS), U.S. Nagar, Uttarakhand, India during October 4-6, 2020.

Record in India Book of Records



Mr. Dhaval Nandkishorbhai Naghera, student of VI semester, B.Sc. Forestry, College of Forestry, Navsari Agricultural University, Navsari was recorded in India Book of Records on January 25, 2021 for touching the nose with the tongue for the longest duration. He touched the nose with his tongue and remained in this position for 6 minutes and 50 seconds.

Others

Ms. Bharucha Yesha C. from ASBI, Surat conferred Best Non-Verbal Communication in Hindi through virtual mode Section held at G. B. Pant University of Agriculture & Technology, Pantnagar during January 14-15, 2021.

4. Education

The Navsari Agricultural University offers undergraduate and postgraduate degree programmes through existing ten colleges *viz.*, N.M. College of Agriculture (1965), ASPEE College of Horticulture (1988), College of Forestry (1988), Vanbandhu College of Veterinary Science and Animal Husbandry (2008), ASPEE Agri-Business Management Institute (2007) located at main campus of Navsari and out campus colleges *viz.* ASPEE Shakilam Agricultural Biotechnology Institute, Surat (2012), College of Agriculture, Bharuch and Waghai (2012), College of Agricultural Engineering, Dediapada (2013). Further, a College of Fisheries Science has been established at Navsari campus during the year 2015. All five new colleges were started with the financial support from Government of Gujarat to meet the increasing demand for admission to agricultural and allied science degree programmes. Thus, at present NAU offers UG and PG degree programmes in the disciplines of Agriculture, Horticulture, Forestry, Veterinary science and Animal Husbandry, Agricultural Engineering and Agricultural Biotechnology. Besides, AABMI offers only PG programme, whereas, College of Fisheries Science offers only UG degree programmes. At present, NAU offers 7 Undergraduate, 43 Masters and 24 Doctoral degree programmes in agriculture and allied science.

Moreover, University offers seven polytechnic in diploma programmes in the agriculture and allied sciences and 16 Agro ITI courses to produce medium skilled manpower for working at grass-root level.

Details of Degree Programmes of NAU

SN	Faculty	No. of Departments	No. of Degree Programmes					
			UG	Intake	Masters	Intake	Ph.D.	Intake
1	Agriculture	13	1	303	13	151	9	34
2	Veterinary	17	1	80	17	47	5	6
3	Horticulture	07	1	77	07	36	6	12
4	Forestry	05	1	72	05	26	4	7
5	Biotechnology	05	1	66	0	0	0	0
6	Agribusiness Management	01	0	0	01	41	1	3
7	Agricultural Engineering	04	1	33	03	12	0	0
8	Fisheries Science	04	1	27	0	0	0	0
Total		**56**	**7**	**658**	**46**	**313**	**25**	**62**

PG Degree Programmes

Faculty: Agriculture

SN	Name of Disciplines	M.Sc.	Ph.D.
1	Agronomy	Yes	Yes
2	Agri. Chem. & Soil Sci.	Yes	Yes
3	Agril. Entomology	Yes	Yes
4	Plant Pathology	Yes	Yes
5	Genetics & PB	Yes	Yes
6	Plant Physiology	Yes	No
7	Agril. Economics	Yes	Yes
8	Extension Education	Yes	Yes
9	Agril. Statistics	Yes	No
10	Agril. Meteorology	Yes	No
11	Agril. Microbiology	Yes	Yes
12	Biochemistry	Yes	Yes
13	Plant Molecular Biology & Biotechnology	Yes	No
	Total	**13**	**9**

Faculty: Horticulture

SN	Name of Disciplines	M.Sc.	Ph.D.
1	Fruit Science	Yes	Yes
2	Floriculture and Landscape Architecture	Yes	Yes
3	Vegetable Science	Yes	Yes
4	Post-Harvest Technology	Yes	Yes
5	Plantation Crops, Spices, Medicinal Plants and Aromatic Plants	Yes	No
6	Horticultural Entomology	Yes	Yes
7	Horticultural Pathology	Yes	Yes
	Total	**7**	**6**

Faculty: Forestry

SN	Name of Disciplines	M.Sc.	Ph.D.
1	Silviculture and Agroforestry	Yes	Yes
2	Forest Biology and Tree Improvement	Yes	Yes
3	Forest Products and Utilization	Yes	Yes
4	Natural Resource Management	Yes	Yes
5	Wildlife Science	Yes	No
	Total	**5**	**4**

Faculty: Agri-Business Management

SN	Name of Disciplines	MBA	Ph.D.
1	Agribusiness Management	Yes	Yes
	Total	**1**	**1**

Faculty – M.Tech (Agriculture Engineering & Technology)

SN	Name of Disciplines	M.Sc.	Ph.D.
1	Farm Machinery & Power Engineering	Yes	No
2	Soil & Water Conservation Engineering	Yes	No
3	Processing & Food Engineering	No	No
4	Renewable Energy Engineering	Yes	No
	Total	**3**	**0**

Faculty: Veterinary Science & A.H.

SN	Name of Disciplines	M.V.Sc.	Ph.D.
1	Veterinary Surgery & Radiology	Yes	No
2	Veterinary Physiology	Yes	Yes
3	Veterinary Biochemistry	Yes	No
4	Animal Biotechnology	Yes	No
5	Gynecology (ARGO)	Yes	No
6	Animal Nutrition	Yes	No
7	Veterinary Pharmacology & Toxicology	Yes	No
8	Veterinary Microbiology	Yes	Yes
9	Livestock Production and Management	Yes	Yes
10	Animal Genetics & Breeding	Yes	Yes
11	Veterinary Public Health	Yes	Yes
12	Veterinary Parasitology	Yes	No
13	Veterinary Animal Husbandry Extension	Yes	No
14	Veterinary Medicine	Yes	No
15	Veterinary Pathology	Yes	No
16	LPT	Yes	No
17	Veterinary anatomy and Histology	Yes	No
	Total	**17**	**5**

Admission Policy

The admission to various UG and PG Degree programmes in all SAUs of Gujarat is given by Central Admission Committee. The candidates are admitted to B.Sc. (Hons.) Agriculture, B.Sc. (Hons.) Horticulture and B.Sc.(Hons.) Forestry, after passing H.S.S.C examination (10+2 system) in science stream (B group) or vocational stream in agriculture from Gujarat state Educational Board or its equivalent. The minimum qualifying marks for admission to above courses are 40% for general and S.E.B.C category and 35% for SC and ST candidates. Similarly, candidates are also admitted to B.V.Sc. and A.H. and B.Tech. (Agri. Engineering) degree programme based on marks obtained in common entrance test (GUJCET) and JEE, respectively.

Admission to post graduate degree programmes like M.Sc. (Agriculture), M.Sc. (Horticulture), M.Sc. (Forestry), M.V.Sc. and M.Tech (Agri. Engineering & Technology) is given to the candidates having Bachelor's degree in respective faculty with OGPA not less than 6.00/10.00. The admission procedures laid down by Central Admission committee for four SAUs of Gujarat is followed.

Admission to M.B.A (ABM) degree programme is given to candidates with graduate or post graduate degree in Agriculture/Horticulture/Forestry or allied sciences or a graduate degree in Biological sciences with OGPA not less than 5.5 /10.00 for general category and 5.0/10.00 for SC/ST/SEBC categories. Eligible candidates then appear for written entrance test, group discussion and personal interviews and admission is given based on the merit list.

Admission to Ph.D. (Agri/Horti/Forestry/Vety) degree programme is given to candidates having master's degree in respective discipline with OGPA not less than 6.50/10.00 for all categories. Eligible candidate need to pass written entrance test as per common admission procedure of SAUs of Gujarat.

Admission to the PG degree programmes of all four SAUs of Gujarat is given by Central Admission Committee after conducting Command Entrance Test. The merit list is prepared by giving 50% weightage to OGPA of last degree and 50% weightage to marks of common entrance test.

Admission to polytechnic is given to candidates possessing Secondary School Certificate (S.S.C) examination with English as compulsory subject from Gujarat State Education Board (GSEB). The minimum qualifying marks for admission in polytechnic is 40% for general and SEBC and 35% for SC and ST candidates. Admission is given to candidates based on merit list.

New admissions

During the year under report, 808 students were admitted in different UG and PG degree programmes offered by the NAU. This included 428 students in UG programmes, 313 in Masters and 62 in Ph.D degree programmes of the University. During the year 2020-21, admissions to undergraduate degree programme was increased from 193 (2010-11) to 428, thus intake of UG degree programme was increased by 149.74 per cent.

Thus overall admission to various degree programmes was increased from 391 (2010-11) to 803 (2020-21) students and increase was recorded as high as 105.37per cent.

Students Admitted

SN	Degree programme	No. of students admitted
Undergraduate		
1	B.Sc. (Hons.) (Agriculture)	268
2	B.Sc. (Hons.) (Horticulture)	64
3	B.Sc. (Hons.) (Forestry)	53
4	B.Sc.(Biotechnology)	33
5	B.Tech (Agril. Engineering)	10
	Total	**428**
Masters		
6	M.Sc. (Agriculture)	151
7	M.Sc. (Horticulture)	36
8	M.Sc. (Forestry)	26
9	M.V.Sc.	47
10	M.B.A (ABM)	41
11	M.Tech.	12
	Total	**313**
Ph.D.		
12	Agriculture	34
13	Horticulture	12
14	Forestry	7
15	Veterinary	6
16	M. Tech.	0
17	Ph.D. (ABM)	3
	Total	**62**
	Total Admission	**803**

***Admission of** B.V.Sc. and B.Sc (Fisheries Science) were done by the Kamdhenu University, Gandhinagar, Gujarat.

Students admitted to Polytechnic

SN	Courses	No. of students admitted
1	Polytechnic in Agriculture, Bharuch	44
2	Polytechnic in Horticulture, Navsari	42
3	Polytechnic in Agriculture, Vyara	43
4	Polytechnic in Agriculture, Waghai	43
5	Polytechnic in Agricultural Engineering, Dediapada	39
6	Polytechnic in Horticulture, Paria	38
	Total Admission	**249**

***Admission of** polytechnic in Animal Husbandry done by the Kamdhenu University, Gandhinagar, Gujarat.

Syllabus implemented

External system of examination for B.Sc. (Agri) is being implemented as per the recommendations of ICAR and 5th Dean's committee. Similar external system of examination for B.V.Sc. and A.H. is implemented as per recommendations of VCI. However, internal system of examination is adopted for B.Sc. (Horticulture) and B.Sc. (Forestry). Post graduate syllabus and system of examination recommended by ICAR has been implemented for post graduate studies in NAU since 2009.

Passed out students

During the year 2020-21, total 461 undergraduate students including 219 B.Sc. (Agriculture), 52 B.Sc. (Horticulture), 38 B.Sc. (Forestry), 79 B.V.Sc. & A.H, 24 B.Sc. (Agril. Biotechnology), 22 B.Tech. (Agri. Engineering & Technology) and 15 B.F.Sc. passed out from different faculties of NAU.

A total of 229 students completed their postgraduate studies at NAU. Out of 229 post graduates, 51 students completed Ph.D. and 178 students completed masters in Agriculture (96), Horticulture (36), Forestry (9), Veterinary (13) Agribusiness Management (22) and M.Tech (2) during the year 2020-21.

Experiential Learning Units

Presently, twelve experiential learning units are in operation in the University for giving opportunities to 'Earn while Learn' and to provide hands on training to undergraduate students. These ELPs have been developed from financial support from ICAR, New Delhi as well as from stateshare. The details of ELPs are given as under:

SN	Name of ELP Units	Sanctioned during	Name of the Colleges
1	Bio-fertilizer Production Unit	2006	N.M. College of Agriculture, Navsari
2	Post-Harvest Handling and Value Addition in Horticultural Crops	2006	ASPEE College of Horticulture, Navsari
3	Plant Tissue Culture	2007	N.M. College of Agriculture, Navsari
4	High Tech Protected Cultivation of Horticultural Crops	2008	ASPEE College of Horticulture, Navsari
5	Commercial Apiculture	2011	College of Forestry, Navsari
6	Commercial Horticulture	2011	ASPEE College of Horticulture,

			Navsari
7	Broiler and Layer Production Unit*	2013	Vanbandhu College of Veterinary Science & Animal Husbandry, Navsari
8	Goat Production and Rearing Unit*	2014	Vanbandhu College of Veterinary Science & Animal Husbandry, Navsari
9	Development of Quality Planting Material in Forestry	2016	College of Forestry, Navsari
10	Enriched Vermicompost Production	2017	College of Agriculture, Bharuch
11	Quality Material Production in Horticultural crops	2018	College of Agriculture, Waghai
12	Agriculture Waste Management through Vermicompost	2018	College of Agriculture, Waghai

*These ELUs were transferred to Kamdhenu University, Gandhinagar, Gujarat due to bifurcation *w.e.f* April 1, 2021.

Student's Achievements at National Level Competitions (2020-21) □

SN	Faculty	No. of Students qualified			
		ICAR- JRF	ICAR-SRF	ARS	NET#
1	Agriculture	11	20	00	00
2	Veterinary	00	00	00	00
3	Horticulture	08	13	00	00
4	Forestry	05	01	00	00
5	Agricultural Biotechnology	08	00	00	00
6	Agribusiness Management	NA	00	00	00
7	Agri. Engineering	01	00	00	00
8	Fisheries Science	11	00	00	00
	Total	**44**	**34**	**00**	**00**

□ Details are given in respective Colleges

NET not conducted by ASRB, ICAR, New Delhi due to COVID-19 Pandemic.

RAWE Programme

As per the fifth Dean's committee recommendation, RAWE programme is being followed regularly for Agriculture, Horticulture and Forestry faculties.

SN	Name of the College/ Faculty	No of Students of Beneficiaries with Stipend		Total
		RAWE	Internship	
1	N.M. College of Agriculture, Navsari	110	-	110
2	College of Agriculture, Bharuch	60	-	60
3	College of Agriculture, Waghai	57	-	57
4	ASPEE College of Horticulture, , Navsari	110	-	110
5	College of Forestry, Navsari	80	-	80
6	ASPEE SHAKILAM Biotechnology Institute, Surat	27	-	27
7	College of Veterinary Science & A. H., Navsari	00	159	159
	Total	**444**	**159**	**603**

National Talent Scholarship

NTS financed by ICAR, New Delhi was granted to a total of 233 students including 112 students of Agriculture, 18 from Horticulture, 19 from Forestry, 52 students of Veterinary Sciences, 10 students of Agricultural Biotechnology and 12 students of Agribusiness Management faculties of the University during the year 2020-21.

Teachers' Strength

During the year 2020-21 a total strength of teacher working at different faculties was 461 including 38 Professor and its equivalent, 95 Associate Professor and its equivalent and 328 Assistant Professor and its equivalent.

Staff Position

Details of activity wise Posts sanctioned (S) and filled (F)

Name of Post	**Education**		**Research**		**Extension**		**Total**	
	S	**F**	**S**	**F**	**S**	**F**	**S**	**F**
Professor	54	29	12	9	0	0	66	38
Associate Professor	98	62	38	27	6	6	142	95
Assistant Professor	233	205	99	87	41	36	373	328
Total	**385**	**296**	**149**	**123**	**47**	**42**	**581**	**461**

Participation in seminar, symposium, conference & capacity building programme by faculties

During the period under report a total of 217 NAU faculties attended & presented research papers in seminars, symposiums and conferences as well as attended capacity building programmes/courses including 21 Professors, 54 Associate Professors and 142 Assistant Professors.

Sr. No.	Name of the College/ Faculty	Professor	Associate Professor	Assistant Professor	Total
1	N M College of Agriculture, Navsari	03	13	30	46
2	College of Agriculture, Bharuch	03	11	16	30
3	College of Agriculture, Waghai	00	02	06	08
4	ASPEE College of Horticulture, Navsari	01	09	35	45
5	College of Forestry, Navsari	01	03	14	18
6	ASPEE Agribusiness Management Institute, Navsari	01	10	03	14
7	College of Veterinary Science & A. H., Navsari	12	06	35	53
8	ASPEE Shakilam Agribiotechnology Institute, Suart	00	00	03	03
	Total	**21**	**54**	**142**	**217**

5. N. M. College of Agriculture Navsari

The Institute

Navinchandra Mafatlal College of Agriculture, popularly known as N. M. College of Agriculture, is the first educational institute established in the field of agriculture in South Gujarat. The college was established in May, 1965 with a vision to impart agricultural education and uplift the socio-economic status of agriculture-based community of the region. At the time of its establishment, the college was affiliated to Gujarat University, Ahmedabad (1965 to 1968). From 1968 to 1972, the college was affiliated to the South Gujarat University, Surat. Later, with the establishment of a dedicated agricultural university in Gujarat, the college was affiliated to erstwhile Gujarat Agricultural University (GAU) from 1972 to 2004. Navsari Agricultural University came into existence in 2004. Since then, N.M. College of Agriculture became a constituent college of Navsari Agricultural University (NAU). During the year 2014-15, N.M. College of Agriculture completed its fifty years of establishment. In last fifty years, the institute has achieved a noteworthy recognition for its quality education, research and extension and has been rendering ceaseless services in the form of producing quality trained human resources and technologies for the benefit of its various stakeholders and has blossomed into one of the leading agricultural colleges of Gujarat.

To keep pace with the advancements in the agricultural education system and in order to maintain standards of teaching, the college adopted the revised academic curricula recommended by different Dean's committees from time to time. In order to offer hands on training to the students while learning, the college has been successfully running the Experimental Learning Programme (ELP) with the establishment of Bio-fertilizer Production Unit and has received much deserved appreciation from ICAR and other national agencies. The college adheres to the guidelines issued by the ICAR from time to time and has also implemented the "Best Teacher Award Scheme" as per ICAR guideline since 2011 to encourage and motivate the faculty members to maintain and uplift the quality of teaching and research. The college has fifteen departments withFood Quality Testing Laboratory to impart quality education to the students enrolled in undergraduate and postgraduate degree programmes.

After 2004, under the flagship of Navsari Agricultural University, the college flourished with all types of infrastructural facilities to attract more students from national and international level to pursue their UG and PG degree programmes. The college has implemented the FDC recommendations from 2017 to cope with the needs and recent advancement of higher education. Since its inception, NMCA has produced more than 3866 undergraduate and 2227 (1768 M.Sc. and 459 Ph.D.) postgraduate students so far. Total 116 undergraduate and 120 postgraduate students have obtained their respective degrees during the year under report. Total 26 research projects are going on at the college funded by various agencies *viz*., GoG, ICAR, DST, IMD and others. The Department of Plant Pathology has produced around 39084 liters of Bio-fertilizers and 6350 kg *Trichoderma*. The Department of Entomology has produced 1408 Trichocards and 66 Chrysocards for the benefit of the farmers. The Department of Genetics and Plant Breeding has produced 18784 banana tissue culture plants.

In addition to the above achievements, eight students of this college have qualified ICAR JRF exam, twenty one students have cleared ICAR SRF exam and eleven students have passed ICAR NET exam, during the year 2020-21. This success at national level competitive examinations reflects the dedication of the teachers, excellent teaching facilities and vibrant educational and research atmosphere of N.M. College of Agriculture, NAU, Navsari. The college publishes "*Navkrushak*" magazine every year which reflects vibrant co-curricular atmosphere of N. M. College of Agriculture.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	01	01	01	00	01	00	01	00	01	00
2	Professors	11	07	-	-	06	01	06	01	07	-
3	Associate Professors	27	19	-	-	17	02	14	05	17	02
4	Assistant Professors	54	45	16	29	11	34	31	14	32	13
	Total	**93**	**72**	**16**	**29**	**34**	**37**	**51**	**20**	**56**	**15**

List of Departments

1	Department of Agronomy	9	Department of Agril. Microbiology
2	Department of Genetics and Plant Breeding	10	Department of Agril. Statistics
3	Department of Entomology	11	Department of Agril. Economics
4	Department of Plant Pathology	12	Department of Extension Education
5	Department of Crop Physiology	13	Department of Animal Sciences
6	Department of Soil Science and Agriculture Chemistry	14	Department of English
7	Department of Horticulture	15	Food Quality Testing Laboratory
8	Department of Agricultural Engineering		

Academic Programmes offered

Degree Programmes	Duration	Total Credits
B. Sc. (Hons.) Agriculture	8 Semesters	185
M.Sc. (Agri.)	4 Semesters	54
Ph.D.	6 Semesters	73

Under Graduate Credit details (As per V Deans' committee recommendations)

Semesters	Number of Courses	Theory + Practical = Total Credits
First	11	14+08=22
Second	11	16+08=24
Third	10	15+09=24
Fourth	12	15+09=24
Fifth	11	14+10=24
Sixth	11	14+11=25
Seventh	2	0+22=22
Eight	1	0+20=20
	Total	**88+97=185**

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	Masters' Degree	Doctoral Degree
1	Agronomy	Yes	Yes
2	Soil Science and Agriculture Chemistry	Yes	Yes
3	Agricultural Statistics	Yes	Yes
4	Entomology	Yes	Yes
5	Agricultural Economics	Yes	Yes
6	Plant Pathology	Yes	Yes
7	Genetics and Plant Breeding	Yes	Yes
8	Extension Education	Yes	Yes
9	Plant Physiology	Yes	Yes
10	Agriculture Microbiology	Yes	Yes
	Total	**10**	**10**

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat						ICAR	Foreign	Grand Total
			Gen	SEBC	SC	ST	CBSE	Total			
B.Sc. (Hons.) Agri.	Male	163 (129 Regular + 20 ICAR +14 DtoD)	66	24	06	05	06	107	11	-	118
	Female		09	10	02	12	01	34	05	-	39
	Total		**75**	**34**	**08**	**17**	**07**	**141**	**16**	**-**	**157**
M. Sc. (Agri.)	Male	150 (104Regular +34 ICAR +12 EWS)	34	16	03	02	-	55	15	-	70
	Female		20	04	02	09	-	35	16	-	51
	Total		**54**	**20**	**05**	**11**	**-**	90	**31**	**-**	**121**
Ph. D.	Male	34 (24 Regular +07 ICAR +3 EWS)	17	03	00	01	-	21	03	-	24
	Female		09	01	01	01	-	12	03	-	15
	Total		**26**	**04**	**01**	**02**	**-**	33	**06**	**-**	**39**
Grand Total		**347**	**155**	**58**	**14**	**30**	**07**	**264**	**53**	**-**	**317**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat								
			Gen	SEBC	SC	ST	CBSE	Total	ICAR	Foreign	Total
B.Sc. (Hons.) Agri.	1st	Male	53	18	04	04	04	30	11	-	94
		Female	08	10	02	12	01	25	05	-	38
	2nd	Male	55	26	07	09	03	45	09	-	109
		Female	15	07	01	08	04	20	11	-	46
	3rd	Male	44	24	07	04	05	40	13	-	97
		Female	13	04	00	13	01	18	06	-	37
	4th	Male	44	12	02	04	02	20	06	-	70
		Female	12	06	04	09	04	23	06	-	41
		Sub-total	**244**	**107**	**27**	**63**	**24**	**221**	**67**	**-**	**532**
M. Sc. (Agri.)	1st	Male	34	16	03	02	-	21	15	00	70
		Female	20	04	02	09	-	15	16	00	51
	2nd	Male	44	13	02	05	-	20	18	02	84
		Female	19	10	03	08	-	21	09	00	49
		Sub-total	**117**	**43**	**10**	**24**	**-**	**77**	**58**	**02**	**254**
Ph. D.	1st	Male	15	03	01	01	-	05	00	00	20
		Female	07	01	00	01	-	02	03	00	12
	2nd	Male	24	03	01	02	-	06	03	00	33
		Female	10	01	00	00	-	01	04	00	15
	3rd	Male	17	03	00	01	-	04	03	00	24
		Female	09	01	01	01	-	03	03	00	15
		Sub-total	**82**	**12**	**03**	**06**	**-**	**21**	**16**	**00**	**119**
Grand total			**443**	**162**	**40**	**93**	**24**	**319**	**141**	**02**	**905**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	41	37	02	-	80
Female	30	05	01	-	36
Total	**71**	**42**	**03**	-	**116**
Master's level					
Male	15	34	02	00	51
Female	29	16	00	00	45
Total	**44**	**50**	**02**	**00**	**96**
Doctoral level					
Male	08	10	00	00	18
Female	05	01	00	00	06
Total	**13**	**11**	**00**	**00**	**24**

Student's Fellowship during AY 2020-21

Name of fellowship	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NTS-UG	28	24	0	0	0	0	**52**
NTS-PG	0	0	21	14	0	0	**35**
ICAR-JRF	0	0	6	7	0	0	**13**
ICAR-SRF	0	0	0	0	2	5	**07**
Student READY (Stipend)	69	41	0	0	0	0	**110**
INSPIRE	0	0	0	0	0	1	**01**
NAU PG fellowship	0	0	2	2	0	1	**05**
NAU Girls meritorious fellowship	0	15	0	0	0	0	**15**
SC fellowship	5	17	2	8	0	0	**32**
ST/fellowship	20	47	4	15	0	0	**86**
SEBC fellowship	180	24	69	32	0	0	**305**
Total	**302**	**168**	**104**	**78**	**2**	**7**	**661**

Cut off marks for admission in the UG degree programme during AY 2020-21

SN	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)*
1	General	40	**61.53**
2	SC	35	**56.04**
3	ST	35	**51.57**
4	SEBC	40	**60.03**
5	Other Board	40	**53.79**
6	PH	35	**36.87**
7	Ex-Army	35	**46.92**
8	**EWS**	**35**	**61.28**

* Cumulative marks of PCB and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examinations	Number of students qualified	Number of students passed out students
ICAR JRF	08	116
ICAR SRF	21	96
Deemed University (NAME)	--	--
NET	11	--

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Patel Darshilkumar Rameshbhai	5010117010	Agricultural Entomology	919-Gen 61-ST
2	Chaudhari Vrushankkumar Jitendrabhai	3010116016	Plant Sciences	2038 Gen 91-ST
3	Kamani Malkeshkumar Bharatbhai	3010116042	Plant Sciences	2183-Gen
4	Rajan Maheshchandra Bhatt	3010116086	Plant Sciences	142-EWS
5	Shivani Jha	3010116096	Plant Sciences	79-Gen
6	Vadodariya Jaimin Mansukhbhai	30101161058	Plant Sciences	998-Gen 122-EWS
7	AakashSaini	30101116001	Physical Science	182-Gen
8	Om Prakash	3010116067	Physical Science	156-Gen

Details of students qualified in ICAR SRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Karravula Rakesh	2010118056	Ag. Extension & Communication	65-Gen 7-SC
2	Nagarjuna T N	2010118072	Agricultural Entomology	48-Gen
3	Shree Naveena	2010118127	Agricultural Entomology	68-Gen
4	Davaria Pratik Jayshukhbhai	2010118031	Agricultural Entomology	292-Gen
5	Padhiyar Digvijaysinh Harisinh	2010118078	Agricultural Entomology	301-Gen
6	Gajjar KartikDevendrabhai	2010118039	Genetics and Plant Breeding	345-Gen 105-OBC
7	Hiteshkumar Koli	2010118047	Genetics and Plant Breeding	373-Gen 64-SC
8	Kanshouwa Modunshim Maring	2010118055	Genetics and Plant Breeding	400-Gen 19-ST
9	Mendapara Isha Kishorbhai	2010118067	Genetics and Plant Breeding	231-Gen
10	Patel Hardikkumar Rajeshbhai	2010118092	Genetics and Plant Breeding	152-Gen 55- OBC
11	Patel Harshita Rakeshbhai	2010118094	Genetics and Plant Breeding	588-Gen 208-OBC
12	Rahulkumar Ishwarbhai Gohil	2010118116	Genetics and Plant Breeding	435-Gen 76-SC
13	Pranitha B P	2010118113	Genetics and Plant Breeding	81-Gen 13-EWS
14	Sheetal Gupta	2010118126	Genetics and Plant Breeding	13-Gen)
15	Shruti K	2010118128	Genetics and Plant Breeding	588-Gen 18-EWS
16	Suchitra	2010118131	Genetics and Plant Breeding	115-Gen 24-OBC
17	Senthilkumar V.	2010117106	Genetics and Plant Breeding	588-Gen 208-OBC
18	Debdatta Panda	2010117022	Genetics and Plant Breeding	30-Gen 06-ST

19	Pandya Mansi Nalinbhai	2010118082	Crop Physiology	237-Gen
20	Pawan Kumar	2010118110	Soil Science and Agricultural Chemistry	31-Gen 15-OBC

Details of students qualified National Eligibility Test (NET) Examination

SN	Name of the students	Reg. No.	Acad. year	Subjects
1	Karravula Rakesh	2010118056	2018-20	Lifelong learning and continuing Extension Education/ Adult Education (UGC)
2	Debadatta Panda	2010117022	2017-19	Genetics & Plant Breeding
3	Kaldate Supriya Bhimrao	2010117045	2017-19	Genetics & Plant Breeding
4	Lakshay Goyal	2010117048	2017-19	Genetics & Plant Breeding
5	M Madhuri	2010117051	2017-19	Genetics & Plant Breeding
6	Patel Mayankkumar Vadibhai	2010117078	2017-19	Genetics & Plant Breeding
7	Vaghela Unnatiben Umeshkumar	2010117119	2017-19	Genetics & Plant Breeding
8	Baldaniya Vipul Gobarbhai	1010119002	2017-19	Genetics & Plant Breeding
9	Satasiya Pratik Nareshbhai	1010119040	2017-19	Genetics & Plant Breeding
10	ChauhanAditi Rajesh Kumar	2010117014	2017-19	Soil Science and Agricultural Chemistry
11	Chavada Bharat N	2010117016	2017-19	Soil Science and Agricultural Chemistry

Placement Cell

Degree	Total passed out students	Higher studies		Govt. Job	NGOs	Abroad	Self – entrepreneurship	Unemployed	Total
		Gujarat	Other states						
B.Sc.	116	88	-	-	3	-	-	-	116
M.Sc.	96	29	-	-	1	-	-	-	96
Ph.D.	24	-	-	-	-	-	-	-	24
Total	**236**	**117**	**-**	**-**	**4**	**-**	**-**	**-**	**236**

Activities of students and faculty members at the College

A view of Vegan Outreach Webinar on "Food-Planet-Health conducted by NMCA on 17th Feb. 2021

A view of students and faculties participation in the workshop, and valedictory function of the Workshop cum Training on Application of Remote sensing& GIS Agriculture and Natural Resource Management at N.M.C.A, Navsari Agricultural University held on 6th March, 2021

NSS activities during AY 2020-21

SN	Activities	Date/ period	No. of Volunteers
1	Awareness on Arogya Setu App	Round the year 2020	>300
2	Duty as corona warriors with police officers in Navsari district like food kit distribution, mask and sanitizer distribution etc.	Round the year 2020	31
3	Ministry of Youth Affairs and Yuwaah programme launch	July 22, 2020	32
4	Launch of Fit India Youth club	August 15, 2020	30
5	National Level Webinar on role of NSS programme officers & volunteers		
6	Covid Pledge 2019	October 8, 2020	25
7	International volunteer day V-award ceremony	December 4, 2020	30
8	Career awareness and tobacco control workshop	January 7, 2021	10
9	Navsari Agricultural University and Vegan Outreach Webinar On "Food-Planet-Health	February 17, 2021	35

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of the Department
1	Research on Tillage Technology for crops of South Gujarat	B.H.12936	GoG	Ag. Engg. Farm, Navsari
2	Establishment of Agro Metrological cell at agriculture college	B.H.12927	GoG	NMCA
3	GKMS (*Gramin Krishi Mausam Sewa*)	B.H.18005-1	IMD	AMFU-Navsari

4	FASL (Forecasting of Agricultural Output using Space Agrometeorology and Land based observations)	B.H.18993	IMD	AMFU-Navsari
5	Low cost biofortification kit: A sustainable technology tool for nutrition, yield and income security of farmers	B.H.18214	DST, New Delhi	Dept. of Agronomy
6	Instructional Farm	B.H.6119	GoG	Instructional Farm Dept. of Agronomy
7	Research in weed control in Agronomy at Navsari	B.H. 12929-02	GoG	Instructional Farm Dept. of Agronomy
8	Establishment of Forage Research Station at Navsari	B.H. 12038	GoG	Instructional Farm Dept. of Agronomy
9	Integrated Farming Systems	B.H.2040	ICAR, New Delhi	Instructional Farm Dept. of Agronomy
10	Low cost biofortification kit : A sustainable technology tool for nutrition, yield and income security of farmers	B.H. 18214	DST, New Delhi	Instructional Farm Dept. of Agronomy
11	Strengthening of Extension Wing	B.H. 12145	GoG	Navsari
12	Student READY programme	B.H. 12968	ICAR	Navsari
13	Strengthening Research on Sericulture and Lac culture	B.H. 12011	GoG	Department of Entomology
14	Strengthening Research in Bio-control of Crop Pests at Navsari	B.H. 12947	GoG	Department of Entomology
15	Scheme on Forecasting Weather, Pest and disease at Navsari	B.H. 12939	GoG	Department of Entomology
16	All India network project on Agricultural Acarology.	B.H. 02092	ICAR	Department of Entomology
17	TSP-Acarology.	B.H. 02092/0A	ICAR	Department of Entomology
18	All India Coordinated Research Project on Honey bees & Pollinators	B.H. 303/2083/00	ICAR	Department of Entomology
19	Evaluating impact of Neonicotinoids on Pollinators	B.H. 2099	ICAR	Department of Entomology
20	NAHEP Component 2A, Investments in ICAR Leadership in Agricultural Higher Education-II.	B.H. 2127	ICAR	Department of Entomology
21	To evaluate the bio efficacy of PII 8007 (20%SC) against insect pests of sugarcane.	B.H. 18152	Other agency	Department of Entomology
22	To evaluate the bio efficacy of PIM 014 (20%WP) against Chilli mite	B.H. 18153	Other agency	Department of Entomology
23	To evaluate the bio efficacy of PII 070 (70% WG) against pest complex of Brinjal.	B.H. 18169	Other agency	Department of Entomology
24	To evaluate the bio efficacy of PII 301 (10%SC) against DBM, phytotoxicity effect on natural	B.H. 18185	Other agency	Department of Entomology

	enemies and yield of Cabbage.			
25	To evaluate the bio efficacy of metaldehyde 2.5% Dry Pellets against snail in cabbage.	B.H. 303/18213/00	Other agency	Department of Entomology
26	Establishment of Secondary Agriculture Unit for Skill Development in Students and Farmers' under National Agricultural Higher Education Project on Centre for Advance Agricultural Science and Technology project Unit-4 (Pesticide Residue Analysis)	B.H.2108	ICAR-World Bank	FQTL

Educational/Infrastructural Facilities

The college has five lecture and one seminar halls with LCD projectors which are making conducive teaching and learning situation for the undergraduate as well as postgraduate students'. Further, all departments possess spacious laboratories with well-equipped latest equipments and postgraduate lecture hall. The Central Instrumentation Laboratory is located in the college and equipped with sophisticated instruments like X-ray, UV-vix-Spectrophotometer, Nitrogen Analyzer, Image Analyzer, L.C. pro, HPLC, NMR, FTNIR, Blood Analyzer, Deep freeze upto -80 ^{o}C, Microwave Digester, Super Critical Extractor, Atomic Absorption Spectrophotometer, *etc*. The college has well equipped bio-fertilizer and bio-pesticide laboratory consists of isolation, inoculation, quality control, fermentation chamber and production rooms with well sprinted instruments *viz*., Automatic bottle filling machine, fomenters, BIOLOG, PCR, Gel DOC, *etc*. One computer laboratory has been developed with various softwares to facilitate the under as well as postgraduate students of the college. The institute is very well supported with research framework like Food Quality Testing Laboratory, Biofertilizer and Biopesticide laboratory, Biocontrol, residue Analysis, Plant Tissue culture laboratory, soil and water analysis laboratories for carrying out quality research.

One ICAR sponsored Experiential Learning Unit has been working on Plant Tissue Culture Technology; while, five Hands on Training units sponsored by the GoG have also been developed to provide skill oriented exposure to the students of undergraduate. These are providing exposure among the students on Bio-fertilizer, Seed production, Bio-agent and Commercial Sericulture, Commercial Horticulture and Soil-Water-Plant testing, and Seed testing.

The 20 ha Instructional Farm is earmarked to provide practical exposure to the students and the profit of their production has been given. The college possesses six well managed hostels namely, Navoday and Navneet hostels for UG students, two PG hostels and two girls' hostels. All hostels are located within the NAU premises.

Experiential Learning Unit

Title of ELU	:	**ELU on Plant tissue culture Technology**
Year of establishment	:	2011
Name of Manager	:	Dr. A. V. Narwade
Department	:	Plant Physiology
Activities	:	Plant tissue culture of banana variety G-9 is used. In this process, explants are selected, sterilized, media is preparation, inoculation, and it is multi-cultured. Afterward rooting and hardening is done.
Number of students beneficiaries	:	37 Students
Amount earned per student	:	Nil

Students involved in the ELP activities *viz.*, cutting of banana suckers and incubation work

Research publications

SN	Details of Publications	NAAS rating
1	Ahir, U.N., Vyas T. K., Gandhi K.D., Faldu P.R. and Patel K.G. (2020). *In vitro* efficacy for chlorpyrifos degradation by novel isolate Tistrella sp. AUC10 isolated from chlorpyrifos contaminated field. *Curr Microbiol*. **77**: 2226-2232.	7.74
2	Ayer, Dipendra Kumar, Modha, Kaushal, Parekh, V., Patel, Ritesh, Vadodariya, Gopal, Ramtekey, Vinita and Bhuriya, Arpit. (2020). Associating gene expressions with curcuminoid biosynthesis in turmeric. *Journal of Genetic Engineering and Biotechnology*,**18**: 83.	--
3	Baldaniya, D.M., Singh, S., Saini, L.K. and Gandhi, K.D. (2020). Persistence and dissipation behavior of fipronil and its metabolites in sugarcane grown soil of South Gujarat. *International Journal of Chemical Studies*, **8**(1): 1524-1527.	5.31
4	Baldaniya, D.M., Singh, S., Saini, L.K. and Gandhi, K.D. (2020). Dissipation and persistence behavior of fipronil and its metabolites in clay soil under laboratory condition. *International Journal of Chemical Studies*, **8**(1): 2216-2219.	5.31
5	Bavalgave, V.G., Rathod, M., Dudhat, M.S. and Tandel, B.B. (2020). Yield and uptake of sweet corn (*Zea mays* L. Saccharata) as influenced by spacing and INM practices under South Gujarat condition *International Journal of Chemical Studies*, **9**(1): 706-708.	5.31
6	Bharambe, V.Y. and Garde, Y.A. (2020). Effect of dietary inclusion of phytogenic feed additives on haemato-biochemical parameters of Broilers in Konkan climatic conditions, India. *Int. J. of Livestock Research*, **10**(12), 128-136.	5.36

7	Bharambe, V.Y. and Garde, Y.A. (2020). Effect *Trigonella foenumgraecum* and *Tinospora cordifolia* feed additives on carcass traits of broilers in Konkan climatic conditions of India. *Journal of Animal Research*, **10**(6): 01-07.	5.68
8	Chandravadia, K., Minaxi, B. and Kumbhani, S. R. (2020). Participation of tribal women in agriculture production. *Gujarat Journal of Ext. Education*, **31**(2): 110-112	3.86
9	Debbarma, R. and Patel, S.R. (2020). Checklist of leaf beetles of Navsari Agricultural University, Navsari, Gujarat, India. *Int. J. Curr. Microbiol. App. Sci*, **9**(9): 2717-2724.	5.38
10	Debbarma, R. and Patel, S.R. (2020). Leaf beetles diversity of Navsari Agricultural University campus in relation to their morphological characteristics. *Journal of Entomology and Zoology Studies*, **8**(5): 613-619.	5.53
11	Desai, A.V., Siddhapara, M.R., and Trivedi, N.P. (2020) Comparative biology of *Goniozus nephantidis* (Muesbeck) on *Galleria mellonella* L. and *Corcyra cephalonica* (Stainton). *The Bioscan*,**15**(3): 315-321.	5.26
12	Desai, Tarjani. B., Madhu Bala and Patel, R.K. (2020). Correlation studies for green manuring traits in Sunnhemp (*Crotalaria juncea* L.). *The Pharma Innovation Journal*, **9**(8): 180-18.	5.03
13	Desai, Tarjani. B., Madhu Bala and Patel, R. K. (2020). Genetic Divergence in Sunnhemp (*Crotalaria juncea* (L.)). *Legume Research*. DOI: 10.18805/LR-4397.	6.34
14	Dholariya, H.P., Zinzala, V.J., Patel, J.V. and Patel, V.M. (2020). Zinc nutrition in Finger Millet [Eleusine coracana (L) Gaertn.] for better nutritional security. Int. J. Curr. Microbiol. App. Sci., **11**(SI): 1082-1086.	5.38
15	Garde, Y.A., Thorat, V.S., Pisal, R.R. and Shinde, V.T. (2020). Pre harvest forecasting of Kharif Rice yield using weather parameters for strategic decision making in Agriculture, *Int. J. of Environ. & Clim. Chan.*, **10**(12):162-70.	5.29
16	Goyal, Lakshay, Intwala, C.G., Modha, K.G., and Acharya, Vishwas. R. (2021). Association and diversity analysis for yield attributing traits in advance generation of green gram (*Vigna radiata* (L.) Wilczek). *International Journal of Chemical Studies*, **9**(1): 1934-1939.	5.38
17	Gudadhe, Nitin, Thanki, J.D., Pankhaniya, R.M. and Usdadia, V.P. (2020). Feasibility of late transplanted summer pearl millet for prolonged *rabi* season with integrated nitrogen management under coastal region. *Maydica*, **65**(2):1-8.	6.57
18	Gudadhe, Nitin, Imade, S. and Thanki, J.D. (2020). Effect of integrated nutrient management on rice-green gram cropping sequence. *Legume Research*, DOI 10.18805/LR-4307. 1-7.	6.53
19	Joshi, M.P., Pankhaniya, R.M. and Parmar, S.K. (2020). Effect of levels and scheduling of nitrogen on economic, quality, nutrient content, uptake and soil status of pearl millet. *International Journal of Chemical Studies*, **8**(6): 128-131.	5.31
20	Joshi, Neha, Usadadia, V.P., Barkha and Patil, K.B. (2020). Effect of land configuration, irrigation levels and nipping on growth, yield and economics of chickpea under mild winder of South Gujarat, I*nt. J. of Che. Studies*, **8**(6): 263-266.	5.31
21	Joshi, Neha, Usadadia, V.P., Barkha and Tajane, Diksha (2020). Influence of land configuration, irrigation levels and nipping on growth and yield of chickpea. *Indian J. of Pure & Applied Biosciences*, **8**(6): 82-87.	5.10
22	Kalariya, K.A., Gajbhiye, N.A., Minipara, D., Saran, P. L., Kumar, S., Solanki, V.H., Singh, S., Choyal, P. and Manivel, P. (2020). Altered biomass allocation and quality improvement in roots of Indian *ginseng Withania somanifera* Dunal. Linn.through physiological interventions. *Heliyon*, 6. DOI: 10.1016/j.heliyon.2020.e05093.	--
23	Kaldate, Supriya, Patel, Apexa, Modha, Kaushal, Parekh, Vipul Kumar, Kale, Bhushan, Vadodariya, Gopal and Patel, Ritesh (2021). Allelic characterization and protein structure analysis reveals the involvement of splice site mutation for	--

	growth habit differences in *Lablab purpureus* (L.) Sweet. *Journal of Genetic Engineering and Biotechnology*, **19**:34.	
24	Kumar, P., Singh, S., Gandhi, K.D., Saini, L.K. and Umeretia, N.G. (2020) Pesticide Residues in vegetables collected from different markets of Navsari district of India. *Int. Res. J. Pure & Appl. Chem*., **21**(24): 87-99.	--
25	Mohapatra, Bikash and Shinde, C.U. (2021). Contact toxicity of different insecticides against egg parasitoid, *Trichogramma japonicum* Ashmead under laboratory condition. *Journal of Entomology and Zoology Studies*, **9**(1):134-139.	--
26	Mule, R., Patel, K.G. and Shukla, A. (2020). Seasonal incidence of two spotted spider mite, *Tetranychus urticae* Koch (Acari: Tetranychidae) on okra. *Pestology*, **XLIV**(5): 36-40.	--
27	Mule, R., Patel, K.G. and Shukla, A. (2020). Effect of different acaricide and biorational treatments on yield and economics of okra. *Pestology*, **XLIV**(6): 36.	--
28	Mule, R., Patel, K.G. and Shukla, A. (2020). Biology of two spotted spider mite, *Tetranychus urticae* Koch (Acari: Tetranychidae) infesting okra. *Pestology*, **XLIV** (8): 30-40.	--
29	Mule, R., Patel, K.G., Shukla, A. and Sangavi, R. (2020). Comparative efficacy of acaricides and bioratinals against two spotted spider mite, *Tetranychus urticae* Koch (Acari: Tetranychidae) infesting okra. *Pestology*, XLIV(7): 24-34.	--
30	Naghera, Y.V. and Vadodariya, K.V. (2020). Genetics of fiber quality traits in interspecific crosses of Cotton. *Trends in Biosciences*, **13**(12): 793-796.	3.94
31	Narendra Singh, Tripathi, Sonal, Patel V.A., Naik J.R., Chauhan, Aditi (2020).Effect of rate and frequency of micronutrient on growth attributes and dry matter yield of banana cv. Grand naine under South Gujarat condition. *The Bioscan*, **15**(3): 287-290.	5.26
32	Padhiyar, D.H. and Patel, S.R. (2021). Floral biology and diversity of pollinator fauna in bottle gourd in South Gujarat. *Journal of Entomology and Zoology Studies*, **9**(2): 435-438.	--
33	Parmar, S.K., Thanki, J.D., Tandel, B.B. and Pankhaniya, R.M. (2020). Effect of nitrogen phosphorus and sulphur application on yield, quality, uptake and economics of linseed (*Linun usitatissimum* L.) *Int. J. of Chem. Studies*, **8**(5): 1956-1960.	5.31
34	Parmar, Sejal. K, Thanki, J.D., Gudadhe, N.N., Pisal, R.R. and Naik, Jaimin (2020). Effect of different summer green manures on growth and yield of succeeding *kharif* rice under integrated nutrient management *Journal of Pharmacognosy and Phytochemistry*, **9**(SI-6):128-130.	5.21
35	Patel, Mahendra. M., Meena, L.K., Arvadiya, L.K., Patel, D.D. and Zinzala, M.J. (2021). Comparative study on improved organic practices of summer greengram (*Vigna radiata* L.) at Bharuch district of Gujarat, *Int. J. of Chem. Studies*, **9**(1): 2368-2370.	5.31
36	Patel, A.A., Patel, A.I., Parekh, V.B., Patel, R.K., Mali, S.C. and Vekariya, R.D. (2020). Estimation of standard heterosis over environments for fruit yield and it's attributes in okra [*Abelmoschus esculentus* (L.) Moench]. *International Journal of Chemical Studies*, **8**(6): 2542-2547.	5.31
37	Patel, A.C., Patel, K.G., Dubey, P.K., Singh, S. and Kaswala, A.R. (2020). Comparative effect of different levels of NADEP manures on nutrients content and quality of different crops grown under certified organic farm. *Journal of Pharmacognosy and Phytochemistry*, 9(5): 611-614.	5.21
38	Patel, A.C., Patel, K.G., Lad, A.N., Prajapati, J.N. and Surani, P.M. (2020). Effect of different levels of NADEP manure on insect-pests and disease in different crops grown under certified organic farm. Int. J. Fauna Biol. Stud, 7(4), 199-202.	4.00
39	Patel, Bhoomika, Jadhav, Sheetal, Ganvit, Swati, Tandel, Y.N., Patel, N.M.,	5.21

	Bhanderi, D.R. and Chaudhari, Darshana (2020). Effect of husking (removing seed tip) and pre soaking treatments on seed germination and seedling growth of Mango cv. Alphonso. *J. Pharmacognosy and Phytochemistry*, 6: 161-166.	
40	Patel, K.M., Pankhaniya, R.M. and Parmar, S.K. (2020). Effect of integrated nutrient management on growth, yield and economics in fodder cowpea. *Multilogic in Science*, **10**(34): 1318-1320.	6.31
41	Patel, K.M., Pankhaniya, R.M. and Parmar, S.K. (2020). Influence of integrated nutrient management on quality, nutrient uptake and soil status in fodder cowpea. *Journal of Pharmacognosy and Phytochemistry*, 9(4): 478-480.	3.15
42	Patel, M.M., Meena, L.K., Arvadiya, L.K., Patel, D.D. and Zinzala, M.J. (2020). Comparative study on improved organic practices of summer greengram (*Vigna radiata* L.) at Bharuch district of Gujarat *International Journal of Chemical Studies*, **9**(1): 2368-2370.	5.31
43	Patel, P.B., Desai, C.S. and Usadadia, V.P. (2020). Population dynamics of mango trips in high density mango plantation under South Gujarat conditions. *Journal of Plant Health Issues*, **1**(1): 29-32.	4.30
44	Patel, P.B., Usadadia, V.P. and Desai, C.S. (2020) Incidence of mango hoppers *Idioscopus nitidulus* Walker in high density mango plantation under South Gujarat conditions. *International Journal of Chemical studies*, **8**(4): 1509-1512.	5.31
45	Patel, Radhikaben N. and Madhu Bala (2020). Correlation studies for yield and its components in black gram [*Vigna mungo* (L.) Hepper]. *International Journal of Current Microbiology and Applied Sciences*, **9**(9): 237-244.	5.38
46	Patel, Radhikaben N. and Madhu Bala (2020). Genetic divergence studies in black gram [*Vigna mungo* (L.) Hepper]. *International Journal of Chemical Studies*, **8**(4): 2777-2780.	5.31
47	Patel, Radhikaben N. and Bala, Madhu (2020). Genetic variability study for yield and its components in black gram [*Vigna mungo* (L.) Hepper]. *Journal of Pharmacogonsy and Phytochemistry*, 9(4): 2061-2064.	5.21
48	Patel, S.R., Patel, Z.P., Patel, K.M. and Shinde, C.U. (2021). Surveillance of Tephritid fruit flies in the Sapota orchards of South Gujarat. *Insect Environment*, **24**(1): 124-128.	--
49	Patil, K.B., Tripathi, S., Jangir, R. and Saini, L. (2020). Influence of phosphorus management on growth, development and yield of Sugarcane, *Int. J. Pure App. Biosci.*, **8**(4): 25-31.	4.74
50	Patil, Kranti B., Tripathi, Sonal, Thorave, Dattatray (2020) Studies on effect of phosphorus levels, time of its application along with arbuscular mycorrhiza on yield, quality and phosphorus use efficiency in Sugarcane. *Int. J. Chem. Stud.*, 8(4): 3626-3630.	5.31
51	Pradhan, S.K., Kumar, B., Banakara, K.B., Patel, V.R., Pandya, H.R. and Singh, R.R. (2020). Effect of boron supplementation on the performance and metabolism of minerals in broiler chicken, *Ani. Nutrition and Food Tech.*, 20:39-49.	6.31
52	Ramani, P.R., Singh, S., Saini, L.K., Solanki, V.H. and Patel, K.G. (2020). Effect of soil amendments on persistence of hexaconazole and tebuconazole in soil and its residue in tomato. *International Journal of Chemical Studies*, **8**(1): 1970-1976.	5.31
53	Saini, L.K., Patel, K.G., Singh, S., Gandhi, K.D. and Solanki, V.H. (2020). Dissipation kinetics of carbofuran in the soil and its residues in sugarcane. *International Research Journal of Pure and Applied Chemistry*, **21**(12): 45-52.	5.40
54	Saini, L.K., Patel, K.G., Singh, S., Solanki, V.H. and Gandhi, K.D. (2020). Persistence and dissipation kinetics of phorate in the soil of sugarcane ecosystem. *Journal of Entomology and Zoology Studies*, **8**(3): 975-979.	5.53
55	Sangani, Jayadip L., Madhu Bala, Patel, R.K. and Vadodariya, G.D. (2020). Molecular diversity analysis in Dhaincha (*Sesbania cannabina* L.) using RAPD	--

	primers. *Indian Journal of Pure and Applied Biosciences*, **8**(5): 313-319.	
56	Sangavi, R., Radadia, G.G. and Shukla, A. (2020). Population dynamics of two spotted spider mite, *Tetranychus urticae* (L.) on cowpea in relation to weather parameters. *Journal of Entomology and Zoology Studies*, **8**(5): 554.	5.53
57	Sangavi, R., Radadia, G.G. and Shukla, A. (2020). Population dynamics of two spotted spider mite, *Tetranychus urticae* (L.) on french bean in relation to weather parameters. *Journal of Entomology and Zoology Studies*,**8**(5): 549.	5.53
58	Saran, P.L., Singh, S., Solanki, V.H., Devi, G., Kansara R.V. and Manivel, P. (2020). Identification of potential accessions of *Asparagus racemosus* for root yield and shatavarin IV content. *Heliyon*. DOI https://doi.org/10.1016/j.heliyon.2020.e05674.	--
59	Shinde, V.T., Singh, M., Pradhan, S.K. and Narwade, A.V. (2020). Effect of Organic and Chemical fertilizers on crop growth and yields in Maize-cowpea-paddy System in Coal Mine Affected Area. *Agril. Res. J.*, **57**(3): 343-350.	5.44
60	Shukla, K.S., Desai, C.S. and Usadadia, V.P. (2020). Strategies for doubling income of farmers. *Agriculture*, 1(2): 338-345.	--
61	Shukla, K.S., Desai, C.S. and Usadadia, V.P. (2020). Wealth from Waste: A profitable project for banana farmers. *Agriculture & Environment*, **1**(1): 84-86.	3.31
62	Singh, L., Netajit, Pandya, H.R. and Pawariya, Vikash (2020). Consumption pattern of food and non-food commodities in rural and urban sector of South Gujarat zone-II, International Journal of Agricultural and Statistical Sciences. 16(1):1125-1131.	5.13
63	Singh, S. and Shah, P.G. (2020). Evaluation of three different multi-residue pesticide extraction approaches for the analysis of 50 multiclass pesticides from isabgol seeds and psyllum husk. *Journal of Pharmacognosy and Phytochemistry*, **9**(4): 163-172.	5.21
64	Singh, S., Bhuva, B.V., Solanki, V.H., Patel, K.N. and Patel, K.G. (2020). Persistence and downward movement of four termiticites in three representative soils of Gujarat under laboratory conditions. *Journal of Entomology and Zoology Studies*, **8**(6): 1803-1811.	5.53
65	Solanki, H., Manoharan, N., Vyas, T.K., Rajivgandhi, G., Patel, K., Patil, P.K. (2020). Isolation and characterisation of sulphur oxidising bacterial isolates from two different Pacific White Shrimp, *Penaeus vannamei* culture systems. *Int. J. Chem. Stud.*, **8**(6): 39-45.	5.2
66	Sutariya, B.P., Vyas T.K., Faldu, P.R., Patel, K.G. and Vala, A.K. (2021). A Microcosm study on effect of iron nanoparticles on Paddy (*Oryza sativa*) growth. *J Inorg Organometallic Polymers and Materials*. **31**: 2425-2434 doi.org/10.1007/s10904-020-01866-2.	7.94
67	Tak, Vibha, Pandey, Vyas and Parmar, P.K. (2021). Effect of date of sowing and varieties on yield of kharif bt-cotton in middle gujarat agro-climatic region. *Int. J. Curr. Microbiol. App. Sci*., **10**(1): 2217-2222.	5.38
68	Tak, Vibha., Pandey, Vyas., and Parmar, P.K., (2020). Impact of variety and date of showing on growth performance of Bt-cotton in middle Gujarat conditions. *Int. J. Curr. Microbiol. App. Sci.*, **9**(12): 1208-1213.	5.38
69	Tandel, B.B., Pankhaniya, R.M. and Thanki, J.D. (2020). Response of fodder sorghum (*Sorghum bicolor* L.) varieties to biofertilizer and nitrogen levels *J. of Pharmacognosy and Phytochemistry*, **6**(4): 49-52.	3.31
70	Tandel, B.B., Pankhaniya, R.M. and Thanki, J.D. (2020). Response of fodder sorghum (*Sorghum bicolor* L. Moench) varieties to biofertilizer and nitrogen levels, *J. of Pharmacognosy and Phytochemistry*, **9**(SP6): 49-52.	5.31
71	Tanwar, Radhika and Pandya, R.D. (2021). Scaling perception of agriculture and animal husbandry enterprise owners about climate change, *Int. J. Microbiology.*	5.38

	App. Sci., **10**(1): 1-5.	
72	Thesiya, N.M., Varasani J.V. and Dholariya, H.P. (2020). Residual effect of integrated nutrient management in little millet on seed yield, quality and nutrient content uptake by green gram under little millet - green gram cropping sequence. *Ind. J. of Plant Protection*, **48**(4): 320-324.	5.07
73	Thorat, Vishal S., Garde, Yogesh and Arhant, A. (2020). Incidence and determinants of indebtedness of agricultural households in Gujarat, *Economic Affairs*, **65**(2): 249-254.	4.82
74	Tripathi, Sonal, Patel, J.M., Narendra Singh, Naik, J.R. and Naik, V.R. (2020). Effect of different NPK levels on growth and yield attributes of broccoli under South Gujarat condition. *International Journal of Chemical Studies*, **8**(3):1335-1339.	5.31
75	Trivedi, N.P., Patel, J.J. and Ghetiya, L.V. (2020). Diversity of aphids in South Gujarat. *Journal of Entomology and Zoology Studies*, **8**(5): 127-131.	5.53
76	Umretiya, N., Nakarani, U., Singh, S., Solanki, V. and Ahlawat, T. (2021) Assessment of matrix effect of tomato and okra on the quantification of pesticides residues using UHPLC–MS/MS. *The Pharma Innovation Journal*, **10**(3): 537-546.	5.23
77	Vadodariya, G.D., Chauhan, D.A., Patel, R.K., Modha, K.G., Naghera, Y.V. and Jadav, S.K., (2020). Generation Mean Analysis for Yield and its Components in Blackgram [*Vigna mungo* (L.) Hepper]. *International Journal of Current Microbiology and Applied Sciences*, **9**(9): 1-6.	5.31
78	Vadodariya, G. D., Chauhan, D. A., Patel, R. K., Modha, K. G., Naghera, Y. V., and Jadav, S. K., (2020). Genetic architecture in blackgram [*Vigna mungo* (L). Hepper]. *International Journal of Chemical Studies*, **8**(5): 490-493.	5.31
79	Vadodariya, P., Abuj, B., Karmakar, N., Gudadhe, N.N., Faldu, P., Narvade, A., Kaur, B. and Debnath, M.K. (2020). Comparative biochemical study of different *Lablab purpureus* L. groups under processing. *Legume Research*, **10**(1): 4331.	5.70
80	Vadodariya, P., Abuj, B., Karmakar, N., Gudadhe, N., Faldu, P., Narwade, A., Chauhan, D., Kaur, B. and Debnath, M.K., (2020). Comparative biochemical study of different *Lablab purpureus* L. groups under processing. *Legume Research*, Doi. 10.18805/LR-4331.	6.34
81	Vaidya, H., Kapadia, C., Borse, B., Vyas, T.K. and Patel, N. (2021). Diverse novel bacterial endosymbionts and their plant growth promoting traits in association with banana plant. *Int. J. Curr. Microbiol. App. Sci.* **10**(02): 2047-2059.	5.3
82	Vihariya, P.H. and Pandya, R.D. (2020). Scale on attitude of stakeholders towards Agricultural Innovation System, *Int. J. Microbiology. App. Sci.*, **9**(9): 1497-1500.	5.38
83	Vihariya, P.H., Tanwar, Radhika and Pandya, R.D. (2021). Efficiency of stakeholders in agricultural innovation system, *Econ. Affairs*, **66**(1): 27-31.	4.82
84	Zinzuvadiya, H.D. and Ghetiya, L.V. (2020). Photographic catalogue of dipteran and lepidopteran pollinators in agricultural landscape area of South Gujarat. *Journal of Entomology and Zoology Studies*, **8**(5): 136-142.	5.53
85	Zinzuvadiya, H.D. and Ghetiya, L.V. (2020). Inventory of insect pollinators under agricultural landscape area of South Gujarat. *Journal of Entomology and Zoology Studies*, **8**(4): 2437-2443.	5.53
86	Zinzuvadiya, H.D., Ghetiya, L.V., Chaudhari, S.D. and Kalariya, G.B. (2020). Photographic catalogue of hymenopteran pollinators in agricultural landscape area of South Gujarat. *J. of Ent. and Zoology Studies*, **8**(5): 1330-1346.	5.53

6. College of Agriculture, Bharuch

The Institute

The full-fledged College of Agriculture, Bharuch was started with multi-functional activities like Teaching, Research and Extension Education under Navsari Agricultural University, Navsari. The college aims to be an academic and cultural leader in Agricultural education, interdisciplinary research for sustainable system. The mission of the college is helps to create and provide professionally competent Agricultural Graduates, and Post Graduates to the entire world of Agriculture. Also helps to provide ambience for interdisciplinary research and collaborative approaches for the development of cohesive intelligence at large having wide ranging applications. The M.Sc. Agriculture programme has been started in six different disciplines *i.e.*, Agronomy, Genetics & Plant Breeding, Entomology, Plant Pathology, Extension Education and Soil Science and Agril. Chemistry during the current year. There is shortfall of Agricultural graduates in the agro based industries and allied sectors *viz.*, banks and other government and non-government organizations. Therefore, the new College of Agriculture was started at Bharuch with financial support of Government of Gujarat during 2012.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	1	1	-	-	1	-	1	-	1	-
2	Professors	4	2	-	-	1	1	1	1	2	-
3	Associate Professors	11	11	2	-	8	1	10	1	11	-
4	Assistant Professors	16	16	3	1	6	6	9	7	10	6
	Total	**32**	**30**	**5**	**1**	**16**	**8**	**21**	**9**	**24**	**6**

List of Departments

1	Agronomy & Agro-Meteorology	7	Agril. Statistics
2	Agril. Chemistry & Soil Science	8	Agril. Economics
3	Horticulture	9	Agril. Extension Education
4	Genetics & Plant Breeding	10	Agricultural Engineering
5	Agricultural Entomology	11	Animal Science
6	Plant Pathology	12	Physical Education

Academic Programmes offered

Degree Programme	Duration	Total Credits
B. Sc. (Hons.) Agriculture	8 Semesters	186
M.Sc. (Agri)	4 Semesters	60

Under Graduate Credit details(As per V Deans' committee recommendations)

Semesters	Number of Courses	Theory + Practical = Total Credits
First	11	14+08=22
Second	11	17+08=25
Third	10	15+09=24
Fourth	12	15+10=25
Fifth	11	14+10=24
Sixth	11	14+11=25
Seventh	02 (RAWE+ ET 7.1)	0+22=22
Eight	01 (ELP-HOT)	0+20=20
Total		**89+97=186**

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	Masters' Degree	Doctoral Degree
1	Agronomy	Yes	No
2	Soil Science and Agricultural Chemistry	Yes	No
3	Entomology	Yes	No
4	Plant Pathology	Yes	No
5	Genetics and Plant Breeding	Yes	No
6	Extension Education	Yes	No
	Total	**06**	--

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat							ICAR	Foreign	Grand Total
			Gen	SEBC	SC	ST	EWS	CBSE	Total			
B.Sc. (Hons.) Agri.	Male	77	18	14	01	03	--	01	37	02	--	39
	Female		09	08	01	04	--	01	23	03	--	26
	Total		**27**	**22**	**02**	**07**	**--**	**02**	**60**	**05**	**--**	**65**
M.Sc. (Agri)	Male	28	10	05	01	02	02	--	20	--	--	20
	Female		05	01	--	02	--	--	08	--	--	08
	Total		**15**	**06**	**01**	**04**	**02**	--	**28**	--	--	**28**
Grand Total			**42**	**28**	**03**	**11**	**02**	**02**	**88**	**05**	**--**	**93**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat								
			Gen	SEBC	SC	ST	CBSE/EWS	Total	ICAR	Foreign	Total
B.Sc. (Hons.) Agri	1st	Male	18	14	1	3	1	37	2	--	39
		Female	9	8	1	4	1	23	3	--	26
	2nd	Male	24	16	2	5	2	49	6	--	55
		Female	14	3	1	2	1	21	2	--	23
	3rd	Male	24	16	3	2	1	46	3	--	49
		Female	6	1	3	5	3	18	4	--	22
	4th	Male	24	10	2	1	2	39	1	--	40
		Female	5	6	2	5	0	18	2	--	20
	Sub-total		**124**	**74**	**15**	**27**	**11**	**251**	**23**	**0**	**274**
M.Sc. (Agri)	1st	Male	10	5	1	2	2	20	-	-	20
		Female	5	1	0	2	0	8	-	-	8
	2nd	Male	4	6	-	0	0	10	-	-	10
		Female	5	0	-	2	1	8	-	-	8
	Sub-total		**24**	**12**	**01**	**06**	**03**	**46**	**0**	**0**	**46**
Grand Total			**148**	**86**	**16**	**33**	**14**	**297**	**23**	**0**	**320**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	27	08	01	-	36
Female	15	02	00	-	17
Total	**42**	**10**	**01**	**-**	**53**

Student's Fellowship during AY 2020-21

Name of fellowship	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NTS-UG	14	13	-	-	-	-	27
STUDENT READY	39	21	-	-	-	-	60
EBC fellowship	70	16	10	8	-	-	104
MYSY fellowship	-	-	-	-	-	-	-
NAU Girls meritorious fellowship	-	05	-	-	-	-	05
SC/ST/fellowship	16	25	1	5	-	-	47
SEBC fellowship	40	17	15	1	-	-	73
Total	**179**	**97**	**26**	**14**	**-**	**-**	**316**

Cut off marks for admission in the UG degree programme during AY 2020-21

SN	Categories	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)*
1	General	40	**57.47**
2	SC	35	**50.73**
3	ST	35	**45.42**
4	SEBC	40	**56.43**
5	Other Board	40	**61.11**
6	PH	40	-
7	Ex-Army	40	-
8	**EWS**	**40**	**57.38**

*Cumulative marks of PCB and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examination	Number of students qualified	Number of students passed out students
ICAR JRF	01	52

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Zala Dashrthabhai Arajanbhai	3010716049	Agronomy	501/General

Placement Cell

Degree	Total passed out students	Higher studies		Govt. Job	NGOs	Abroad	Self –entre preneurship	Unemployed	Total
		Gujarat	Other states						
B.Sc.	53	27	01	-	11	04	-	-	10
Total	**53**	**27**	**01**	**-**	**11**	**04**	**-**	**-**	**10**

Activities of students and faculty members at the College

Celebrated Republic Day on January 26, 2021 at College of Agriculture, Bharuch Campus with Polytechnic, NARP and Cotton Regional Research Centre Staff and Students

Celebrated Martyrs' Day (Shaheed Diwas) on January 30, 2021 at College of Agriculture, Bharuch Campus with Polytechnic, NARP and Cotton Regional Research Centre Staff and Students

Total 105 students and staff were attended the live programme on awareness programme of "Significance of Yoga for Student's Physical, Mental and Emotional Health in Covid-19 Era" organised by DSW, NAU, Navsari on March 2, 2021 through virtual mode

Special YOGA Sessions for Students were arranged at College of Agriculture, Bharuch campus on March 3, 2021 at 6:30 -07.15 hrs. for boys and at 17.30-18:15 hrs. for girls students

Farmer's Awareness Programme was conducted by the Department of Agronomy, CoA, Bharuch under the *Gramin Krishi Mausam Seva* Project at Katpor village of Hansot taluka of Bharuch on March 18, 2021. Total 150 farmers were participated in the programme. Dr. Shailesh Mali, Sugarcane Scientist and Dr. Mahesh Patel, Vegetable Scientist delivered lead talk.

Students and faculty members participated in the celebration of International Yoga Day on June 21, 2020.

One day State level Webinar on "*Sajeev Kheti*: *Takau Krushino Vaigyanik Abhigam*" was organized by Department of Agronomy, College of Agriculture, NAU, Bharuch on November 25, 2020. Total 250 participants across the state

One day National Webinar on "Underutilized fruits: Converting wastelands in to Goldmine" was organized by Department of Horticulture, College of Agriculture, NAU, Bharuch on September 30, 2020. Total 600 participants have

including farmers and students and 5 expert speakers delivered their talks and 2 farmers gave their views.The webinar was graced and inaugurated by our Hon'ble Vice Chancellor, Dr. Z.P. Patel, Navsari Agricultural University, Navsari and addresses the event with importance of organic farming if reference to current situation and motivate farmers and students.

participated and 4 eminent speakers delivered their talks in webinar.

Two days National Workshop on "Microbial Intervention in Plant Health and Nutrition" was organized by Department of Plant Pathology and Department of Entomology, College of Agriculture, NAU, Bharuch during August 25-26, 2020. Total 415 participants were participated and 6 distinguish speakers delivered their lead talks on use of microbial pesticides in agriculture.

One day Webinar on "Biopesticides: Green Technology in Sustainable Agriculture" organized by Department of Plant Pathology and Department of Entomology, College of Agriculture, NAU, Bharuch during August 18, 2020. Total 480 participants were participated and 5 distinguish speakers delivered their lead talks on use of biopesticides in agriculture.

College of Agriculture, Bharuch campus, organized two days programme on "Addressing COVID-19: Impact on food security, nutrition and future livelihood-A special focus to Gujarat" during July 15-16, 2020 through virtual mode. Total 1080 participants were participated and 8 speakers delivered their talks.

NSS activities during AY 2020-21

SN	Activities	Date/ period	No of Volunteers
1	International Yoga Day	June 21, 2020	28

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of department
1	Establishment of College of Agriculture,	B.H.12246	GoG	CoA, Bharuch
2	Strengthening of Agricultural Polytechnic Phase-2	B.H.12247	GoG	CoA, Bharuch
3	National Agricultural Research project	B.H.7081-C	Non-Plan, GoG	CoA, Bharuch
4	Genetic enhancement of Niche crop	B.H.12946-A	Plan, GoG	CoA, Bharuch
5	Establishment of Plug Nursery for Horticultural Crops under HRT-2	B.H.18188	NHM, GoG	Horticulture
6	*Gramin Krishi Mausam Seva* (GKMS)	B.H. 18925	IMD, GoI	Agronomy

Educational/Infrastructural Facilities

The faculties of CoA are working for Teaching, Research and Extension Education activities. There are 11 departments in the college which are involved in teaching of undergraduate and post graduate courses. Departments have well established equipped laboratories for practical and research work. The college has almost all the infrastructure & physical facilities for the students. Biotechnology laboratory executed in GPB departments for students practical. Green net house also built for development of plug nursery for students in horticultural department. Most of the departments are facilitated with the equipments/instruments for UG practical work. Various models/structures of animals also developed for the identification of students. Model of 2 stroke and 4 stroke engine, submersible pump, wind mill, solar fencing system, sprinkler as well drip irrigation are available for students in Agricultural Engineering department. The open air gym has been created for development of physical fitness and recreation for faculties and students.

Experiential Learning Unit

Title of ELU	:	**Enriched vermicompost production**
Year of establishment	:	2017
Name of Manager	:	Dr. T. U. Patel
Department	:	Agronomy
Activities	:	Establishment of vermicompost shed and processing unit is under progress.
Number of students beneficiaries	:	60
Amount earned per student	:	-



Research publications

SN	Details of Publication	NAAS rating
1	Berani, N.K. and Patel, J.J. (2020). Population fluctuation of sucking insect pest of brinjal and its relation with weather parameters. *Journal of Entomology and Zoology Studies*, **8**(6): 1613-1617.	5.53
2	Berani, N.K., Patel, J.J. and Zinzuvadiya, H.D. (2020). Screening of different brinjal cultivars/genotypes against sucking insect pest of brinjal. *Journal of Entomology and Zoology Studies*, **8**(6): 1582-1587.	5.53
3	Chalodia, A.L., Neeraj Kumar, Vaishali Surve and Mote, B.M. (2020). Climate change analysis by using Mann-Kendal trend test for Bharuch districts of Gujarat. *Green Farming*, **11**(4 &5): 1-6.	4.38
4	Neeraj Kumar, Chandrawanshi, S.K., Zinzala, M.J., Chalodia, A.L., Mote, B.M. and Radadia, G.G. (2020). Rainy days analysis by using normal, binomial distribution and discrete probability for Bharuch district of South Gujarat. *Green Farming*, **11**(4 &5): 79-85.	4.38
5	Deshmukh, Swapnil, Surve, Vaishali, Patel, H.H., Patel, T.U. and Patel, D.D. (2020). Effect of row spacing and intercropping in pigeon pea under rainfed condition of South Gujarat. *Journal of Pharmacognosy and Phytochemistry*,**9**(1): 1571-1573.	5.21
6	Gupta, R.P., Patel, S.R., Dinisha, A., Patil, S.S. and Patel, H.N. (2020). Heterosis and Inbreeding Depression for Seed Yield Attributing Traits and Quality Parameter in Cowpea (*Vigna unguiculata* (L.) Walp.). *International Journal of Current Microbiology and Applied Sciences*,**9**(8): 3335-3343.	5.38
7	Hiremath, D.B. and Makadia, J.J. (2020). Growth and instability of area under drip method of irrigation in South Gujarat- A District-wise analysis. *International Journal of Agricultural Sciences*, **17**(1): 271-277.	4.82
8	Mote, B.M., Yadav, S.B., Neeraj Kumar, Zinzala, M.J. and Pandey, V. (2020). Simulation of summer groundnut phenology under different sowing dates using CROPGRO-PEANUT model in middle Gujarat. *International Journal of Microbiology Research*, **12**(6): 1852-1854.	4.77
9	Mote, Neeraj Kumar, B. M., Srivastava, A. and Chalodia, A.L. (2021). Rainy days analysis by using statistical methods for Valsad district of South Gujarat. *Indian Journal of Pure and Applied Bioscience*, **9**(1): 378-388.	4.74
10	Mote, Neeraj Kumar, B.M., Srivastava, A., Patel, D.D. and Chalodia, A.L. (2021). Rainy days analysis by using normal, binomial distribution and discrete probability for Navsari district of South Gujarat. *International Journal of Chemical Studies*, **9**(1): 3145-3153.	5.31
11	Muchhadiya, D.V., Patel, K.G. and Patel, J. J. (2020). Bio-efficacy of insecticides against pod borers infesting cowpea [*Vigna unguiculata* (L.) Walp.]. *Indian Journal of Pure and Applied Bioscience*, **8**(3): 678-684.	4.74
12	Muchhadiya, D.V., Patel, K.G., Patel, J.J. and Patel, D.R. (2020). Seasonal incidence of pod borers and effect of abiotic factors on population of pod borers in cowpea [*Vigna unguiculata* (L.) Walp.]. *Indian Journal of Pure and Applied Bioscience*, **8**(2): 76-81.	4.74
13	Neeraj Kumar, Zinzala, M.J., Patel, H.H., Patel, T.U.,Patel, D.D., Radadia, G.G. (2020). Day wise analysis and validation of medium range weather forecast for Navsari region under South Gujarat. *International Journal of Agriculture Science*, **12**(3): 9519-9524.	4.20
14	Patel, C.S., Patel, S.R., Patil, S.S., Dinisha, A. and Naik, A. J. (2020).Generation mean analysis for yield and its contributing traits in Rice (*Oryza sativa* L.).*International Journal of Current Microbiology and Applied Sciences*,**9**(8): 1601-1610.	5.38

15	Patel, D.B., Patel, T.U., Patel, H.H., Patel, D.D., Patel H.M. and Zinzala, M.J. (2020). Irrigation scheduling and weed management in *rabi* greengram (*Vigna radiata*). *International Journal of Chemical Studies*, **8**(3): 204-210.	5.31
16	Patel, Mahendra M., Meena, L.K., Arvadiya, L.K., Patel, D.D. and Zinzala, M.J. (2021). Comparative study on improved organic practices of summer greengram (*Vigna radiata* L.) at Bharuch district of Gujarat. *International Journal of Chemical Studies*,**9**(1): 2368-2370.	5.31
17	Patel, Neeraj Kumar, Patel, D.D., Patel, M.L., Mote, B.M. and Radadia, G. G., (2020). Winter season rainfall trend analysis by using distribution-free statistics and linear regression techniques under South Gujarat. *International Journal of Agriculture Sciences*,**12**(11): 9896-9902.	4.20
18	Patel, P.S., Patel, H.H., Patel, T.U., Patel, H.M., Italiya, A.P. and Patel, A.M. (2020). Impact of organic manures on soil health, yield and quality of pit planted sugarcane. *International Journal of Chemical Studies*,**8**(1): 2459-2463.	5.31
19	Patel, S.G., Devashrayee, V.M.,Patel, D.R. and Shrivastava, A. (2021). Screening of Indian bean genotypes/cultivars against major insect pests. *Journal of Entomology and Zoology*, **8**(1): 815-818.	5.38
20	Patel, Sanjay, Pandya, D.C. and Bhatt, S.A. (2021).Isolation and characterization of an acetamiprid degrading bacteria from cultivated soils of North Gujarat region.*International Journal of Current Microbiology and Applied Sciences*, **10**(2): 1557-1568.	5.38
21	Patel, Sanjay, Pandya, D.C. and Bhatt, S.A. (2021).Study of metabolic diversity (Enzymatic diversity) of *Pantoea dispersa*. *International Journal of Current Microbiology and Applied Sciences*, **10**(2): 1557-1568.	5.38
22	Patil, P.P., Patil, S.S., Mali, S.C. and Patel, D.U. (2020). Character association and path analysis for cane yield, juice quality and their component traits in sugarcane over the environment. *International Journal of Chemical Studies*,**8**(4): 3491-3495.	5.31
23	Surve, Vaishali, Singh, Narendra, Deshmukh, Swapnil, Patel, T.U. and Patel, D.D. (2020). Effect of N & P management with and without bio organics on growth and yield parameters of *kharif* sorghum under South Gujarat conditions. *Journal of Pharmacognosy and Phytochemistry*,**9**(1): 132-133.	5.21
24	Thakor, Bharvi, Surve, Vaishali, Singh, Narendra and Deshmukh, S.P. (2020). Effect of summer green gram [*Vigna radiata* L.] varieties, sulphur levels and fertilizer levels on quality, nutrient content and uptake under South Gujarat condition. *Journal of Pharmacognosy and Phytochemistry*, **9**(5): 2313-2315.	5.21
25	Trivedi, N.P., Patel, J.J. and Ghetiya, L.V. (2020). Diversity of aphids in South Gujarat. *Journal of Entomology and Zoology Studies*, **8**(5): 127-131.	5.53
26	Vaghela, T.D., Patel, D.D., Patel, K.H., Singh, Barkha and Joshi, Neha (2020). Effects of tillage practices and fertility levels on crop growth, yield and quality of sugarcane (*Saccharum officinarum* L.) under South Gujarat conditions. *International Journal of Chemical Studies*,**8**(4): 2286-2290.	5.31
27	Vaghela, T.D., Patel, D.D., Patel, K.H., Dharaiya, B.K. and Chaudhari, D.T. (2020). Effects of plant dry matter, quality parameters and economics of sugarcane as influenced by different tillage practices and fertility levels (*Saccharum officinarum* L.) under South Gujarat conditions. *The Pharma Innovation*, **9**(11): 1-4.	5.23

Extension publication

1	*Badlata Vatavaranne Anurup Krushi Tajgyata* (Uni. Pub. No. **1**1/**20**20-21)
2	*Kutrim Varsad: Safal Kheti mate Ek Naveentam Abhigam* (Uni. Pub. No. **1**0/**20**20-21)
3	*Adhunik Vedhshala – Samayni Maang* (Uni. Pub. No. 09/**20**20-21)
4	*Khedut Mitra – Gramin Krushi Mausam Seva Project* (Uni. Pub. No. 08/**20**20-21)
5	*Rakshit Kheti- Havamanna Ferbadal same Khedutone Rakshan*(Uni. Pub. No. **1**2/**20**20-21)
6	*KrushiHavamanAvlokan Margdarshika*(Uni. Pub. No. **1**4/**20**20-21)
7	*Chomasani Vaividhyata*: *Bharat mate Ashirvad*(Uni. Pub. No. **1**3/**20**20-21)

Radio/TV talks

SN	Name of faculty	Topic/title	Date	Radio/ TV Talk
1	Mr. S.L. Sangani	*Fal ane Shakbhajinu Mulyavardhan*, a phone in programme live on Krishidarshan at DD Girnar	November 04, 2020	TV Talk
2	Dr. D.M. Pathak	Non-Chemical Management of Pests and Diseases in Polyhouse at AIR Vadodara	December 15, 2020	Radio Talk

7. College of Agriculture, Waghai

The Institute

College of Agriculture, Waghai is one of the constituent colleges of Navsari Agricultural University established under the Tribal Sub-Plan funded by the Government of Gujarat with the vision of creating a top class institution of learning dedicated to excellence in agricultural sciences, industrial technology, and allied fields, research and development, and extension and training for global competitiveness and cooperation. Students were admitted to the four-year B.Sc. (Hons.) Agriculture degree programme for the first time in July 2012-13, when the College of Agriculture first opened its doors. So far 251 students have been graduated from the College of Agriculture, Waghai. This college is accredited by National Agricultural Education Accreditation Board of ICAR during 2018. The recommendations of the Fifth Dean's committee reports have already been adopted at the college.

The constructions of Polytechnic and Degree college buildings have been completed during 2014-15 and 2017-18, respectively. The college has state of art facilities which includes an ultra-modern auditorium with all necessary AV equipment, smart classrooms with digital projectors and CCTV cameras, a language lab, and well-equipped laboratories of Entomology, Plant Pathology, Soil Science & Agricultural Chemistry, Genetics & Plant Breeding, and Horticulture. To prepare students for global competition, the college provides a computer lab with high-speed internet access and a language lab to improve fluency in English. In the near future, there is a plan to open a tissue culture laboratory, Center of Excellence on Mushroom Research and Bio-Agent Production Unit at this college.The college strives to provide students with the best possible amenities. The total capacity of accommodation in *Dandakaranya* Boys hostel is 162 students and in Shabri Girls hostel, the capacity is 93 students. The College features a playground for various sporting activities, and also has a separate Gymnasium for boys and girls students. Generally, the students are participating in college, university, inter university and national level sports *viz.*, kabbaddi, kho-kho, badminton, volley ball, cricket and basketball and cultural competitions *viz.*, drama, folk dance, mono acting, mimicry, musical events, agri unifest,*etc.* and won number of prizes/medals.

College also conducts Student Ready and RAWE programme for the final year students. The RAWE Programme covers a wide range of topics and it offers a direction to the students to develop their competence, capacity and ability to acquire an expertise. The college publishes "*DandakaranyaMagazine'* every year, which is a sign of extracurricular activities of students as well as faculties of College of Agriculture, Waghai.The faculties of college are working hard to fulfill the mission- "to train manpower needed for Agricultural development of the state of Gujarat. In addition to this paramount mission, research and extension education of agricultural sectors are also the priority areas of this college.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	01	00	-	-	-	-	-	-	-	-
2	Professors	03	03	-	-	03	-	02	01	03	-
3	Associate Professors	08	04	-	-	04	-	02	02	04	-
4	Assistant Professors	16	15	07	-	08	-	09	06	13	02
	Total	**28**	**22**	**07**	**-**	**15**	**-**	**13**	**09**	**20**	**02**

List of Departments

SN	Departments	SN	Departments
1	Agronomy	7	Agricultural Economics
2	Genetics and Plant Breeding	8	Horticulture
3	Soil Science and Agricultural Chemistry	9	Basic Sciences and Humanities
4	Entomology	10	Agricultural Engineering
5	Plant Pathology	11	Animal Production
6	Agricultural Extension & Communication	12	Statistics

Academic Programmes offered

Degree Programmes	Duration	Total Credits
B.Sc. (Hons.) Agriculture	8 Semesters	186

Under Graduate Credit details (As per V Deans' committee recommendations)

SN	Semesters	Number of Courses	Theory +Practical = Total Credits
1	First	11	14+08=22
2	Second	11	17+09=26
3	Third	10	15+09=24
4	Fourth	12	15+10=25
5	Fifth	11	14+10=24
6	Sixth	11	14+11=25
7	Seventh	01	0+20=20
8	Eight	01	0+20=20
		Total	**89+97=186**

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat								Grand Total
			Gen	SEBC	SC	ST	CBSE	Total	ICAR	Foreign	
B.Sc. (Hons.) Agri.	Male	70	19	10	02	05	02	38	-	-	38
	Female		12	03	01	03	-	19	04	-	23
	Total		**31**	**13**	**03**	**08**	**02**	**57**	**04**	**-**	**61**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat								
			Gen	SEBC	SC	ST	CBSE	Total	ICAR	Foreign	Total
B.Sc. (Hons.) Agri.	1st	Male	19	10	02	05	02	38	-	-	38
		Female	12	03	01	03	00	19	04	-	23
	2nd	Male	28	12	02	07	03	52	03	-	55
		Female	09	04	01	00	00	14	01	-	15
	3rd	Male	26	13	04	05	00	48	-	-	48
		Female	07	03	02	03	00	15	01	-	16
	4th	Male	25	12	03	02	00	42	-	-	42
		Female	04	03	01	07	00	15	-	-	15
	Sub-total		**130**	**60**	**16**	**32**	**05**	**243**	**09**	**-**	**252**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	19	16	-	-	35
Female	11	04	-	-	15
Total	**30**	**20**	-	-	**50**

Student's Fellowship during AY 2020-21

Name of fellowship	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NTS-UG	03	03	-	-	-	-	06
SC/ST/fellowship	18	22	-	-	-	-	40
SEBC fellowship	99	16	-	-	-	-	115
NAU Girls fellowship	-	01	-	-	-	-	01
Total	**120**	**42**	-	-	-	-	**162**

Cut off marks for admission in the UG degree Programme during AY 2020-21

SN	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)*
1	General	40	**58.83**
2	SC	35	**48.07**
3	ST	35	**42.48**
4	SEBC	40	**54.07**
5	Other Board	40	**51.13**
6	PH	35	-
7	Ex-Army	35	-
8	**EWS**	**35**	**54.35**

* Cumulative marks of PCB and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examination	Number of students qualified	Number of students passed out students
ICAR JRF	02	50
ICAR SRF	--	--
Deemed University (NAME)	--	--
NET	--	--

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Rabari Nareshbhai Nagjibhai	3010616040	Plant Breeding	51 – General
2	Baldaniya Jignesh Zinabhai	3010616003	Agronomy	221 – General

Placement Cell

		Higher studies							
Degree	**Total passed out students**	**Gujarat**	**Other states**	**Govt. Job**	**NGOs**	**Abroad**	**Self –entre preneurship**	**Unemployed**	**Total**
B.Sc.	50	24	02	24	-	-	-	-	**50**
Total	**50**	**24**	**02**	**24**	-	-	-	-	**50**

Activities of students and faculty members at the College

Organized constitution Day on November 26, 2020 through virtual mode

Celebrated the National Voters Day on January 25, 2021


Celebrated the Republic Day at College of Agriculture, Waghai on January 26, 2021


Organized International Women's Day at College of Agriculture, Waghai on March 08, 2021

NSS activities during AY 2020-21

SN	Activities	Date/ period	No of Volunteers
1	Constitution Day	November 26, 2020	100
2	National Voters Day	January 25, 2021	35
3	Republic Day Celebration	January 26, 2021	45
4	International Women's Day Celebration	March 08, 2021	100

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of department
1	Establishment of Center of Excellence on Mushroom Research at Dang District	14053	RKVY	Plant Pathology
2	Establishment of Bio-Agent Production Unit for Organic Dang	18182	NHM	Plant Pathology
3	Quality Planting Material Production in Horticultural Crops (TSP)	2115/01	Education division ICAR	Horticulture
4	Agricultural Waste Management through vermicompost (TSP)	2116/01	Education division ICAR	Agronomy

Educational/Infrastructural Facilities

Education infrastructure like Buildings, classrooms, laboratories, and equipment are crucial elements of learning environments in college. There is strong evidence that high-quality infrastructure facilitates better instruction, improves student outcomes, and reduces dropout rates, among other benefits. Each lecture hall is made it as Digital Classrooms, which is equipped with comfortable sitting for all students. It is decorated with podium and the modern facilities for presentations. The College Library serves various purposes like serving the academic needs of students and

faculties, acting as a center for collection of books, journals related to a various branches of education. College has the Departmental Laboratory facilities, where practical activities have great significance in the teaching learning process and help to develop important skills, and a broad understanding of scientific concepts. With this objective in our mind we have various departmental laboratories in our college. Departmental laboratories are richly equipped with all the equipment's necessary for performing the practical. College has computer laboratory with high speed internet facility to enable students for global competitiveness. Apart from these, Language lab is also established which is equipped with computers having internet connectivity to cater to audiovisual learning with a view to enhance communicative skills. It is enabled with "Oréll Talk" software for language learning. The Colleges has seminar hall with capacity of 140 seats, well equipped with latest facilities. It is useful to the students of the college to give their presentations and organize other activities. The college building consists of ultra-modern auditorium with all necessary AV aids with capacity of 450. In the premises, necessary facilities for both indoor and outdoor games including separate Gymnasium for physical development of boys and girls have been created. In the sub campus, separate boys & girls hostels have been established with all modern amenities. The hostel also has a recreation room fitted television and indoor and outdoor sports facilities. The hostel kitchen provides excellent and hygienic food.

Experiential Learning Units

Title of ELU	:	**Agriculture Waste Management through Vermicomposting**
Year of establishment	:	2018
Name of Manager	:	Dr. Ajay Patel appatel@nau.in & arya5122005@gmail.com Mob: 9979674748 & 9427155512
Department	:	Department of Agronomy, College of Agriculture, NAU, Waghai
Activities	:	Construction of ELP unit has been completed. Total 29 students trained for vermicompost production and students produced about 1000 kg vermicompost.
Number of students beneficiaries	:	29
Amount earned per student	:	-Nil- [Project is at initial stage]

Students involved in various activities for production of vermicompost

Title of ELU	:	**Quality Planting Material Production in Horticultural Crops**
Year of establishment	:	2018
Name of Manager	:	Dr. Mangaldeep Sarkar Email: msarkar@nau.in; Mob: 9933777603
Department	:	Department of Horticulture, College of Agriculture, NAU, Waghai
Activities	:	Construction work has been completed. Production of planting materials in different horticultural crops is going on.
Number of students beneficiaries	:	28
Amount earned per student	:	-Nil- [Project is at initial stage]

Infrastructure developed in the ELU and students raised horticultural crops in the ELP

Research publications

SN	Details of Publication	NAAS rating
1	Attar Sanjay and Kumar Navneet (2021). Management of Banda (*Dendrophthoe falcata*): A Phanerogamic Plant Parasite of Mango and Sapota. *JPDS*,**13**(2): 85-88.	-
2	Bambharolia R.P., Khunt, M.D., Deshmukh, A.J., Prajapati, V.P. and Vavdiya, P.A. (2020). Isolation, screening and characterization of endophytic bacteria from root of finger millet (*Eleusine coracana* L.) for different plant growth promotion (PGP) activities: An *in-vitro* study. *Journal of Pharmacognosy and Phytochemistry*, **9**(5): 539-545.	5.21
3	Bhinsara, D.B., Verma, P.D., Pastagia, J.J. and Parmar Hitesh (2021). Study on knowledge of owners of milch animals about animal breeding in tribal area of South Gujarat. *Int.J.Curr. Microbiol. App. Sci.*,**10**(3):1-5.	5.38
4	Damasia D.M. and Patel, Z.P. (2020). Bio-efficacy of Insecticides and Botanical against Tea Mosquito Bug, *Helopeltis antonii* Signoret. infesting Cashew. *Ind. J. Pure App. Biosci.***8**(4): 370-374.	4.21
5	Damasia D.M., Patel, Z.P. and Bambharoliya, R.P. (2020). Effect of abiotic factors on seasonal incidence of tea mosquito bug, *Helopeltis antonii* Signoret. of cashew in South Gujarat. *Journal of Entomology and Zoology Studies*, **8**(5): 695-698.	5.53
6	Damasia D.M., Patel Z.P. and Makwana A.I. (2020). Studies on the Biology of Tea Mosquito Bug, *Helopeltis antonii* Signoret. (Hemiptera: Miridae) on Cashew, *Int. J. Curr. Microbiol. App. Sci.*, Special Issue-**11**: 2381-2388.	5.38
7	Damasia, D.M., Pastagia, J. J. and Kachela, H. R. (2020). First report of the occurrence of fall army worm, *Spodoptera frugiperda* (J E Smith) on finger millet (*Eleusine coracana* Gaertn) in Gujarat, India. *Indian Journal of Plant Protection*,**48**(4): 368-371.	5.07
8	Deshmukh, A.J., A.N. Sabalpara and R.P. Bambharolia (2020) Efficacy of fungicidal seed treatments on seed borne diseases of green gram. *International Journal of Economic Plants*, **7**(3):138-143.	4.37

9	Deshmukh, A.J., R.S. Jaiman, R.P. Bambharolia and V.A. Patil (2020). Seed Biopriming–A Review. *International Journal of Economic Plants*, **7**(1): 38-43.	4.37
10	Dholariya, H.P., V.J. Zinzala, J.V. Patel and V.M. Patel (2020). Zinc nutrition in finger millet (*Eleusine coracana* (L.) Gaertn.) for better nutritional security. *International Journal of Current Microbiology and Applied Sciences*, Special issue-**11**: 1082-1086.	5.38
11	Prajapati, V.P., R.F. Chaudhary, A.J. Deshmukh, R.P., Bambharolia, N.K. Gajre (2020). Management of blast (Pyricularia grisea) of finger millet with fungicides and biocontrol agents. *Plant Disease Research*, **35**(1): 36-41.	4.76
12	Rakesh Kumar Jaiman, S.K. Acharya, N.P. Pathan, A.J. Deshmukh, H.A. Desai, P.K. Patel and A.U. Amin (2020). *In situ* effect of seed bio-priming techniques on seedling of vegetable crops. *International Journal of Biotech Trends and Technology*, **10**(4): 6-16.	-
13	Rakesh Kumar Jaiman, S.K. Acharya, N.P. Pathan, A.J. Deshmukh, H.A. Desai, P.K. Patel and A.U. Amin (2020). *In vitro* effect of seed bio-priming techniques on seed germination and seedling vigour of few vegetable crops. *Journal of Applied and Natural Science*,**12**(4):702-709.	-
14	Vimal B. Patel and R.D. Morena (2020). Trend analysis and prediction of rainfall using genetic algorithm. *Shodh Sanchar Bulletin*,**10**(14): 2229-3620.	-
15	Vimal B. Patel and R.D. Morena (2020). Use of appropriate loss function in rainfall prediction using deep learning. *International Journal of Engineering and Advanced Technology*, **9(**6): 2249-8958.	-

8. ASPEE College of Horticulture Navsari

The Institute

ASPEE College of Horticulture and Forestry is a prime institute providing horticulture and forestry education and research in the state. To give a fillip to the trained human resources in the field of Horticulture and Forestry as well as tothe research for meeting out the challenges in horticulture and forestry sectors, College of Forestry and Horticulture was established in November, 1988 at Navsari (Gujarat) under the approval of *Krishi* and *Gram VikasVibhag* of the Government of Gujarat *vide* Resolution No. GKV-1087-3174 K-2, dated 4-11-1988. For starting this college, generous donation of Rs. 40 lakh was provided by ASPEE Foundation for Agriculture and Development, Malad, Mumbai and therefore, the college derived its name as ASPEE College of Horticulture and Forestry.

The main streams of Horticulture *viz*., Fruit Science, Vegetable Science, Floriculture and Landscape Architecture and Post Harvest Technology are working under the umbrella of ASPEE College of Horticulture, Navsari Agricultural University, Navsari with multi-disciplinary approach to address education, research and extension. After the inception of ASPEE College of Horticulture and Forestry, Bachelor degree programme of Horticulture and Forestry, Post Graduate degree programme in the disciplines of Fruit Science; Vegetable Science; Plantations, Spices, Medicinal and Aromatic Crops (PSMA); Floriculture and Landscape Architecture; Post Harvest Technology; are operational. To impart hands-on-training in horticultural field and develop entrepreneurship among UG students, 3 modules of Student READY Experiential Learning Programme *viz*., Protected Cultivation of High Valued Horticultural Crops, Commercial Production of Horticultural Materials, Post-Harvest Handling and Value Addition in Horticultural Crops and Floriculture and Landscape Architecture are running under the college. Apart from this, one plan project on"Practical Training Centre for students in Hi-tech Horticulture" is also functional for horticultural students.Other than degree programmes, certificate courses on Turf Grass Management and Landscape, Gardening Training Programme*etc*. are undertaken to train the human resources in the field of Floriculture and Landscaping. In Biotechnology students from other Universities are allowed to do dissertations on “Plant molecular biology, biotechnology and tissue culture”. Beside this, faculties guide students for JRF/SRF/NET and other national competitive examinations. For undergraduate students, V Deans' Committee course curricula and syllabi are followed; whereas, for post graduate students, course curricula and syllabi of BSMA Committee on Horticultural Sciences (2009) are followed.

Under the aegis of Navsari Agricultural University (NAU) and ASPEE College of Horticulture and Forestry, the Regional Horticultural Research Station is functional since 1965 to strengthen various research activities of fruits and vegetables. There are three different schemes running under Fruit Science and PSMA discipline namely, 1) Strengthening activities of Fruit Crops, 2) Research in Fruit crops andAICRP on Palms in which scientists are working on various aspects like fruit production, breeding and climate change, *etc*. In Vegetable Science discipline, total five different schemes such as 1) Research in Vegetable Crops under Protected Conditions Phase-II 2) Research and Development in Vegetable Crops, 3) AICRP on Tuber Crops 4) AICRP on Vegetable Crops and 5) Vegetable grafting to mitigate biotic and abiotic stresses in vegetable crops are operational with different experiments on crop improvement, production technology, protected cultivation and vegetable grafting. In the department of Floriculture and Landscape Architecture, four different research schemes/projects are running1) Establishment of Research Project on Floriculture, 2) Practical Training Centre of Hi-Tech Horticulture for Horticultural Students, 3) Advanced

Technology Centre of Soilless System for various Crops and 4) AICRP on Floriculture are operational which deal with various research trials on crop improvement, production technology, protected cultivation and soil-less cultivation of flower crops. Also, two National Horticulture Mission (NHM) sponsored project *i.e.* Model Nursery for Fruit and Ornamental Plants are also running in the college, in which different fruits, vegetables and ornamental seedlings/grafts/plants are prepared and sold to farmers on, no profit no lossthe basis. Two different research schemes *viz.*, Centre of Excellence of Post-harvest Technology and Establishment of Fruits and Vegetable Packing Research Station are also operational in the department. The Department of Post-Harvest Technology undertakes basic and strategic research in cutting edge technologies for innovative breakthrough, development of post-harvest handling, transportation, packaging and intelligent storage structure for horticultural crops, development, testing, popularization and commercialization of post-harvest protocols, establishment of infrastructure in terms of pilot plants (Mango, Tomato, Banana and Onion) for processing (primary /secondary /tertiary).

All the extension activities are organized and coordinated by Directorate of Extension Education, NAU, Navsari in which faculty members are called to deliver lectures in various farmer training programmes like on campus training programme in *SardarSmriti Kendra*, Agricultural Technology Information Centre and Farmers Training Centre and off campus activities at different villages of south Gujarat. Horticulture scientists also provide their valuable inputs/suggestions to the farmers of Gujarat state as well as adjoining states. However, most of the extension activities were conducted on virtual mode owing to the unprecedented situation enforced by COVID 19. Farmers willing to seek government subsidy to Green House cultivation are also trained on various aspects of Protected Cultivation of Horticultural Crops by horticultural scientists in 15 days training programme organized at Agricultural Technology Information Centre, NAU, Navsari. Besides this, college also organizes training programmes and exhibition-cum-competition and Hand-on-Trainings to the farmers of Gujarat. The Scientists also disseminate various horticultural technical know-how through publications, TV and Radio talks in vernacular language. The scientists do participate actively in *KrishiMahotsava* – a flagship programme of Government of Gujarat, to share knowledge among farmers on various aspects of Hi-Tech horticulture technologies.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	1	**0**	0	0	0	0	0	0	0	0
2	Professors	5	4	0	0	2	2	2	2	3	1
3	Associate Professors	19	15	0	0	12	3	12	3	14	1
4	Assistant Professors	47	44	11	3	25	5	34	10	31	13
	Total	**71**	**63**	**11**	**3**	**39**	**10**	**48**	**15**	**48**	**15**

List of Departments

SN	Departments	SN	Departments
1	Department of Fruit Science	5	Department of Plant Protection
2	Department of Vegetable Science	6	Department of Basic Sciences
3	Department of Floriculture and Landscape Architecture	7	Department of Natural Resource Management
4	Department of Post Harvest Technology	8	Department of Social Sciences

Academic Programmes offered

SN	Degree Programmes	Duration	Total Credits
1	B. Sc. (Hons.) Horticulture	8 Semesters	180
2	M.Sc. (Horticulture)	4 Semesters	55
3	M.Sc. (Horticulture)	6 Semesters	75

Under Graduate Credit details (As per V Deans' Committee Recommendations)

SN	Semesters	Number of Courses	Theory +Practical = Total Credits
1	First	10	14+09=23
2	Second	11	23(13+10)+1*=24 (*Non-Credit)
3	Third	10	12+09=21
4	Fourth	10	24(15+09) +1*=25 (*Non-Credit)
5	Fifth	09	13+09=22
6	Sixth	10	15+10=25
7	Seventh	12	0+20
8	Eight	06	0+20
		Total	**82+98 (including 2 NC) = 180**

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	Masters' Degree	Doctoral Degree
1	Fruit Science	Yes	Yes
2	Vegetable Science	Yes	Yes
3	Floriculture & Landscape Architecture	Yes	Yes
4	Post-Harvest Technology (PHT)	Yes	Yes
5	Plantation, Spice, Medicinal and Aromatic Plants (PSMA)	Yes	No
6	Horticultural Entomology	Yes	Yes
7	Horticultural Pathology	Yes	Yes
	Total	**07**	**06**

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat							ICAR	Foreign	Grand Total
			Gen	SEBC	SC	ST	CBSE	EWS	Total			
B.Sc. (Hons.) Horti	Male	70	02	14	02	03	02	13	36	05	-	41
	Female		03	11	01	05	-	01	21	02	-	23
	Total		**05**	**25**	**03**	**08**	**02**	14	57	07	-	64
M.Sc. (Horti)	Male	36	-	05	-	01	-	09	15	02		17
	Female		-	07	01	03	-	01	12	05		17
	Total		**-**	**12**	**01**	**04**	**-**	**10**	**27**	**07**	**-**	**34**
Ph.D.	Male	11+4*	-	02	-	-	-	01	03	02	-	05
	Female		02	03	-	04	-	01	10	-	-	10
	Total		**02**	**05**	**-**	**04**	**-**	**02**	**13**	**02**	**-**	**15**
Grand Total			**07**	**42**	**04**	**16**	**02**	**26**	**97**	**16**	**-**	**113**

*** Sponsored**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat									
			Gen	SEBC	SC	ST	CBSE	EWS	Total	ICAR	Foreign	Total
B.Sc. (Hons.) Horti	1st	Male	02	14	02	03	02	13	36	05	-	41
		Female	03	11	01	05	-	01	21	02	-	23
	2nd	Male	03	17	-	03	-	10	33	04	-	37
		Female	01	09	-	10	02	07	29	03	-	32
	3rd	Male	18	08	03	03	-	-	32	08	-	40
		Female	05	11	02	07	02	-	27	01	-	28
	4th	Male	16	06	03	02	01	-	28	02	-	30
		Female	05	07	-	06	01	-	19	03	-	22
	Sub-total		**53**	**83**	**11**	**39**	**08**	**31**	**225**	**28**	**-**	**253**
M. Sc. (Horti)	1st	Male	-	04	00	01	-	09	14	02	-	16
		Female	-	07	01	03	-	01	12	05	-	17
	2nd	Male	02	09	-	04	-	08	23	02	01	26
		Female	01	06	03	03	-	-	13	07	-	20
	Sub-total		**03**	**26**	**04**	**11**	**-**	**18**	**62**	**16**	**01**	**79**
Ph. D.	1st	Male	-	02	-	-	-	01	3	01	-	04
		Female	02	02	-	04	-	01	9	-	-	09
	2nd	Male	01	02	-	01	-	-	4	02	-	06
		Female	02	03	02	03	-	01	11	01	-	12
	3rd	Male	03	03	-	03	-	-	9	01	01	11
		Female	02	03	01	-	-	-	6	-	-	06
	Sub-total		**10**	**15**	**03**	**11**	**-**	**03**	**42**	**05**	**01**	**48**
Grand Total			**66**	**124**	**18**	**61**	**08**	**52**	**329**	**49**	**02**	**380**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	12	13	05	-	30
Female	09	11	02	-	22
Total	**21**	**24**	**07**	**-**	**52**
Master's level					
Male	02	09	-	-	11
Female	10	15	-	-	25
Total	**12**	**24**	**-**	**-**	**36**
Doctoral level					
Male	04	02	-	-	06
Female	05	-	-	-	05
Total	**09**	**02**	**-**	**-**	**11**

Student's Fellowship during AY 2020-21

Name of Fellowships	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NTS-UG	09	07	-	-	-	-	16
NTS-PG	-	-	01	01	-	-	02
ICAR-JRF	-	-	03	14	-	-	17
ICAR-SRF	-	-	-	-	02	03	05
STUDENT READY	61	49	-	-	-	-	110
INSPIRE	-	-	-	-	-	-	-
NAU PG fellowship	-	-	01	02	-	-	03
NAU Girls meritorious fellowship	-	22	-	-	-	-	22
ASPEE JRF	-	-	-	-	-	-	-
SC fellowship	05	05	-	04	-	-	14
ST fellowship	07	24	03	06	-	-	40
SEBC fellowship	74	33	24	13	-	-	144
Total	**156**	**140**	**32**	**40**	**02**	**03**	**373**

Cut off marks for admissionin the UG degree programme during AY 2020-21

SN	Categories	Minimum requirement of Marks (%) in PCB	Cut of Marks (%)*
1	General	40	-
2	SC	35	**46.32**
3	ST	35	**41.63**
4	SEBC	40	**52.75**
5	Other Board	40	**42.83**
6	PH	35	-
7	Ex-Army	35	-
8	**EWS**	**40**	-

* Cumulative marks of PCB and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

SN	Name of examination	Number of students qualified	Number of students passed out students
1	ICAR JRF	08	52
2	ICAR SRF	13	36
3	Deemed University (NAME)	-	-
4	NET	-	-

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Patel DharaJagadishbhai	3020216031	Horticulture	134 (ST)
2	TandelPrakrutiBallubhai	3020216051	Horticulture	274 (OBC)
3	AhirBhumikabenMaheshkumar	3020216001	Horticulture	443 (OBC)
4	DhimmarShivaniBhikhubhai	3020216008	Horticulture	377 (OBC)
5	Patel DipaliHiteshkumar	3020217004	Horticulture	613 (OBC)
6	Pansuriya Rahul Rameshbhai	3020216029	Vegetable Science	37 (EWS)
7	GamitJimishkumarJivanbhai	3020216012	Horticulture	55 (ST)
8	Patel RiddhiHiteshkumar	3020216039	Horticulture	456 (OBC)

Details of students qualified in ICAR SRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Lalitha K R	2020218017	Fruit Science	19 (OBC)
2	Thejaswini K.	2020218047	Fruit Science	4 (SC)
3	BorichaUrvashiKamleshkumar	2020218006	Fruit Science	21 (General)
4	Desai YashkumarGamanbhai	2020218012	Fruit Science	52 (General)
5	Desai DevanshiJayeshbhai	2020218011	Fruit Science	154 (General)
6	AjaykumarSahu	2020218001	Fruit Science	3 (General)
7	MonuKumari	2020218020	Vegetable Science	15 (OBC)
8	Nagendra	2020218022	Vegetable Science	13 (OBC)
9	Vidyashree S.	2020218049	Floriculture and Landscape Architecture	3 (General)
10	MangroliyaRonak	2020218018	Floriculture and Landscape Architecture	6 (EWS)
11	Alka	2020218002	Floriculture and Landscape Architecture	7 (OBC)
12	ZhalaKuvarsinhRavisinh	2020217038	Floriculture and Landscape Architecture	35 (General)
13	GohilMehulbhaiMaganbhai	2020218014	Postharvest Technology	8 (OBC)

Placement Cell

Degree	Total passed out students	Higher studies							
		Gujarat	Other states	Govt. Job	NGOs	Abroad	Self –entre preneurship	Unemployed	Remarks
B.Sc.	52	-	-	-	**07**	-	-	**45**	-
M.Sc.	43	08	04	14	02	-	-	14	01 (unfortunate demise)
Ph.D.	11	-	01	03	01	-	-	01	05 (2 SRF, 3 in-service)
Total	**106**	**08**	**05**	**17**	**10**			**60**	**06**

Activities of students and faculty members at the College

International World Yoga Day was celebrated in ACHF

Dr. Mehul Thakkar, Associate Professor, AABMI delivered the Motivational lecture for the students on November 26, 2020. Dr. P.K. Shrivastava, Principal & Dean and Dr. J.M. Vashi, NSS Programme Officer participated in the programme

College celebrated Agricultural Education Day on December 03, 2020

College conducted quiz competition on the topic Fundamental Duties and Rights on November 26, 2020

Volunteers involved in *RastriyaMatdata Divas* programme on January 25, 2021

International Women's Day was Celebrated on March 08, 2021 at Central Examination Hall, NAU, Navsari

Celebrated World Water Day on March 22, 2021 at Central Examination Hall, NAU, Navsari

NSS activities during AY 2020-21

SN	Activities	Date/ period	No of Volunteers
1	International Yoga Day celebration	June 21, 2020	11
2	*Ek Bharat Sresth Bharat* Webinar	July 20, 2020	05
3	Launch of Partnership Webinar by Ministry of Youth Affairs & Sports	July 22, 2020	13
4	Constitution Day celebration	November 26, 2020	60
5	Online Quiz on Fundamental Duties and Rights	November 26, 2020	101
6	Elocution : Indian Constitution	November 26, 2020	03
7	Agricultural Education Day Celebration	December 03, 2020	39
8	Workshop on Cancer awareness and Tobacco control	January 07, 2021	51
9	*RashtriyaMatdata Divas* Celebration	January 25, 2021	27
10	Republic Day Celebration	January 26, 2021	22
11	Webinar on Food Planet Health	February 17, 2021	07
12	Awareness program on the significance of Yoga for students' physical, mental and emotional health during COVID-19 era	March 02, 2021	25
13	International Women's Day Celebration	March 08, 2021	18
14	World Water Day Celebration	March 22, 2021	21

NCC activities during AY 2020-21

SN	Activities	Date/ period	No of Cadets
1	*Triranga* March	August 22, 2020	135
2	Republic Day Celebration	January 26, 2021	447

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of department
1	Strengthening of Horticulture College	12237	Plan, GoG	College Budget
2	Strengthening Research Activities of Fruit Crops	12025	Plan, GoG	Fruit Science
3	Project for Research in Fruit Crops	5014	Plan, GoG	Fruit Science
4	Establishment of Department of Horticulture	6503/03	Non Plan, GoG	Fruit Science
5	All India Coordinated Research Project on Palms	2044	ICAR	Fruit Science
6	Mission for Integrated Development of Horticulture	18930-1	NHB	Fruit Science
7	Evaluate the for Chlorfenuron 0.1 LIQ (CPPU) for fruit set, retention and post-harvest quality of mango	18208	Omega Fine Chemicals, Thane	Fruit Science
8	Development of DUS Test Guidelines for Sapota (*Achraszapota* L.)	329/18217	PPV& FRA	Fruit Science
9	Research in vegetable crops under protected conditions-Phase-II	12017	Plan, GoG	Vegetable Science
10	Research and Development in Vegetable Crops	12021	Plan, GoG	Vegetable Science
11	AICRP on Tuber Crops	2006-3	ICAR	Vegetable Science
12	AICRP on Vegetable Crops Voluntary Centre	2058	ICAR	Vegetable Science
13	Vegetable grafting to mitigate biotic and abiotic stresses in vegetable crops	14054	RKVY	Vegetable Science
14	Establishment of Research Project on Floriculture	12046 - 1	Plan, GoG	Floriculture & Landscape Architecture
15	Establishment of Practical Training Centre of Horticulture Students for the Hi-tech Horticulture	12970	Plan, GoG	Floriculture & Landscape Architecture
16	Advanced Technology Centre for Soilless System for Production of Various Crops	12041	Plan, GoG	Floriculture & Landscape Architecture
17	Landscaping and Gardening Training Programme (*Mali Talim*)	12508	Plan, GoG	Floriculture & Landscape Architecture
18	Model Nursery for Ornamental plants	9510N - 50	NHM	Floriculture & Landscape Architecture

19	ELP on Hi- Tech Protected Cultivation of Horticultural Crops	9510N- 60	ICAR	Floriculture & Landscape Architecture
20	Certificate Course in Turfgrass Management	9510N- 83	Self-financed	Floriculture & Landscape Architecture
21	AICRP on Floriculture	2100	ICAR	Floriculture &Landscape Architecture
22	Centre of Excellence on Post-Harvest Technology	12935	Plan, GoG	Post-Harvest Technology
23	Strengthening of P.G. Programme of Post-Harvest Technology & Process Engineering (Phase-II)	12244	Plan, GoG	Post-Harvest Technology
24	Establishment of Fruits and Vegetable Packaging Research Station Including Seeds	12940	State Govt.	Post-Harvest Technology
25	RKVY Project on Investigation of major quarantine pests and post-harvest diseases of mango in south Gujarat and mass production of fruit fly trap	14052	RKVY	Plant Protection
26	NHM on Establishment of Bio-agent (bio pesticide) production laboratory for major pests and diseases of horticultural crops	18198	NHM	Plant Protection
27	Researchin tissue culture	12014-05	State Govt.	Basic Sciences
28	Strengthening of Department of Biotechnology	12097	State Govt.	Basic Sciences
29	Strengthening of organic farming cell	12022	State Govt.	Natural Resource Management

Educational/Infrastructural Facilities:

Practical Lab for PG students was developed in the Department of Fruit Science and the facilities like working table, seed divider and illuminated purity work board were created in the Department of Vegetable Science for practical learnings among students. Different laboratory as well as EL units of the college were strengthened by purchasing/installing few important equipments/instruments namely Plan Achromatic Trinocular Microscope with camera Module (Fruit Science), 5 HP submersible pump, portable power sprayer (4 stroke petrol), temperature and humidity data logger with USB interface (Floriculture), Variable speed motor with control panel, UPS 1 KVA (Post Harvest Technology) and Breeding kits (Vegetable Science).

Experiential Learning Units

Title of ELU	:	Protected Cultivation of High Valued Horticultural Crops
Year of establishment	:	2008
Name of Manager	:	Dr. H. P. Shah (FLA) and Dr. Sanjeev Kumar (Veg. Sci.)
Department	:	Department of Floriculture and Landscape Architecture Department of Vegetable Science
Activities	:	All the activities were carried on e-platform owing to lockdown enforced by Government due to COVID 19 pandemic
Number of students beneficiaries	:	27
Amount earned per student	:	964

Students involved in activities of protected cultivation of vegetable crops

Title of ELU	:	Commercial Production of Horticultural Crops Components
Year of establishment	:	2011
Name of Manager	:	Dr. N. K. Patel (Veg. Sci.) & Dr. Tulsi D. Gurjar (Fruit Sci.)
Department	:	Department of Vegetable Science Department of Fruit Science
Activities	:	After the lock down enforced by the Government due to COVID 19 pandemic, from April onwards the activities were carried on - e platform
Number of students beneficiaries	:	25
Amount earned per student	:	1363

Students involved in various activities of Commercial Production in Horticultural Crops

Title of ELU	:	Post Harvest handling and Value Addition in Horticultural crops
Year of establishment	:	2011-12
Name of Manager	:	Er. A.K. Senapati, Dr. N.V. Patel &Er. F.M. Sahu
Department	:	Post Harvest Technology
Activities	:	After the lock down enforced by the Government due to COVID 19 pandemic, from April onwards the activities were carried on - e platform
Number of students beneficiaries	:	25
Amount earned per student	:	466

Students involved in various activities Post Harvest handling and Value Addition in Horticultural crops

Title of ELU	:	Floriculture and Landscape Architecture Components
Year of establishment	:	2020-21
Name of Manager	:	Dr. H. P. Shah, Mr. Ankit Bhandari, Dr. Dipal S. Bhatt
Department	:	Department of Floriculture and Landscape Architecture
Activities	:	After the lock down enforced by the Government due to COVID 19 pandemic, from April onwards the activities were carried on - e platform
Number of students beneficiaries	:	25
Amount earned per student	:	Nil

Research publications

SN	Details of Publication	NAAS Score
1	Alka Singh (2020). Floriculture at Navsari Agricultural University- An Overview. *The Journal Of Greens and Gardens*,**2**(4):22-28.	-
2	Alka Singh, Chavan, S.K., Bhandari, A.J., Parekh, Vipulkumar, Shah, H.P., Patel, A.I. and Patel, B.N. (2020). New multipetalous variety G. Ad.2 in *Adeniumobesum*. *Electronic Journal of Plant Breeding*, **11**(2): 346-350.	4.97
3	Asha Chaudhary, T.R. Ahlawat, Sanjeev Kumar, Dharmishtha Patel and Suchismita Jena (2020). Promoting seedling growth in kagzi lime through pre-sowing treatments. *International Journal of Chemical Studies*, **8**(1): 2815-2819.	5.31
4	Bambharolia, R.P., Khunt, M.D., Deshmukh, A.J., Prajapati, V.P and Vavdiya, P.A. (2020). Isolation, screening and characterization of endophytic bacteria from root of finger millet (*Eleusinecoracana* (L.) for different plant growth promotion (PGP) activities: An *in-vitro* study. *Journal of Pharmacognosy and Phytochemistry*, **9**(5): 539-545.	5.21
5	Bhagariya, D.A., V.P. Prajapati and M.R. Thesiya (2021). In-vitro evaluation of botanicals against Pestalotiopsisclavispora causing crown rot of strawberry. *International Journal of Chemical Studies*, **9**(1): 3459-3461.	5.31
6	Bhatt, Z.K., Patel N.V., Mayani J.M. and Dev Raj (2020). Development of technology for preparation of instant tomato (*Solanumlycopersicum*L.) soup mix powder. *International Journal of Chemical Studies*, **8**(2): 2034.	5.31
7	Bhavika, R., Dobariya, Diwakar Singh, K.P. Suthar and V.B. Parekh (2020). Phenylpropanoid pathway leads to salinity stress tolerance in castor (*Ricinuscommunis*L.). *International Journal of Topical Agriculture*, **38**(1): 313-328.	3.94
8	Bhoomika Patel, SheetalJadhav, Swati Ganvit, Tandel, Y.N., Patel, N.M., Bhanderi, D.R. and DarshanaChaudhari (2020). Effect of husking (removing seed tip) and pre-soaking treatments on seed germination and seedling growth of Mango cv. Alphonso. *Journal of Pharmacognosy and Phytochemistry*, SP.**6**: 161-166.	5.21
9	Chaudhari, B.N., Patel, A.I. and Vashi, J.M. (2020). Study on heterosis over environments in brinjal (*Solanummelongena* L.). *Int. J. Curr. Microbiol. App. Sci*, **9**(7): 3358-3367.	5.38
10	Chaudhari, D.J. and Narendra Singh (2020). Awareness and utilization of market information by the farmers and traders in Navsari district of South Gujarat. *Journal of Pharmacognosy and Phytochemistry*, Sp. **9**(4): 250-255.	5.21
11	Chaudhary, A.D., Ahlawat, T.R., Bhandari, D.R. and Dharmishtha Patel (2020). Effect of de-blossoming treatments on physical characteristics of different mango varieties during off-season production under South Gujarat conditions. *Current J. Appl. Sci. Tech.*, **39**(8): 1-6.	5.32
12	Chaudhary, A.D., Ahlawat, T.R., Shah, N.I., Bhandari, D.R. and Patel Dharmishtha (2020). Influence of de-blossoming treatments on physic-chemical characteristics of selected mango varieties during off season fruit production under South Gujarat conditions. *Int. J. Chem. Stud.*, **8**(4): 2963-2966.	5.31
13	Chaudhary, M.V, Sharma, O.P. and Chaudhary, K.L. (2021). Socio economic profile of cooperative society members and non-members in South Gujarat. *International*	5.38

	Journal of Current Microbiology and Applied Sciences, **10**(2): 27-31.	
14	Chaudhary, M.V, Sharma, O.P. and Chaudhary, K.L. (2021. Constraints as perceived by the members in availing services of cooperatives societies in South Gujarat. *International Journal of Current Microbiology and Applied Sciences*, **10**(1): 2376- 2378.	5.38
15	Chawla S.L., Dipal Bhatt, SudhaPatil and ParmeshvariChaudhari (2020). Standardization of chemicals for improving postharvest life of loose flowers of tuberose *(Polianthestuberosa*). *Indian Journal of Agricultural Sciences***, 90**(10): 2029-2032.	6.21
16	Dhoti, S.D., Patel, M.M., JyotiUppar and Tandel, B.M. (2020). Effect of integrated nutrient management on growth and yield of Senna (*Cassia angustifoliaVahl*). *Indian J. Pure App. Biosci*., **8**(5): 456-461.	-
17	Dushyant, D., Champaneri, J.M. Mayani, H.N. Pancholi, J.B. Patel, and Urvi V. Bangoria (2020). Effect of different blanching methods on physical and colour characteristics of Moringaoleifera L. dry leaf powder. *International Journal of Latest Trends in Engineering and Technology*, **16**(1): 34-37.	-
18	Henaxi Patel, Alka Singh, N.B. Patel, A.J. Bhandari and H.P. Shah (2020). Effect of foliar spray of plant growth regulators on growth of potted hibiscus, *International Journal of Chemical Studies*, **8**(6): 119-122.	5.31
19	Kadivar, Mohhamadfarid U., Singh, N. and Chaudhari, D.J. (2020). Economics and resource use of bottle gourd production in Navsari district of Gujarat state. The *Journal of Rural and Agricultural Research*, **20**(2): 1-5.	3.89
20	Koli, H.K. and Patel, A.I. (2020). Combining ability analysis for yield and yield components in okra [*Abelmoschusesculentus* (L.) Moench]. *Int. J. Curr. Microbiol. App. Sci*., **9**(10): 665-673.	5.38
21	Koli, H.K., Patel, A.I., Vashi, J.M. and Chaudhari, B.N. (2020). Study of heterosis for fruit yield and its component traits in okra [*Abelmoschusesculentus* (L.) Moench]. *Int. J. Curr. Microbiol. App. Sci.*, **9**(9): 1930-1937.	5.38
22	Lalitha, K.R., Tank, R.V., Chawla, S.L. and Suchismita Jena (2020). Effect of chemicals on seed germination and seedling growth of aonla (*EmblicaofficinalisGaertn*.). *The Pharma Innovation Journal*, **9**(12): 239-243.	5.03
23	Leua, A. and Parmar, G. (2020). Impact of Covid-2019 on major vegetable markets of Gujarat. *Indian Journal of Economics and Development***. 16**(4): 648-655.	4.82
24	MamillaSindhuja, Alka Singh, ChintanKapadiya, A.J. Bhandari, H.P. Shah and A.I. Patel. (2020). Evaluation of Adenium genotypes for physiochemical and flowering characters. *International Journal of Chemical Studies*, **8**(4): 3840-3844.	5.31
25	Meha D. Desai, K.P. Suthar, Diwakar Singh, Vipulkumar Parekh, M.D. Khunt and A. Haidar (2020). Molecular evidence of phytohormonal modulatory effect of Serratialiquefaciens on rice. *Applied Biological Research*, ***22***(2): 126-133.	4.96
26	Mittal Parmar and Hemant Sharma (2020). In-vitro inhibitory effect of botanicals and fungicides on mycelial growth of Peziotrichumcorticolum (Massee) Subramanian. causing black banded disease of mango. *International Journal of Chemical Studies*, **8**(4): 1473-1476.	5.31
27	Modi, S., Kumar, S. and Dubey, P.K. (2021). Dynamics of chitosan based NPK-nanofertilizers in greenhouse cucumber production system. *Journal of Environmental Biology*, **42**: 162-168.	6.78
28	Mogal, C.S., Jha Sanjay, Suthar Harish, Parekh Vipulkumar and Rajkumar B.K. (2020. Efficiency of Plant Growth Promoting Rhizobacteria (PGPR) consortia for modulation of phytohormone and better nutrient acquisition. *Plantae Scientia*, **3**(4): 20-29.	-
29	Nakarani, Udit M., Diwakar Singh, K.P. Suthar, NilimaKarmakar, PritiFaldu and H.E. Patil (2020). Nutritional and phytochemical profiling of nutracereal finger millet (*Eleusinecoracana* L.) genotypes. Food Chemistry, **341**: 128271. https://doi.org/10.1016/j.foodchem.2020.128271	12.31
30	Nalawade, S.V., P.R. Patel and V.A. Patil (2020). Effect of weather parameters and	5.31

	sheath mite population on incidence and development of sheath rot disease of rice. *International Journal of Chemical Studies*, **8**(2): 2821-2825.	
31	Nalawade, S.V., P.R. Patel and V.A. Patil. (2020). Biochemical constituents variation in resistant and susceptible rice genotypes against sheath rot disease of rice. *Int. J. Curr. Microbiol. App. Sci*., **9**(5): 729-742.	5.38
32	Narshima, P.N., Murthy, Patel, N.B., Kapadia C., Desai, K.D. and Koteshwara Rao. (2021). Genetic diversity analysis of sweet potato (*Ipomoea batatas* L. Lam.) germplasms through RAPD and ISSR markers. *Bangladesh J. Botany*, **50**(1): 119-129.	6.21
33	Pargi, Arti and Leua, A. (2020). An analysis of resource use efficiency of banana for South Gujarat. International Journal of Social Sciences, **8**(7-9): 274-277.	2.72
34	Parmar, A.B., Tandel, Y.N., Parmar, B.R., Patel, A.I. and Pandey, A.K. (2020). Correlation and path coefficient analysis studies in Sapota [*Manilkaraachras* (Mill.) Fosberg] genotypes. *Journal of Pharmacognosy and Phytochemistry*,**9**(5): 2158-2162.	5.21
35	Parmar, G. and Leua, A. (2020). Impact of Covid-19 on agriculture: A case study of okra in South Gujarat. EPRA International Journal of Research and Development, **5**(8): 274-277.	-
36	ParvathiBennurmath, Dipal S. Bhatt, MeghalakshmiGuddad, SudhaPatil and S.L. Chawla (2020). Assessment of qualitative and quantitative parameter of different Chrysanthemum genotypes. *Indian J. Pure App. Biosci*., **8**(6): 235-240.	4.74
37	Patel Dharmishtha, Ahlawat, T.R., Suchismita Jena and Chaudhary Abhijit (2020). Effect of silicon and seaweed extract on physical and sensory quality of papaya cv. Red Lady. *Int. J. Curr. Microbiol. App. Sci*., **9**(01): 504-510.	5.38
38	Patel Jesal R, Sanjeev Kumar, A.K. Pandey, N.B. Patel and J.M. Mayani (2020). Interactive effects of silicic acid and NOVEL on tomato performance under protected conditions. *Current Journal of Applied Science and Technology*, **39**(46): 50-57.	5.32
39	Patel Niyati, Patel Snehal, Pandya, H.V., Saxena S.P., Chawla S.L. and PatilSudha (2020). Field evaluation of botanical extracts against lily caterpillar (*PolytelagloriosaeFabricius*) infesting spider lily. *Journal of Entomology and Zoology Studies*, **8**(3): 1884-1887.	5.53
40	Patel, A.A., Patel, A.I., Parekh, V.B., Patel, R.K., Mali, S.C. and Vekariya, R.D. (2020). Estimation of standard heterosis over environments for fruit yield and its attributes in Okra [*Abelmoschusesculentus* (L.) Moench]. *International Journal of Chemical Studies*, **8**(6): 2542-2547.	5.31
41	Patel, A.I., Desai, B.S., Chaudhari, B.N. and Vashi, J.M. (2020). Genetic improvement in glory lily (*Gloriosasuperba* L.): A review. International Journal of Chemical Studies, **8**(4): 255-260.	5.31
42	Patel, Ashishkumar C., Patel, K.G., Dubey, P.K., Singh, Susheel and Kaswala, A.R. (2020). Comparative effect of different levels of NADEP manures on nutrients content and quality of different crops grown under certified organic farm. *Journal of Pharmacognosy and Phytochemistry*, **9**(5): 611-614.	5.21
43	Patel, G.D., Nilam V. Patel, Bhatt, Zalak, Raghavendra, H.R. and Patel, N.B. (2020). Development of technology for preparation of fortified tomato (*Solanumlycopersicum* L.) beverage. *International Journal of Chemical Studies*, **8**(2): 2452-2459.	5.31
44	Patel, M.H., Patel, A.I., Desai, B.S., Jha, S.K., Patel, D.P. and Tandel, M.B. (2021). Genetic variability, heritability and genetic advance studies in *Gloriosasuperba Linn. Int. J. Curr. Microbiol. App. Sci*., **10**(02): 3278-3282.	5.38
45	Patel, P.R., Patel, B.N., Dev Raj and Patil, S.J. (2020). Quality of banana cv. Grand Naine influenced by nitrogen and biofertilizers. *Int. J. Curr. Microbiol. App. Sci*., **9**(12): 1.	5.38
46	Prajapati, V.P., R.F. Chaudhary, A.J. Deshmukh, R.P. Bambharolia and N.K. Gajre (2020). Management of blast (*Pyriculariagrisea*) of finger millet with fungicides	4.76

	and biocontrol agents. *Pl. Dis. Res*., **35**(1): 36-41.	
47	Rathod, K.D., Ahlawat, T.R., Sanjeev Kumar, Sarkar, M. and Chakraborty, B. (2021). Effect of plant growth regulators on growth, yield and quality of strawberry (Fragaria × ananassa Duch.) cv. Winter Dawn under open field conditions of South Gujarat. *Agricultural Science Digest*, **41**(2): 329-333.	4.21
48	Reetu Mehta, Diwakar Singh, S.C. Mali and D.U. Patel. (2020). In-vitro optimization and rapid micropropagation of two elite sugarcane varieties Co 86032 and CoC 671 by shoot tip culture. *International Journal of Topical Agriculture*, **38**(4): 289-298.	3.94
49	Roma Tandel, Patel, Snehalben and Pandya, H.V. (2020). Population dynamics of Citrus psylla, DiaphorinacitriKuwayama in relation to abiotic factor. *International Journal of Chemical Studies*, **8**(6): 2112-2116.	5.31
50	SangeethaPriya S., Dipal S. Bhatt, S.L. Chawla, S.T. Bhatt and G.D. Patel. (2020). Effect of land configuration and nutrient management on growth and yield of African marigold var. Punjab Gaindaunder South Gujarat conditions. *The Bioscan*, **15**(1): 45-49.	5.26
51	Sanjeev Kumar, N.B. Patel and S.N. Saravaiya (2020). Pruned side shoots as planting material: Opening new dimensions for sustainable greenhouse cucumber production system. *Indian J. Hort.*,**77**(2): 307-314.	6.11
52	Shah, S.B., Desai, K.D. and Pandey, A.K. (2020). Response of sweet potato to different levels of fertilizers and Novel. *The Pharma Innovation Journal*. **9**(9): 16-18.	5.03
53	Shivakumara, N.R., Ahlawat, T.R., Patel, A.I., Dharmishtha Patel, Suchismita Jena and Abhijit Chaudhary (2020). Assessment of correlation for yield and its contributing traits in papaya cv. Red Lady Taiwan under South Gujarat conditions. *Journal of Pharmacognosy and Phytochemistry*, **9**(1): 2200-2203.	5.21
54	Shivkumara, N.R., Ahlawat, T.R., Pandey, A.K., Dharmishtha Patel, Suchismita Jena and Chaudhary, A.D. (2021). Comparative morphology, phenology and productive potential of different plant types in papaya cv. Red Lady Taiwan. *Int. J. Curr. Microbiol. App. Sci.*, **10**(3): 2050-2059.	5.38
55	SindhujaMamilla, Singh Alka, KapadiyaChintan, Bhandari, A.J. Shah, H.P. and Patel, A.I. (2020). Evaluation of Adenium genotypes for physiochemical and flowering characters. *International Journal of Chemical Studies*, **8**(4): 3840-3844.	5.31
56	Solanki, B., Kaswala, A.R., Dubey, P.K. and Italiya, A.P. (2020). Impact of land configuration and various organic sources on yield, nutrient content and uptake by Carrot in organic farming. *International Journal of Current Microbiology and Applied Sciences*, **9**(8): 3836-3845.	5.38
57	Solanki, B., Kaswala, A.R., Dubey, P.K., and Italiya, A.P. (2020). Effect of land configuration and different organic sources on growth, yield and quality of carrot under organic farming. *The Bioscan*, **15**(3): 357-362.	5.26
58	Sravani, V., S.N. Saravaiya, B.N. Patel, H.N. Chhatrola, Himani B. Patel and J.M. Vashi. (2020). Response of plant bioregulators on growth parameters and plant growth analysis of onion (*Allium cepa* L.). *International Journal of Chemical Studies*, **8**(3): 1312-1316.	5.31
59	Sravani, V., S.N. Saravaiya, D.R. Bhanderi, Dev Raj, Himani B. Patel and J.M. Vashi (2020). Effect of plant growth regulators on biochemical analysis of onion (*Allium cepa* L.). *International Journal of Chemical Studies*, **8**(3):1317-1321.	5.31
60	Suchismita Jena, Ahlawat, T.R., Patel, A.I., Pandey, A.K., Dharmishtha Patel and Chaudhary Abhijit (2020). Per se performance of parents and hybrids for reproductive parameters in breeding program of papaya. *The Pharma Innovation*, **9**(12): 382-388.	5.03
61	Suchismita Jena, Ahlawat, T.R., Patel, A.I., Pandey, A.K., Dharmishtha Patel and Chaudhary Abhijit. (2020). Comparative growth performance of papaya hybrids and their parents under reciprocal crossing system. *Journal of Experimental Agriculture International*, **42**(9): 167-173.	4.69

62	SudhaPatil and S. Vidyashree (2020). Plant people relationship-An unseen bond with perceived benefits. *Int. J. Curr. Microbiol. App. Sci.*,**9**(1): 2625-2630.	5.38
63	SudhaPatil, S.L. Chawla, Dipal S. Bhatt and M.A. Patel. (2020). Response of Sancerre gladiolus to different levels of nitrogen and phosphorus application under south Gujarat condition. *Indian J. Hort.*,**77**(2): 356-361.	6.16
64	Twinkle Patel, Pandey, A.K., Desai, K.D. and Ahlawat, T.R. (2020). Effect of preharvest treatments of paclobutrazol and calcium chloride on physical quality traits of mango cv. Amrapali. *Journal of Pharmacognosy and Phytochemistry*,**9**(5): 1009-1012.	5.21
65	UrvashiBoricha, Parmar, B.R., Parmar, A.B., SheetalRathod, Patel, M.V. and Pandey, A.K. (2020). Effect of pre-sowing treatments on seed germination and seedling growth of guava. *The Pharma Innovation Journal*,**9**(9): 431-433.	5.03
66	Vasava, K.I. and P.R. Patel (2020). In-vitro evaluation of various antagonists against *Cercosporamalayensis* causing leaf spot of okra. *Journal of Pharmacognosy and Phytochemistry*, **9**(5): 2649-2651.	5.21
67	Vasava, K.I. and P.R. Patel. (2020). In-vitro evaluation of various botanicals against *Cercosporamalayensis* causing leaf spot of okra. *Journal of Pharmacognosy and Phytochemistry*, **9**(5): 2645-2648.	5.21
68	Vashi, J.M., S.N. Saravaiya, A.I. Patel and B.N. Chaudhari (2020). Silicon – The most under-appreciated element for vegetables. *International Journal of Chemical Studies*, **8**(4): 2122-2127.	5.31
69	Vinu Ahir and Hemant Sharma (2021). Diversity of seed borne Mycota associated with finger millet and their effects on seed germination and seedling vigour. *International Journal of Chemical Studies*, **9**(2): 603-606.	5.31

9. College of Forestry, Navsari

The Institute

The Faculty of Forestry came into existence in the year 1988 and started imparting education leading to B.Sc. (Forestry) degree. Thereafter, post graduate programmes leading to M.Sc. (Forestry) and Ph.D. (Forestry) degrees commenced from 1993-94 and 2006-07, respectively. On receipt of fund from ICFRE, Dehradun for construction of College and Hostel buildings, a separate College of Forestry was established. Further, Government of Gujarat sanctioned plan project on Strengthening of College of Forestry, Navsari Agricultural University, Navsari with 36 faculty positions including one Principal position. Meanwhile, 31 teaching staff members were recruited in the College of Forestry in 2010, as per the recommendations of IV Dean´s committee of ICAR. Thus, College of Forestry started functioning independently from the year 2010. This college is accredited by ICAR, New Delhi for a period of five years up to 31 Mar 2021. Further, this college is also accredited by ICFRE, Dehradun with A* ranking for a period of five years up to 21 June 2022. Total 472 B.Sc. (Forestry), 140 M.Sc. (Forestry) and 32 Ph.D. (Forestry) students passed out up to March, 2020.

Faculty information

SN	Name of the Post	Composition of filled posts									
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
		Sanctioned posts	Filled posts	Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	1	0	0	0	0	0	0	0	0	0
2	Professors	4	2	1	1	1	1	1	1	2	0
3	Associate Professors	10	3	0	3	0	3	0	3	3	0
4	Assistant Professors	21	20	15	5	17	3	10	10	20	0
	Total	**36**	**25**	**16**	**9**	**18**	**7**	**11**	**14**	**25**	**0**

List of Departments

1	Silviculture and Agroforestry (SAF)	4	Natural Resource Management (NRM)
2	Forest Biology and Tree Improvement (FBT)	5	Basic Science and Humanities (BSH)
3	Forest Products and Utilization (FPU)		

Academic Programmes offered

Degree Programmes	Duration	Total Credits
B. Sc. (Hons) Forestry	8 Semesters	169 (IV Dean)/ 185 (V Dean)
M.Sc. (Forestry)	4 Semesters	40+20
Ph.D. (Forestry)	6 Semesters	30+45

Under Graduate Credit details(As per V Deans' committee recommendations)

Semesters	Number of Courses	Total Credits (Theory +Practical)
First	08+2*	21 (13+8)
Second	10+2*	25 (16+9)
Third	08+1*	23 (14+9)
Fourth	08+2*	24 (14+10)
Fifth	06+1*+1**	23 (11+12)
Sixth	08+1*+1**	25 (12+13)
Seventh	07	23 (0+23)
Eighth	05+1*	21 (7+14)
	Total	**185 (87+98)**

*Non credit courses; ** ELP courses

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	Masters' Degree	Doctoral Degree
1	Silviculture and Agroforestry	Yes	Yes
2	Forest Biology and Tree Improvement	Yes	Yes
3	Forest Products and Utilization	Yes	Yes
4	Natural Resource Management	Yes	Yes
5	Wildlife Sciences	Yes	No
	Total	**05**	**04**

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat							ICAR	Foreign	Grand Total
			Gen	SEBC	SC	ST	CBSE	EWS	Total			
B.Sc. (Hons.) Forestry	Male	**66**	18	08	02	04	03	03	38	04	-	42
	Female		05	03	-	02	-	01	11	02	-	13
	Total		**23**	**11**	**02**	**06**	**03**	**04**	**49**	**06**	**-**	**55**
M. Sc. (Forestry)	Male	**26**	01	-	-	01	-	-	02	01	-	03
	Female		02	01	01	-	-	01	05	03	-	08
	Total		**03**	**01**	**01**	**01**	-	**01**	07	**04**	**-**	**11**
Ph. D. (Forestry)	Male	**7**	01	-	01	-	-	-	02	-	-	02
	Female		01	-	-	-	-	-	01	-	-	01
	Total		**02**	**-**	**01**	**-**	-	-	**03**	**-**	**-**	**03**
Grand Total		**99**	**28**	**12**	**04**	**07**	**03**	**05**	**59**	**10**	**-**	**69**

*Students of B.Sc. (Hons.) Forestry left out during the period

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat									
			Gen	SEBC	SC	ST	CBSE	EWS	Total	ICAR	Foreign	Total
B.Sc. (Hons.) Forestry	1st	Male	02	16	02	03	03	06	32	04	-	36
		Female	01	05	-	01	-	01	08	01	-	09
	2nd	Male	05	07	02	03	01	02	20	04	-	24
		Female	-	04	01	02	-	02	09	04	-	13
	3rd	Male	05	12	-	01	-	-	18	03	-	21
		Female	02	04	01	03	03	-	13	03	-	16
	4th	Male	01	01	-	-	-	-	02	03	-	05
		Female	04	03	01	01	-	-	09	-	-	09
		Sub-total	**20**	**52**	**07**	**14**	**07**	**11**	**111**	**22**	**-**	**133**
M. Sc. (Forestry)	1st	Male	01	-	-	01	-	-	02	01	-	03
		Female	02	01	01	-	-	01	05	03	-	08
	2nd	Male	01	01	-	01	-	-	03	02	-	05
		Female	01	-	-	01	-	01	03	02	-	05
		Sub-total	**05**	**02**	**01**	**03**		**02**	**13**	**08**	**-**	**21**
Ph.D. (Forestry)	1st	Male	01	-	01	-	-	-	02	-	--	02
		Female	01	-	-	-	-	-	01	-	-	01
	2nd	Male	02	-	01	-	-	-	03	-	-	03
		Female	-	01	-	-	-	-	01	-	-	01
	3rd	Male	02	-	02	-	-	-	04	-	-	04
		Female	-	01	-	-	-	-	01	-	-	01
		Sub-total	**06**	**02**	**04**	**-**		**-**	**12**	**-**	**-**	**12**
Grand Total			**31**	**56**	**12**	**17**	**07**	**13**	**136**	**30**	**-**	**166**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	2	12	8	3	**25**
Female	3	9	1	-	**13**
Total	**5**	**21**	**9**	**3**	**38**
Master's level					
Male	2	3	1	-	**6**
Female	2	1	-	-	**3**
Total	**4**	**4**	**1**	-	**9**
Doctoral level					
Male	**4**	-	-	-	**4**
Female	-	-	-	-	-
Total	**4**	-	-	-	**4**

Student's Fellowship during AY 2020-21

Name of fellowships	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NTS-UG	14	8	-	-	-	-	**22**
NTS-PG	-	-	-	01	-	-	**01**
ICAR-JRF	-	-	02	01	-	-	**03**
STUDENT READY	46	23	-	-	-	-	**69**
NAU PG fellowship	-	-	-	04	-	01	**05**
NAU Girls meritorious fellowship	-	18	-	-	-	-	**18**
SC fellowship	04	04	01	-	-	-	**09**
ST fellowship	05	09	-	02	-	-	**16**
SEBC fellowship	23	12	05	-	01	-	**41**
Total	**92**	**74**	**8**	**8**	**1**	**1**	**184**

Cut off marks for admission in the UG degree Programme during AY 2020-21

SN	Categories	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)*
1	General	40	**50.13**
2	SC	35	**42.10**
3	ST	35	**36.82**
4	SEBC	40	**45.42**
5	Other Board	40	**37.00**
6	PH	35	-
7	Ex-Army	35	-
8	**EWS**	**35**	**48.88**

*Cumulative marks of PCB and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examination	Number of students qualified	Number of students passed out students
ICAR JRF	05	38
ICAR SRF	01	05

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Preeti	3030316029	Forestry/ Agroforestry & Silviculture	5-Gen 2-EWS
2	Sourav Manoharan	3030316035	Forestry/ Agroforestry & Silviculture	6-Gen 2-OBC
3	Rangani Mohit Ratilalbhai	3030316033	Forestry/ Agroforestry & Silviculture	31-Gen
4	TandelPurvakumariAnilbhai	3030316037	Forestry/ Agroforestry & Silviculture	373-Gen 122-OBC
5	Gorfad Krishna Parbatbhai	3030316008	Forestry/ Agroforestry & Silviculture	421-Gen 132-OBC

Details of students qualified in ICAR SRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Purohit Bhaveshkumar Karsanbhai	2030318007	Forestry/ Agroforestry	56-Gen 8-EWS

Placement Cell

Degree	Total passed out students	Higher studies		Govt. Job	NGOs	Abroad	Self –entre preneurship	Private Job	Unemployed	Total
		Gujarat	Other states							
B.Sc.	38	11	02	-	-	-	01	06	-	38
M.Sc.	4+1*	1	0	-	-	-	01	01	-	4
Ph.D.	3	-	-	02#	-	-	-	-	-	3
Total	**45**	**12**	**02**	**02**	**-**	**-**	**02**	**7**	**-**	**44**

*Including 01 In-service candidate; #ad-hoc research position

Activities of students and faculty members at the College

ACHF organized quiz competition on the occasion of Constitution Day Celebration through online mode on November 26, 2020

NSS activities during AY 2020-21

SN	Activity	Date/ period	No of Volunteers
1	Constitution Day Celebration	November 26, 2020	70

NCC activities during AY 2020-21

SN	Activity	Date/ period	No of Volunteers
1	Independence Day Celebration	August 15, 2020	14

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of the Department
1	Strengthening of College of Forestry	12952	Plan-GoG	College of Forestry
2	Research in Agroforestry System	12130	Plan-GoG	Silviculture and Agroforestry
3	Strategies to Mitigate the Impact of Climate Change	12019	Plan-GoG	Natural Resource Management
4	Development of Bamboo Resource Center	12029	Plan-GoG	Silviculture and Agroforestry
5	A pilot project for Development of Aqua-Agroforestry model for coastal area of South Gujarat- Dandi	12030	Plan-GoG	Silviculture and Agroforestry

6	Determination of Carbon Sequestration Potential of Forest Tree Species of South Gujarat	12036	Plan-GoG	Forest Products and Utilization
7	Establishment of Forest Biodiversity Conservation Center	12053	Plan-GoG	Forest Biology & Tree Improvement
8	Popularizing *Melia composita* based Agroforestry System in Gujarat through production of quality planting material	12054	Plan-GoG	Silviculture and Agroforestry
9	Genetic enhancement of niche crops of South Gujarat through conventional and bio technological approach	12946	Plan-GoG	Basic Science & Humanities
10	Regeneration Technique for Lesser known and Threatened Tree Species of South Gujarat	12065	Plan-GoG	Silviculture and Agroforestry
11	Development of Industrial Agroforestry Models for South Gujarat region	12066	Plan-GoG	Silviculture and Agroforestry
12	Investigations on Non-Timber Forest Products (NTFP) of Gujarat	18031	ICFRE, Dehradun	Forest Products and Utilization
13	Demonstration of site specific water conservation technologies for improving soil and water quality in coastal South Gujarat	18179	SSTP DST	Natural Resource Management
14	Establishment of secondary agriculture unit for skill development in students and farmers at NAU (Unit-2: Scientific Utilization of NTFPs and MAPs)	02108	ICAR-NAHEP-CAAST (World Bank Funded)	Directorate of Research, NAU Unit -2 at Forest Products & Utilization; Forest Biology & Tree Improvement
15	Development of descriptors and DUS testing guidelines for *Eucalyptus urophylla*, *E. globulus* and *E. grandis*	18206	PPVFRA, New Delhi	Forest Biology & Tree Improvement

Educational/Infrastructural Facilities

During the reporting period, new laboratory of Soil Science and Forest Mensuration (Silviculture and Agroforestry UG lab) on the second floor of college were modified and new facilities were createdfor students. New instruments/equipment's were purchased in the forest mensuration laboratory such as Criterion dendrometer, EC II DR and in Forest Products and Utilization laboratory such as seasoning and preservation unit, Universal Testing (UTM) machine, rotary evaporator, Leica sledge microtome, Hot press, Agarbatti making machine, essential oil extraction machine, tenoning machine, turning lathe, pulping machine, wood chipper and grinder. ELP units *viz.*, Development of quality planting materials in Forestry and Commercial Apiculture have been strengthened.

Experiential Learning Units

Title of ELU	:	Development of Quality Planting Material in Forestry
Year of establishment	:	2016-17
Name of Manager	:	Dr. N. S. Thakur
Department	:	Silviculture and Agroforestry
Activities	:	Nursery preparatory activities; Procurement of seed, wildling and propagules *etc*.; Procurement of material (soil, sand and FYM/ vermicompost/compost), implements, polybags, containers, instruments and chemicals for treatment of soil, cuttings *etc*; Preparation of soil working and bag filling; Raising seedlings and after care; Seed/cutting/propagules treatment (Physical or chemical if required); Sowing/planting in

		polybags/seedbeds; Intercultural operation (weeding, singling, fertilizer application *etc.*) and plant protection
Number of students beneficiaries	:	52
Amount earned per student	:	2789.00 to 38 students, 75% profit share 1860.00 to 14 students, 50% profit share

Students involved in differenet nursery activities for raising quality seedlings in ELU

Title of ELU	:	Commercial Apiculture
Year of establishment	:	2011-12
Name of Manager	:	Dr. A. A. Mehta
Department	:	Forest Products and Utilization
Activities	:	Study of important bee species *i.e.Apiscerana indica, A. mellifera , A. florea, A. dorsata* and Non- *Apis* species; Study of bee flora available in different months during the year; Bee floral park and growing potential bee plants; Study of morphology, anatomy, colony organization, life cycle and Social behavior of honey bee; Insect pest and diseases in honey bee; Study of different bee boxes; Study of bee equipments and their uses; Pollen identification; Seasonal management of bee colonies; Survey for identifying the natural bee hives (*Apis cerana* and *Trigona* spp.); Artificial feeding; Bee migration; Study of swarming and capturing colonies or bee swarm from nature; Queen production and rearing technique; Separation of Bee colonies and multiplication of colonies; Market study of Honey bee products; Visit to commercial apiary; Wax extraction; Study of honey extraction, processing, marketing and selling; Study of quality standards for honey; Skill and Entrepreneurship development in Beekeeping, Ethics in business; Study of Economics of Bee rearing (cost benefit analysis). Project preparation & Report writing.
Number of students beneficiaries	:	52
Amount earned per student	:	3006.00 to 38 students, 75% profit share 2004.00 to 14 students, 50% profit share

On field training to trainee students on honey extraction and a view of field visit at commercial Apiary by ELP students

Research publications

SN	Details of Publications	NAAS rating
1	Ayer, D.K., Modha, K., and Parekh, V. (2020). Associating gene expressions with curcuminoid biosynthesis in turmeric. *Journal of Genetic Engineering and Biotechnology*, **18**: 83.	-
2	Bardhan, K., York, L.M., Hasanuzzaman, M., Parekh, V., Suchismita Jena. and Pandya, Mansi N. (2021). Can smart nutrient applications optimize the plant's hidden half to improve drought resistance? *Physiologia Plantarum*, **172**: 1007-1015.	10.15
3	Behera, L.K., Lala, I.P., Ray, M. Nayak, R., Mehta, A.A., and Patel, S.M., (2020). Carbon sequestration potential of Eucalyptus spp.: A review. **E-planet**, **18**(1): 79-84.	3.48
4	Behera, L.K., Mehta, A.A., Dholariya, C.A., Sukhadiya, M., Gunaga, R.P. and Patel, S.M. (2020). Vegetative propagation of Guggul [*Commiphora wightii* (Arn.) Bhan.]: A commercially important and threatened medicinal plant species. *E-planet*, *18*(2): 164-169.	3.48
5	Bhanderi, B.N., Shrivastava, P.K., Nayak, D. and Patel, D.P. (2020). Evaluation of Micro Watersheds of Coastal Navsari. *Int. J. Curr. Microbiol. App. Sci*., Special Issue-**11**: 28-43.	5.38
6	Desai, M.D., Suthar, K.P., Singh, D., Parekh, V.B., Khunt, M.D. and Haidar, A., (2020). Molecular evidence of phytohormonal modulatory effect of Serratia liquefacienson rice. *Applied Biological Research*, **22**(2): 126-133.	5.07
7	Desai, M.K., Dobriyal, M.J., Tandel, M.B. and Patel, S.M. (2020). Performance and economics of medicinal crop (*Psoralea corylifolia* L.) under sapota-jatropha based horti-silviculture system. Indian J. of Agroforestry, 22(2): 80-85.	4.53
8	Deshmukh, H.K., Tandel, M.B., Gunaga, R.P., Thakur, N.S., Dobriyal, M.J., Singh, N., Chhatrola, H.N. and Mevada, R.J. (2020). Three decades of review on existing agroforestry systems and practices in South Gujarat. *Int. J. Curr. Microbiol. App. Sci*.,**9**(8): 2973-2978	5.38
9	Dhaka, R.K., Gunaga, R.P., Sinha, S.K., Thakur, N.S. and Dobriyal, M.J. (2020). Influence of tree height and diameter on wood basic density, cellulose and fibre characteristics in *Melia dubia* Cav. Families. *Journal of Indian Academy of Wood Science*, **17**(2): 138-144.	4.46
10	Dobariya, B., Singh, D., Suthar, K.P. and Parekh, V.B. (2020). Phenylpropanoid pathway leads to salinity stress tolerance in castor (*Ricinus communis* L.) *International Journal of Tropical Agriculture*, **38**(4): 313-328.	3.49
11	Lunagariya, Dhara D., Patel, K.G., Singh, S., Parekh, V.B. and Ahlawat, T.R. (2020). A Review on Adsorption and Desorption of Different Pesticides in Various Soil. *International Research Journal of Pure & Applied Chemistry*, **21**(24): 35-41.	-
12	Mevada, R.J., Tandel, M.B., Prajapati, D.R., Deshmukh, H.K. and Prajapati, V.M. (2020). Plant diversity in North Gujarat. *Indian Forester*, **146**(9): 838-842.	4.38
13	Mevada, R.J., Tandel, M.B., Prajapati, V.M., Patel, D.P., Patel, N.K., Pathak, J., and Prajapati, D.R. (2021). Impact of INM and intercrop on soil properties under Teak (*Tectona grandis*) based agroforestry system. *International Journal of Chemical Studies*, **9**(1): 902-906.	5.31
14	Mevada, R.J., Tandel, M.B., Prajapati, V.M., Patel, N.K., Pathak, J.G. and Deshmukh, H.K., (2020). Effect of INM on quality of Okra (*Abelmoschus esculentus* L.) under Teak (*Tectona grandis* L. f.) based agroforestry system. *International Journal of Chemical Studies*, **8**(6): 132-135.	5.31
15	Mogal, C.S., Jha, S., Sutar, H., Parekh, V.B. and Rajkumar, B.K. (2020). Efficiency of Plant Growth Promoting Rhizobacteria (PGPR) Consortia for modulation of phytohormone and better nutrient acquisition. *An International Research Journal in Botany*, **3**(4): 20-29.	-

16	Patel, D.S., Bardhan, K., Patel, D., Parekh, V.B., Suchismita Jena, Narwade, A.V. and Chhatrola, H.N. (2020). Does plant root architecture respond to potassium nutrition under water stress? A case from rice seedling root responses. *BioRxiv- Plant Biology*. DOI: 10.1101/2020.08.05.237685.	8.39
17	Patel, Dipika S., Bardhan, K., Patel, D.P., Parekh, V., Jena Suchismita, Narwade, A.V. and Chhatrola, H.N. (2021). Does plant root architecture respond to potassium under water stress? A case from rice seedling root responses. *Current Science*, **120**(6): 1050-1056	6.88
18	Patel, M.M., Tandel, M.B., Prajapati, V.M., Patel, S.M. and Desai, M.K., (2020). Influence of various levels of growth hormones on rooting of cuttings of Casuarina (*Casuarina equisetifolia* L.). *International Journal of Chemical Studies*,**8**(5): 2183-2186.	5.31
19	Patel, V.R., Choubey, V.M., Prajapati, V.M., Dangar, N.S., Katariya, M.A. and Desai, M.C. (2020). Effects of feeding siris (*Albizialebbeck*) and arjun (*Terminalia arjuna*) tree leaves on nutrient intake, utilization and milk yield in Surti goats. *The Indian Journal of Small Ruminants*, **26**(2): 183-188.	5.25
20	Patel, Y.D., Tandel, M.B., Prajapati, V.M., Pathak, J.G. and Patel, S.M. (2020). Effect of growing media on seed germination of Red Sanders (*Pterocarpus santalinus* Linn. f.). *International Journal of Chemical Studies*, 8(5): 2424-2427.	5.31
21	Prajapati, D.R., Thakur, N.S., Gunaga, R.P., Patel, V.R., Mevada, R.J. and Bhuva, D.C. (2020). Growth performance of *Melia dubia* in Sole and *Melia dubia*-Sorghum Sudan grass silvi-pasture systems: Sorghum Sudan Grass intercropping implications. *International Journal Current Microbiology and Applied Sciences*, **9**(4): 726-732.	5.32
22	Prajapati, D.R., Thakur, N.S., Singh, Narendra, Gunaga, R.P. and Patel, V.R. (2020). Economic feasibility of *Melia dubia*-Sorgham Sudan grass based silvi-pasture systems. *Indian Journal of Ecology*, **47**(2): 502-506.	4.96
23	Sharma, K.M., Muralidharan, C.M., Baidiyavadra, D.A., Bardhan, K., and Panchal, C.N. (2021). Evaluation of potentiality of different adjuvants for date palm pollination and fruit set. *Sugar Tech*, **23**: 139–145.	7.20
24	Vashi, H.N., Patel, P.P. and Bardhan, K. (2020). Growth and physiological responses of vegetable crops to water deficit stress. *Journal of Exp. Agri. Int.*,**42**(5): 91-101.	4.69

10. College of Veterinary Science and Animal Husbandry, Navsari

The Institute

The College of Veterinary Science & Animal Husbandry was established on 1 Jul. 2008 with funding from the Chief Ministers' Ten Point Programme (*VanbandhuKalyanYojana*), Government of Gujarat with a total five year outlay for an amount of Rs. 62.62 croresunder the flagship of Navsari Agricultural University. This college caters the services to livestock farmers / owners, co-operative dairies, village level co-operative societies and pet owners, especially tribal community of South Gujarat region.On the recommendation from Veterinary Council of India, Department of Animal Husbandry, Dairying and Fisheries, Government of India has notified the College under Navsari Agricultural University, Navsari as a VCI recognized Veterinary College of India. This has been the first VCI recognized college after enactment of VCI – 2008.

Under graduate degree program was started in the year 2008 and course curriculum recommended by Veterinary Council of India (1993) was implemented. Post graduate degree programmes, M.V.Sc. in the subjects *viz.* Veterinary Pathology (2008), Veterinary Surgery, Veterinary Gynecology and Obstetrics (2009), Veterinary Microbiology, Veterinary Extension, Animal Nutrition, Livestock Production and Management and Veterinary Public Health (2010) were started subsequently. Moreover, Ph.D. degree programme in Veterinary Pathology (2009) and Veterinary Gynecology and Obstetrics, Animal Genetics and Breeding and Livestock Production and Management were started in the college during 2010. In the year 2011, Ph.D. degree programme was started in Veterinary Surgery and Radiology, Veterinary Public Health and Veterinary Physiology. Further, Ph.D. degree programme was also initiated in the Veterinary Medicine, Veterinary Anatomy and Animal Nutrition in the year 2012. The intake of UG degree programme was gradually increased to 66 in the year 2013-14 from 30 (2008-09). At present, the intake capacity for undergraduate programme is 80 including VCI and *Kashmiri* quota. The College also offers a polytechnic course in Animal Husbandry. Polytechnic in Animal Husbandry is a three years (6 semesters) programme including six months farm practice training.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	01	01	01	-	-	01	01	-	01	-
2	Professors	15	07	07	--	04	03	05	02	06	01
3	Associate Professors	11	08	05	03	05	03	05	03	06	02
4	Assistant Professors	45	36	29	07	31	03	29	07	30	06
	Total	**72**	**52**	**42**	**10**	**40**	**10**	**40**	**12**	**43**	**09**

List of Departments

SN	Name of Departments	SN	Name of Departments
1	Department of Veterinary Anatomy	10	Department of Livestock Products Technology
2	Department of Veterinary Physiology and Biochemistry	11	Department of Veterinary Medicine
3	Department of Livestock Production and Management	12	Department of Veterinary Surgery and Radiology
4	Department of Animal Genetics and Breeding	13	Department of Veterinary Gynecology and Obstetrics
5	Department of Animal Nutrition	14	Department of Public Health and Epidemiology
6	Department of Veterinary Microbiology	15	Department of Veterinary Clinical Complex
7	Department of Veterinary Pathology	16	Department of Livestock Farm Complex
8	Department of Veterinary Parasitology	17	Department of Veterinary and Animal Husbandry Extension Education
9	Department of Veterinary Pharmacology and Toxicology	18	Department of Animal Biotechnology

Academic Programmes offered

SN	Degree Programmes	Duration	Total Credits
1	B.V.Sc. & A.H. (VCI-2008)	5 years(10 semesters)	177
2	B.V.Sc. & A.H. (VCI-2016)	5.5 years	81 (equivalent to 179 credit hours as per semester system)
3	M.V.Sc. (Vet.)	4 Semesters	64
4	Ph.D.	6 Semesters	75

Under Graduate Credit details(As per VCI 2008)

SN	Semesters	Number of Courses	Theory +Practical = Total Credits
1	First	06	11 + 7 = 18
2	Second	07	12 + 8 = 20
3	Third	08	12 + 9 = 21
4	Fourth	09	12 + 9 = 21
5	Fifth	07	12 + 7 = 19
6	Sixth	08	13 + 8 = 21
7	Seventh	07	10 + 10 = 20
8	Eighth	08	10 + 8 = 18
9	Ninth	08	9 + 10 = 19
10	Tenth	-	Internship
	Total		**101+76=177**

Under Graduate Credit details (As per VCI 2016)

SN	Year	Number of Courses	Total
1	First	3	12+6=18
2	Second	5	15+7=22
3	Third	6	15+9=24
4	Fourth (One and a half year)	4	8+9=17
5	Fifth (One Year)	-	Internship
	Total	**18**	**50+31=81***
	* It is an equivalent to 179 credit hrs. as per semester system of VCI 2008		

Post Graduates Programmes offered

SN	Disciplines of PG programmes	Masters' Degree	Doctoral Degree
1	Veterinary Anatomy	Yes	No
2	Veterinary Physiology	Yes	Yes
3	Veterinary Biochemistry	Yes	Yes
4	Veterinary and Animal Hus. Extension Education	Yes	Yes
5	Veterinary Microbiology	Yes	Yes
6	Veterinary Parasitology	Yes	Yes
7	Veterinary Public Health	Yes	Yes
8	Veterinary Pathology	Yes	No
9	Livestock Production Technology	Yes	No
10	Veterinary Pharmacology & Toxicology	Yes	Yes
11	Veterinary Surgery & Radiology	Yes	Yes
12	Veterinary Gynecology & Obstetrics	Yes	Yes
13	Livestock Production & Management	Yes	Yes
14	Animal Nutrition	Yes	Yes
15	Animal Genetics & Breeding	Yes	Yes
16	Veterinary Medicine	Yes	Yes
17	Animal Biotechnology	Yes	No
	Total	**17**	**13**

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat								
			Gen	SEBC	SC	ST	CBSC	Total	ICAR	Foreign	Grand Total
B.V.Sc. & A. H.	Male	80	18	21	04	09	-	52+02*	9	-	63
	Female		09	03	-	01	-	13	3	-	16
	Total		**27**	**24**	**04**	**10**	**-**	**65+02***	**12**	**-**	**79**
M.V.Sc.	Male	42	03	03	02	01	-	09	-	-	09
	Female		03	01	-	02	-	06	-	-	06
	Total		**06**	**04**	**02**	**03**	**-**	**15**	**-**	**-**	**15**
Ph. D.	Male	06	01	01	-	-	-	02	-	-	02
	Female		01	01	-	-	-	02	-	-	02
	Total		**02**	**02**	**-**	**-**	**-**	**04**	**-**	**-**	**04**
Grand Total			**35**	**30**	**06**	**13**	**-**	**86**	**12**	**-**	**98**

*Kashmiri quota; * 01 UG & 03 PG Student Left after Registration

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat								
			Gen	SEBC	SC	ST	CBSE	Total	ICAR	Foreign	Total
B.V.Sc. & A.H.	1st	Male	18	20	04	09	-	51+02*	10	-	63
		Female	09	03	-	01	-	13	03	-	16
	2nd	Male	19	23	04	08	-	54+02*	05	-	61
		Female	06	06	-	01	-	13	03	-	16
	3rd	Male	25	16	06	05	-	52+01*	10	--	63
		Female	07	04	01	08	-	20+02*	01	-	23
	4th	Male	22	20	03	05	-	50	01	-	51
		Female	06	03	01	07	-	17+01*	01	-	19
	5 (VCI-2016)	Male	26	11	02	-	-	39+01*	05	-	45
		Female	06	04	-	04	-	14+01*	01	-	16
	5 (VCI-2008)	Male	05	07	-	03	-	15	01	-	16
		Female	-	01	01	01	-	03	-	-	03
		Sub-total	**149**	**118**	**22**	**52**	**-**	**341+10***	**41**	**-**	**392**
M.V.Sc.	1st	Male	03	02	02	01#	-	08	01	-	09
		Female	01	-	-	02	-	03	03	-	06
	2nd	Male	01	01	01	01	-	04	05	-	09
		Female	-	-	-	-	-	-	05	-	05
		Sub-total	**05**	**03**	**03**	**04**	**-**	**15**	**14**	**-**	**29**
Ph. D.	1st	Male	01	01	-	-	-	02	-	-	02
		Female	01	01	-	-	-	02	-	-	02
	2nd	Male	-	-	-	01#	-	01	-	-	01
		Female	-	-	-	-	-	-	-	-	-
	3rd	Male	-	-	-	-	-	-	-	-	-
		Female	-	-	-	01#	-	01	01$	-	02
	4th (In service)	Male	01#	01#				02			02
		Female	-	-	-	-	-	-	-	-	-
		Sub-total	**03**	**03**	**-**	**02**	**-**	**08**	**01**	**-**	**09**
Grand Total			**157**	**124**	**25**	**58**	**-**	**364**	**56**	**10**	**430**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First Class	Second class	Passed class	Total
Under Graduate level					
Male	01	18	43	06	68
Female	01	02	07	01	11
Total	**02**	**20**	**50**	**07**	**79**
Master's level					
Male	07	04	-	-	11
Female	02	-	-	-	02
Total	**09**	**04**	-	-	**13**
Doctoral level					
Male	09	01	-	-	10
Female	01	-	-	-	01
Total	**11**	**01**	-	-	**11**

Student's Fellowship during AY 2020-21

Name of fellowships	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NTS-UG	23	07	-	-	-	-	30
NTS-PG	07	08	-	-	-	-	15
ICAR-JRF	-	-	-	-	-	-	-
ICAR-SRF	-	-	-	-	-	-	-
STUDENT READY (Internship All.)	61	19	-	-	-	-	80
INSPIRE	-	-	-	-	-	-	-
NAU PG fellowship	-	-	03	-	01	-	04
NAU Girls meritorious fellowship	-	16	-	-	-	-	16
ASPEE JRF	-	-	-	-	-	-	-
SC/ST/fellowship	12+21=33	2+24=26	-	-	-	-	59
SEBC fellowship	67	13	-	-	-	-	80
Total	**191**	**89**	**03**	**-**	**01**	**-**	**284**

Cut off marks for admission in the UG degree Programmeduring AY 2020-21

SN	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	50.0	**67.71**
2	ST	47.5	**40.83**
3	SC	47.5	**59.38**
4	OBC/SEBC	**47.5**	**68.54**

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examinations	Number of students qualified	Number of students passed out students
ICAR JRF	-	79
ICAR SRF	-	13
Deemed University	-	-
NET	-	-

Activities of students and faculty members at the College

College conducted Yoga Competition on the occusion of Fit India Movement on June 21, 2020 through virtual mode

College organized Skipping rope for Fitness event through online under the aegis of Fit India Movement on September 03, 2020.

Celebrated online Drawing competition on Vocal for Local under the aegis of *AatmaNirbhar Bharat Abhiyan* on August 07, 2020

Celebrated Swachhta Awareness Program on October 02, 2020

Navy Day celebrated on December 04, 2020 and students participated in this event.

Students participated in the above national events organized by the college through virtual mode

VET NAU WEBINAR SERIES-2020:

During COVID-19 Pandemic situations, Veterinary College organized VET NAU WEBINAR SERIES- 2020. In this, 25 technical lectures were delivered on the topics to the interest of undergraduate and postgraduate students, field veterinarians, private small and large animal practitioners and academicians under VET NAU WEBINAR SERIES 2020 using NAU e-learning facilities. Total 10300 students and Professionals across the country have taken advantage of these series of lectures. Dr. Dipak Suthar, Asst. Professor, Veterinary Surgery and Radiology and Dr. Lalit Modi, Asst. Professor, Veterinary Gynecology department in collaboration with IT cell of the University voluntarily worked for organization of this webinar series. The Webinar series was also telecasted on facebook as well as youtube.

Smart Vet Clinician Photography Competition-2020 (Gujarat):

Veterinary college has successfully organized Smart Vet Clinician Photography Competition-2020 (Gujarat) with the collaboration of five Pharmaceutical companies. The sole motto of this event is to motivate veterinarian working in the Gujarat State as they all worked hard during this pandemic COVID situation to treat the animals. In these event, 77 state veterinarians has participated in different category *viz*. Small Animal Practitioner award, Large Animal Practitioner award, General Vet Practitioner award, Equine Practitioner award and Exotic Pet Practitioner award. Every week one photo of each category was published on social media. On the base of public vote the winner of each category was declared after completion of voting period.

The winner of each category was awarded with cash prize and certificate by the each category sponsors. Dr. DipakSuthar, Asst. Professor, Veterinary Surgery and Radiology and Dr. LalitModi, Asst. Professor, Veterinary Gynecology department worked for organization of this event under the guidance of Dr. V. B. Kharadi, Principal and Dean of the college.

International Farming Experience Program in Abroad

College of Veterinary Science & A.H., Navsari has organized online information programme with PROLEARN INDIA to make students aware about the activities of PROLEARN INDIA on 11th March, 2021 in which total 52 students and 6 faculties have participated. This programme may beneficial for students who dream for experiential learning in abroad. “PROLEARN INDIA” is a group of professionals from agriculture, education & management background. With its mission statement “Innovating Agribusiness Learning”, PROLEARN INDIA has been offering International Farming Experience Program (IFEP) for agriculture and related fields graduates since 2013, with a proven track record. PROLEARN INDIA is giving an opportunity of work experience in a foreign country in the sectors of Dairy, Horticulture, Poultry& Winery for Indian students. It has an exclusive tie-up with USA, Denmark, Norway, Sweden, Australia and Israel for IFEP.

NSS activities during AY 2020-21

SN	Activities	Date/ period	No of Volunteers
1	Celebration of International Yoga Day	June 21, 2020	85
2	Covid 19 Pledge taking ceremony	October 08, 2020	32
3	Workshop on Cancer Awareness and Tobacco Control (Online Mode)	January 07, 2021	35
4	Celebration of International Women's Day (Online Mode)	March 08, 2021	48

NCC activities during AY 2020-21

SN	Activities	Date/ period	No of Volunteers
1	The CATC (Combine Annual Training Camp) organized at Rajpipla	February 24-28, 2021	34 cadets
2	The CATC (Combine Annual Training Camp) organized at Navsari	March 09-11, 2021	30 cadets
3	EBSB Phase VI online training	March 10-16, 2021	04 cadets
4	Online Drawing Competition on Vocal for Local under the aegis of AatmaNirbhar Bharat Abhiyan	August 07, 2020	13 cadets
5	Online Debate on Can Indian Manufacturer fulfill the vision of AatmaNirbhar Bharat Abhiyanon	August 08, 2020	12 cadets
6	Organized online Run/Walk for Fitness under the aegis of Fit India Movement	August 28, 2020.	50
7	Organized online Skipping rope for Fitness event under the aegis of Fit India Movement on 03 September, 2020.	September 03, 2020	20
8	Constitution Day &Swachhta Awareness Programme with Online awareness campaign by circulation of video, message, *etc*, Online poster making, Online awareness talks/lectures on hand wash and personal hygine and Pledge taking on swachhta awareness.	November 17-29, 2020	77
9	Celebrated *SwachhtaPakhwada* on virtual mode with cleaning and passing message for importance of cleaning and disadvantages of plastic.	December 01-15, 2020	77

Educational/Infrastructural Facilities

The college has well developed and refurbished building with separate space for all the departments as per the norms of VCI. There are presently 14 departments and TVCC building to accommodate 4 clinical departments. A dedicated hostel for the students of veterinary science having 68 rooms to accommodation 204 students is available very close to the college building. PG students are given separate accommodation in PG hostel at university level.

Experiential Learning Units

Title of ELU	:	Experiential Learning Unit on Broiler & Layer Production
Year of establishment	:	2013-14
Name of Manager	:	Dr. Y. D. Padheriya
Department	:	Livestock Farm Complex
Activities	:	ELP activities on Broiler rearing carried out virtually on broiler birds. Students were acquainted with recent management practices on broiler rearing.
Number of students beneficiaries	:	03
Amount earned per student	:	NIL

A view of Experiential Learning Unit on Broiler & Layer Production

Title of ELU	:	Experiential Learning Unit on Goat Production
Year of establishment	:	2015-16
Name of Manager	:	Dr. J. K. Movaliya
Department	:	Livestock Farm Complex
Activities	:	ELP activities on Surti goat rearing has been carried out virtually. The students have been trained for different farm operational activates like feeding, milking, record keeping etc.
Number of students beneficiaries	:	01
Amount earned per student	:	NIL

A view of Experiential Learning Unit on Goat Production

Research publications

SN	Details of Publications	NAAS rating
1	Atara, V.B., Chaudhari, C.F., Chaudhary, M.M., Modi, L.C., Chaudhari, N.F., Khasatiya, C.T. and Bhoi, D.B. (2020). Influence of body weight on semen characteristics in Surti bucks. *TheIndian Journal of Animal Reproduction*,**41**(1):29-31.	3.43
2	Baldaniya, R.V., Chaudhari, N.F., Modi, L.C., Patel, C.M., Puri, G. and Pate, J.M. (2020). Effect of coconut water in Tris egg yolk citrate extender on caudaepididymal buck spermatozoa motility preserved at refrigeration temperature. *Indian Journal of Animal Health*, **59**(1):55-61.	4.08
3	Baldaniya, R.V., Patel, C.M., Chaudhari, N.F., Modi, L.C., Chaudhary, L.M., Dangar, N.S. and Pandya, G.M. (2020). Study of testicular biometry and its correlation with caudaepididymal buck seminal attributes. *The Haryana Veterinarian*, **59**(SI): 61-64.	5.36
4	Baldaniya, R.V., Chaudhari, N.F., Modi, L.C., GopalPuri, Patel, C.M. and Tyagi, K.K. (2020). Effect of Coconut Water in Tris Egg Yolk Citrate Extender on Morphology of CaudaEpididymal Buck Spermatozoa Preserved at Refrigeration Temperature. *Veterinary Research International*, **8**(3): 191-194.	4.58
5	Chaudhary, Sandhya S., Singh, Virendra Kumar and Manat, Tanvi D. (2020). Effect of Mitigating Heat Stress in Dry Period of Surti Buffaloes on Erythrogram, Leukogram and Neutrophil to Lymphocyte Ratio during Subsequent Lactation. *Int. J.Curr. Microbiol. App.Sci.***9**(11): 3244-3251.	5.38
6	Chaurasia, Shailendra, Menaka, R.K., Panchal, M. and Niranjan Kumar (2020). Histogenesis of spleen in foetus of Surti goats. *Indian Journal of Small Ruminants*, **26**(2): 208-213.	5.25
7	Deepti, N.N., Solanki, J.B., Savalia, C.V. and Makwana, Pushpa (2020). Bacteriological evaluation of locally marketed ice cream in Navsari city of Gujarat. *International Journal of Current Microbiology and Applied Sciences*,**9**(12): 2236-2240.	5.38
8	Desai, D.N., Kalyani, I.H., Ramani, U.V., Makwana, P.M., Patel, D.R. and Vala, J.A. (2020). Evaluation of three different methods of viral DNA extraction for molecular detection of canine parvo virus-2 from faecal samples of dogs. *Journal of Entomology and Zoology Studies*,**8**(3):479-481.	5.53
9	Desai, D., Kalyani, I., Patel, D., Makwana, P., Solanki, J. and Vala, J. (2020). Rapid detection based prevalence of Canine Corona Virus (CCoV) and Canine Parvo Virus (CPV) infection in diarrheic Dogs in South Gujarat. *The Indian Journal of Veterinary Sciences and Biotechnology*,**16**(1):41-43.	4.47
10	Desai, D., Kalyani, I., Solanki, J., Patel, D., Makwana P., Sharma, K., Vala, J. and Muglikar, D. (2020). Serological and Nucleocapsid Gene Based Molecular Characterization of Canine Distemper Virus (CDV) Isolated from Dogs of Southern Gujarat, India. *Indian Journal of Animal Research*. 1-9.	6.44
11	Desai, D., Makwana, P., Solanki, J., Kalyani, I., Patel, D., Mehta, S., Mavadiya, S., Vala, J. and Parmar, S. (2020). Detection and Prevalence of Canine Leptospirosis from Navsari District of South Gujarat, India. *Microbiology Research Journal International*, **30**(9), 103-110.	4.65
12	Desai, Dhruv, Kalyani, Irshadullakhan, Ramani, Umed, Makwana, Pushpa, Patel, Dharmesh and Vala, Jignesh. (2020). Evaluation of three different methods of viral DNA extraction for molecular detection of canine parvo virus-2 from faecal samples of dogs. *Journal of Entomology and Zoology Studies*. **8**(3): 479-481.	5.53
13	Desai, Dhruv, Makwana, Pushpa, Solanki, Jayesh, Kalyani, Irshadullakhan, Patel, Dharmesh, Mehta, Sudhir, Mavadiya, Suresh, Vala, Jignesh and Parmar,	4.65

	Saurabh (2020). Detection and Prevalence of Canine Leptospirosis from Navsari District of South Gujarat, India. *Microbiology Research Journal International*, **30**(9): 103-110.	
14	Diniz, W.V., Modi, L.C., Chaudhari, N.F., Chaudhary, Sandhya, Pandor, M.A. and David Kumar (2021). Anti-oxidant effect of Quercetin in Tris egg yolk citrate extender on Surti Buck semen preserved at refrigerated temperature. *International Journal of Livestock Research*, **11**(1): 87-92.	5.36
15	Diniz, W.V., Modi, L.C., Chaudhari, N.F. and Pandor, M.A. (2020) Effect of Quercetin supplementation on functional membrane integrity of Surti Buck semen preserved at refrigerated temperature. *International Journal of Current Microbiology and Applied Sciences*,**9**(10): 1089-1095.	5.38
16	Diniz, W.V., Modi, L.C., Chaudhari, N.F. and Pandor, M.A. (2020). Effect of Quercetin supplementation on functional membrane integrity of Surti Buck semen preserved at refrigerated temperature. *International Journal of Current Microbiology and Applied Sciences*, **9**(10): 1089-1095.	5.38
17	Gadhavi, D.N., Sorathiya, L.M., Rathva, A.L., Patel, V.R. and Patel, N.M. (2020). Study of prevailing healthcare management practices in specialized dairy farms. *The Pharma Innovation Journal*,**9**(4):18-22.	5.03
18	Gamit, Martina, Gupta, Swati and Savalia, C.V. (2020). Quality characteristics of chicken meat cutlets incorporation with finger millet (Eleucinecoracana) flour. *Journal of Animal Research*, **10**(1): 111-116.	5.68
19	Janmeda, M., Pandya, G., Ramani, U., Dangar, N., Brahmkshtri, B. andKharadi, V. (2020). Stage specific expression profile of lipogenic genes in mammary epithelial cells of Surti and Jaffarabadi Buffaloes. *International Journal of Livestock Research*, **10**(11): 60-66.	5.36
20	Janmeda, Mamta, Pandya, Gaurav, Ramani, Umed, Balkrushna, Brahmkshtri, Patel, Navin, Kharadi, Vishnu (2020). Relative gene expression study on casein protein and its regulatory genes in mammary epithelial cells of Surti Goat. *The Indian Journal of Veterinary Sciences andBiotechnology*.**16**(1):54-57.	4.47
21	Kumar, R. and Savalia, C.V. (2020). Effect of different stress conditions on antibiotic susceptibility of coagulase positive thermo tolerant Staphylococcus aureus. *Octa Journal of Biosciences*. **8**(2):62-72.	3.05
22	Makwana, P.M., Kalyani, I.H. and Desai, D.N. (2020). Isolation of bovine rotavirus in MDBK cell line from diarrhoeic calves of Navsari district. *The Pharma Innovation Journal*,**9**(5): 222-225.	5.03
23	Makwana, P.M., Kalyani, I.H., Desai, D.N., Patel, J.M., Solanki, J.B., Vihol, P.D., Patel, D.R., Muglikar, D.M. and Sakhare, P.S. (2020). Detection of bovine rotavirus (BRV) infection in neonatal calves of in and around Navsari district of South Gujarat, India. *Journal of Entomology and Zoology Studies*,**8**(2): 1092-1097.	5.53
24	Mavadiya, S.V., Mehta, S.A., Vagh, A.A., Raval, S.K., Kanani, A.N. and Joshi, B.P. (2020). Pathology of equine influenza virus in Horses. *Veterinary Research International*,**8**(2): 85-87.	4.58
25	Mehta, Sudhir, Mavadiya, Suresh, Parmar, Saurabh, Vagh, Arshi, Vala, Jignesh, and Patel, R.M. (2020). Comparative economical analysis of the treatment adopted for canine parvo virus infected dog. *Journal of Animal Research*, **10**(5):843-848.	5.68
26	Mehta1, S.A., Mavadiya, S.V., Vagh, A.A., Parmar, S.M., Vala, J.A. and Patel, R.M. (2020). Comparative efficacy of diagnostic methodology for detection of canine parvo virus faecal antigen. *Int. J. Curr. Microbiol. App. Sci*., **9**(5): 743-750.	5.38

27	Modi, L.C., Khasatiya, C.T., Chaudhari, N.F., Sharma, H.C. and Modi, Falguni (2020). Effect of parentral administration of Vitamin E and Selenium during periparturient period on cortisol profile in Surti Buffaloes. *The Haryana Veterinarian*, **59** (SI): 53-56.	5.36
28	Nayak, D.N., Kumar, R. and Savalia, C.V. (2020). The Socio-economic Impacts of the COVID-19 Pandemic: A Review. *International Journal of Current Microbiology and Applied Sciences*,**9**(11): 562-566.	5.38
29	Panchal, Pratik P., Patel, Jignesh M., Vihol, Priti D., Raval, J.K., Patel, D.R., Danger Nikhil, Kalyani, I.H. and Patel, N.M. (2020). Serotyping and prevalence of *Escherichia coli* infection in poultry of south Gujarat based on culture isolation and identification. *International Journal of Current Microbiology and Applied Sciences*,**9**(10): 3876-3883.	5.38
30	Pandor, M.A., Chaudhari, N.F., Modi, L.C., Janmeda, M., Diniz, W.V. and Kumar, D. (2020). Effect of Vitamin E supplementation on plasma membrane functional integrity in Surti Buck semen preserved at refrigeration temperature. *Indian Journal of Animal Health*, **59**(2):183-188.	4.08
31	Pandya, G.M., Ramani, U.V., Tyagi, K.K. and Dangar, N.S. (2020). Genetic Polymorphism of GHR, LEP and MSTN Genes in Surti Goats from Organized Farm. *The Indian Journal of Veterinary Sciences*,**16**(2): 21-24.	4.47
32	Patel, C.M., Modi, L.C., Chaudhari, N.F., Baldaniya, R.V. and Chaudhary. L.M. (2020). Effect of honey supplementation on Caudaepididymal buck spermatozoa preserved at refrigerated temperature. *The Haryana Veterinarian*, **59**(SI): 99-101.	5.36
33	Patel, D.K., Chaudhari, C.F., Chaudhari, N.F., Modi, L.C., Atara. V.B., Panchal, P.P. and Amarjeet (2020). Monthly variations in fresh semen parameters of Surti Buck in Rainy Season. *International Journal of Current Microbiology and Applied Sciences*,**9**(12): 1398-1703.	5.38
34	Patel, D.C., Solanki, J.B. and Kumar, N. (2020). *In vitro* detection of acaricidal resistance status of *Rhipicephalus* (*Boophilus*) *microplus* against commercial preparation of deltamethrin in coastal areas of South Gujarat, India. *Ind. J. Vet. Sci. and Biotech*.,**16**(1): 32-36.	4.47
35	Patel, J.M., Vihol, P.D., Prasad, M.C., Patel, J.H., Patel, N.B. and Patel, K.M. (2021). Pathomorphological changes in vital organs of buffaloes (*Bubalusbubalis*) naturally infected with leptospirosis. *Buffalo Bulletin*, **39**(4):483-491.	6.10
36	Patel, N.M., Kumar, R., Savalia, C.V., Desai, D.N. and Kalyani, I.H. (2020). Dietary exposure and risk assessment of antibiotics residues in marketed bovine raw milk. *Journal of Entomology and Zoology Studies*,**8**(4): 1823-1827.	5.53
37	Patel, V.R., Choubey, M., Prajapati, V.M., Dangar, N.S., Kataria, M.A. and Desai, M.C. (2020) Effects of feeding siris (*Albizialebbeck*) and arjun (*Terminaliaarjuna*) tree leaves on nutrient intake, utilization and milk yield in Surti goats. *The Indian Journal of Small Ruminants*, **26**(02):183-188.	5.25
38	Pradhan, S.K., Kumar, B., Banakara, K.B., Patel, V.R., Pandya, H.R. and Singh, R.R. (2020). Effect of boron supplementation on the performance and metabolism of minerals in Broiler Chicken. *Animal Nutrition and Feed Technology*, **20**(01):39-49.	6.31
39	Prajapati, D.R., Thakur, N.S., Gunaga, R.P., Patel, V.R., Mevada, R.J. and Bhuva, D.C. (2020). Growth Performance of *Meliadubia* in Sole and *Meliadubia* Sorghum Sudan Grass Silvi-Pasture Systems: Sorghum Sudan Grass Intercropping Implications, *International Journal of Current Microbiology and Applied Sciences*, **9**(4):726-732.	5.38
40	Prajapati, D.R., Thakur, N.S., Singh, Narendra, Gunaga, R.P. and Patel, V.R. (2020). Economic feasibility of sorghum sudan grass-*Meliadubia* based silvi-pasture systems, *Indian Journal of Ecology*, **47**(02):502-506.	4.96

41	Rathva, A.L., Sorathiya, L.M., Sabapara, G.P., Patel, V.R. and Patel, N.B. (2020). Study of calf rearing and welfare management practices in urban and periurban dairy farms. *The Pharma Innovation Journal*, **9**(3):758-761.	5.03
42	Sukhadiya, M.L., Thakur, N.S., Patel, V.R., Gunaga, R.P., Kharadi, V.B., Tyagi, K.K., and Singh, Susheel (2020). Provenance variations in proximate principles, mineral matter, total phenols and phytochemicals of *Meliadubia* drupes: an unexplored alternate livestock feed stock. *Journal of Forestry Research*, **32**: 119-131.	7.16
43	Trangadia, B.J., Prasad, M.C., Ramani, U.V., Pandya, G.M. and Kurkure, N.V. (2020). A comparative study of serology and PCR for the diagnosis of brucellosis in goats. *Indian Journal of Animal Sciences*,**90**(6): 847–850.	6.23
44	Tyagi, Surbhi K., Pratap, Manisha P., Suthar, D.N., Bhatt, R.H., Jhala, S.K., Dabas, V.S. and DivyaChaudhari (2020). Dose sparing effects of butorphanol and diazepam or midazolam premedication on propofol total intravenous anaesthesia in dogs. *J.Ani. Res.*, **10**(5):777-781.	5.68
45	Usadadia, S.V., Patel, J.M., Vihol, P.D. and Urkude, A.P. (2020). Protective effect of quercetin on azithromycin induced hepatotoxicity and nephrotoxicityinwistar rats.*Int.J. Curr.Microbiol.App.Sci.*,**9**(9): 2926-2934.	5.38
46	Vala, J.A., Patel, M.D., Patel, D.R., Ramani, U.V., Kalyani, I.H., Makwana, P.H., and Desai, D.N. (2020). Diagnosis of Equine Herpes Virus 4 infection using Polymerase Chain Reaction. *International Journal of Current Microbiology and Applied Sciences*,**9**(11): 887-890.	5.38
47	Vala, Jignaesh, Patel, Manish, Parmar, Saurabh, Mavadiya, Suresh and Mehta, Sudhir (2020). Equine Herpes Virus 1 and 4 infection: A review. *Int. J. Curr. Microbiol. App. Sci*., **9**(7):100-105.	5.38
48	Varia, R.D., Patel, J.H., Modi, F.D., Vihol, P.D. and Bhavsar, S.K. (2020). *In vitro* and *in vivo* antibacterial and anti-inflammatory properties of linalool. *Int. J. Curr. Microbiol. App. Sci*.,**9**(9): 1481-1489.	5.38
49	Vihol, P.D., Patel, J.M., Patel, J.H., Raval, J.K., Varia, R.D. and Makwana, P.M. (2020). Pathomorphological study on leptospirosis in slaughtered goats. *The Pharma Innovation*,**9**(9): 84-87.	5.03
50	Yede, Amol B., Khasatiya,Chandubhai T., Singh, Virendra Kumar, Londhe, Arvind S. and AtulUrkude (2020). Assessment of Pomegranate juice as antioxidant in extender on Cauda Epididymis Spermatozoal quality of buck at refrigerated temperature. *Indian J.Vet.Sci.Biotech*., **16**(2,3& 4):72-75.	4.47

11. ASPEE Agribusiness Management Institute, Navsari

The Institute

The ASPEE Agribusiness Management Institute at Navsari Agricultural University is a response to the changing scenario of Indian Agriculture Sector.Considering the glut of opportunities available for competent agribusiness professionals, Navsari Agricultural University (NAU), Navsari responded to the need of the hour by establishing the ASPEE Agribusiness Management Institute (AABMI) in 2007. The Institute is well equipped to provide high standard education with well-qualified teachers supported by highly sophisticatedinfrastructure facilities of Navsari Agricultural University for experiential learning.Institute is successfully running full-time two-year M.B.A. (Agribusiness Management) programme specially designed to prepare students for careers in management related to agriculture, food, agri-business, rural and allied sectors of the economy.

The main objective of MBA (Agribusiness Management) programme is to prepare managers, business leaders and entrepreneurs in food and agribusiness sector to respond to the challenges faced by these sectors. The MBA (ABM) is a full time 2 years PG Programme. In 2017, another feather was added in the cap by initiation of Doctoral Degree Programme – Ph. D. (Agribusiness Management). The core philosophy of AABMI is to build and sustain the relationship between farming community and professional agencies involved in agribusiness. MBA (ABM) programme at ASPEE Agribusiness Management Institute is duly accredited by the Indian Council of Agricultural Research (ICAR), New Delhi. PhD (Agribusiness Management) aims at preparing students that add to the collective knowledge base of agribusiness field in terms of production, processing, marketing, financing and technical assistance, preparation of products for exports, overseas marketing and government policies, *etc*. The minimum duration of the full time Ph.D. (ABM) programme is three years (six semesters).

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	0	0	0	0	0	0	0	0	0	0
2	Professors	1	1	-	1	-	1	-	1	-	1
3	Associate Professors	2	2	1	1	1	1	1	1	2	-
4	Assistant Professors	4	4	2	2	1	1	2	2	3	1
	Total	7	7	3	4	2	3	3	4	5	2

List of Departments

SN	Departments	SN	Departments
1	Agribusiness Marketing Management	3	Organizational Behavior & Human Resource Management
2	Agribusiness Economics and Finance	4	Agribusiness Operation and IT

Academic Programmes offered

SN	Degree Programmes	Duration	Total Credits (Theory + Practical)
1	MBA (ABM)	4 Semesters	67 (51+16)
2	Ph.D. (ABM)	6 Semesters	77 (24+53)

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	MBA	Doctoral Degree
1	Agribusiness Management (ABM)	Yes	Yes
	Total	**01**	**01**

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat									
			Gen	SEBC	SC	ST	CBSE	EWS	Total	ICAR	Foreign	Grand Total
MBA (ABM)	Male	41	4	9	0	2	0	9	24	6	-	**30**
	Female		3	1	1	1	0	1	7	1	-	**08**
	Total		**7**	**10**	**1**	**3**	**0**	**10**	**31**	**7**	**-**	**38**
Ph.D.	Male	03	0	0	0	0	0	0	0	0	-	**0**
	Female		0	0	0	0	0	0	0	0	-	**0**
	Total		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**-**	**0**
Grand Total		**44**	**7**	**10**	**1**	**3**	**0**	**10**	**31**	**7**	**-**	**38**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat								
			Gen	SEBC	SC	ST	CBSE	Total	ICAR	Foreign	Total
MBA (ABM)	1st	Male	04	09	00	02	09	24	06	-	30
		Female	03	01	01	01	01	07	01	-	08
	2nd	Male	04	06	01	05	03	19	07	-	26
		Female	02	00	01	00	00	03	01	-	4
		Sub-total	**13**	**16**	**03**	**08**	**13**	**53**	**15**	**-**	**68**
Ph.D.	1st	Male	0	0	0	0	0	0	0	-	0
		Female	0	0	0	0	0	0	0	-	0
	2nd	Male	0	02	0	0	0	02	0	-	02
		Female	01	0	0	0	0	01	0	-	01

	3rd	Male	-	-	-	-	-	-	-	-	
		Female	-	-	-	-	-	-	-	-	
		Sub-total	**01**	**02**	**0**	**0**	**0**	**03**	**0**	**-**	**03**
Grand Total			**14**	**18**	**03**	**08**	**13**	**56**	**15**	**-**	**71**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
MBA					
Male	02	12	03	0	17
Female	02	02	01	0	05
Total	**04**	**14**	**04**	**0**	**22**

Student's Fellowship during AY 2020-21

SN	Name of fellowship	Masters		Doctorate		Total
		No. of Students		No. of Students		
		Male	Female	Male	Female	
1	NAU PG Fellowship	0	01	-	-	01
2	SC/ST/SEBC Fellowship	17	03	01	-	21
3	NTS-PG	12	02	-	-	14
4	ICAR-JRF	01	0	-	-	01
5	Others	14	02	-	-	16
	Total	**44**	**09**	**01**	**-**	**54**

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

SN	Name of examination	Number of students qualified	Number of students passed out students
1	ICAR SRF	-	22
2	Deemed University (NAME)	-	-
3	NET	-	-

Placement Cell

Degree	Total passed out students	Higher studies		Govt. Job	NGOs	Abroad	Self –entre preneurship	Private Job	Unemployed
		Gujarat	Other states						
M.B.A.	22	-	-	-	-	-	-	07	15
Total	**22**	**-**	**-**	**-**	**-**	**-**	**-**	**07**	**15**

Activities of students and faculty members at the College

Total 16 students of MBA (ABM) and PhD (ABM) along with 6 faculty members participated in the virtual event "*KrishiManthan* 2020" at IIM, Ahmedabad, Gujarat during December26-27, 2020. Students and faculty members attended/participated in the three workshops entitled "Inclusive Grassroot Innovations and Agri- Entrepreneurship", "New approaches in sales & distribution of Food Products & Beverages" and "Block Chain and IoT Applications in Agri& Food" at IIM Ahmedabad.

ASPEE Agribusiness Management Institute organized webinar on "**Commodity derivative market"** in collaboration with **NCDEX** Institute of Commodity Markets and Research, New Delhi, on June 25, 2020**.** The programme was presided by Hon. Vice Chancellor of NAU, Dr. S.R. Chaudhary who highlighted the need of Commodity markets for ensuring remunerative prices to the farmers who are the main stakeholders. Mr. Aleen Mukherjee, Executive Vice President of Business, NCDEX, Mr. Neeraj Shukla Senior Economist - Market Intelligence at NCDEX and Ram GopalYadav, Deputy Manager, NCDEX, NICR delivered informative sessions on Global and Domestic scenario of commodity exchanges,

Usefulness for farmers/FPOs, Derivatives& Price risk Management and functioning and regulation of Commodity Exchanges. The webinar was coordinated by faculty members Dr. AlpeshLeua and Dr. Gautam. R. Parmar of AABMI.

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of department
1	Strengthening Institute of Agribusiness Management, Navsari Phase-II	12245	Plan Project Government of Gujarat	AABMI
2	Establishment of Research Centre on Agricultural Marketing	12951	Plan Project Government of Gujarat	AABMI

Educational/Infrastructural Facilities

State-of-the-art infrastructure matching with global standards of quality education has been established at AABMI with distant vision. It has state-of-the-art infrastructure with ergonomically designed class rooms and conference hall well equipped with LCD, Interactive board, Multimedia facilities, projector, computer and TV. The Institute has its own reading room facility. A separate Information Technology Centre is created in the Institute with one student - one computer facility. AABMI has a well-equipped Seminar Hall with the seating capacity of around 80 persons. The institute also have well facilitated P.G. Boys Hostel with 44 room of 88 capacity.

Research publications

SN	Details of Publication	NAAS rating
1	Parmar, G. and Leua, A. (2020). Impact of Covid-19 on Agriculture: A case study of okra in South Gujarat, *EPRA International Journal of Research and Development*, **5**(8): 274-277.	-
2	Parmar, G. and Rathod, R.M. (2020). Study on social and demographic factors association with food choice in Gujarat, *International Journal of Management Research and Social Science*, **7**(2): 22-25.	-
3	Parmar, G., Lathiya, A. and Choudhari, K. (2020). Knowledge sharing behaviour among university staff, *Journal of Management Outlook*, **10**(1): 22-27	-
4	PriyankaMaity and Sharma, S. (2020). Block chain technology in coffee industry in India. *PRAGATI: Journal of Indian Economy.*,**7**(1): 61-75.	-

5	Swati Sharma and Kumar, A. (2020). Consumers' knowledge and attitude towards organic food products in Surat city. *MANTHAN: Journal of Commerce and Management*,**7**:74-86.	-
6	Swati Sharma and Kumar, A. (2020). Transformation of rural India through e-panchayat. *Pacific University Journal of Social Science*, **5**(1):87-92.	-
7	Thorat, V.S., Garde, Y. and Arhant, A. (2020). Incidence and determinants of indebtedness of agricultural households in Gujarat. *Economic Affairs*, **65**(2): 249-254.	4.82
8	Vaghasiya, R.N. and Thakkar, M. G. (2019). Customer buying behaviour and reasons of customer attrition in online shopping of Fruits and Vegetables in Surat City. *Journal of Pharmacognosy and Phytochemistry*, **8**(4): 745-751.	5.21

Book Chapters

1	DayaSuvagiya and Sharma, S. (2020). Indian Agricultural Start-ups Amidst COVID-19: Prospects and Challenges. *In:* Entrepreneurship Amidst COVID 19, Amit Verma&Satinder Kumar(Eds.), Book Rivers, Lucknow, 61-75. (ISBN: 978-93-89914-95-5).
2	Swati Sharma and Suvagiya, D. (2020). Digitalization of Indian Agriculture Sector: Pathway to Prosperity. In: Growth and Environment in the Challenging Times: The Strategies Ahead, K. R. Chavan (Ed.), Lulu Publication, United States, 51-57. (ISBN: 978-1-71654-176-6).
3	Swati Sharma, Shukla, R., Parmar, G. and Leua, A. (2020). Marketing of Medicinal and Aromatic Plant Products in India: Issues and Trends. *In:* proceedings of National Conference on Utilization and conservation of Non-Timber Forest Genetic Resources for Sustainable Development., Ahlawat, T.R., Gunaga R.P., Sankanur M.S., Sinha S.K., Chaudhary A.D., BalvantAhir (Eds), Published by NAHEP-CAAST subproject, Navsari Agricultural University, Navsari, Gujarat, 94-101.
4	Thakkar, M.G. (2020). Building Human & Business Excellence through Quality of Work Life (QWL) of Employees. *Business Excellence and Leadership in VUCA World*, Himalaya Publishing House, New Delhi, 164-173.ISBN 978-93-89652-98-7.
5	Thakkar, M.G. (2020). Moving from Traditional to Strategic HR - Changing Role of People Managers in Digital Age for Excellence. *Business Excellence and Leadership in VUCA World*, Himalaya Publishing House, New Delhi, 150-163.ISBN 978-93-89652-98-7.
6	Thakkar, M.G. (2020). Powerful Personality Development to become a High Achiever for Gaining that "Extra Edge" A Journey from "Good to Better to Best". *In:* Training Material Booklet of the 1st 5-Days Online Training Programme on Next Generation Extension Tools and Techniques for Upcoming Agricultural Professionals, Published by Dept. of Agril. Extension, College of Agriculture, JAU, Junagadh under the NAHEP IDP Component, 2-20.
7	Thakkar, M.G. (2020). Ethical Pharmacy Practice. *In:* Reading Notes of Gujarat State Pharmacy Council Sponsored 2-Days Refresher Course for Registered Pharmacist, Published by IPCPRC, Dharmaj-Gujarat under the guidance of Gujarat State Pharmacy Council, Ahmedabad-Govt. of Gujarat, 1-8.
8	Thakkar, M.G. (2020). Succession Planning-A Sustainable Institutional Practice for Business Excellence through Leadership Continuity. *Business Excellence and Leadership in VUCA World*, Himalaya Publishing House, New Delhi, 216-229.ISBN 978-93-89652-98-7.

Popular article

1	Thakkar, M.G. (2020). Pathway to Positive Parenting. *ParatvaPiyush*, **15**: 6-12.

12. ASPEE SHAKILAM
Biotechnology Institute, Surat

The Institute

The ASPEE SHAKILAM Biotechnology Institute (ASBI), Navsari Agricultural University, Surat has been established with the financial aid of Department of Agriculture and Co-operation, Government of Gujarat in April, 2012.

As per the ICAR guidelines and approval of university (Notification No. 613/ 2017), the institute has accepted the 5th dean committee's recommendation and offering B. Tech. (Biotechnology) degree in place of B.Sc. (Agril. Biotechnology) from 2017-18 and institute renamed as ASPEE SHAKILAM Biotechnology Institute instead of ASPEE SHAKILAM Agricultural Biotechnology Institute. The institute provides various facilities including state of art instruments, modern laboratories with well equipped instruments, library, e-Lab and also women plant tissue culture training centre with qualified academic staff. The institute is achieving the significant recognition for its high quality of teaching and research. Besides these, in the view of women empowerment mission, institute is offering exclusive women plant tissue culture training for catering the skill development in women to become entrepreneur.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	0	0	0	0	0	0	0	0	0	0
2	Professors	3	2	0	0	2	0	2	0	2	0
3	Associate Professors	5	3	0	0	3	0	2	1	3	0
4	Assistant Professors	10	10	1	0	7	2	8	2	7	3
	Total	18	15	1	0	12	2	12	3	12	3

List of Departments

SN	Departments	SN	Departments
1	Division of Plant Biotechnology	3	Division of Microbial and Environmental Biotechnology
2	Division of Animal Biotechnology	4	Bioinformatics Section

Academic Programmes offered

Degree Programmes	Duration	Total Credits
B. Tech. (Biotechnology)	8 Semesters	184

Under Graduate Credit details(As per V Deans' committee recommendations)

SN	Semesters	Number of Courses	Theory +Practical = Total Credits
1	First	10	15+7+1 NC =23
2	Second	9	15+7+1 NC =23
3	Third	9	15+8+1 NC =24
4	Fourth	9	15+8+1 NC =24
5	Fifth	9	20+4 =24
6	Sixth	8	22+4 =24
7	Seventh	02 (Student READY)	0+20+2 NC=22
8	Eight	02 (Student READY)	0+20 =20
		Total	102+76=184

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat									
			Gen	SEBC	SC	ST	CBSE	EWS	Total	ICAR	Foreign	Grand Total
B. Tech. (Bio-technology)	Male	60	11	03	01	03	00	04	22	04		26
	Female		02	01	00	00	01	00	04	03		07
	Total		**13**	**04**	**01**	**03**	**01**	**04**	**26**	**07**		**33**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat									
			Gen	SEBC	SC	ST	CBSE	EWS	Total	ICAR	Foreign	Total
B. Tech. (Bio-technology)	1st	Male	11	03	01	03	00	04	22	04	0	26
		Female	02	01	00	00	01	00	04	03	0	07
	2nd	Male	10	03	00	03	00	05	21	03	0	24
		Female	09	03	00	01	01	01	15	02	0	17
	3rd	Male	16	06	01	03	02	00	28	01	0	29
		Female	04	03	02	01	01	00	11	04	0	15
	4th	Male	10	01	02	03	00	00	16	00	0	16
		Female	06	02	00	03	00	00	11	00	0	11
		Total	**68**	**22**	**06**	**17**	**05**	**10**	**128**	**17**	**0**	**145**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	0	11	1	0	12
Female	3	8	1	0	12
Total	3	19	2	0	24

Student's Fellowship during AY 2020-21

Name of Fellowships	Under-graduate		Total
	No. of Students		
	Male	Female	
NTS-UG	04	06	10
STUDENT READY	17	10	27
NAU Girls meritorious fellowship	-	15	15
SC/ST/fellowship	11	06	17
SEBC fellowship	26	04	30
SHAKILAM foundation	04	07	11
EWS	21	04	25
Total	**83**	**52**	**135**

Cut off marks for admission in the UG degree Programme during AY 2020-21

SN	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)*
1	General	40	32.52
2	SC	35	50.58
3	ST	35	42.23
4	SEBC	40	37.42
5	Other Board	40	43.61
6	PH	40	-
7	Ex-Army	40	-
8	EWS	40	37.90

* Cumulative marks of PCB and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examination	Number of students qualified	Number of students passed out students
ICAR JRF	08	24

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	PrachiSakariya	3060816022	Plant Biotechnology	213-Gen
2	Sejal Patel	3060816024	Plant Biotechnology	282-Gen 7-ST
3	AbhishekGhetia	3060816008	Plant Biotechnology	323-Gen
4	PriyanshiGadhiya	3060816006	Plant Biotechnology	363-Gen 30-EWS
5	AnjalikumariGavli	3060816007	Plant Biotechnology	618-Gen 20-ST
6	BhargaviKoradiya	3060816011	Plant Biotechnology	627-Gen
7	BhumikaVasava	3060816027	Plant Biotechnology	695-Gen 30-ST
8	TejalHadiya	3060816009	Plant Biotechnology	793-Gen 243-OBC

Placement Cell

Degree	Total passed out students	Higher studies		Private Jobs	Govt. Job	NGOs	Abroad	Self –entre preneurship	Unemployed	Total
		Gujarat	Other states							
B. Tech. (Bio-Technology)	24	08	00	05	00	00	00	02	09	24
Total	**24**	**08**	**00**	**05**	**00**	**00**	**00**	**02**	**09**	**24**

Activities of students and faculty members at the College

International Day of Yoga celebrated on June 21, 2020 through online mode

Celebrated *Van Mahotsav* during August10-14, 2020 at ASBI, NAU, Surat

Celebrated Vigilance Awareness Program during October 27 to November 2, 2020 at ASBI, NAU, Surat

Celebrated the National Unity Day on October 31, 2020 at ASBI, NAU, Surat

Celebrated Constitution Day on November 26, 2020 at ASBI, NAU, Surat

Hon'ble Vice Chancellor, NAU, Dr. Z.P. Patel, visited ASBI, NAU, Surat on December 8, 2020 and discussed about activities carried out and future plan of the college in terms of academics, research and extension activities

Celebrated National Voter's Day on January 25, 2021 at ASBI, NAU, Surat

Organized online Orientation Programme for first semester students on February 06, 2021 at ASBI, NAU, Surat

Conducted Yoga Awareness Programme on March 02, 2021 at ASBI, NAU, Surat

Celebrated the International Woman's Day on March 08, 2021 at ASBI, NAU, Surat

NSS activities during AY 2020-21

SN	Activities	Date/s	No of Volunteers
1	International Yoga day celebration (Virtual)	June 21, 2020	102
2	Yoga awareness programme on Virtual mode	March 02, 2021	56
3	International Woman's day celebration	March 08, 2021	14

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the project	Budget Head	Funding agency	Name of department
1	Establishment of ASPEE SHAKILAM Biotechnology Institute	12248	Govt. of Gujarat (Plan Project)	ASPEE SHAKILAM Biotechnology Institute

Educational/Infrastructural Facilities

The institute has well furnished four lecture halls, faculty rooms, auditorium, AC tissue culture laboratory and conference room with LCD facilities for proper teaching learning process at UG degree programme. All departments possess modern laboratories, which are well equipped with highly sophisticated equipments. The Institute has a Central Instrumentation Laboratory having sophisticated instruments like Thermal Cycler, Gel Documentation System, Electrophoresis, Real Time PCR, Lyophilizer, Freezer (-80), Freezer (-20), Vortex, Laminar Air Flow, Stereo Zoom Microscopes, Nanodrop, Fermentor, UV Trans illuminator, UHPLC, Hi-glass Beader, Digital Dry Block Heater, Sonicator, Incubator Shakers, Atomic Absorption Spectrophotometer, Steriozoom Microscope with camera, Highly Pressurized Reactor, Muffle Furnace, Fluorescence Spectrophotometer, Vacuum Rotary Evaporator, Distillation Unit, Gel Electrophoresis system, *etc*.

The institute is also equipped with bioinformatics computer laboratory which provides training to students. The institute possesses two well managed hostels both for boys and girls. Both hostels are located close to institute and have sufficient capacity of accommodating students with 104 boys and 90 girls. The institute is also having internet facility, locally networked and connected through *Wi-Fi* to the central server and which is available for students to access e-books, study materials, previous question papers, daily circulars, *etc* for their project work and seminar presentations and exam preparations.

Research publications

SN	Details of Publications	NAAS rating
1	Acharya, V.R., Manju Singh, R.K. Patel, LakshayGoyal and Zeal, R. (2021). Diversity analysis in different accessions of coriander (*Coriandrumsativum L.*). *IJCS*,**9**(2): 917-920.	-
2	Atodaria, K., Mayank Singh, Vimalkumar, S. Prajapati, Kush, ShaileshkumarShahkush and Pradipkumar R.A. (2020). Protection of health care workers from exhaled air of patients operated under local, regional, spinal or epidural anaesthesia during COVID 19 pandemic. *medRxiv* (DOI:10.1101/2020.11.26.20192823)	-
3	Bhatt, Bhumi, VimalPrajapati, Kamlesh Patel and Ujjval Trivedi. (2020). Kitchen waste for economical amylase production using *Bacillus amyloliquefaciens* KCP2. *Biocatalysis and Agricultural Biotechnology*,**26** : 1-7.	-
4	Dabhi, K., Patel S., and Jha S. (2020). Optimization of regeneration and transformation system in finger millet (*Eleucinecoracana*L.). *IJCS*,**8**(3): 1678-1683.	5.31
5	Desai, N.B., R.L. Leva, M.B. Khadadiya and U.J. Patel. (2020). Integrated nutrient management in Rabi Indian bean (Dolichos lablab L.). *Journal of Pharmacognosy and Phytochemistry*,**9**(4): 457-459.	--
6	Desai, N.B., R.L. Leva, U.J. Patel and M.B. Khadadiya. (2020). Influence of inorganic fertilizer, organic manure and biofertilizers on nutrient content and uptake of Indian bean (*Dolichos lablab L.*). *IJCS*,**8**(4): 3201-3204.	5.31
7	Kailasa, S.K., VN. Mehta, J.R. Koduru, Hirakendu, B., R.K. Singhal, Z.V.P. Murthy and Tae-Jung Park. (2020). An overview of molecular biology and nanotechnology based analytical methods for the detection of SARS-CoV-2: promising biotools for the rapid diagnosis of COVID-19. *Analyst*, **146**(5): 1489-1513.	10.02
8	Kalaria, R.K. and H.K. Patel. (2020). Naturally occurring phytochemical as inhibitors from *Catharanthusroseus*: An In-silico approaches for drug development against COVID-19. (DOI: 10.21203/rs.3.rs-116443/v1).	-
9	Kant, K. (2020). Free radicals and their enzymatic scavenger during moisture stress in plant. *IJSET*,**6**:874- 877.	3.98
10	Kant, K. (2020). Oxidative stress and non enzymatic antioxidants during fruit ripening. *IJSET*,**9**:789-792.	3.98
11	Meena, Raveena, V.N. Mehta, JR. Bhamore, Potnuru, T.R., Tae-Jung Park and S.K. Kailasa. (2020). Diaminodiphenylsulfone as a novel ligand for synthesis of gold nanoparticles for simultaneous colorimetric assay of three trivalent metal cations (Al^{3+}, Fe^{3+} and Cr^{3+}). *Journal of Molecular Liquids*,**312**:1-8.	10.56
12	Modi, K. and Sanjay Jha (2020). *Bacilli* consortia positively regulates agronomic and growth traits in rice. *IJCS*,**8**(3): 636-645.	5.31
13	Modi, K. and Sanjay Jha (2020). Plant growth promoting *Bacillus* consortia regulates the expression of *NRT2.1*, *PT6*, and *AKT1* genes in rice." *IJCS*,**8**(5): 2685-2691.	5.31
14	Patel, Radhika K., R.K. Shah, V.S. Prajapati, K.C. Patel and U.B. Trivedi (2020). Draft Genome Analysis of Acinetobacterindicus Strain UBT1, an Efficient Lipase	7.75

	and Biosurfactant Producer. *Current Microbiology*,**78**(4): 1238-1244.	
15	Patel, Radhika, VimalPrajapati, Ujjval Trivedi and Kamlesh Patel (2020). Optimization of organic solvent-tolerant lipase production by *Acinetobacter sp*. UBT1 using deoiled castor seed cake. *3 Biotech*, **10**(12): 1-13.	7.79
16	Prajapati, A.P., P.B. Patel, H.D. Bhimani and A.V. Desai. (2020). Population dynamics of major insect pests of cowpea (Vignaunguiculata L. Walp) and its correlation with different abiotic factors under south Gujarat conditions. *IJCS*,**8**(3): 2307-2311.	5.31
17	Shrivastav, A.N. and H.Y. Vaghasiya. (2020). Production of Dextran from *Leuconostocmesenteroid.Int. J. Curr. Microbiol. App. Sci.* **9**(4): 1855.	5.38

Popular Article

1	Swati Patel (2020) Drip Fertigation – A Sustainable Water and Nutrient Management. Krishijagaran, December 8, 2020. https://bit.ly/3a6CziK

Books

1	Kalaria, R.K.,Patel, H.K., Patel, M.I. and Patel, H.V. (2020) Objective on PlantBiotechnology. 2ndEdition, Jain Brothers, New Delhi (ISBN-9788194829720).

Book Chapters in Edited book

1	V.N., Raval, J.B., Patel, S.R., Prajapati, V.S. and Patel R.M. (2021). Bio-functionalized Silver Nanoparticles: A Versatile Candidate for the Ceramic Industry. In:Hussain C.M., Thomas S. (Eds). Handbook of Polymer and Ceramic Nanotechnology. Springer, Cham. pp 1-17.(ISBN: 978-3-030-10614-0)
2	Patel, H.K., Kalaria, R.K. and Khimani, M.R. (2020). Nanotechnology: A promising tool for bioremediation. InMaulin P. Shah (Eds). Removal of Toxic Pollutant Through Microbiological and Tertiary Treatment, Elsevier, pp 515-547 (ISBN: 978-0-12-821014-7)
3	Vaghasiya, H.Y. (2020). Synergistic effect of TerminaliachebulaRetz. and antibiotic against some microbial strains. Conference proceeding of national seminar on Present Day Biology: Impact of Research at Molecular and Cellular Level, 61-65. (ISBN: 978-93-90996-18-6)

13. College of Agricultural Engineering & Technology, Dediapada

The Institute

To meet the ever increasing demand of qualified manpower in the field of emerging areas of Agricultural Engineering and Technology, Navsari Agricultural University (NAU), Navsari, has established College of Agricultural Engineering and Technology, Dediapada in the academic year 2013-14. The College has the mandate for conducting educational activities and strategic research on design and development of technologies/equipments in the various departments of the college *viz.*, Farm Machinery and Power Engineering, Processing and Food Engineering, Soil and Water Conservation Engineering, Irrigation and Drainage Engineering Renewable Energy Engineering & Basic Engineering and Applied Science along with extension of developed technologies to farmers processors and agricultural entrepreneurs. The college is located at Parsi Tekra, Dediapada, Narmada district, 72 km East from Ankleshwar railway station and 45 km South from Rajpipala.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	*Principal/Professor	01	01	-	-	-	-	-	01	01	-
2	Professors	01	00	-	-	-	-	-	-	-	00
3	Associate Professors	06	00	-	-	-	-	-	-	-	-
4	Assistant Professors	10	09	05	02	01	01	06	03	06	03
	Total	**18**	**10**	**05**	**02**	**01**	**01**	**06**	**03**	**07**	**03**

***Post is not sanction but charge given as against the post of Professor for I/C Principal.**

List of Departments

SN	Departments	SN	Departments
1	Department of Farm Machinery and Power Engineering (FMPE)	4	Department of Renewable Energy Engineering (REE)
2	Department of Soil and Water Conservation Engineering (SWCE)	5	Department of Irrigation and Drainage Engineering (IDE)
3	Department of Processing and Food Engineering (PFE)	6	Department of Basic Engineering and Applied Sciences (BEAS)

Academic Programmes offered

Degree Programmes	Duration	Total Credits
B. Tech. (Agril. Engg.)	8 Semesters	182
M. Tech. (Agril. Engg.)	4 Semesters	55
Ph. D. (Agril. Engg.)	6 Semesters	75

Under Graduate Credit details(As per V Deans' committee recommendations)

SN	Semesters	Number of Courses	Theory +Practical = Total Credits
1	First	9	13+9 = 22
2	Second	9	13+8 =21
3	Third	9	14+8 =22
4	Fourth	9	13+9 =22
5	Fifth	9	14+13 =27
6	Sixth	8	22+10 =22
7	Seventh	4	0+27 =27
8	Eight	4	6+13 =19
		Total	**85+97 = 182**

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	M. Tech Degree	Doctoral Degree
1	Farm Machinery and Power Engineering	Yes	No
2	Soil and Water Conservation Engineering	Yes	No
3	Processing and Food Engineering	Yes	No
4	Renewable Energy Engineering	Yes	No
	Total	04	00

Students Information

Summary of Students Admitted during AY 2020-21

Degrees	Gender	Intake capacity	Gujarat						ICAR	Foreign	Grand Total
			Gen	SEBC	SC	ST	CBSE	Total			
B. Tech. (Agril. Engg.)	Male	30	02	03	-	02	-	**07**	-	-	07
	Female		00	01	-	02	-	**03**	-	-	03
	Total		**02**	**04**	**-**	**04**	-	**10**	**-**	**-**	**10**
M. Tech. (Agril. Engg.)	Male	11	-	-	-	-	-	-	-	-	-
	Female		-	-	-	-	-	-	-	-	-
	Total		-	-	-	-	-	-	-	-	-
Grand Total			**02**	**04**	**-**	**04**	**00**	**10**	**-**	**-**	**10**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat						ICAR	Foreign	Total
			Gen	SEBC	SC	ST	CBSE	Total			
B. Tech. (Agril.Engg.)	1st	Male	02	03	-	02	-	-	-	-	07
		Female	00	01	-	02	-	-	-	-	03
	2nd	Male	07	10	01	01	-	-	-	-	19

		Female	00	01	-	02	-	-	-	-	03
	3rd	Male	08	14	-	03	-	-	-	-	25
		Female	00	00	-	01	-	-	-	-	01
	4th	Male	14	08	-	-	-	-	-	-	22
		Female	00	00	-	-	-	-	-	-	-
		Sub-total	**31**	**37**	**01**	**11**	**00**	**00**	**00**	**00**	**80**
M. Tech. (Agril.Engg.)	1st	Male	-	-	-	-	-	-	-	-	-
		Female	-	-	-	-	-	-	-	-	-
	2nd	Male	-	-	-	-	-	-	-	-	-
		Female	-	-	-	-	-	-	-	-	-
		Sub-total	**00**	**00**	**00**	**00**	**00**	**00**	**00**	**00**	**00**
Ph. D. (Agril. Engg.)	1st	Male	-	-	-	-	-	-	-	-	-
		Female	-	-	-	-	-	-	-	-	-
	2nd	Male	02	01	01	-	-	-	-	-	04
		Female	-	-	-	-	-	-	-	-	-
	3rd	Male	03	-	-	-	-	-	-	-	03
		Female	-	-	-	-	-	-	-	-	-
	4th	Male	02	-	-	-	-	-	-	-	02
		Female	-	-	-	-	-	-	-	-	-
		Sub-total	**07**	**01**	**01**	**00**	**00**	**00**	**00**	**00**	**09**
Grand Total			**38**	**38**	**02**	**11**	**00**	**00**	**00**	**00**	**89**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	02	10	10	00	22
Female	00	00	00	00	00
Total	**02**	**10**	**10**	**00**	**22**

Student's Fellowship during AY 2020-21

Name of fellowship	Under-graduate		Masters		Doctorate		Total
	No. of Students		No. of Students		No. of Students		
	Male	Female	Male	Female	Male	Female	
NAU PG fellowship	00	00	00	00	00	00	**00**
NAU Girls meritorious fellowship	00	00	00	00	00	00	**00**
SC/ST/fellowship	06	04	00	00	00	00	**10**
SEBC fellowship	33	02	00	00	00	00	**35**
General fellowship	26	00	00	00	00	00	**26**
Total	**65**	**06**	**00**	**00**	**00**	**00**	**71**

Cut off marks for admission in the B. Tech Programme during AY 2020-21

SN	Category	Minimum requirement of Marks (%) in PCM	Cut of Marks (%)*
1	General	40	**45.45**
2	SC	35	-
3	ST	35	**29.23**
4	SEBC	40	**31.48**
5	Other Board	40	**63.10**
6	PH	35	-
7	Ex-Army	35	-
8	EWS	**40**	**45.45**

* Cumulative marks of PCM and GUJCET

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examination	Number of students qualified	Number of students passed out students
ICAR JRF	**1**	**28**
ICAR SRF	-	-
Deemed University (NAME)	-	-
NET	-	-

Details of students qualified in ICAR JRF examination

SN	Name of the student	Registration number	Subject	Rank & Category
1	Sabalpara Rinaben H.	3050916016	Agricultural Processing and Food Engineering	204-Gen

Placement Cell

Degree	Total passed out students	Higher studies								
		Gujarat	Other states	Govt. Job	NGOs	Abroad	Self –entre preneurship	Unemployed	Private Job	Total
B.Tech. (Agril.Engg.)	28	2	1	-	-	-	8	4	13	28
Total	**28**	**2**	**1**	**-**	**-**	**-**	**8**	**4**	**13**	**28**

Activities of students and faculty members at the College

Organized International Day of Yoga-2020 through online on June 21, 2020

Conducted *"Vanmahotsav-2020"*programme in the campus on August 14, 2020

Students and staff members celebrated Constitution Day-2020on November 26, 2020

Organized Fit India Movement-2020 through online on December 24, 2020

Students prepared poster on the occasion of celebration of Agriculture Education Day-20202020 through online on December 04, 2020

Students involved in the online webinar on International Volunteer Day-2020 celebrated on December 05, 2020

Organized Republic day in the campus on January 26, 2021.

Students involved in National Voters Day 2020 through online on January 25, 2021

1st year students involved in the awareness programme on "Significance of Yoga for student's physical, mental and emotional health in COVID-19 era" on March 02, 2021


Hon'ble Vice Chancellor of NAU, Navsari, Dr. Z. P. Patel visited the College of Agricultural Engineering and Technology as well as Polytechnic Agricultural Engineering, Dediapada on March 9, 2021 and interacted with the staff members and students of both the colleges about academic progress as well as research and extension education activities pertaining to Agricultural Engineering and Technology.

NSS activities during AY 2020-21

SN	Activities	Date(s)	No of Volunteers
	Regular activities		
1	Yoga day (Online)	June 21, 2020	57
2	Constitution day (Online for students)	November 26, 2020	43
3	International Volunteer Day (Online)	December 05, 2020	31
4	Celebration of Agricultural Education Day (Online)	December 04, 2020	22
5	National Voter's day celebration (Online)	January 25, 2021	20
6	Awareness program on 'Significance of Yoga for student's physical, mental and emotional health in COVID-19 era'	March 02, 2021	20
7	Cancer awareness programme	March 20, 2021	14

Educational/Infrastructural Facilities

The college of Agricultural Engineering and Technology, NAU, Dediapada is one of the preeminent colleges of Navsari Agricultural University in the state matching with recommendations of V Deans' committee standards. The College takes pride in being an administrative building which is powered by clean and green energy campus provides an eco-friendly environment to its all the staff and students having anti-ragging cell, training and placement cell, NSS program cell and Students representative council to run various activities through a year. CAET is one of the few colleges in the NAU which has upgraded its classrooms to facilitate teaching through modern tools and techniques such as the classrooms with Wi-Fi and LCD projectors, tutorial rooms, college central library, well equipped laboratories of all the departments, engineering workshop, computer lab with CAD/CAM facilities, reading hall, examination hall and a state-of-the-art seminar cum conference hall with seating capacity of over 80 persons. The College is endowed with renovated boys' and girls' hostels, gymnasium, parking facility and playground to run various indoor and outdoor games. The College has taken measures to address the need for vigilance and security with CCTV-enabled to cater to the safety requirements of a well endowed and the equipped campus.

Research publications

SN	Details of Publications	NAAS rating
1	Dabhi, P.V., Lakkad, A.P., Patel, G.R. and Shrivastava, P.K. (2020). Application of dual crop coefficient approach for estimation of crop water requirement for Summer Sesame using SIMDualKc Model. *Journal of Agricultural Engineering*, **57**(4): 364-376,	5.59
2	Lakkad, A.P., Patel, B.S., Patel, V.A., Pachani, N.P. and Patel V.V. (2020). Comparative evaluation of various NDVI models to estimate crop co-efficient for Summer Sesame, *International Journal of Science, Environment and Technology*, **9**(5): 776-783.	3.98
3	Sanchavat, H.B., Singh, S.N., Modi, V. and Patel, B. (2020). Status, strategies and challenges for farm mechanization in Dediapada taluka of Narmada district, Gujarat, *Journal of Agri. Search*, **07**(04): 247-250.	4.41
4	Singh, A., Kandpal, T.C. and Mullick, S.C. (2020). An experimental study on top heat loss coefficient of a box-type solar cooker. *J. of Agricultural Engineering*. **57**(01):48-55.	5.59
5	Singh, S.N., Burbade, R.G., Sanchavat, H.B., Pandit, P.S. (2020). Physico-chemical characteristics of Sapota (Chikoo) powder based value added pasta product using semolina (Suji) and Maida, *Journal of Agri. Search*, **07**(04): 223-227.	4.41
6	Singh, S.N., Patel, V.A., Varma, M.G., Patel, S.G. and Savaliya, M.V. (2021). Effect of processing methods on physico-chemical properties, sensory evaluations and storage studies of Cauliflower (*Brassica oleracea* L. var. *botrytis*) Pickle, *Int.J.Curr.Microbiol.App.Sci..*, **10**(1): 1413-1428.	5.38

14. College of Fisheries Science Navsari

The Institute

The College of Fisheries Science was established on 27 November, 2014. South Gujarat region comprising of seven districts *viz*., Bharuch, Narmada, Surat, Navsari, Valsad, Tapi and Dang doesn't have a full-fledged faculty of Fisheries Science though fisheries is the main occupation and principal source of livelihood for over 3 lakhs of socio economically backward people. To achieve the above-envisioned goal, human resource development drive taken up on a mission mode serves the purpose of generating professionals, middle level technicians and skilled workforce to augment fisheries production and timely processing to ensure profitability to the fish farmers/Entrepreneurs. The College of Fisheries Science serves as a Nodal Centre of Educational, Research and Transfer of Technology activities by imparting higher education, and taking up research on location / situation specific needs and conduct specific client oriented training and demonstration programmes. New College of Fisheries Science at Navsari has been commenced in the year 2014-15 under Navsari Agricultural University. First two batches of 30 students are graduated in the academic year 2018-19 and 2019-20. Out of this 30 students, 21 students have qualified ICAR JRF exam. At present, total 97 students belonged to different batches (first, second, third & fourth year) studying at this college. The course curriculum is followed as per the ICAR VDean Committee recommendation. At present, total five sanctioned posts, out of these, only three teaching posts *i.e.* two Associate Professor & three Assistant Professors were filled. Further, two technical posts *i.e.*, one Lab technician and Fisheries officer are sanctioned so far to carry out the teaching, administrative and conduct the academic work. In order to strengthen the existing staff position for carrying out the academic, financial and administrative work, some more staff positions are proposed for the year 2022-23 to the Government of Gujarat for the sanction.

Faculty information

SN	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral					
				Gujarat	Out states	Gujarat	Out states	Gujarat	Out states	Male	Female
1	Principal	-	-	-	-	-	-	-	-	-	-
2	Professors	-	-	-	-	-	-	-	-	-	-
3	Associate Professors	2	1	-	-	1	-	1	-	1	-
4	Assistant Professors	4	4	2	-	2	-	4	-	4	-
	Total	**6**	**5**	**2**	**-**	**3**	**-**	**5**	**0**	**5**	**-**

List of Departments

SN	Department	SN	Department
1	Department of Aquaculture	5	Department of Fish Processing Technology
2	Department of Aquatic Animal Health Management	6	Department of Fisheries Engineering
3	Department of Fisheries Resource Management	7	Department of Fisheries Extension, Economics and Statistics
4	Department of Aquatic Environmental Management		

Academic Programmes offered

Degree Programmes	Duration	Total Credits
B.F.Sc.	8 Semesters	180

Under Graduate Credit details(As per V Deans' committee recommendations)

SN	Semesters	Number of Courses	Theory +Practical = Total Credits
1	First	10	13+9 = 22
2	Second	09	14+8 = 22
3	Third	10	13+9 = 22
4	Fourth	10	13+10 = 23
5	Fifth	11	16+11 = 27
6	Sixth	11	15+9 = 24
7	Seventh	20 (SRP)(RFWEP)	0+20 = 20
8	Eight	20 (SRP) (ELP)	0+20 = 20
		Total	**84+96 = 180**

SRP- Students Ready Programme; **ELP-** Experiential Learning Programme; **RFWEP-** Rural Fisheries Work Experience Programme

Post Graduates Programmes offered

SN	Disciplines of PG Programmes	Masters' Degree	Doctoral Degree
1	Aquaculture	-	Yes*
	Total	-	**01**

* In-service

Students Information

Summary of Students Admitted during AY 2020-21

Degree	Gender	Intake capacity	Gujarat								ICAR	Foreign	Grand Total
			Gen	SEBC	SC	ST	CBSE	EWS	Fishermen Quota	Total			
B.F.Sc.	Male	27	01	11	01	03	0	02	0	18	-	-	18
	Female		0	3	0	0	0	0	02	05	-	-	05
	Total		**01**	**14**	**01**	**03**	**0**	**02**	**02**	**23**	-	-	**23**

Summary of Students Enrolled during AY 2020-21

Degree	Year	Gender	Gujarat									
			Gen	SEBC	SC	ST	CBSE	EWS	Total	ICAR	Foreign	Total
B.F.Sc.	1st	Male	01	11	01	03	0	02	18	-	-	18
		Female	0	05	0	0	0	0	05	-	-	05
	2nd	Male	06	0	01	0	01	02	10	-	-	10
		Female	07	07	0	03	0	0	17	-	-	17
	3rd	Male	03	02	-	01	01	0	07	-	-	07
		Female	01	13	01	02	-	-	17	-	-	17
	4th	Male	04	06	0	02	-	-	12	-	-	12
		Female	0	10	01	01	-	-	12	-	-	12
		Sub-total	**22**	**54**	**4**	**12**	**02**	**04**	**98**	-	-	**98**

Summary of passed out students during AY 2020-21

Gender	Distribution of students in different classes				
	First with Distinction	First class	Second class	Passed class	Total
Under Graduate level					
Male	8	0	0	-	**8**
Female	6	1	0	-	**7**
Total	**14**	**1**	**0**	-	**15**

Student's Fellowship during AY 2020-21

SN	Name of fellowship	Under-graduate		Masters		Doctorate		Total
		No. of Students		No. of Students		No. of Students		
		Male	Female	Male	Female	Male	Female	
1	NAU Girls meritorious fellowship	-	01	-	-	-	-	01
2	ASPEE JRF	-	-	-	-	-	-	-
3	SC/ST/fellowship	08	08	-	-	-	-	16
4	SEBC fellowship	19	35	-	-	-	-	54
	Total	**27**	**43**	-	-	-	-	**71**

Cut off marks for admission in the UG degree Programme during AY 2020-21

SN	Categories	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)*
1	General	40	**45.88**
2	ST	35	**31.38**
3	SC	35	**44.75**
4	OBC/SEBC	40	**46.73**
5	EWS	40	**48.32**
6	Fishermen	As per Category	**51.30**
7	Other Board	**As per Category**	**59.31**

* Based on PCB and GUJCET marks

Number of students qualified in ICAR JRF/SRF/NET examination or Deemed University during AY 2020-21

Name of examination	Number of students qualified	Number of students passed out students
ICAR JRF	11	**15**

Details of students qualified in ICAR JRF examination

SN	Name of the students	Registration number	Subjects	Rank & Category
1	Chandegara Abhaykumar Dineshbhai	3111016001	Fisheries Extension Tripura (India)	GEN-228/ OBC-104
2	Chovatiya Ravikumar Mansukhbhai	3111016002	Aquatic Animal Health Management	GEN-22
3	Halpati Reena Prakashbhai	3111016003	Fish nutrition and feed technology	ST
4	Parmar Bindiya Kiritkumar	3111016006	Aquatic Environment Management	GEN
5	Patel Jaykumar Bhagubhai	3111016008	Aquatic Animal Health Management	OBC
6	Patel Kundankumar Rameshbhai	3111016009	Fish Genetics/Breeding	GEN-269/ EWS-20
7	Patel Shivangi Bharatbhai	3111016010	Fish Processing Technology	SC
8	Patel Urviben Mahendrabhai	3111016011	Fish Processing Technology	ST
9	Tandel Manthankumar Amrutlal	3111016013	Aquatic Environment Management	OBC
10	Tandel Nehalkumari Anilbhai	3111016014	Fisheries Resource Management	OBC
11	Verma Jinal Madanlal	3111016015	Fisheries Resource Management	OBC

Placement Cell

Degree	Total passed out students	Higher studies							
		Gujarat	Other states	Govt. Job	NGOs	Abroad	Self –entre preneurship	Unemployed	Remarks
B.F.Sc.	**15**	**3**	**11**	**0**	**0**	**0**	**1**	**0**	-
Total	**15**	**3**	**11**	**0**	**0**	**0**	**1**	**0**	-

Activities of students and faculty members at the College

College organized Sea Food Event under the Forth Professional year B.F.Sc. students (ELP)

Celeberated National Fish Farmer's Day on July 10, 2020

Organized swimming exam and activity of first professional year B.F.Sc. students

Students invlvoed in Shrimp Harvesting at Aqua Farm Danti-Ubharat,

NSS activities during AY 2020-21

SN	Activities	Date/ period	No of Volunteers
1	International Yoga Day (Online)	June 21, 2020	45
2	Tree plantation	July 05, 2020	20
3	Farmers/ Students visit to DantiPond & Aqua lab (NAU)	July 17, 2020	145

Ongoing Educational/Research/ Extension projects funded by Govt. of Gujarat and External agencies

SN	Name of the projects	Budget Head	Funding agency	Name of department
1	Establishment of College of Fisheries Science	12062	Government of Gujarat (Plan Project)	College of Fisheries Science, Navsari
2	Develop and demonstrate aqua-agro models in coastal areas of South Gujarat	12023	Government of Gujarat (Plan Project)	CSSRS, Danti-Umbharat and Navsari Agricultural University, Navsari
3	All Indian Network Project on Fish Health, project	2097	ICAR	College of Fisheries Science, Navsari

Educational/Infrastructural Facilities:

This College has got independent building with modern classrooms, laboratories. Total seven laboratories are established in the college for UG teaching. There are separate hostels for Boys (Sagar Hostel) and Girls (Meenakshi Hostel) students of Fisheries in the NAU Campus.

Experiential Learning Unit

Title of ELU	:	1. Seed Production 2. Post Harvest technology
Year of establishment	:	2019
Name of Manager	:	Dr. R.V. Borichangar
Department	:	Department of Aquaculture and Department of Fish Processing Technology
Activities	:	Ornamental fish production, Carp seed production, Marketing and Value-added product preparation such as fish-shrimp pickle and marketing etc.,
Number of students beneficiaries	:	54
Amount earned per student	:	Nil

15. University Library and Knowledge Centre, Navsari

About Library and Knowledge Center

Library is the heart of the institution and it is the knowledge paradise for the students, teachers, researchers and other users to acquire right knowledge at right time to the right user. Library is the principal resource and knowledge centre in the present era of information technology. This library was college library of N.M. College of Agriculture during the year 1965;later, it was renamed as Campus library by the Gujarat Agriculture University in the year 1972. Again, it was renamed as University Central Library in the year 1988 with inclusion of new faculty of Horticulture and Forestry. When the Navsari Agricultural University came into existence on May 1, 2004, it was converted into University Central Library. At present, it is working as the University Library and Knowledge Centre. Library is located in the centre of Navsari Campus at approachable walking distance from the various colleges and hostels. Library is having good infrastructure facilities spread over an area of 3099 Square meter. The main mandatory function of the library is to provide all kinds of scientific and technical database information especially in the fields of Agriculture, Horticulture, Forestry, Veterinary, Biotechnology, Agribusiness Management, Agri-engineering, Fisheries, Information Communication Technology as well as other basic and allied science to the students, scientist, teachers, researcher and extension workers and all type of readers. Following information has been narrated here to throw the light on past, ongoing and future activities of the library.

Library Timing

The University library timing is scheduled as following to meet the objectives of the library to improve the knowledge and developing a habit of reading among students and other library users as well as to avail the reading resources for maximum hours.

1. Monday to Working Saturday: 07:30 AM to 00:00 Mid Night
2. Second and Fourth Saturday and Sunday: 09:00 AM to 05:00 PM
3. The library is opened on demand and as per need of the library users even on public holidays.

University Library Staff position

SN	Designation	Filled Posts
1	I/c University Librarian	01
2	Assistant Librarian	01
2	Library Assistant	01
3	Junior Clerk	01
4	Lab Attendant	01
5	Library Attendant	02
	Total	**07**

Library Collections (as on 31/03/2021)

Books	83971
Gratis Books	2087
E-Books	946
Bound volumes of periodicals	11327
M.Sc. Theses	2694
Ph.D. Theses	549
Reports	6603
Total Collection	108177

Journal / Periodicals Subscription (as on 31/03/2021)

Indian	**25**
Through CeRA	2923
Gratis	72
E-Resources	
1. CDs / DVDs	665
Online Database	
A. Indian	**B. Foreign**
CMIE Commodities CMIE Prowess For Interactive Querying CMIE Industry Outlook Indiastat J-Gate Complete Nipaers Database	CAB Abstract VET Abstract Biotropica Plant Pathology

Library Membership

Type of Members	**No. of Members**
Faculty	659
Diploma Students	053
UG Students	733
PG students	524
Ph.D. Students	132
Total	2101

Book Purchased during 2020-21 financial year

Particulars	**Numbers**
E-Books	166
Subscribed Journals (Indian)	025
Subscribed E-Resources	004

Library User Statistics during 2020-21 financial year

Library Users	**Numbers**
Students	16939
Faculty	00744
Issue-Return of Books	03768
Reprography Services	34839
CeRA and Krishi Kosh users	202476

Services Provided at University Library

SN	Circulation Services	SN	Internet lab facilities
1	(CAS) Current awareness services	14	Separate Reading Room for boys and girls
2	(SDI)Selective Dissemination Information Services	15	Reading Room facility / Night Reading Room facility
3	Classification Services	16	Book Display Services
4	Cataloguing Services /OPAC (Online Public Access Catalogue)	17	Discuss Room Services
5	Document Delivery Services	18	CCTV Camera facilities
6	Indexing Services	19	CeRA (Consortium for e-Resources in Agriculture) through ICAR
7	Reference Services	20.	KrishiKosh through NAIP Project (ICAR)
8	Reprography Services	21	e-library
9	Online Database : CAB Database, VET Database, Plant Biotechnology, CMIE Indian Online Commodities, CMIE Prowess For Interactive Querying, India State etc Services.	22	Property Counter services
10	Inter Library loan services	23	Wi-Fi facilities
11	Referral Services	24	Internet Base Services

Library Committee

University constituted Library committee for approval of books, e-books, journals and other items including software for purchase. The committee also works out for the strengthening of library and knowledge center that helps the students, faculty members and other readers.

Members of Library Committee

SN	Name	Office Name & Address	Designation
1	Dr. Z. P. Patel	Vice-Chancellor, Navsari Agricultural University, Navsari	**Chairman**
2	Dr. S. R. Chaudhary	Director of Research, Navsari Agricultural University, Navsari	Member
3	Dr. C. K. Timbadiya	Director of Extension Education, Navsari Agricultural University, Navsari	Member
4	Dr. K. G. Patel	Principal & Dean Agricultural College, Navsari Agricultural University, Bharuch	Member
5	Dr. P. K. Shrivastava	Principal & Dean, ASPEE College of Horticulture & Forestry, Navsari Agricultural University, Navsari	Member
6	Dr. V. B. Kharadi	Principal & Dean, College of Veterinary Science and Animal Husbandry, Navsari Agricultural University, Navsari	Member
7	Dr. Ruchira A. Shukla	Principal & Dean, ASPEE Agribusiness Management Institute, Navsari Agricultural University, Navsari	Member
8	Dr. R. M. Patel	Principal & Dean, ASPEE SHAKILAM Bio-Technology Institute, Navsari Agricultural University, Navsari	Member
9	Dr. R. M. Naik	Director of Student Welfare, Navsari Agricultural University, Navsari	Member
10	Dr. H. V. Pandya	Registrar, Navsari Agricultural University, Navsari	Member
11	Mr. D. T. Chaudhari	Comptroller, Navsari Agricultural University, Navsari	Member
12	Dr. J. D. Thanki	Professor, N.M.College of Agriculture,	Member

		Navsari Agricultural University, Navsari	
13	Dr. P. K. Shrivastava	Professor, ASPEE College of Horticulture & Forestry, Navsari Agricultural University, Navsari	Member
14	Dr. S. S. Chaudhary	Professor, College of Veterinary Science and A.H., Navsari Agricultural University, Navsari	Member
15	Dr. Mehul G. Thakkar	Associate Professor, ASPEE Agribusiness Management Institute, Navsari Agricultural University, Navsari	Member
16	Dr. R. V. Borichanger	Nodal Officer, College of Fisheries, Navsari Agricultural University, Navsari	Member
17	Dr. M. K. Arvadia	Principal, N.M.College of Agriculture, Navsari Agricultural University, Navsari	Invited Member
18	Dr. J. J. Pastagia	Principal, Agricultural College, Navsari Agricultural University, Waghai	Invited Member
19	Er. S. S. Sengar	College of Agricultural Engineering, Dediapada, Narmada	Invited Member
20	Mr. Savan Rathava	Student Representative, College of Veterinary Science and A.H., Navsari Agricultural University, Navsari	Member (Student's Representative)
21	Mr.Vipual. A. Surela	Student Representative, ASPEE College of Horticulture & Forestry, Navsari Agricultural University, Navsari	Member (Student's Representative)
22	Kum. Abhilasha M. Pandya	Student Representative, N.M. College of Agriculture, Navsari Agricultural University, Navsari	Member (Student's Representative)
23	Mr. Roanak P.Gajera	Student Representative, ASPEE Agribusiness Management Institute, Navsari Agricultural University, Navsari	Member (Student's Representative)
24	Dr. Kamelsh G. Patel	I/C University Librarian, University Library, Navsari Agricultural University, Navsari	Member Secretary

The XIX meeting of Library Committee was held on 30/12/2020 the following issues/items were discussed.

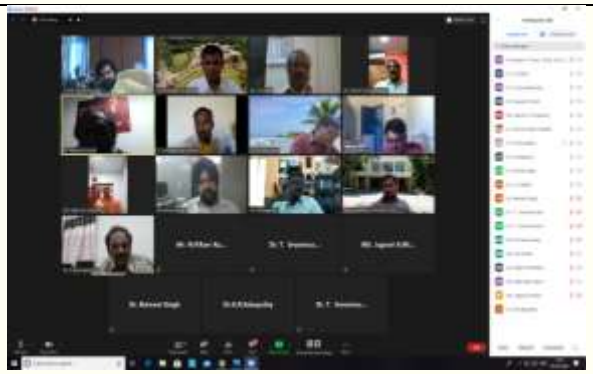
1 Resolved the purchase policy of books and e-books for University Library and Departmental Library of various college of NAU, Navsari.
2 Resolved the subscription policy of Journals, e-journals, e-database and e-resources for University Library and Departmental Library of various college of NAU, Navsari.
3 Resolved to purchase necessary books for University Library and Departmental Library of various college of NAU, Navsari.

Consortium for E-Resources in Agriculture and Krishiprabha Indian Agriculture Doctoral Dissertation Repositories

University Library, NAU, Navsari is linked with consortium for e-Resources in Agriculture for online journals (CeRA) and "*Krishikosh*" Indian Agriculture Doctoral dissertation (Theses) repositories for encouragement of better reading environment. Efforts have been made to provide online journal services and online thesis database for scientist and student community of NAU, Navsari. Use of the CeRA in the NAU Library in the academic year 2020-21, total number is 202476 hits by university library users, which is very high in the western zone.Total 481 requests are received from other agricultural university libraries users for available full text research articles in the NAU library and 320 full text request articles were provided by the document delivery services. Similarly, 311 users have collected full length thesis information of his/her own interest from University Library, NAU, Navsari through *Krishikosh* database.

Significant Achievements

1. University Library, NAU, Navsari received Award of Best Usage of "J-Gate@CeRA award of western zone of India from ICAR, New Delhi on November 9, 2020.
2. National Webinar on Transforming the Agricultural Knowledge Resource Centres to meet the post COVID 19 Challenges has been organized by University library, NAU, Navsari and AALDI during the period May 26-30, 2020. In the National Webinar, total 378 librarians, library users, researchers as well other professionals and students across states of the country were attended through online. Total six external experts (lecturers) were presented during three days. This programme was organized by Dr. Kailash D. Tandel, I/C University Librarian, NAU as Organizing Secretary and Mr. Rakesh N. Dhimar, Library Assistant as Joint Organizing Secretary under the direction and guidance of Dr. S. R. Chaudhary, Vice-Chancellor, Navsari Agricultural University, Navsari.
3. National Level Faculty Development Training Programme, DIGICULT-Spreading Digital Culture to the Library Professional, Readers and Researchers has been organized by University Library, NAU, Navsari during the period June 8-12, 2020. This programme was inaugurated by Dr. S. R. Chaudhary, Vice-Chancellor, Navsari Agricultural University, Navsari. Dr. Kailash D. Tandel, I/C University Librarian, NAU acted as Organizing Secretary and Mr. Rakesh N. Dhimar, Library Assistant acted as Joint Organizing Secretary. The National FDTP training was attended by 370 librarians, library users, researchers as well other professionals and students across the states of the country through online mode. In this programme, six external experts were invited and presented their view.
4. University library, NAU, Navsari also organized the National Level Faculty Development Programme: Show-seek-know-Sowing seeds of knowledge to library and information professionals from June 18-22, 2020. The National FDP was attended through online by 370 librarians, library users, researchers as well other professionals and students across states of the country. Total six experts lecture were presented during three days.
5. Improvement of Infrastructure like implementation of digital and ICT technology, CCTV, fire proof server room, up-gradation of server, desktops, etc. have been attempted.
6. E-theses submitted by the students of NAU under Ph.D. and Master Degree programme are managed through digital repository. Library has also made provision of all India Agricultural University Ph.D. theses among NAU PG students through KRISHIKOSH.
7. Bibliographic records of library have been updated with KOHA Library Management Software.
8. Library has been providing Wi-Fi Internet with remote access facility for the users.
9. University library provided with full-fledged AC reading room facilities of the library users.
10. Library provided the separate reading section for library users of late night usage purpose and also extended library timing (*i.e.*, 12-00 AM) for maximum use of late night library
11. Library membership has been automated and circulation of books and other publications were also done through KOHA Library Management Software
12. Succeed in increasing the membership of library users and made them for maximum use of the library with remote access.
13. Succeed in e-collection development through providing the e-books catalogues, e-contents to the library users.
14. e-Library has been made more dynamic through remote access.
15. Bibliographic records of library have been updated with KOHA Library Management Software.



University Library organized the National Webinar on Transforming the Agricultural Knowledge Resource Centres to meet the post COVID 19 Challenges during May26to30,2020

University Library organized the National Level Faculty Development Training Programme-DIGICULT during June 8 to 12, 2020

University Library organized the National Level Faculty Development Programme: Show-Seek-Know from June 18 to 22, 2020

OPAC Section

Stack Room

Reading rooms-Library

16. Directorate of Research, Navsari

Navsari Agricultural University has a strong research base to cater the needs of the farmers of South Gujarat. The primary goal of research in the university is to generate technologies for augmenting agricultural productivity and farm returns synchronizing with the state's objectives, socio-economic and cultural needs of the farming community on a sustainable basis. The University mainly undertakes research on the crops grown in South Gujarat *viz.*, cotton, paddy, sugarcane, pulses sorghum, hill millets, niger, soybean, castor, wheat, groundnut and horticultural crops like, mango, banana, sapota, papaya, cashew nut, mushroom, vegetable and floriculture crops. Apart from this, University also undertakes research on soil and water management, organic farming, bio-fertilizers and bio-pesticides, post-harvest technology, value addition, agro-forestry, fisheries, animal husbandry, protected cultivation, climate change and agriculture, soil health, forage crops, food quality and food testing, residual analysis, nutritional security, bee-keeping, sericulture etc.

South Gujarat is considered as the horticultural bowl of the state. This region is blessed with eleven rivers including the Narmada river which traverses through the South Gujarat. Cultivated area of South Gujarat is 1332900 ha with 599400 ha irrigated area (44.96%). NAU jurisdiction area includes around 300 km of coastal line.

District-Wise Major Cultivated Crops

Various grains, pulses, oilseeds, fruits and vegetables are grown in different districts of South Gujarat. Important crops like cotton is cultivated in Bharuch and Narmada districts, amongst grains, paddy is largely grown in Navsari, Surat, Bharuch, Valsad, Tapi and Dang districts. Sugarcane is grown in entire South Gujarat area except Dang district and grain of poor people sorghum is grown in five out of seven districts. Pulses are cultivated mainly in Narmada, Tapi and Valsad districts and finger millets, vari and niger are largely grown in tribal dominated Valsad and Dang districts of South Gujarat. Main fruit crops of this region are mango, banana and sapota but other fruits like papaya, cashew, ber, guava and custard-apples are also grown. Major vegetable crops of South Gujarat are brinjal, okra, chilli, tomato, cucurbits, Indian bean and tuber crops.

Historical Background

NAU has its presence at 15 different locations in South Gujarat, possesses 897.26 ha land including 710.99 ha cultivable land. The foundation of agricultural research has been laid down way back during the year 1896 by establishing Main Cotton Research Station at Surat, Regional Cotton Research Station (1913) at Bharuch, Regional Rice Station (1934) at Vyara and Fruit Research Station (1935) at Gandevi by British Government before independence of India. Further, after independence, Hill Millet Research Station (1954) at Waghai, Agricultural Research Station (1959) at Tanchha, Main Sorghum Research Station (1962) at Surat, Cotton Wilt Breeding Station (1964) at Hansot, Cotton Sub-Research Station (1964) at Achhalia, Horticulture Farm (1965) at Navsari, Soil & Water Management Research Unit (1965) at Navsari, Soil Salinity Research Station (1966) at Danti, Ubharat, and Sugarcane Research Station (1968) at Navsari were established by Department of Agriculture, Government of Gujarat. These nine research stations were then transferred to newly established Gujarat Agricultural University (GAU) during the year 1972 and research activities were also started at Navsari center. Later on, Agricultural Experimental Station (1972) at Paria, Livestock Research Station (1978) at Navsari, Wheat Research Station (1980) at Bardoli, Niger Research Station (1990) at Vanarasiwere established by GAU and all research centers were transferred to NAU, Navsari during the year 2004. Then, NAU has established research stations *viz.*, Floriculture Farm (2004) at Navsari, Agricultural Research Station (2008) at Mangrol and Agricultural Research Station (2009) at Dediyapada.

Research Stations of the University

SN	Location	Year of Establish.	Area (ha)	Cultivated area(ha)	Details of Farms
1	Navsari	1964	400.62	288.15	Main Rice Research Station Main Sugarcane Research Station Soil & Water Management Research Unit Livestock Research Station, Regional Horticultural Research Station Pulse Research Station Floriculture Farm Vegetable Farm Organic Farm
2	Bharuch	1913	39.19	31.00	Regional Cotton Research Station Pulse Research Station
3	Surat	1896	87.58	81.21	Main Cotton Research Station Main Sorghum Research Station
4	Paria	1972	142.73	127.73	Agriculture Experiment Station (Horticulture)
5	Vyara	1934	40.33	29.87	Regional Rice Research Station
6	Waghai	1954	28.59	19.81	Hill Millet Research Station
7	Gandevi	1935	12.23	10.18	Fruit Research Station
8	Bardoli	1980	8.90	7.94	Wheat Research Station
9	Achhalia	1964	45.89	40.81	Regional Cotton Research Station
10	Tanchha	1959	19.42	14.89	Agriculture Research Station
11	Hansot	1964	16.30	14.10	Cotton Wilt Breeding Station
12	Danti-Umbharat	1966	14.47	12.00	Coastal Soil Salinity Research Station
13	Vanarasi	1989-90	9.11	8.70	Niger Research Station
14	Mangrol	2008-09	10.10	8.80	Agriculture Research Station
15	Dediyapada	2009-10	21.80	15.80	Agriculture Research Station
		Total	**897.26**	**710.99**	

NAU, Navsari receives funds from Government of Gujarat, ICAR, New Delhi, Government of India and other private organizations for undertaking research for fulfilling the needs of farmers of South Gujarat. During the year 2020-21, a total of 264 schemes were operational, which includes 190 schemes funded by Government of Gujarat, 31 schemes funded by ICAR and GoI and 43 schemes financed by private companies and other agencies.

The University has successfully developed synthetic leather, cellulose powder, high quality paper and fibres from waste banana pseudostem. The University got success in developing edibles like candy, pickle, chips and RTS from central core of Banana Pseudostem. The University has patented two technologies *viz*., "Preparation of candy from central core of banana pseudostem" and "Preparation of Novel Organic fertilizer from banana pseudostem".

Department of Plant Pathology produced more than 39,084 litres of bio-fertilizer of various strains like PSB, Rhizobium, *Azotobactor*, *Acetobactor and Azospirillium* in liquid form and distributed/sold to farmers of south Gujarat. Navsari has developed NAUROJI- Stonehouse trap: a saga of triumph over fruit flies and produced at large scale for the benefit of farmers growing fruits and vegetables in South Gujarat.

NAU, Navsari has very well developed research facilities like Bio-fertilizer and Bio-pesticide Unit, Banana Pseudostem Value Addition Unit, Soil and Water Management Unit, Food Quality Testing Laboratory, Central Instrumentation Laboratory, Post Harvest Technology Laboratory, Tissue Culture Laboratory, Organic Farm, Horticultural Farm, Protected Cultivation of Vegetables and Flowers, Nurseries for horticultural and medicinal plants, Biotechnology Laboratory and latest Diagnostic and treatment facilities for animals and diagnosis of diseases of aquaculture. These facilities provide an opportunity to undertake quality research in agricultural and allied sciences.

Moreover, NAU, Navsari also imparts farm skill development trainings to farm women for inculcating entrepreneurship and thereby to strengthen women empowerment.

About the technologies

After attaining the status of an independent University in the year 2004, NAU has developed a total of 736 technologies for the benefit of farmingcommunity. Technologies have been developed in the field of crop improvement (99), natural resource management (266), horticulture and agro-forestry (166), forestry (18), plant protection (93), agriculture engineering (46), animal health (6), animal production & fisheries (33), basic sciences (8) and social sciences (1). Over the last 11 years, NAU has developed Good Agricultural Practices and technologies related to INM, IPM, IDM, IWM, Organic farming practices and IFS of various crops under cultivation in South Gujarat for benefitting farmers.

The NAU has released 99 high yielding good quality varieties of various crops including 18 varieties of cotton, 18 varieties of rice, 9 varieties of sugarcane, 7 varieties of sorghum, 7 varieties of nagli, 4 varieties ofpigeon pea, 4 adenium, 3 eachvarietiesturmeric, vari, Indian bean and moong, 2 each varieties of niger and mango ginger, 1 each variety of little gourd, pointed gourd, castor, brinjal, tomato, malabarneem, urd bean, greater yam, susbenia, elephant foot yam and okra. Moreover, NAU endorsed, 1 each variety of Pigeon pea-Vaishali, Sorghum- PhuleRevati, Rice- NAUR-1 (Aerobic condition), Sweet potato- Bhukanti and Soybean-Phuleagrani.

During the year 2020-21, NAU has released 13 new varieties of 11 crops including 2 varieties of rice (GR-20and GNR-9), 2 varieties ofadenium(GNAd-3and GNAd-4)and 1 each from sugarcane (GNS-12), turmeric (GNT-3), mango ginger (GNMG-2), okra (GNO-1), finger millet (CFMV-2) , little millet (GV-4), rabi-sorghum (GJ-101), cotton (GN.Cot.27) and niger (GNIG-4).

The scientists of NAU have been working for evolving and optimizing technologies in relation to MIS with and without mulching, nutrient management based on soil health cards, schedule of nutrient supplement to enhance productivity of various crops grown in South Gujarat. Thus, NAU has recommended as many as 266 package of practices for soil, water and Integrated Nutrient Management. Some of the important technologies like land configuration, drip irrigation and nutrient management for fruit crops, grain crops and vegetables; drip irrigation, mulching and fertigation technology for banana and other crops, drainage technologies for prevention of soil erosion and water logging have been recommended by NAU. Other technologies for the benefit of farmers have been developed *viz*., nutrient management in papaya and mango, effect of micronutrients in mango, sapota, papaya and okra. Effect of mulching and nitrogen on growth, yield and quality of *desi* rose and Net house cultivation of papaya.

Apart from these, scientists of NAU also developed several technologies for minimizing losses caused by various diseases and pest in various crops. Based on feedback of farmers, specific IPM technologies have been developed and propagated for control of various crop diseases as well pest incidence to enhance productivity. NAU has recommended 93 technologies of IPM since 2004. Some important technologies like Methyl Uginol and sex pheromone traps for control of fruit flies in mango, sapota and vegetable crops; black *Tulsi*extract baited trap for chicku bud borer; effective control of white fly in okra, brinjal and cotton; sucking pest and bollworm in cotton, leaf blight and stem borer in paddy, stem borer, other borers, red rot and wilt in sugarcane;culture of mulberry worm in castor crop have been developed for the benefit of farmers of South Gujarat.

Besides, 184technologies for improvement in the field of vegetables, fruits, flowers, medicinal and aromatic plants, and forest and plantation trees have also been developed for the benefit of farmers of South Gujarat. Technologies worth mentioning are high density planting in mango, precision farming of banana, papaya and brinjal; organic farming of fruits, vegetables and tuber crops; paired row planting in banana, nutrient management of banana, papaya and other vegetables; early flowering of mango, canopy management in mango, de-sucking of banana, post shooting management of banana, pitcher method of irrigation in mango and rejuvenation of mango. NAUalso developed technologies of bee keeping for additional income of farmers. Further, technologies of value addition for enhancing the income of farmers like value addition of banana pseudostem, preservation of fresh mango pulp, value addition of fruits like banana, sapota, guava and flower crops and enhancement of shelf life of banana and mango have been developed.

Moreover, this university also produces quality seeds for farmers of South Gujarat. During last fifteen years, the University has produced 62866.5 quintals of quality seeds including nucleus,

breeder, foundation, certified and truthfully labelled seeds and 64210.5 quintals of sugarcane *setts*.University also produced 3.20 lakh of saplings and 24.33 lakh of tissue culture plants of banana and sugarcane during last fifteen years under Mega Seed Project.

Research Council is the apex body of the University for taking policy decision related to research. It has discipline wise 10 research sub committees, wherein, results of research schemes/experiments of previous year are discussed, new programmes as well as recommendations for farmers and scientific communities are being finalized. The same has been finally approved in Joint AGRESCO of SAUs of Gujarat.

Planning and Monitoring of Research

NAU has a mission to develop and disseminate modern agricultural technologies which are location specific, cost effective and suitable for wide acceptance by the farming community. To achieve holistic goal in proper manner, the Agricultural Research Council acts as apex body for planning and implementing long, medium and short term schedules and guidelines. The Director of Research and Dean P.G. Studies under the guidance of Vice-Chancellor co-ordinates, monitors, evaluates and lays future plans in consultation with experts and scientists of the University for research to be implemented at main stations and sub centres.

Research Sub-Committees

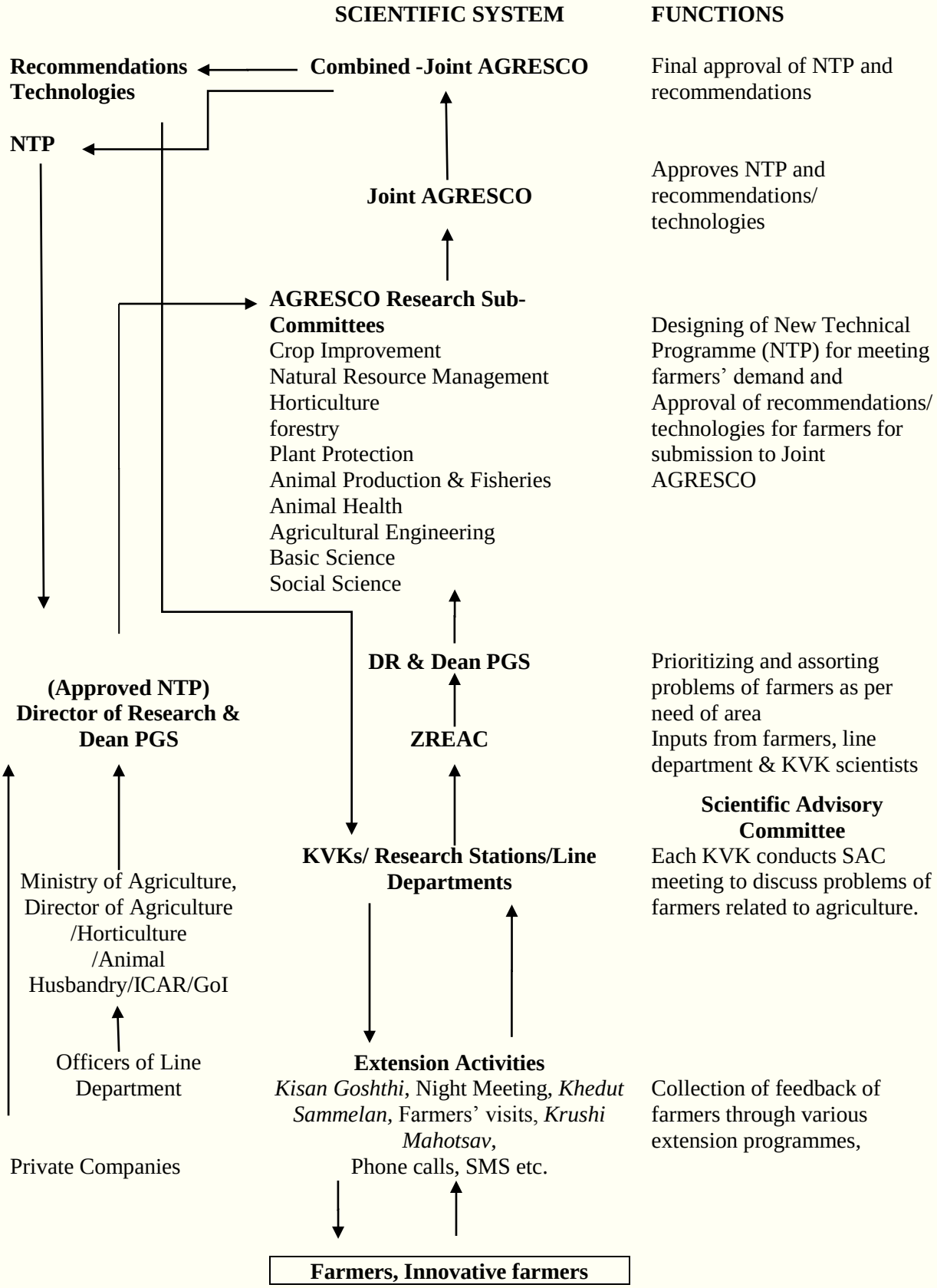
NAU gives priority to undertake the research based on challenges faced by the farmers of South Gujarat. The feedback of farmers is received through KVKs and Line departments during the biannual meeting of Zonal Research and Extension Action Committee. Thereafter, new technical programmes are framed and proposed to respective Research Sub-committees for further discussion, deliberations and approval as a New Technical programme.

The detailed discussion and deliberations are held in various sub-committee meetings regarding new research proposals, research results and recommendations. Post Graduate research works which are valuable and high standard are also discussed to take this for further research by the respective department. The proposed research work is implemented only after approval of respective research sub-committee. There are nine different sub committees to look after research proposal, progress of research work and submission of final reports to various funding agencies. The meeting of sub-committee is conducted under the chairmanship of Director of Research and under the supervision of Vice Chancellor of the University.

Research recommendations for farming community 2020-21

SN	Name of the Sub-Committees	No. of Recommendations		NTP
		Farmers	**Scientific community**	
1	Crop Improvement	13	00	**00**
2	Natural Resource Management	11	02	**41**
3	Plant Protection	10	14	**75**
4	Horticulture	11	01	**41**
5	Forestry	03	01	**7**
6	Agril. Engineering	07	02	**10**
7	Basic Science	00	02	**22**
8	Social Science	00	04	**37**
9	Animal Production & Fisheries Science	04	00	**17**
10	Animal Health	00	03	**12**
	Total	**59**	**29**	**262**

Flowchart of Prioritizing/Decision making in Research at NAU, Navsari



Recommendations for Farmers (2020-21)

1. Crop Improvement

1.1RICE VARIETY: NVSR-407 (GR-20)

The farmers of Gujarat state are recommended to grow aromatic rice variety GR-20 (Navsari Kamod) in transplanted condition during *kharif* season. The proposed genotype recorded average grain yield of 4935 kg/hain Gujarat, which was 118.7, 30.5, 14.3 and 36.6 % higher over the check varieties Krishna Kamod, Narmada, GAR-14 and GR-101, respectively. It has strong aroma, short slender grain, more productive tillers and more number of grains per panicle. It has intermediate amount of amylose (23.10 %), protein (6.14 %) and high head rice recovery (64.2 %). The variety is moderately resistant against bacterial leaf blight, grain discoloration and sheath rot. The variety showed tolerant reaction to brown plant hopper and moderately resistant reaction against stem borer, leaf folder and sheath mite.


1.2 RICE VARIETY: NVSR-2756(GNR-9)

Rice variety GNR-9 (Lalkada Gold) is recommended for transplanted rice growing areas of South Gujarat.This rice variety recorded average grain yield of 4200 kg/ha whichis 40.4 and 19.7 % higher over check varieties Lalkada and GNR-4, respectively. Long slender grain rice variety GNR-9 contains intermediate amylose (21.5%), high head rice recovery (56.24%), high Protein (8.44%), Iron (3.4 ppm) and Zinc (19.17 ppm) in polished rice. The variety showed moderately resistant reaction against disease like leaf blast as well as pests like stem borer, leaf folder and sheath mite.

1.3 SUGARCANE VARIETY: CoN 15071(GNS-12)

Early maturing non lodging and non-flowering sugarcane variety CoN 15071 (129.34 t/ha) performed very well in south Gujarat, where is exhibits overall 17.98 per cent and 27.94 per cent cane yield superiority over the standards CoN 05071 and Co 86032. This clone possess higher sugar yield. The proposed clones showed moderately resistant reaction against major diseases like wilt and red rot, while resistant against whip smut. The proposed clone showed less susceptible reaction to major insect and it is a good ratooner. Sugarcane clone CoN 15071 recommended for sugarcane growing areas at south Gujarat as GNS-12 (Divyashi).


1.4 TURMERIC VARIETY: NVST-84(GNT-3)

The early maturing turmeric genotype NVST-84 recorded 32.89 t/ha average green rhizome yield in South Gujarat. It exhibited overall 10.26 per cent and 27.51 per cent green rhizome yield superiority over GNT-2 (LC) and Pratibha (NC), respectively. It possess higher tillers per plant, mother rhizomes, finger rhizomes, rhizome length as well as width. It also exhibited higher curcumin content, oleoresin content, dry rhizome recovery and powder recovery, which are desired quality traits for the processing industry. NVST-84 is resistant to rhizome rot and moderately resistant to leaf blight. The proposed genotype is recommended for turmeric growing areas of South Gujarat as GNT-3 (Pitambari).


1.5 MANGO GINGER VARIETY: NVMG-13(GNMG-2)

The mango ginger genotype NVMG-13 recorded 31.17 t/ha average green rhizome yield in South Gujarat. It exhibited overall 18.81 per cent green rhizome yield superiority over local check Kachuro. It also possess higher number mother rhizomes, finger rhizomes, rhizome length, rhizome width and tillers per plant. The strong mango like aroma, presence of curcumin content, oleoresin content, higher total oil content, higher dry rhizome weight as well as powder recovery per cent and lower fiber content are value added traits. NVMG-13 is resistant to rhizome rot and moderately resistant to leaf blight. Mango ginger genotype is recommended for mango ginger growing areas of South Gujarat as GNMG-2 (Jyoti).


1.6 OKRA VARIETY: NOL-17-05 (GNO-1)

Okra variety Gujarat Navsari Okra 1 (GNO-1: PurnaRakshak) is recommended for cultivation by okra growing farmers of south Gujarat. The average fruit yield of this okra variety is 12.72 t/ha which exhibited yield advantages of 10.70, 13.52 and 12.59 % in *kharif* season over the check varieties GAO-5, PusaSawani and GO-6, respectively. It shows moderately resistant reaction against YVMV, powdery mildew, ELCV disease as well as moderately resistant reaction against fruit and shoot borer, jassid and whitefly.


1.7 FINGER MILLET VARIETY: WN-559(CFMV-2)

Finger millet variety CFMV2 (Gira) is recommended for finger millet growing regions of Gujarat.This finger millet variety produced average grain yield of 3551 kg/ha which is 15.02 % higher over local check GNN6 as well as 27.47 and 25.88 % over national checks PR 202 and GPU 67, respectively. The variety has attractive red colour with bold grain, uniform maturity and having non-lodging plant type. It is moderately resistant to foot rot as well as leaf, neck and finger blast diseases. It also showed moderate reistance to pests like stem borer and aphids under field condition. Finger millet variety CFMV-2 (Gira) is recommended for finger millet growing regions of Gujarat.


1.8 LITTLE MILLET VARIETY: WV-126 (GV-4)

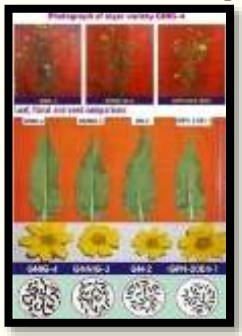
Little millet variety Gujarat Vari 4 (GV4: Ambika) is recommended for little millet growing regions of Gujarat. This little millet variety produces average grain yield of 2933 kg/ha which is 13.78 % higher over local check GNV-3 as well as 44.39 %and 31.44 % over national checks CO-2 and OLM-203, respectively. The variety has bold grains, uniform medium maturity with more tillers and non-lodging plant type. It is moderately resistant to diseases like blast, grain smut and sheath blight. It also showed moderate reistance to pests like stem borer and aphids under field condition. Little millet variety GV-4 (Ambika) is recommended for little millet growing regions of Gujarat.


1.9 *RABI* SORGHUM VARIETY: CRS-13 (GJ-101)

The sorghum variety Gujarat Jowar-101 (GJ-101: *Madhu Moti*) is recommended for *rabi* cultivation under irrigated as well as conserved moisture conditions in Gujarat state. The *rabi* sorghum variety produced average grain yield of 2578 kg/ha and fodder yield of 7126 kg/ha. The grain yield is 20.7, 22.6, 10.7, 35.3 and 21.7 *percent* higher over local check varieties Nizer Goti, BP-53, Phule Revati and National checks CSV 216R and CSV 29R, respectively. It produced 7126 kg/ha dry fodder yield, which is 2.3, 7.1 and 4.0 *percent* higher over checks Nizer Goti, BP-53 and CSV 29R, respectively. Under conserved moisture condition, it produced 1697 kg/ha grain yield which is 23.3, 15.3 and 28.0 *percent* higher over Nizer Goti, CSV 216R and CSV 29R, respectively along with 5814 kg/ha dry fodder yield. It exhibited moderately resistant reactions to Ergot, Grain Mold, Anthracnose and Leaf blight diseases and was found as good as checks for infestations of shoot fly and stem borer.


1.10 DESI COTTON VARIETY : GShv-331/14 (GN.Cot.27)

The *herbaceum* cotton variety Gujarat Navsari Cotton 27 (GN.Cot.27: Surti Sonu) is recommended for cultivation under rainfed areas of South Gujarat. This desi cotton variety recorded 1264 kg/ha average seed cotton yield which is 27.2 and 22.8 % higher than checks G.Cot.23 and GN.Cot.25, respectively under rainfed condition of South Gujarat. It exhibited 433 kg/ha average lint yield and 34.4 % average ginning out turn. The proposed variety recorded below ETL population of sucking pests. The bollworms damage is also found low and comparable to checks.


1.11 NIGER VARIETY: NMBP-1907 (GNIG-4)

The niger variety GNIG-4 (Kasturi) produces an average seed yield of 543 kg/ha which is 41.10 and 34.07 % higher over the national check IGPN-2004-1 and local check GNNIG-3. The variety also produces 205 kg/ha oil, which is 65.32 and 57.69 % high as compared to national check IGPN-2004-1 and local check GNNIG-3, respectively. It is also found resistant to *Alternaria* and *Cercospora* leaf spot diseases and major pests *viz.*, caterpillar and semi looper of niger. The niger variety GNIG-4 (Kasturi) is recommended for niger cultivating farmers for kharif season in South Gujarat.

1.12 ADENIUM VARIETY: GNAd-3 (Aabha)

The nursery men dealing with ornamental plants, landscape designers and plant lovers are recommended to grow adenium variety GNAd3 (Aabha) under polyhouse for higher commercial value as well as in garden and house plant. Adenium variety GNAd3 is novel that it bears pink coloured flowers having multipetalous flower form with dual whorls of petals (10) in each flower with prominent red streaks in the centre of the petals along with good flower size, flower clusters per plant and flowering duration. It can be propagated by grafting on local pink root stock.


1.13 ADENIUM VARIETY: GNAd-4 (Shobhita)

The nursery men dealing with ornamental plants, landscape designers and plant lovers are recommended to grow adenium variety GNAd4 (Shobhita) under polyhouse for higher commercial value as well as in garden and house plant. Adenium variety GNAd4 is novel that it bears flowers having single whorl of pinkish red coloured petals (5) with dark red coloured margin and pointed tip and scores higher in terms of number of flowers/ cluster, maximum open flowers / cluster, and flowers/plant/ year. It can be propagated by grafting on local pink root stock.


2. Natural Resource Management

2.1Spatial distribution of moisture and nutrient under different drip discharge rate and lateral placement in cabbage (Brassica oleracea L) grow on clay soil of South Gujarat

The farmers' of South Gujarat heavy rainfall zone growing cabbage under drip irrigation are recommended to place inline lateral with 4 lph dripper discharge at 10 cm depth and apply recommended dose of fertilizer 100-50-50 N, P_2O_5, K_2O kg/ha (*i.e.*, urea 217 kg/ha and muriate of

potash 84 kg/ha) through fertigation in 8 equal splits at weekly interval starting one week after transplanting and single super phosphate 312 kg/ha as basal for getting higher yield and net profit along with higher irrigation water use efficiency.

System details:

Lateral spacing: 1.20 m
Dripper spacing: 0.60 m
Dripper discharge: 4 lph
Operating pressure: 1.20 kg/cm^2
Operating time (alternate day):
October: 70 -75 min., November: 80-85 min., December: 90-100 min.

2.2 Study of inline subsurface drip system with different discharge rate, spacing and lateral depth in sugarcane

The farmers of south Gujarat heavy rainfall zone growing sugarcane (paired row 60:120:60 cm) are recommended to place subsurface drip inline lateral of 4 lph dripper discharge and 60 cm dripper spacing at a depth of 7.5 cm in paired row for minimizing lateral damage and dripper clogging over surface placed inline lateral.

System details:
Lateral spacing: 1.80 m
Dripper spacing: 0.60 m
Dripper discharge: 4 lph
Operating pressure: 1.20 kg/cm^2
Operating time (alternate day): December: 70-75 min., January-February: 80-85 min., March: 90-100 min., April-May: 120-140 min., June: 160-180 min.

2.3 Effect of land configuration, gypsum and integrated nutrient management on growth and yield of radish

The farmers of coastal areas of south Gujarat heavy rainfall zone AES- IV growing radish are recommended to sow radish crop on broad bed and furrow (30 cm x 30 cm x 60 cm, bed width: 90 cm, furrow top width: 30 cm) or ridges and furrow (45 cm). Further, they are advised to apply gypsum @ 50 % gypsum requirement one month before sowing the crop. They also advised to fertilized their crop with 100 – 50 - 50 N, P2O5, K2O kg/ha + 5 t FYM/ha or 100-37.5-37.5 N, P2O5, K2O kg/ha + bio fertilizer (Azotobacter + PSB, 108 CFU/ml, each1.25 l/ha) of which 25% N, and full dose of P2O5 and K2O applied through chemical fertilizer and 25 % N through bio-compost as basal and remaining 50% N through chemical fertilizer 30 days after sowing for achieving higher yield and net returns with improvement in sodicity of coastal salt affected soils.

2.4 Effect of organic manure on rice based cropping system under coastal salt affected soils

The farmers of coastal area of South Gujarat heavy rainfall zone following rice based cropping system are recommended to adopt rice (Kharif) – fodder sugar beet (Rabi) cropping sequence with application of 120 - 30 - 00 kg N, P2O5, K2O /ha with bio compost @ 10 t/ha to rice crop and 120 - 60 - 60 kg N, P2O5, K2O /ha to fodder sugar beet for achieving higher yield and net returns.

2.5 Yield performance of rice (*Oryza sativa* L.) varieties in direct seeded condition under organic farming.

Farmers of South Gujarat, growing direct seeded drill rice (Purna or GR 5) organically are recommended to apply 37.5 kg N ha-1 (50% RDN) through FYM for achieving profitable yield.

2.6Studies on irrigation scheduling through drip, nitrogen management and mulch in Turmeric

The farmers of south Gujarat Agro-climatic zone cultivating drip irrigated turmeric with sugarcane trash mulch (@ 5.0 t/ha) are recommended to schedule drip irrigation at 0.8 PEF. They are further recommended to apply 7.5 t/ha of bio-compost and PSB + *Azotobacter* @ 1.25 lit/ha each along with 30-60-30 kg NPK/ha as a basal and remaining 15-00-30 kg NPK/ha in 9 equal splits through drip system at an interval of 15 days starting after cessation of monsoon.

Cultural details: Planting should be carried out at 30 cm x 20 cm spacing on BBF having 90 cm top width (3 rows per bed). BBF should be prepared by keeping 45 cm space between two beds and opening 30 cm deep furrow in it.

Drip system details

Lateral spacing	: 135 cm (1 lateral per BBF)
Dripper spacing	: 50 cm
Dripper discharge	: 4 Lph
Operating Pressure (kg/cm^2)	: 1.2
System operation interval	: 2 days

Operating time

June	2:15 to 2:30 (hrs:min)
July and August	1:10 to 1:15 (hrs:min)
September and October	1:20 to 1: 30 (hrs:min)
November, December and January	1:00 to 1:10 (hrs:min)
February	1:30 to 1: 45 (hrs:min)
March and April	2:15 to2:30 (hrs:min)

Note: Rainy season drip schedule for dry spells of more than 20 day

2.7 Effect of spacing on the performance of sorghum varieties during summer season

The farmers of South Gujarat Heavy Rainfall Zone growing sorghum during summer season are recommended to sow the crop at 45 cm x 10 cm, 45 cm x 15 cm or 60 cm x 10 cm spacing for achieving higher yield and net return.

2.8 Response of summer sesamum (*Sesamum indicum* L.) to integrated nutrient management under south Gujarat condition

The farmers of South Gujarat Heavy Rainfall Zone growing summer sesamum are recommended to fertilize the crop with 50 kg N/ha (50% as basal and 50% at 30 DAS) + 25 kg P2O5/ha (basal), treat the seed with Azotobacter + PSB (10 ml/kg each) and spray 1% nauroji organic liquid nutrient at flowering and capsule formation stages for getting higher yield and net return.

2.9 Agronomical evaluation of different paddy varieties under organic farming

The farmers of south Gujarat heavy rainfall agro-climatic zone growing rice (variety: GNR-7 or GNR-3) organically are recommended to apply 100% RDN (100 kg/ha) through NADEP compost (8.9 t/ha NADEP compost containing 1.12%N) for achieving higher yield and net profit. Further, they have to give root dipping treatment to the seedlings with Azospirilum and PSB each of 0.5% along with three spray of Novel organic liquid nutrient @ 1% at 15, 45 and 60 DAT.

2.10 Effect of age of seedling and nutrient management in ragi

The farmers of South Gujarat heavy rain fall zone growing finger millet (ragi) during kharif season are recommended to transplanting 18 to 24 days old seedlings with recommended dose of nitrogen (40 kg N ha-1) through bio-compost along with 2 kg/ha Azatobacter for getting higher yield and net income.

2.11 Response of cotton to green manuring and different fertility levels under rainfed condition

The farmers of South Gujarat Agro-climatic Zone Growing cotton (var. G.N.Cot. 25) under rainfed condition during kharif season are recommended to apply 80 kg N/ha in two equal split (40 Kg N/ha at 30 DAS and 40 kg N/ha at 60 DAS) along with 5 t FYM/ha as basal and seed treatment of biofertilizers (Azotobactor and PSB each 10 ml/kg seed) need not to adopt simultaneous green manuring of sunnhemp, dhaincha and cowpea.

3. Plant Protection

3A Agricultural Entomology

3A.1 Management of the two spotted spider mite, *Tetranychus urticae* Koch on gerbera with the use of biopesticides and the predatory mite, *Amblyseius* (*Neoseiulus*) *longispinosus* (Evans)

Farmers of south Gujarat growing gerbera in polyhouse are recommended to apply first spray of neem oil 0.5% @ 50 ml/ 10 litre of water at bud initiation stage, second spray of neem oil 0.5% @

50 ml/ 10 litre of water after fifteen days of first spray and release of predatory mite, *Amblyseius (Neoseiulus) longispinosus* @ 20 gravid female/plant after fifteen days of second spray for the effective control of two spotted spider mite, *Tetranychus urticae* to gain higher flower production.

3A.2 Effect of various leaf defoliation levels on castor yield for rearing of eri silkworm, *Samia cynthiaricini* Hutt.

The eri silkworm rearers of Gujarat are recommended to pluck 25-30 per cent leaves of castor to rear eri silkworm at 15 days interval (45 DAS) to obtain additional income along with castor production.

3A.3 Evaluation of insecticides against important insect- pests of mango

Mango growing farmers of south Gujarat are recommended to apply two spray of thiamethoxam 25 WG 0.0084 % (3.36 g/10 litre water) or imidacloprid 17.8 SL 0.005% (2.8 ml/10 litre water) for effective control of mango hopper and thrips, first spray at panicle initiation and second spray at 28 days after first spray. Keep pre harvest interval 30 days for thiamethoxam 25 WG and 45 days for imidacloprid 17.8 SL.

As per CIBRC format:

Year	Crop	Pest	Pesticide with formulation	Dosage/ha			Waiting period (days)	Residue in the fruit sample
				a.i (gm)	Quantity of formulation (g or ml)	Dilution in water (liter)		
2021	Mango	Hopper, Thrips	Thiamethoxam 25 WG	84	336	1000	30	BDL
2021	Mango	Hopper, Thrips	Imidacloprid 17.8 SL	49.84	280	1000	45	BDL

3A.4 Validation of IPM module for Pink bollworm

Cotton farmers of South Gujarat cultivating *Bt* cotton are recommended to adopt following effective IPM module for management of pink bollworm as well as sucking pests (thrips, leafhopper, aphid and whitefly).

IPM Module for cotton pests

1. Timely sowing of the crop (15th June to 15th July of the year)
2. Installation of yellow sticky trap @ 20 traps/ha at 30 DAS
3. Stem application of flonicamid 50 WG @ 60 g/ha each at 30, 45 and 60 DAS
4. Installation of Phero-sensor TM-SP trap @ 5 traps/ha at 45 DAS and change the Pectino-lure thrice at 40 days interval having viability of 30-40 days
5. Spraying of Azadirachtin 1500 PPM @ 2.5 lit/ha at 60 DAS (50 ml/10 lit. of water at spray volume of 500 lit/ha)
6. Three inundative release of egg parasitoid, *Trichogrammatoideabactrae* @ 1.5 lakh/ha at weekly interval initiating 7 days after application of neem insecticide
7. ETL (10% fruiting body damage) based application of recommended insecticides (Indoxacarb 14.5 SC @ 5 ml/ 10 lit. or Emamectin benzoate 5 SG @ 5 g/10 lit. or Spinosad 45 SC @ 3 ml/10 lit.)
8. Timely termination of crop (By January 15th of the year)

As per CIBRC format:

Year	Crop	Pests	Pesticides with formulation	Dosage/ha			Waiting Period (days)*
				Quantity of formulation	Conc. (%)	Dilution in water (L)	
2021	Cotton	Sucking pests & Bollworms	Azadirachtin 1500 PPM	2500 ml	0.00075	500	5
		Sucking pests (Thrips, Leafhopper, Aphid,	Flonicamid 50 WG	150 g	0.015	500	25

		Whitefly)					
		Pink bollworm	Indoxacarb 14.5 SC	250 ml	0.0072	500	16
			Emamectin benzoate 5 SG	250 g	0.0025	500	10
			Spinosad 45 SC	150 ml	0.014	500	10
*Note: Ministry of Agriculture and Farmers Welfare, GOI, DPPQS, CIBRC, Faridabad, Major uses of pesticides- 31/10/2019 and 31/01/2020							

3A.5 Management of podfly, *Melanagromyza obtusa* (Mollach) in pigeon pea

The pigeon pea growers are recommended to follow the following IPM strategy for reducing pod fly infestation as well as in gaining higher grain yield with low input cost.

- Basal soil application of neem cake @ 0.5t/ha before sowing.
- Installation of trap baited with 20 ml ethanol @ 20/ha during 50% flowering up to maturity
- Application of spinosad48 SC@ 0.0096% (2 ml/10 lit) at 50% pod setting followed by NSKE@ 5% at 10 days after first spray and emamectin benzoate 5 SG@ 0.0011% (2.2 g/10 lit) at 10 days after second spray.

Method for preparation of trap:

For preparation of trap, 1 litre plastic water bottle can be used and inner sideis wrapped with white paper. The middle portion of bottle is cut in 2x2 inch size for inserting a 20 ml ethanol suspended plywood block that remains hang in the bottle.

3A.6 Estimation of yield losses for cotton pink bollworm

Cotton farmers of south Gujarat cultivating *Bt* cotton are recommended to apply, thiodicarb 75 WP @ 0.15% (20 g/10 lit. of water) at 60 days after sowing, chlorpyrifos 20 EC @ 0.05% (25 ml/10 lit. of water) at 90 days after sowing and lambda-cyhalothrin 5 EC @ 0.005% (10 ml/10 lit. of water) at 120 days after sowing to avoid the yield loss of 48.86% from pink bollworm in cotton.

AS PER CIBRC format:

Year	Crop	Pest	Pesticides with formulation	Dosage				Application schedule (Days after sowing)	Waiting Period/ PHI (days)*
				Conc. (%)	Dose/ 10 lit.	Quantity of formulation /ha	Dilution in water (L)		
2021	Cotton	Pink bollworm	Thiodicarb 75 WP	0.15	20 g	1000 g	500	60	30
			chlorpyrifos20 EC	0.05	25 ml	1250 ml		90	-
			Lambda-cyhalothrin 5 EC	0.005	10 ml	500 ml		120	21

3B. Plant Pathology

3B.1 Evaluation of fungicides against the sheath rot of rice

The paddy growers of south Gujarat are recommended to apply two sprays of azoxystrobin 11 + tebuconazole 18.3 (29.3 SC) 0.045 per cent (15 ml/10 l.) or azoxystrobin 18.2 + difenoconazole 11.4 (29.6 SC), 0.030 per cent (10 ml/10 l.) for effective management of sheath rot. The first spray should be given at appearance of disease and second spray at booting stage. Pre harvest interval 21 days for azoxystrobin 11 + tebuconazole 18.3 (29.3 SC) and 31 days for azoxystrobin 18.2 + difenoconazole 11.4 (29.6 SC).

As per CIBRC format:

Year	Crop	Disease	Fungicidewith formulation	Doses/ha			Waiting Period (days)
				Quantity of formulation g a.i.	Conc. (%)	Dilution in water (L)	
2021	Paddy	Sheath rot	Azoxystrobin 11 + Tebuconazole 18.3 (29.3 SC)	82.5 + 137.25 = 219.75	0.045	500	21
			Azoxystrobin 18.2 + Difenoconazole 11.4 (29.6 SC)	0.3	0.030	500	31

3B.2 Biological management of chickpea wilt

Chickpea growing farmers of south Gujarat are recommended to treat seed with *Trichoderma viride*1.5% WP (IIHR strain) ($2x10^6$cfu/g) @ 10g/kg of seeds + two soil applications of *Trichoderma viride*1.5% WP (IIHR strain) @ 2.5 kg /ha in 250 kg FYM at sowing and at 50% flowering or to treat seed with *Pseudomonas fluorescence* 1.5% liquid form (NAU strain)($1x10^8$cfu/ml) @ 10ml/kg of seeds + two soil applications of *Pseudomonas fluorescence*1.5% liquid form (NAU strain)@ 2.5 l /ha in 250 kg FYM at sowing and at 50% flowering for effective management of chickpea wilt.

As per CIBRC format:

Yr	Crop	Disease	Biopesticide with formulation	Dosage/ha				Quantity of water/soil amendments/ha	Waiting period (days)	Residue in sample
				a.i (gm)	Quantity of formulation (g or ml)	Conc. (%)	Dilution in water (liter)			
2021	Chick pea	wilt	*Trichoderma viride*1.5 % WP (IIHR strain)	--	10 gm/kg seed treatment + 2.5 kg /ha soil application at sowing and 50% flowering	(2x 10^6 cfu/ g)	--	250 kg FYM /ha at sowing and 50% flowering respectively	--	--
			Pseudomonas fluorescence 1.5% liquid form. (NAU strain)	--	10 ml /kg seed treatment +2.5 l /ha soil application at sowing and 50% flowering	(1x 10^8 cfu/ ml	--	250 kg FYM /ha at sowing and 50% flowering respectively	--	--

3B.3 Management of stem rot disease of groundnut under rice based cropping system

Farmers of south Gujarat growing summer groundnut after paddy are recommended to treat seeds with azoxystrobin 23 SC @ 1 ml mixed in 50 ml water/kg seed + soil application with *Trichodermaharzianum* (2×10^6cfu/g) @ 2.5 kg/ha mixed in 100 kg FYM at the time of sowing OR treat seed with azoxystrobin 23 SC @ 1ml mixed in 50 ml water/kg seed for management of stem rot disease of groundnut under rice based cropping system.

3B.4 Management of post-harvest diseases of mango using hot water treatment

Farmers, consumer and entrepreneurs are recommended to manage postharvest diseases and pest *viz;* anthracnose, stem end rot and fruit fly by dipping mango fruits after the harvesting in hot water at 48ºC for 60 min or 50ºC for 20 min, or 52ºC for 10 min without any adverse effect on fruits.

4. Horticulture

4.1 Evaluation of different bio fertilizers with graded chemical fertilizers for nutrient management in papaya var. *Red Lady*

The farmers of South Gujarat growing papaya var. Red Lady are recommended to apply 60 per cent recommended dose of chemical fertilizer (120-120-150 NPK g/plant, As per the schedule given in table below) along with soil application of biofertilizers (*Azotobacter*, *Phosphate solubilizing bacteria*, *Potash mobilizing bacteria*) @ 20 ml per plant of each at the time of planting, 3 and 6months after planting for getting higher yield and net realization.

Time of fertilizer application	Application of fertilizers					
	N (g/plant)	**P (g/plant)**	**K (g/plant)**	***Azotobacter* ($1x10^8$cfu/ml) (ml/plant)**	***PSB* ($1x10^8$cfu/ml) (ml/plant)**	***KMB* ($1x10^8$cfu/ml) (ml/plant)**
At the time of planting	-	-	-	7.00	7.00	7.00
Two month after planting	30	30	37.5	-	-	-
Three month after planting	-	-	-	6.50	6.50	6.50
Four month after planting	30	30	37.5	-	-	-
Six month after planting	30	30	37.5	6.50	6.50	6.50
Eight month after planting	30	30	37.5	-	-	-

4.2 Evaluation of the field performance of the macro-propagated plants of banana

The banana growers are recommended to cultivate banana through macro propagated plants for getting early maturity, higher production and net return as compared to suckers plant.

4.3 Standardization of stage wise requirement of nutrients in sapota

The farmers of South Gujarat having mature trees of sapota cv. Kalipatti are recommended to apply 80% recommended dose of chemical fertilizers (800:400:400 g N: P_2O_5 :K_2O/tree) in four splits July, September, November and February month {as per given below table} and 15 kg vermicompost along with Azotobacter 100 ml and PSB 100 ml per tree (10^8cfu/g) per tree in July and Grade-4 multi micronutrient (0.5%) spray in October month for getting higher yield and net income in winter season.

80% recommended dose of chemical fertilizer				
Time and stage of application	**I Vegetative flush (July)**	**II Fruit set (September)**	**III Fruit growth (November)**	**IV Fruit growth (February)**
N:P_2O_5 :K_2O (%)	32-40-20 %	16-00-20 %	16-40-20 %	16-00-20 %
N:P_2O_5 :K_2O g/tree	320-200-100	160-00-100	160-200-100	160-00-100
Urea (g/tree)	700	350	700	350
SSP (g/tree)	1250	0	1250	0
Murate of Potash (g/tree)	170	170	170	170

4.4 Effect of micronutrients on yield and quality of mango

Farmers of South Gujarat Heavy Rainfall Zone-I, AES-II having adult mango trees of Kesar variety are recommended to apply100 g zinc sulphate with 50 g copper sulphate and 50 g borax (soil application in basin after harvest) along with foliar spray of 0.2% zinc sulphate, 0.1% copper sulphate

and 0.1% boric acid (2 sprays at just before flowering and marble stage)in addition to the recommended dose of fertilizers (RDF) for obtaining higher yield and net return.

4.5 Artificial oscillation for increasing fruit set and performance of tomato in polyhouse under South Gujarat conditions

Farmers cultivating tomato in naturally ventilated polyhouseare recommended to vibrate tomato truss with electric pollinator on every 3rdday starting from the day of first flowering for 10 seconds during morning hours between 7.30 am to 9.00 am for better fruit set, higher yield and net returns.

4.6Effect of IBA and number of nodes on stem cutting on propagation of little gourd

The farmers/nurserymen of South Gujarat are recommended to select one year old little gourd vine cutting with two nodes dipped in 80mg/l IBA solution for 30 minute and plant in growing media Soil: FYM: Sand (1:1:1) increases survival percentage of little gourd cutting.

4.7 Effect of different growing media on Haworthia pot plant

Nurserymen raising haworthia as pot culture under naturally ventilated polyhouse are recommended to grow in media comprising of Sand: Vermicompost (9:1 v/v) for better plant growth and quality.

4.8 Development of plant architecture through pinching and pruning in adenium pot plant under soilless growing system

Nursery men or farmers raising adeniums as pot culture are recommended to follow the pruning treatment (leaving 2inches of new growth) after four and eight months of grafting to obtain better architecture with plant canopy as well as more flower clusters per plant and flowers per cluster.

4.9 Effect of different growing media and foliar application of nitrogen on Garlic, Fenugreek and Spinach

Farmers growing green garlic and spinach under polyhouse in off-season are recommended as below:

1) To grow green garlic: Fill tray with sand media and apply foliar spray of nitrogen @ 150 mg/l at weekly interval for higher yield with good pungency.

2) To grow spinach: Fill tray with sand media and apply foliar spray of nitrogen @ 150 mg/l at weekly interval for higher yield.

*****Note: For N150mg/l =326 mg/l Urea, For N50mg/l =108 mg/l Urea

4.10 Standardization of technology for minimal processing of fresh cut potatoes (*Solanum tuberosum* L.)

It is recommended to the processors and entrepreneurs that minimally processed fresh cut potatoes can be prepared by hot water blanching for 3 minutes at 95 °C along with 1.0 per cent calcium chloride ($CaCl_2$) and cooling for 15 minutes by dipping in the solution of 0.05 per cent citric acid and 0.1 percent potassium meta bisulphite (KMS) followed by excess water removal. The fresh cut potatoes can be successfully stored for 16 days at refrigerated temperature when packed in 200 gauge LDPE bags with acceptable quality.

4. 11 Effect of different cultivation practices on yield and quality of banana pseudostem sap.

The farmers and entrepreneurs are recommended to use banana pseudostem sap from banana field planted through suckers having drip irrigation to get maximum fresh sap with better quality for fresh use as well as for enrichment purpose.

5. Forestry

5.1 Annual biomass, volume and carbon stock estimation of Meliadubia Cav. through destructive method

Farmers of South Gujarat, cultivating Malabar Neem, and forester and timber traders are recommended to use the below given table to estimate fresh biomass and volume of standing Malabar Neem tree.

Table - Estimated *M. dubia*fresh biomass (kg/tree) based on regression equations

		DBH (cm)													
		4	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Tree height (m)	4	5.75	8.02	10.79	14.07										
	5	6.76	9.60	13.06	17.16										
	6				11.94	16.44	21.54	27.24	33.54						
	7				14.39	19.64	25.59	32.24	39.59	47.64					
	8					22.84	26.78	31.19	36.06	41.40	47.20	53.46			
	9					24.69	29.13	34.09	39.57	45.57	52.10	59.14	66.71		
	10							36.99	43.08	49.75	57.00	64.83	73.24	82.23	
	11									53.92	61.90	70.51	79.76	89.65	100.18

DBH=Diameter at breast height

Table - Estimated *M. dubia* over bark volume (m^3/tree) based on regression equation

		DBH (cm)													
		4	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Tree height (m)	**4**	0.005	0.006	0.007	0.009										
	5	0.005	0.007	0.008	0.010										
	6				0.012	0.015	0.018	0.021	0.025						
	7				0.013	0.016	0.020	0.024	0.028	0.033					
	8					0.018	0.022	0.027	0.032	0.038	0.044	0.050			
	9					0.020	0.025	0.030	0.036	0.042	0.049	0.056	0.064		
	10							0.033	0.039	0.046	0.054	0.062	0.071	0.080	
	11									0.051	0.059	0.068	0.077	0.088	0.098

DBH=Diameter at breast height

5.2 Integrated nutrient management of Brinjal (*Solanum melongena* L.) under Teak (*Tectona grandis* L.) based Silvi-horticultural system in South Gujarat region

Farmers of South Gujarat growing Brinjal (*Solanum melongena* L.) var. GNRB-1 as an intercrop under Teak having spacing of 3 x 2 m are recommended to apply 100 % RDF (100-50-50 NPK kg/ha) or 75 % RDN + 25 % Neem cake on the basis of cultivated area (6670 m^2) in teak based silvi-horticultural system to get additional income and higher production. It also increased fertility status of soil as well as growth of teak.

5.3 Development of local volume table for Saru (*Casuarina equisetifolia*)

It is recommended that farmers, foresters and wood merchants of South Gujarat can use volumetric equations, $V_1 = 0.00005 \times HD^2 + 0.0196$ (trees with DBH of 10 to 45 cm) and volumetric equation $V_2 = 0.00003 \times HD^2 + 0.6874$ (trees with DBH of 45 to 70 cm) and below given local volume table for estimation of volume of standing trees of *Casuarina equisetifolia*.

Table: Local volume table developed for Saru (*Casuarina equisetifolia*) trees grown in south Gujarat condition (m^3/tree)

		Height in m (Height range and mid value)											
	Diameter/ Height range	8-11	11-14	14-17	17-20	20-23	23-26	26-32	32-35	35-38	38-41	41-44	44-47
	Mid diameter / Height	9.5 m	12.5 m	15.5 m	18.5 m	21.5 m	24.5 m	27.5 m	33.5 m	36.5 m	39.5 m	42.5 m	45.5 m
DBH (cm)	10 - 15 12.5 cm	*0.094*	*0.117*	*0.141*	*0.164*	*0.188*	*0.211*	*0.234*					

	15 - 20	17.5 cm	*0.165*	*0.211*	*0.257*	*0.303*	*0.349*	*0.395*	*0.441*					
	20 - 25	22.5 cm		*0.336*	*0.412*	*0.488*	*0.564*	*0.640*	*0.716*	*0.868*				
	25 - 30	27.5 cm			*0.606*	*0.719*	*0.833*	*0.946*	*1.059*	*1.286*				
	30 - 35	32.5 cm				*0.997*	*1.155*	*1.314*	*1.472*	*1.789*	*1.947*	*2.106*	*2.264*	*2.423*
	35 - 40	37.5 cm				*1.320*	*1.531*	*1.742*	*1.953*	*2.375*	*2.586*	*2.797*	*3.008*	*3.219*
	40 - 45	42.5 cm				*1.690*	*1.961*	*2.232*	*2.503*	*3.045*	*3.316*	*3.587*	*3.858*	*4.129*
	45 - 50	47.5 cm						**2.346**	**2.549**	**2.955**	**3.158**	**3.361**	**3.564**	**3.767**
	50 - 55	52.5 cm						**2.713**	**2.961**	**3.457**	**3.705**	**3.954**	**4.202**	**4.450**
	55 - 60	57.5 cm							**3.415**	**4.010**	**4.308**	**4.605**	**4.903**	**5.200**
	60 - 65	62.5 cm							**3.910**	**4.613**	**4.965**	**5.316**	**5.668**	**6.019**
	65 - 70	67.5 cm								**5.266**	**5.676**	**6.087**	**6.497**	**6.907**

6. Agricultural Engineering

6.1 Effect of laser leveling on water use efficiency and growth of gram crop

Farmers of South Gujarat growing irrigated Gram (GG3) are recommended to adopt laser land leveling technique to provide 0.2 per cent longitudinal slope for getting higher gram yield, net return and water saving.

6.2 Design and development of economical manual harvesting tool

Fodder grower are recommended to use ergonomically designed manual harvesting tool developed by the Navsari Agricultural University to achieve harvesting capacity of 0.016 ha/h, to reduce up to 37 percent harvesting cost and save harvesting time.

6.3 Comparative Studies on the different drying methods of ber fruits (*Ziziphus mauritiana*L)

Farmers are recommended to dry ber fruits by washing it with 0.3% sodium hydroxide in hot water at 40 ºC for 1 min followed by rinsing in tap water and tray drying at 60 ºC for 24 h or sun drying at 136 h to obtain good quality dried ber with 25.44 % or 28.42 % moisture content (w.b.), moisture content and can get good rate return from the market.

6.4 Study on drying characteristics of bitter gourd (*Momordica charantia* L.)

Farmers, processors and entrepreneurs are recommended to prepare better quality dried bitter gourd chips by slicing washed and trimmed bitter gourd into 5 mm thickness followed by boiled water blanching at 100 ^{0}C for 5 min and dipping into chilled 0.2 % KMS solution for 10 min thereafter soaking in 3 % salt solution for 90 min and drying in tray dryer at 60 °C temperature for 7 hours up to a final moisture content of 5±1 % (w.b).

6.5 Modification of NAU designed hold-on type power operated paddy thresher

Farmers are recommended to use modified hold on type paddy thresher (Threshing drum made by PVC plastic) developed by Navsari Agricultural University operated with 0.5 horsepower electric motor and having approximate 101.3 kg/h capacity and 98.6 % threshing efficiency which reduces 67.0 % labour compared to manual threshing.

6.6 Effect of lateral and open drain spacing on growth and yield of *kharif* sown pigeon pea with irrigation through drip during rabi season under South Gujarat conditions

The farmer of South Gujarat are recommended to grow pigeon pea during late *kharif* season in paired row at a spacing of 60 x 30:180 cm (2.4 m between two pair and 60 cm in pair) and irrigate after cessation of monsoon through drip lateral placed at 2.4 m. Further, they are also advised to prepare open drain (60 cm top width and 30 cm depth) after every four pairs (9.6 m) before monsoon to drain out excess rain water for getting higher yield and net profit than close paired spacing (1.8 m) without open drain.

The system details are:	*Operating time (minute):*
Lateral spacing : 2.4 m	September : 138 –150
Dripper spacing : 0.6 m	October : 150-175
Dripper discharge : 4 lph	November : 175-140
Operating pressure : 1.2 kg/cm^2	December : 130-95
Operating frequency: Alternate day	January : 95-110 min
	February : 110-125 min
	March : 125 min to harvest

Note: At the time of flower initiation, irrigation should be shut down for 20-25 day for imposing water stress

6.7 Evaluation of irrigation interval for summer rice in respect to irrigation depth

The farmers of South Gujarat growing summer rice (GNR-3) in *kyari* land (heavy black soil) are recommended to give 40 mm depth of flood irrigation at alternate day (up to 76-80 days) for getting 20 % more net returns and saving of 360 mm depth of water (18.6 %) without decrease in grain yield than conventional irrigation scheduling.

7. Animal Production and Fisheries

7.1 Time motion study at organized farm

Livestock keepers are recommended that one milker can milk 9 H.F. crossbred cows or 13 Surti buffaloes in aday and daily management of one H.F. crossbred cow and one Surti buffalo require 42.37 and 38.30 minutes,respectively.

7.2 Effect of rumen protected niacin supplementation on sweating rate, oxidative stress and skin temperature during summer in Surti buffaloes

Farmers are recommended that dietary supplementation of rumen protected niacinat6g/animal/day in summer to lactating Surti buffaloes increases sweating rate, decreases skin surface temperature and increases milk production.

7.3 Impact of Light Sources on Broiler Performance

The poultry farmers of Gujarat are recommended to use White LED as a source oflight for rearing of broilers. It has no adverse effect on live body weight and Feed ConversionRatio.Italsoreducescostof electricityupto88%ascomparedtoincandescentbulb light.

7.4Assessment of feeding practices, nutritional status and gap for lactating buffaloes in Tapi district.

The livestock keepers of Tapi district are recommended to offer additional 0.8kg compound concentrate mixture having 20% CP to the buffaloes yielding 4-7 kg/d milk in order to fulfill the nutrient requirement.

Recommendations for Scientific Community (2020-21)

1. Natural Resource Management

1.1 Evaluation of ground water suitability for irrigation in Navsari district

- In pre monsoon season, the percentage of surveyed samples were found falling in no restriction to medium restriction category of irrigation water followed the order of Vansda (70%) >Chikhli (60%) >Khergam (50%) >Gandevi (50%) >Jalalpore (40%) > Navsari (40%).
- In post monsoon season, the percentage of groundwater samples under no restriction to medium restriction category of irrigation water mostly decreased and followed the order of Navsari (65%) >Vansda (45%) >Khergam (30%) >Jalalpore (20%) >Gandevi (15%) >Chikhli (5%).
- Overall in Navsari district, 52.49 % and 29.99 % of surveyed samples were found falling in no restriction to medium restriction categoryof irrigation water during pre and post monsoon respectively.

1.2 Carbon crediting and GHG emission in IFS models

It is inferred from the carbon crediting and GHG emission studies in IFS models that the paddy component (Transplanted) emits more GHGs in terms of CO_2-e kg followed by horticulture component. Further, Rice-Cabbage-Green gram crop sequence recorded higher emission as compared to Rice-Linseed-Sorghum fodder and Rice-Indian bean (vegetable)-Pearl millet. The maximum sink of GHGs was observed in border plantation of agroforestry tree component followed by crop residue incorporation.

2. Plant Protection

2A. Agricultural Entomology

2A.1 Survey of Acari associated with different stored grains and by-products

The order Astigmata is the dominant among three orders *viz*., Astigmata, Prostigmata and Mesostigmata while family acaridae is most diverse and dominant family that attack most of the stored grain commodities and its value-added products. Among twenty-nine mite species, *Tyrophagusputrescentiae* (Schrank, 1781) (Family: Acaridae) is most abundant species attacking twenty-two stored products.

2A.2 Survey of soil oribatidmites fauna

Nine species of soil oribatid mites are belonging to five dominant families *i.e.*Scheloribatidae, Haplozetidae, Oppiidae, Lohmanidae and Mochlozetidae. Among nine species of soil oribatid mite, *Scheloribates curvialatus* Hammer. is most abundant and occurring throughout the year in various agro-ecosystems.

2A.3 Screening of mango varieties against shoot borer, *Chlumetia transversa* (Walker).

The infestation of mango shoot borer, *Chlumetia transversa* (Walker) was maximum in Kesar and Alphonso, whereas minimum infestation was recorded in BanarasiLangra, Dashehari, Amrapali, Neelphonso and Ratna varieties of mango.

2A.4 Estimation of yield losses caused by insect pests on pigeonpea (*Cajanus cajan* (L.) Mill sp.)

The avoidable yield loss in pigeonpea is recorded up to 38.48 per cent (35-40 %) by insect-pests when no plant protection measures are taken. The maximum damage is recorded due to pod borer (*Helicoverpa armigera*) followed by pod sucking bugs (*Clavigralla gibbosa*) and pod fly (*Melanogromyza obtusa*).

2A.5 Screening of *Gossypium hirsutum* cotton varieties/ genotypes for resistance to insect pests under rainfed conditions.

*Gossypium hirsutum*cotton varieties/genotypes *viz*., NH-615, GBHV-201, GBHV-209, GBHV-204 and G.N. Cot-26 were found moderately resistant to jassids under rainfed conditions.

2A.6 Crop loss assessment by major insect-pests and diseases of mango

Avoidable yield losses up to 49.61 per cent was observed due to major insect-pests (hopper, thrips and fruit fly) and diseases (powdery mildew, anthracnose and stem end rot) of mango.

2A.7 Dissipation of insecticides in tomatoes grown under open field and greenhouse under South Gujarat conditions

The tomato fruits are safer for consumption with respect to residues of chlorantraniprole, flubendiamide, indoxacarb and thiamethoxam applied at the recommended doses [Chlorantraniprole

18.5 SC (30.0g a.i/ha), Flubendiamide 20% WG (48.0 g a.i/ha), Indoxacarb 14.5 SC (60.0 g a.i/ha), Thiamethoxam 25% WG (50.0 g a.i/ha)] either grown in open field or under polyhouse condition when harvested after prescribed waiting periods [Chlorantraniprole 18.5 SC (3days), Flubendiamide 20% WG (5 days), Indoxacarb 14.5 SC (5 days), Thiamethoxam 25% WG (5 days)] as their terminal residues were less than Codex MRL values.

2A.8 Seasonal incidence and pest activity of two spotted spider mite, *Tetranychus urticae* Koch. on Adenium [*Adenium obesum (Forssk.)*Roem&Schult.]

The population of two spotted spider mite, *Tetranychusurticae* Koch. infestingadenium, *Adeniumobesum* (Forssk.) Roem&Schult. is significantly higher in polyhouse as compared to field condition.Underfield condition, the population of two spotted spider mite, *Tetranychusurticae* Koch. hassignificantpositivecorrelationwith minimum temperature, morning relative humidity and evening relative humidity while maximum temperature showedsignificantnegativecorrelationwith mite population in adenium.

2A.9 Management of seed borer in sapota

Four sequential applications of deltamethrin 2.8 EC @ 10 ml/ 10 lit water and *Bt* powder (*Bacillus thuringiensis* var. *kurstaki* - 1 x 10^{11} CFU/gm) @ 10 g/ 10 lit water at 15 days interval at marble stage of fruit (October onwards) exhibited minimize fruit damage of seed borer (*Trymalitismargarias*Meyrick) and enhanced the number of marketable fruits in sapota.

As per CIBRC format:

Year	Crop	Insect pest	Insecticide with formulation	Dose/ha				Waiting period (Days) as per residue report
				a.i (gm)/ha	Quantity of formulation (ml or g)	Conc. (%)	Dilution in water (L)	
2021	Sapota	Seed borer	Deltamethrin 2.8 EC	28	1000	0.0028	1000	1

2B. Plant Pathology

2B.1 Screening of sugarcane varieties for resistance red rot

Sugarcane varieties *viz*., Co 11001, Co 11004, CoM 11084, Co 11007 and Co 11019 were exhibited moderately resistant to red rot.

2B.2 Screening of Sugarcane varieties for resistance to whip smut

Sugarcane Varieties *viz.*,Co 11001, CoM 11082, Co 11005 and CoM 11085 were showed resistant reaction while variety Co 11019 was exhibited highly susceptible reaction against whip smut disease.

2B.3 Evaluation and multiplication of Groundnut genotypes to identify the sources of resistance against stem rot caused by *Sclerotium rolfsii.*

Groundnut genotypes *viz.*, GJG-32, ICGV-07222, Phule Vijya, GG-13, Jawan, GAUG-1 and R-9281 were found moderately susceptible against stem rot disease under sick plot condition.

2B.4Dynamics of diseases in gerbera under protected cultivation

Under the protected cultivation of gerbera, leaf blight disease (*Alternaria alternata)* was observed from July to August (29^{th} to 35^{th} SMW) with its maximum intensity and showed significant positive correlation with relative humidity and negative with average temperature.

2B.5 Susceptibility of medicinal plants to Garmar (*Plectranthus barbatus* Andrews.) Root Knot Nematode (*Meloidegyne* sp.).

Medicinal plants *viz*., Garo, Kalijiri and Black Basil were found highly resistant in reaction against root knot nematode (*Meloidogyne incognita*). Moreover, Bhoyaringani, Senna and Garmar were highly susceptible to root knot nematode**.**

3. Horticulture

3.1Response of media, fertilizer and chemicals application on growth of mango rootstock

Scientists those who are working on raising of mango rootstock are recommended to sow the mango stone in poly bag having potting media of red soil + FYM + vermicompost (2:1:0.5) and to fertilize @ 75:16:75 mg NPK /Kg through soil application with foliar application of Novel organic liquid nutrients 10 ml per litre at 2nd and 3rd MAS for better germination, growth and higher survival of mango rootstock.

4. Forestry

4.1 Mapping of degraded lands using Remote sensing and GIS technique in coastal region of Navsari.

Policy makers, state agriculture and forest departments are suggested to utilize the technique of weighted overlay analysis using remote sensing and GIS for assessment of land degradation at regular basis to ascertain the land sustainability. The sustainable utilization of unutilized land *i.e.*> 50% area (muddy & barren) may be done as per land capability classification essentially required for nourishing ecological balance and food security of the region.

5. Agricultural Engineering

5.1 Development of erodibility map for Dang district

Soil erodibility of Dang district varies from 0.18 to 0.44 with the mean value of 0.33. About 44.5% area having high erodibility value >0.34, showed higher susceptibility to erosion, while 24.3% area having low erodibility <0.29 showed comparatively lower susceptibility to erosion. The highest soil erodibility was found in soil sample of Satbabla village which contains 52.36% sand, 30.26% silt and 17.38% clay, while the soil erodibility was lowest in sample of Borkhet village which contains 48.1% sand, 14.29% silt and 37.61% clay and has lowest percentage of silt as compared to all the other samples.

5.2 Development of dynamic mobile app to rectify the updation of *KisanMitra* app of NAU

The prototype model of mobile based application developed by Navsari Agricultural University (*KisanMitra* 2.0) can be used as advancement version of earlier developed *KisanMitra* mobile application for agricultural information dissemination to the farming community.

6. Basic Science

6.1. Study of free living nitrogen fixing bacterial diversity with respect to seasonal variation

The post monsoon isolate A19 (*Streptomyces coelicolor*) and A28 (*Bacillus altitudinis*) can be used due to their multiple *in vitro* plant growth promoting activities along with the living nitrogen fixing potential.

6.2 Optimization of expression level of recombinant protein from *E. coli* host strain *BL21(DE3)*

Expression level of recombinant protein from E. coli host strain BL21 (DE3) with the addition of salts cocktail solution (10.1294 gm%), Glycerol (0.600253 gm%), Tryptone (1.58441 gm%), Yeast extract (1.28801 gm%) and IPTG (0.347879 mM) leads to the increase in cellulase activity (1.76 fold), chitinase activity (1.36 fold) and protease activity (3.55 fold). The activity was found to be 0.09 U/ml for cellulase, 0.05 U/ml for chitinase and 45.08 U/ml for Protease.

7. Social Science

7.1 Training needs and constraints of farmwomen engaged in backyard poultry farming in South Gujarat region

Extension functionaries of south Gujarat are advised to give priority to impart training on health care, feeding and management aspects of poultry for women engaged in backyard poultry farming.

7.2 Growth and instability analysis of area and production in forestry sector of Gujarat

Special attention needs to be given to Surat, Gandhinagar, Junagadh, Valsad and Vadodara circles to increase the area under forest and tree cover whereas appropriate measures are needed to increase timber trees in Surat circle and fuel wood trees in Junagadh and Junagadh Wildlife circle.

7.3 Construction of selection indices using different economic coefficients to select optimum selection index in Indian bean (*Lablab purpureus* L. sweet)

The genetic gain of selected Indian bean progenies was observed higher with equal weight method as compared to genotypic correlation coefficients and genotypic path coefficients (Direct effect) weight method. It is recommended to select progeny based on plant height, pod width and days to maturity that provides higher genetic gain in Indian bean seed yield improvement program. It is suggested that progeny F3B 144 2 can be used in breeding for getting higher yield.

7.4 Stability of sorghum genotype through AMMI model in Gujarat

It is advised to use SR-2957(G5) sorghum germplasm for grain yield and dry fodder in the breeding programme to explore other breeding parameters aggressively. For green fodder sorghum SRF-322 (G1) is highest yielder and has stable performance across locations hence advised for further utilization in different breeding programme.

8.Animal Health

8.1 Postnatal gross-morphometrical and histomorphological studies on the spleen of goat (*Capra hircus*)

The histoarchitecture of splenic parenchyma show distinct red pulp and white pulp during various stages of development and the average numbers of white pulp per square mm area of spleen were decreased from the age of twelve months onwards in goats.

8.2 Molecular detection of theileriosis and anaplasmosis in bovine

The cytochrome b gene primers (Forward 5'- tttggaggccaaacagttgg - 3': Reverse 5'- cctgccattgccaaaagtcc- 3') are useful for the specific detection of Theileriaannulata in bovine with 401 bpamplicon using PCR.

8.3 Molecular detection of theileriosis and anaplasmosis in bovine

The *Anaplasma marginale* is distributed in infected whole, anterior and posterior half of the body of *Rhipicephalus* (*Boophilus*) *microplus* and also in its eggs, indicative of transovarian transmission.

Details of seed /planting material production during 2020-21

SN	Type of Seeds	Production in Quintals
1	Breeder Seed	108.92
2	Foundation Seed	500.51
3	Certified Seed	1245.03
4	Truthfully labeled/university Seed	1181.78
	Total	**3026.74**
5	Planting Material (Sugarcane/single eye bud) (No.)	55100.00
6	Planting Material (Sugarcane) (No.)	1680.00
	Tissue-culture Plants	
7	Sugarcane	4750.00
8	Banana	0.0

Summary of Research projects running at NAU during 2020-21

SN	Funding sources	Name of Projects	No. of Projects
			2020-21
1	GoG	Plan	122
		Non Plan scheme	42
		Other State Govt.	26
2	ICAR	AICRP	21
		NAHEP-CAAST	
		AINP (Fish Health)	
3	GoI	CIBA (Diagnostic lab)	10
		ICFRE (NTFPs)	
		IMD, GKMS	
		DBT	
		DST	
		PPV & FR	
		NMPB	
		NHM/RKVY/NFSM	
4	Other Agency	Other Agency	43
		Total	**264**

List of AICRP Schemes

SN	Name of AICRP Schemes	Year of Implementation	Location
1	AICRP on Cotton	1967-68	Surat
2	AICRP on Water Management	1970-71	Navsari
3	AICRP on Sugarcane	1971-72	Navsari
4	AICRP on Sorghum	1973-74	Surat
5	AICRP on Integrated Farming System	1980-81	Navsari
6	AICRP on Fruits	1986-87	Paria
7	AICRP on Fruits	1986-87	Gandevi
8	AICRP on Agricultural Acarology	1987-88	Navsari
9	AICRP on Goat Improvement	2001-02	Navsari
10	AICRP Tuber crops	2006-07	Navsari
11	AICRP on Palms (Coconut)	2008-09	Navsari
12	AICRP on Niger	2009-10	Vanarasi
13	AICRP on Cashew	2009-10	Paria
14	AICRP on Rice	2010-11	Navsari
15	AICRP on Rice	2013-14	Vyara
16	AICRP Small Millets	2014-15	Waghai
17	AICRP on Spices (Network Centre)	2008-09	Navsari
18	AICRP on Vegetables (Network Centre)	2010-11	Navsari
19	AICRP on Floriculture (Network Centre)	2011-12	Navsari
20	AICRP Honey Bees and Pollinators (Network Centre)	2014-15	Navsari

List of NICRA Projects

SN	Name of Project
1	National Initiatives on Climate Resilient Agriculture, AES, Paria

Experiential Learning Programmes implemented at NAU, Navsari

SN	Name of ELP Unit	Sanctioned during	Colleges
1	Bio-fertilizer production unit	2006-07	NM College of Agriculture
2	Dehydrated onion processing and packaging unit for value addition	2006-07	ASPEE College of Horticulture
3	Plant tissue-culture unit	2007-08	
4	Hi-tech protected cultivation of Horticultural crops	2008-09	
5	Commercial production of Horticultural crops	2011-12	
6	Broiler and Layer Production unit	2013-14	Veterinary College
7	Goat Production Unit	2014-15	
8	Commercial Apiculture	2011-12	College of Forestry
9	Production of Quality Planting Materials in Forestry	2015-16	
10	Enriched Vermicompost Production	2017-18	College of Agriculture, Bharuch
11	Quality Planting Material Production in Horticultural Crops	2018-19	College of Agriculture, Waghai
12	Agricultural Waste Management through Vermicompost	2018-19	

New Plan Projects

Education	
1	Construction of laboratory Animal house at NAU, Navsari

Human Resource Development

SN	Research Center	Seminar/Symposia/Conference	Winter/Summer Schools	Workshop/Short term training
1	MSRS, Surat	35	6	5
2	MCRS, Surat	120	4	3
3	WRS, Bardoli	2	0	3
4	FRS, Gandevi	31	0	4
5	NARP, Bharuch	22	0	0
6	LRS, Navsari	3	2	3
7	AES, Paria	60	3	10
8	SWRMU, Navsari	3	5	2
9	CRSS, Achhalia	0	0	0
10	RSSS, Navsari	3	0	0
11	ARS, Tanchha	0	0	0
12	CWBS, Hansot	0	0	0
13	MSRS, Navsari	0	0	0
14	ARS, Mangrol	0	0	0
15	RCRS, Bharuch	2	0	0
16	NRS, Vanarasi	5	0	2
	Total	**286**	**20**	**32**

Summary of Radio/ TV talk

SN	Research Center	No. of Radio/ TV talks broadcasted
1	MSRS, Surat	1
2	MCRS, Surat	1
3	RSSS, Navsari	2
	Total	**4**

Summary of Awards

SN	Center	No. of Awards received by scientists
1	MCRS, Surat	1
2	WRS, Bardoli	1
3	FRS, Gandevi	3
4	AES, Paria	1
	Total	**6**

Summary of Publications

SN	Centers	Research Paper/s	Books/ Book Chapters
1	MSRS, Surat	1	0
2	MCRS, Surat	11	1
3	WRS, Bardoli	1	0
4	FRS, Gandevi	4	0
5	NARP, Bharuch	4	0
6	LRS, Navsari	2	0
7	AES, Paria	17	0
8	SWRMU, Navsari	14	0
9	RSSS, Navsari	1	0
10	ARS, Tanchha	1	0

11	CWBS, Hansot	0	0
12	MSRS, Navsari	4	0
13	NRS, Vanarasi	2	0
	Total	**62**	**1**

Research Publications

SN	Details of Publications	Name of Research station	NAAS rating
1	AdrishDey, Pathour R.S., Meshram, N.M, Sabtharishi, S., Mallikarjuna, J., Kalleshwaraswamy, C.M., Chavan, S.M., Jawala, J. and Suby, S.B. (2021). Molecular diversity of *Sesamiainferens*(Walker, 1856) (Lepidoptera: Noctuidae) from India. *Biotech*, **11**:134.	AES, Paria	--
2	Bana, J.K. and Patil, S.J.(2020). Impact of pesticides on pollinators or visitors during flowering period of mango, *Mangiferaindica* L. *J. Ent. and Zoo. Studies*, **8**(4): 49-51.	AES, Paria	5.53
3	Bana, J.K., Choudhary, J.S., Ghoghari, P.D., Sharma H.,Sushil Kumar and Patil, S.J.(2020). Influence of weather parameters on powdery mildew of mango inflorescence in humid tropics of South Gujarat. *J. Agrometeoro.*, **22**(4): 488-493.	AES, Paria/ SWMRU	6.64
4	Bana, J.K., Ghoghari, P.D., SushilKumar and Patil, S.J. (2021). Population dynamics of mango thrips and its natural enemies. *Indian Journal of Entomology*,**31**(4): 83-89.	SWMRU, Navsari	5.08
5	Bhanderi, G.R., Patel, R.D., Desai, H.R. and Patel, R.K. (2020). Assessment of yield losses due to mealybug (*PhenacoccussolenopsisTinsley*) infestation in the cotton farmers' field of south Gujarat. *Journal of Entomology and Zoology Studies*, **8**(2): 73-79.	MCRS, Surat	5.53
6	Bhanderi, G.R., Patel, R.D., Desai, H.R., Patel, A.J. and Patel, H.V. (2020). Bioefficacy of bistrifluron 10% EC against cotton sucking pests and its natural enemies. *Journal of Entomology and Zoology Studies*, **8**(2): 318-322.	MCRS, Surat	5.53
7	Bisane, K.D. (2020). Screening sapota varieties against bud borer (*Anarsiaachrasella* Bradley) under south Gujarat condition. *Indian Journal of Plant Genetic Resources*,**33**(3): 347-51.	FRS, Gandevi	5.54
8	Chaudhary, J.K., A.G. Patel, N.B. Gohil and D.G. Chaudhary (2020). Response of nutrient content and quality of summer forage pearlmillet (*Pennisetumglaucum* L.) on sowing date and nitrogen level. *International Journal of Chemical Studies*, **8**(5): 841-844.	AES, Paria	5.30
9	Chaudhary, J.K.,A.G. Patel, N.B.Gohil and D.G. Chaudhary (2020). Effect of sowing date and nitrogen level on growth and yield of summer forage peal millet (*Pennisetumglaucum* L.). *Green Farming*, **11**(4 & 5): 332-336.	AES, Paria	4.30
10	Desai, V.K. and Rakholia, K.B. (2021). Efficacy of the bioagents for the management of sorghum grain mold.*International Journal of Current Microbiology and Applied Sciences*,**10**(3):1770-1775.	SWMRU, Navsari	5.38
11	Desai, V.K., Rakholia, K.B. and Patil, V.A. (2021). Efficacy of fungicides on grain mold of sorghum. *International Journal of Current Microbiology and Applied Sciences*,**10**(04):648-652.	SWMRU, Navsari	5.38
12	Gajre, N.K. and H.L. Chauhan(2020). Effect of known antagonists on the growth of the *S. oryzae in vitro* a causal agent of rice grain discolouration. *International Journal of Chemical Studies*,**8**(3): 2198-2201.	AES, Paria	5.30
13	Gamit, D.R.,C.G. Intwala and A. Patil (2021). Genetic variability analysis in F_2 generations of vegetable Indian bean (*Lablab purpureus* L.) Sweet.	MSRS, Navsari	4.51

	Multilogic in Science,**36**(10):1697-1702.		
14	Gamit, D.R.,C.G. Intwala and V. Lodam (2021). Correlations and path analysis studies on yield and its components in F_2 generation of vegetable Indian bean (*Lablab purpureus* L. Sweet.).*International Journal of Chemical Studies*,**9**(2): 737-741.	MSRS, Navsari	5.31
15	HarsiddhiLimbani and J. P. Makati (2020). Genetic variability and D^2 analysis for yield and quality traits in tomato (*Solanumlycopersicum* L.). *Int. J. Curr. Microbiol. App. Sci.*, **9**(05):2163-2174.	AES, Paria	5.30
16	Jinalben J. Tandel, Patil, S.J., Gaikwad, S.S. and Tandel, B.M. (2020). Effect of defoliation and storage of scion stick on sprouting and survival of softwood graft of mango var. Sonpari. *Int. J. Chem. Studies*, **8**(2): 901-903.	AES, Paria	5.30
17	Kalaria, R.K., Patel, A. and Desai, H. (2020). Isolation and characterization of dominant species associated as grain mold complex of sorghum under south Gujarat region of India. *Indian Phytopathology*, **73**(1): 159-164.	MCRS, Surat	5.90
18	LakshayGoyal, C.G. Intwala, K.G. Modha and Vishwas Acharya (2021). Association and diversity analysis for yield attributing traits in advance generation of green gram (*Vignaradiata* L. Wilczek). *International Journal of Chemical Studies*,**9**(1): 1934-1939.	MSRS, Navsari	5.31
19	Lalita Saini, Sahil Sindhi, B.K. Davda, B. Gangaiah, Satpal and N. Kharor(2020). Is phosphorus and potassium fertilization of multicut forage sorghum rewardive in heavy clay soils of Gujarat?*Forage Research*,**46**(3): 261-265.	MSRS, Surat	4.84
20	Modi, P.K., Chavan, S.M.andVerma, P.D. (2021). Extent of adoption of "Novel organic liquid nutrients" in fruits and vegetable crops. *Agriculture Science Digest*, **41**(1): 93-95.	AES, Paria	4.75
21	Modi, P.K., Chavan, S.M. and Verma, P.D. (2021). Extent of novel organic liquid nutrients in fruits and vegetables crops. *Agricultural Science Digest*, **41**(1): 93-95.	FRS, Gandevi	4.75
22	Muhammad, R.M., Desai, C.S. and Patil, S.J. (2020) Effect of banana pseudostem sap with apple, pomegranate and Aloe vera juice on organoleptic properties of blended nectar. *The Pharma Innovation Journal*,**9**(10): 272-276.	SWMRU, Navsari	5.23
23	Muhammadi, M.R., Desai, C.S. and Patil, S.J. (2020). Effect of banana pseudostem sap with apple, pomegranate and *Aloe vera* juice on organoleptic properties of blended nectar. *The Pharma Inn. J.*, **9**(10): 272-276.	AES, Paria	5.23
24	Narendra Singh, SonalTripathi, patel V. A., JaiminNaik and Chauhan Aditi (2020). Effect of rate and frequency of micronutrient on growth attributes and dry matter yield of banana *cv. grand naine* under south Gujarat. *The Bioscan*,**15**(3): 287-290.	RSSS, Navsari	5.26
25	Panchal, R.K., Patil, S.J. and Chawla, S.L. (2020). Yield and yield attributes of banana (*Musa paradisiaca* L.) cv. Grand Nain.influence by foliar application of silicon. *Int. J. Chem. Studies*,**8**(6): 2156-2157.	AES, Paria	5.30
26	Panchal, R.K., Patil, S.J. Chawla, S.L., Tandel, B.M. and Gaikwad, S.S. (2020). Effect of foliar application of silicon on growth of banana (*Musa paradisiaca* L.) cv. Grand Nain. *The Pharma Inn. J.*, **9**(12): 39-40.	AES, Paria	5.23
27	Panchal, R.K., Patil, S.J. Chawla, S.L., Tandel, B.M. and Gaikwad, S.S. (2020). Effect of foliar application of silicon on leaf nutrient content and flowering of banana (*Musa paradisiaca* L.) cv. Grand Nain. *Int. J. Chem. Studies*,**8**(6): 2163-2164.	AES, Paria	5.30
28	Pandya, G.M., Joshi, C., Rank, D., Kharadi, V., Vataliya, P., Desai, P. and Solanki, J. (2021). Sustainability of milk production in Surti buffalo on an organized farm. *Buffalo Bulletin*,**40**(1): 161-165.	LRS, Navsari	6.11

29	Pandya, G.M., Ramani, U.V., Tyagi, K.K., Dangar, N.S. and Janmeda, M. (2020). Genetic Polymorphism of GHR, LEP and MSTN Genes in Surti Goats from Organized Farm. *Indian Journal of Veterinary Sciences and Biotechnology*,**16**(2, 3 & 4): 21-24.	LRS, Navsari	4.47
30	Parmar, S.M.,Z.P. Patel, S.G. ParmarandN.K. Gajre(2020). Studies on biology and morphometrics of fruit borer, *Etiella* sp. (Lepidoptera: Pyralidae) on mango under laboratory conditions. *International Journal of Chemical Studies*, **8**(6): 2017-2021.	AES, Paria	5.30
31	Patel, B.K., Sandipan, P.B., Chawada, S.K. and Patel, R.K. (2021). Morphological and cultural characteristic of *Fusariumoxysporum* f. sp. *vasinfectum* (FOV) under south Gujarat. *International Journal of Current Microbiology and Applied Science*,**9**(12): 814-819.	MCRS, Surat	5.38
32	Patel, B.K., Sandipan, P.B., Chawada, S.K. and Patel, R.K. (2021). Evaluation of different biocontrol agents against of *Fusariumoxysporum* f. sp. *vasinfectum* (FOV) under *in vitro* condition of South Gujarat. *International Journal of Chemical Studies*,**9**(1): 998-1000.	MCRS, Surat	5.31
33	Patel, B.K., Sandipan, P.B., Patel, R.K. and Chawada, S.K. (2021). Screening of different non systemic and systemic fungicides for the wilt disease of cotton under *in vitro* condition of South Gujarat. *International Journal of Current Microbiology and Applied Science*,**9**(12): 820-825.	MCRS, Surat	5.38
34	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. *International Journal of Chemical Studies*,**9**(1): 1005-1007.	MCRS, Surat	5.31
35	Patel, H.R. and Patel, P.B. (2020). Heritability and genetic advance studies in segregating generation for yield, its components and quality traits in rice (*Oryzasativa* L.). *The Pharma Innovation Journal*, **9**(10): 221-224.	SWMRU, Navsari	5.23
36	Patel, P.B., Desai C.S. and Usdadia, V.P. (2021). Correlation and regression of mango thrips (*Scirtothripsdorsalis* hood) in high-density mango plantation under south Gujarat conditions. *InternationalResearch Journal of Chemistry*, **33**(1):1-7.	SWMRU, Navsari	4.32
37	Patel, P.B., Usdadia, V.P and Desai, C.S. (2020) Incidence of mango hoppers *Idioscopusnitidulus* Walker in high density mango plantation under south Gujarat Conditions. *International Journal of Chemical Studies*, **8**(4):1509-1512.	SWMRU, Navsari	5.31
38	Patel, P.K. and Bisane, K.D. (2020). Assessment of avoidable losses due to seed borer, *Trymalitismargarias*Meyrick in different varieties of sapota under high density plantation. *Pest Management in Horticultural Ecosystem*, **26**(1): 29-34.	FRS, Gandevi	5.05
39	Patel, P.K., Bisane, K.D. and Naik, B.M. (2020). Estimation of fruit damage deviation due to seed borer, *Trymalitismargarias*Meyrick in different varieties and spacing of sapota.*Journal of Entomological Research*, **44**(4): 505-510.	FRS, Gandevi	5.89
40	Patil, V.A., Patel, P.B, Ghaghara, P.D., Kavad, N.K. and Usadadia, V.P. (2020). Efficacy of fungicides against grain discoloration disease of rice. *International Journal of Economic Plants*, **7**(2):073-076.	SWMRU, Navsari	4.37
41	Prajapati, A.P., Patel, P.B., Bhimani, H.D. and Desai, A.V. (2020). Population dynamics of major insect pests of cowpea and its correlation with different abiotic factors under south Gujarat conditions. *International Journal of Chemical Studies*, **8**(3):2307-2311.	SWMRU, Navsari	5.31
42	Prajapati, R.F., Chaudhary, A.J., Deshmukh, R.P., Bambharolia and N.K. Gajre. (2020). Management of blast (*Pyriculariagrisea*) of finger millet ith fungicides and biocontrol agents. *Plant Disease*, **35**(1):36-41.	AES, Paria	4.50
43	Raghavendra, H.R., Desai, C., Mayani, J. and Patil, S. (2021)	SWMRU,	5.38

	Standardization of banana fruit *(Musa paradisiaca* L.) and pseudostem central core blended jam. *Int.J.Curr.Microbiol.App.Sci*.,**10**(02): 90-104.	Navsari	
44	Raghavendra, H.R., Desai, C., Mayani, J. and Patil, S. (2021).Standardization of banana fruit (*Musa Paradisiaca* L.) and pseudostem central core blended jam. *Int. J. Curr. Microbiol. App. Sci.*, **10** (02): 1-15.	AES, Paria	5.3
45	Ramani, H.R., Vekariya, V.K., Faldu, G.O., Patel, D.M. and Solanki, B.G. (2020). Change in biochemical constitutes of cotton genotypes under rainfed and irrigated condition. *Multilogics in Science*, **9**(32): 308-310.	MCRS, Surat	5.20
46	Mehta, Diwakar Singh, S.C. Mali and D.U. Patel (2020). *In vitro* optimization and rapid micropropogation of two elite sugarcane Co 86032 and CoC 671 by shoot tip culture. *International Journal of Tropical Agriculture*,**38**(4): 289-298.	MSRS, Navsari	3.94
47	Rishi Pareek, SandhyaKranthi, G.M.V. Prasad Rao, Desai, H.R., Bheemanna, H., Dharajothi, B., Alka Chaudhary and Kranthi K. R. (2021). Assessment of bollworm damage and yield loss in seed blends of Bollguard II with corresponding non Bt hybrid as built in refuge in cotton. *Phytoparasitica*,49: 253-263.	MCRS, Surat	7.02
48	Singh, A.G. and Patel, P.B. (2020). Study of heterosis and inbreeding depression in F2 generation of rice (*Oryzasativa* L.). *The Pharma Innovation Journal*, **9**(10): 468-472.	SWMRU, Navsari	5.23
49	Singh, A.G. and Patel, P.B. (2020). Estimation of heterosis and inbreeding depression for yield, its components and qualitative traits in rice (*Oryzasativa* L.). *The Pharma Innovation Journal*, **9**(10): 217-220.	SWMRU, Navsari	5.23
50	Singh, A.G. and Patel, P.B. (2020). Generation mean analysis for yield and its components in rice (*Oryza sativa* L.). *The Pharma Innovation Journal*, **9**(10): 473-477.	SWMRU, Navsari	5.23
51	Supriya, Jaiswal H.K., Showkat A. Waza and Rai, V.P. (2019). validation of functional markers associated with genes for fragrance in rice (*Oryzasativa* L.). *Indian Journal Plant Genetic Resources*, **32**(2): 217-222.	ARS, Tanchha	5.54
52	Thejaswini, K., Patil, S.J., Patel, A.M. and Tandel, B.M. (2020). Root growth, leaf area, fresh and dry weight of mango seedlings influence by foliar spray of growth substances. *Int. J. Chem. Studies*,**8**(6): 267-269.	AES, Paria	5.3
53	Vekariya, R.D., A.I. Patel, K.G. Modha, C.V. Kapadiya, S.C. Mali and Patel, A.A. (2020). Estimation of heterosis, gene action and combining ability over environments for improvement of fruit yield and its related traits in Okra [*Abelmoschusesculentus* (L.) Moench]. *Int.J.Curr.Microbiol.App.Sci*. **9**(9): 866-881.	WRS, Bardoli	5.38

Chapters in Book/ Proceedings

Butani, N., Bhatt, Megha. D., Parmar, Priti, JobanputraJaydeep, Dobriyal Anoop K. and Bhatt Deepesh (2020). Nanoemulsions of plant based bioreactive compounds: Synthesis, Properties and applications *In:*Nanotechnological approaches in food microbiology. SanjuBalaDhull, Prince Chawla and RavinderKaushik (Eds). First edition, CRC Press, Taylor and Francis Group, Boca Group, London, New York, Pp. 187-226(ISBN: 978-0-429-34277-6).
Ganvit, R.S.,P.K. Jagtap and P.M. Mistry (2020). Genetic diversity and trait association in groundnut. Paper published in National webinar Plant Priological interventions for climate smart agriculture: (PBICSA-2020)
Jagtap, P.K. and P. M. Mistry (2020). Character association for seed yield and yield attributer in nigergermplasms. Paper published in National webinar Plant Priological interventions for climate smart agriculture: (PBICSA-2020)

17. Directorate of Extension Education, Navsari

Navsari Agricultural University, Navsari 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.

Vision

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

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

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

Krishi Vigyan Kendra, Navsari

Krishi Vigyan Kendra, Waghai

Krishi Vigyan Kendra, Vyara

Krishi Vigyan Kendra, Narmada

Sardar Smruti Kendra

Agril. Technology Information Center, Navsari

Sardar Training Hall With Waiting Room

Agriculture Educational Museaum (Educatorium)

Shashtri Krushikar Bhavan

Balram Krushikar Bhavan

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

Details of technical staff working under extension unit

SN	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	4	**0**
4	Agricultural Officer	3	3	**0**
5	Agriculture Supervisor	1	1	**0**
6	Agricultural Assistant	2	2	**0**
	Total	**12**	**11**	**1**

Transfer of Technology (ToT) Centres & Extension Schemes

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

SN	Type	Name of Centre	Location
1	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
2	Training Centres for Extension Workers	Training and Visit System	Navsari
		Sardar Smruti Kendra	Navsari
3	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
4	On-farm testing Frontline demonstrations Trainings to farmers Resource and knowledge centre of the district.	Krishi Vigyan Kendra	Vyara, Waghai, Navsari, Surat, Dediyapada

Vocational Certificate Courses for Rural Youth & Women

SN	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 in First Aid in Avian Health Management	Certificate	Five months Saturday (First, Third and Fifth)	20

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

Ongoing Extension Schemes: Extension activities through 32 Schemes

SN	Plan Schemes : Development (12)
1	Strengthening of the Directorate of Extension Education, Navsari
2	Upgrading of the existing Sardar Smruti Kendra, Navsari
3	Establishment of Centre for Agril. Extension Information System, Navsari
4	Agricultural Technology Information Centre (ATIC), Navsari
5	Establishment of Agro ITI Centre for Agricultural & Horticulture, Navsari
6	Establishment of University Educational Museum, Navsari
7	Testing of University technologies on farmers' fields through adaptive trials, Navsari
8	Demonstration-cum-Training Centre for Inland Fisheries, Navsari
9	Vegetable & Fruit Crops Demon. Scheme for Tribal Upliftment, Paria
10	Strengthening of Soil and Water Management Training Centre, Navsari
11	Strengthening of Tribal Women Training Centre, Dediyapada
12	Strengthening of Extension Wing, Navsari
	Non-Plan Schemes : Standing charges (05)
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
	Other Agency (08)
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	*Krishi Mahotsav* Programme,Navsari
8	Krishi Library, Navsari
	ICAR (07)
1	Krishi Vigyan Kendra, NAU, Vyara, Dist.-Tapi
2	Krishi Vigyan Kendra, NAU, Navsari
3	Krishi Vigyan Kendra, NAU, Dediyapada, Dist.-Narmada
4	Krishi Vigyan Kendra, NAU, Surat
5	Krishi Vigyan Kendra, NAU, Waghai, Dist.-Dangs
6	Providing support to DEE for knowledge empowerment, technological backstopping, HRD and overseeing of KVKs, Navsari
7	Farmer FIRST Programme

Salient Extension Activities & Achievements

Various extension activities, training and achievement under taken during the current year are elaborated under different heads:

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

SN	Extension Programmes	No. of activities	No. of Beneficiaries			
			Farmers	Women	Youths	Total
1	On campus Farmers' Training programme	243	4628	3849	986	**9463**
2	Off campus Farmers' Training programme	285	5670	4987	1265	**11922**
3	Training for Extension functionaries	50	887	282	338	**1507**
4	Seminar / Workshop / Symposium for Farmers	30	3948	2914	980	**7842**
5	Seminar / Workshop / Interface/ Symposium for Extension Officers	15	331	77	83	**491**
6	Farmers' day / Field day	93	1819	1725	308	**3852**
7	Agril. Fair / Agril. Exhibition	23	3402	3374	713	**7489**
8	Farmer *shibir* / Farm women *shibir*	69	2249	2620	406	**5275**
9	Farmers' meeting/*Krishi gosthi*	89	1562	1086	419	**3067**
10	Front Line Demonstrations (KVKs)	1072*	2936	708	347	**3991**
11	Adaptive trials (NAU technologies)	646*	2654	547	261	**3462**
12	On Farm Trials	34*	213	56	43	**312**
13	AICRP Demonstrations	126*	375	115	123	**613**
14	Demonstrations (Research Stations)	250*	651	198	203	**1052**
15	Exposure visit of the farmers	19	414	217	172	**803**
16	Diagnostic team visit on farmers' field	675	1486	265	164	**1915**
17	Veterinary Clinic Camp/ Animal Husbandry *Shibir*	7	639	508	122	**1269**
18	Text SMS sent on farmers' mobile	1822	21843	2441	3830	**28114**
19	Telephonic / e-mail guidance	5499	26037	3025	4042	**33104**
20	Press-notes / Articles in vernacular Newspapers	326	Mass	Mass	Mass	**Mass**

21	Radio & TV talk	72	Mass	Mass	Mass	**Mass**
22	Farm Literature Publication	132	26571	20216	9613	**56400**
23	**Visitors (dignitaries, officers, farmers, students)**	**1338**	**6932**	**6490**	**1973**	**15395**

* Area in Ha.

Seminar/Symposium/Interface organized for farmers under capacity building of farmers

SN	Subject/Topic	No. of Programme	No. of Beneficiaries
1	Paddy Crop	1	87
2	Sugarcane Crop	1	45
3	Fruit Crops	4	2745
4	Flowers	2	203
5	Vegetable Crops	3	2074
6	Pulse Crops	2	362
7	Integrated Pest Management	4	758
8	Post-Harvest Technology	2	286
9	Green House Technology	1	131
10	Soil and Water Management	2	233
11	Agriculture farm Machinery	2	91
12	Animal Husbandry	2	112
13	Value Addition	1	374
14	Natural / organic farming	1	256
15	Fishery and its Marketing	1	49
16	Prawn/Shrimp cultivation and its Marketing	1	36
Total		**30**	**7842**

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 3991 FLDs in 1072 ha. and 1665 other demonstrations in 376 ha. were conducted on farmers' fields under the close supervision of the NAU Scientists.

SN	Crop	No. of Demon.
1	Paddy	1587
2	Sugarcane	144
3	Pigeon pea	593
4	Gram	461
5	Green gram	249
6	Nagli	87
7	Sweet corn	67
8	Okra	259
9	Groundnut	164
10	Maize	131
11	Mango	72
12	Sapota	47
13	Cashew	73
14	Turmeric	57
	Total	**3991**

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 2020-21, total 3462 adaptive trials were conducted on the farmer's fields through five KVKs in South Gujarat on newly released varieties of paddy, gram, wheat, green gram, pigeon pea, soybean, Sugarcane, Cotton, Fodder Sorghum, turmeric, Ajwain, Indian bean, Elephant foot, pointed guard, Little Guard, Drumstick, mango were conducted. Demonstration on ICM, INM, IPDM, Novel organic liquid nutrient, Novel plus, fruit fly trap, Dregan fruit, Bypass Fat and Mineral Mixture, Kitchen garden, Paddy thresher, Hand weeder, Spiral Grader, Mushroom were also conducted.

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'ble Vice-Chancellor of NAU for facilitating an interface between KVKs, PDs (ATMA), DAOs and Scientists of NAU. One meeting (29th) was organized during the period (on 13-01-2021, 26 participants).

Bimonthly workshops


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:

SN	Activities	Place	Date	Beneficiaries
1	Bimonthly workshop, Jan.-Feb.-2021	Navsari	13-01-2021	26
2	Bimonthly workshop, March- April-2021	Navsari (through Google meet)	19-03-2021	24

Review meeting of KVKs

Two Review meetings of Senior Scientist & Head and Scientists and one University level Action Plan workshop of KVKs under NAU jurisdiction were organized during the year using e-platform. During the meetings, the activities carried out against target for the month and planning for the next month was discussed in detail.

Orientation Training on "Agrometeorological Advisory Services" under DAMU project

Orientation Training on "Agrometeorological Advisory Services" for newly recruited three SMS (Agril. Meteorology) and three Agromet Observer under DAMU project at Krishi Vigyan Kendra (Surat, Dang, Narmada) under NAU, Navsari was organized by Directorate of Extension Education during 20/10/2020 to 03/11/2020 at Agricultural Meteorological Cell, Department of Agricultural Engineering, NMCA, NAU, Navsari

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 1122 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*.

Campus Visit of 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 63 farm visits were conducted and 1933 farmers had visited the SSK and 1720 visitors had visited farms at NAU Campus. Due to Covid-19 pandemic situation, *Kisan ghar* / farmer's hostels being used as COVID Care Centre, in which 1568 patients, Doctors, medical /Para medical staff were stayed.

Farmers Meet by KVK, Dediyapada


A farmers' meet for distributing cotton seed to FLD beneficiary farmers was organized at Kakadkui village (Dist. Netrang) and at Dediyapada on June 09, 2020 in collaboration with KVK, Chaswad. Dr. M. C. Patel, Research Scientist (Cotton) and Dr. D. H. Patel, Associate Research Scientist of Main Cotton Research Station, NAU, Surat participated in the meeting and informed the farmers about Integrated Crop Management (ICM) program to be undertaken during *Kharif* 2020 season.

Farmers Meet by KVK, Vyara

A farmers' meet for distributing seed of GN. Cot. 25- G. herbaceum variety to FLD beneficiary farmers was organized at Singarana village (Dist. Bharuch) on June 18, 2020. Dr. K. V. Vardodaria, Associate Research Scientist and Dr. K. B. Sankat, Assistant Research Scientist of Main Cotton Research Station, NAU, Surat participated in the meeting and informed participants about desi cotton seed production program to be undertaken during *Kharif* 2020 season

Dial-out Conference

Experts participated in the programme

Participants attended the programme

One Dial out Conference on "Value addition in fruits crops" was organized under Establishment of Agro ITI Center for Agriculture and Horticulture, DEE in collaboration with Reliance foundation on May 30, 2020 and chaired by the Director of Extension Education Dr. G. R. Patel. NAU. Scientists delivered the lectures and provided the information on value addition in different fruit crops. In the conference, 374 Farmers of South Gujarat were participated.

During lockdown situation due to COVID-19, it was not possible for farmers to visit KVK, Vyara district of Tapi. Therefore, KVK, Vyara in collaboration with Reliance Foundation organized 15 dial-out conferences (online off campus training) for farmers during March 23, 2020 to June 30, 2020 regarding scientific cultivation of groundnut, green gram, Indian bean, IPDM in summer vegetable crops, importance of soil sampling, dairy management for milking animals in summer season, community health and nutrition and basic protective measures against corona virus, mushroom cultivation, organic farming, scientific management in poultry farming and scientific cultivation of paddy which benefited 1231 farmers in Tapi district. A dial-out conference was also organized for 72 Village Level Extension Workers (Gram Sevak) of Tapi district on the use of Information and Communication Technology (ICT).

Vocational Training programmes under AGRO ITI


Following three vocational training programmes were organized under AGRO ITI (Establishment of Agro ITI Center for Agriculture and Horticulture) running under Directorate of Extension Education, NAU, Navsari during the period:

1. Virtual Training on "Biological control of crop pests" during 6th to 13th January, 2021 (Participants=43)
2. Virtual Training on "Bonsai & Flower Arrangement" during 2nd to 5th February 2021 (Participants=40)
3. Training on "PASHUPALAN" during 8th to 20th March 2021 (Participants=13)

Other training programmes under AGRO ITI

Apart from these trainings, other training programmes of different durations were also organized under AGRO ITI (Establishment of Agro ITI Center for Agriculture and Horticulture) *viz*., Diseases and Pest Management in crops, Seed Production, Kitchen Garden/Terrace Garden, Organic Farming, Cultivation of edible Mushroom on Commercial basis *etc*. during the period

SN	Title of the Training programmes	Date	Place	No. of Participants
1	Diseases and Pest Management in Crops	30-07-2020	Educational Museum, DEE, NAU, Navsari	176
2	Seed Production	14 to 19-09-2020	Educational Museum, DEE, NAU, Navsari	39
3	Kitchen Garden/Terrace Garden	19 to 23-10-2020	Educational Museum, DEE, NAU, Navsari	40
4	Organic Farming	07-12-2020 to 11-12-2020	Educational Museum, DEE, NAU, Navsari	40
5	Cultivation of Edible Mushroom on Commercial basis	21-12-2020 to 31-12-2020	Educational Museum, DEE, NAU, Navsari	48
			Total	**343**

National Flagship Programmes / Celebrations

***Swachhta Hi Sewa* 2020**

The KVKs running under NAU organized various activities under *Swachhta Hi Sewa* 2020 campaign from September 15 to October 2, 2020 as a part of 150th birth anniversary celebration of Mahatma Gandhi. Various activities were organized by KVKs during the programme *viz*., quiz competition, poem on different life events of Mahatma Gandhiji and exhibition of different charts on Gandhiji's quote *etc*. Total 470 farmers and farm women participated

in the programmes at different places.

Awareness programme on Farmers' Act 2020

KVKs working under NAU organized different activities to increase awareness farmers about Farmers Act 2020. The activities *viz*., Awareness among farmers Group, Text messages, Webinar, *Kishan Goshthi*, film show, Guest lecture, *Khedut shibir*, *Mahila Shibir*, Farmers Scientist Interaction, SMS through m-Kisan portal Text messages *etc*. at KVK campus and at different places were organized during September to December 2020. Total 1384 farmers and farm women actively participated in the programmes at different places. Short Text message regarding Farmers' Act 2020 were sent through m-Kisan portal to the 11113 farmers of Tapi district.

Vigilance Awareness week celebration

The Central Vigilance Commission (CVC) observes the Vigilance Awareness Week every year during the week in which the birthday of Sardar Vallabhbhai Patel (31st October) falls to motivate stakeholders to collectively participate in the fight against corruption and also aims at raising public awareness regarding the detrimental consequences of corruption. This year, the Vigilance Awareness Week is being observed from October 27, to November 3, 2020. Various activities were organized by KVKs working under NAU and total 178 farmers and farm women participated in the programmes.

***Swachhta Pakhawada*-2020**

The KVKs running under NAU organized various activities under *Swachhta Pakhwada* during 16-31 December, 2020. Various activities were organized by KVKs during the programme *viz*., Adopted village Cleanliness and sanitation, Swachhata (Sanitation) rally, Awareness programme, Campaign, Mahila Goshthi, Composting of kitchen and home waste materials, Awareness about green demo & Hand wash, Market & Public Place cleaning, cleaning of KVK premises, farm and taking Swachhata sapath during celebration. Total 2261 farmers and farm women participated in these programmes at different places.

***Jai Kisan Jai Vigyan* week celebration**

Govt. of India celebrates "*Jai Kisan Jai Vigyan* Week" every year during December 23-29 on the birth anniversary of Late Shri Atal Bihari Vajpayee and Late Shri Chaudhary Charan Singh, two former Prime Ministers of India keeping in view of their immense contribution for promoting use of science for the welfare of farmers. KVKs of NAU organized different activities during December 23-29, 2020 to celebrate the week. Total 830 farmers and farm women participated in the programmes at different places.

Celebration of International Women's Day' 2021


The International Women's Day (IWD) being celebrated all over the world on 8th March. KVKs working under NAU, Navsari also celebrated the IWD 2021 on 8th March 2021 in the presence of dignitaries. The theme of the programme was 'Women leadership in agriculture: Entrepreneurship, Equity and Empowerment'. Speech of dignitaries and Lecture of experts on gender equality, role of women in organic farming were organized. Different activities were organized viz., Nutritive recipe competition, Nutrition Quiz, Breast cancer awareness, Blood sugar check-up camp, Marshal Art, stall exhibitions, progressive women felicitation, Price and certificates distribution etc. More than 634 farm women were actively participated in the programme at different places.

Celebration of World Water Day

The KVKs working under NAU, Navsari celebrated the "World Water Day" on March 22, 2021 in the auspicious presence of Padmashri Shri Mathurbhai Sawani and Hon'ble Vice Chancellor, NAU, Navsari Dr. Z. P. Patel and other 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 253 participants including farmers, farm women and extension officers remained present at different places.

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 ofNavsari 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 *viz*., seeds of Lucerne, Indian bean (Guj.Val-2), Fruit fly traps, *etc*.

KisanGosthi organized under FFP

"*Kisan Gosthi*" programme was organized under Farmer FIRST Project at Hansapore village of Navsari district on November 26, 2020. Programme was chaired by Dr. Z.P. Patel, Hon'ble Vice Chancellor of NAU, Navsari in the presence of Dr. C.K. Timbadia, DEE, Sarpanch of Hansapore village Mrs. Bhavanaben Patel, PI and Co-PI of the project. All the Co-PIs and members of six modules interacted with the farmers on different technologies demonstrated on the farmer's field and farmers shared their experiences about technologies. Hon'ble Vice Chancellor Dr. Z.P. Patel emphasized on ensuring the effective involvement of farmers in research process on farmers' fields. Total 96 farmers and farm women participated in the programme.

Implementation of "*Mera Goan Mera Gaurav*" programme

"*Mera Gaon Mera Gaurav*" programme launched by the Hon'ble Prime Minister on 25th July, 2015 at Patna, Bihar has been implemented by NAU. During the reporting period total 164 Scientists were assigned the work in 205 villages selected under the programme.

Activities organised by Navsari Agricultural University, Navsari under MGMG

SN	Name of activities	No. of activities conducted	No. of farmers participated & benefitted
1	Visit to village by teams	48	250
2	Interface meeting/ *Goshties*	15	582
3	Training organized	07	268
4	Demonstrations conducted	15	190
5	Mobile based advisories (No.)	635	635
6	Literature support provided	35	834
7	Awareness created	10	332
8	Input support provided (q)	-	-
9	Linkages developed with other agencies (No. of agency)	12	389
10	Facilitation for new varieties, seeds, technology		
	i. New varieties (No.)	-	-
	ii. Technology (No.)	12	483
	iii. Seeds (q)	04	-
	iv. New crops (No.)	-	-
	Total	**793**	**3963**

Note: Due to COVID 19, most of the extension activities were conducted on virtual platform.

Farmer Award

This year, Shri Jigarbhai Desai of Tapi district received "National Best Innovative Farmer Award" for Best Working Innovative Technology in Agriculture on January 9, 2020 at NASC, New Delhi.

Publications

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–newsletter/reports

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

University publication

1)	Book/booklets	: 32	5)	Annual report	: 01
2)	Folders	: 89	6)	Crop calendar	: 01
3)	Training manual	: 06	7)	Magazine	: 02
4)	Souvenir	: 01			

Research Publications

SN	Details of Publication	NAAS Rating
1	Bhanderi, G.R., Patel, R.D., Desai, H.R. and Patel, R.K. (2020). Assessment of yield losses due to mealybug (*Phenacoccus solenopsis* Tinsley) infestation in the cotton farmers' field of south Gujarat. *Journal of Entomology and Zoology Studies*, **8**(2): 73-79.	5.53
2	Bhimani, G.J., Prajapati, M.R. and Parmar, H.C. (2019). Adoption of fruits and vegetable preservation technology by farm women of Surat district. *Gujarat Journal of Extension Education*, **30**(1): 23-26.	3.86
3	Bhinsara, D.B., Verma, P.D., Pastagia, J.J. and Parmar, H. (2021). Study on knowledge of owners of milch animals about animal breeding in tribal area of South Gujarat. *International Journal of Current Microbiology and Applied Sciences*,**10**(3): 1964-1968.	5.38
4	Chaudhari, S.D., Naik, V.R., Sodavadiya, H.B. and Patel, B.K. (2020). Effect of gypsum and integrated nutrient management on soil properties of partially reclaimed salt affected soils of south Gujarat. *Plant Archives*, **20**(1): 2248-2250.	4.41
5	Dobariya, J.B., Lad, M.D. and Kavad, S.D. (2020). Knowledge and attitude of self-help group members towards micro finance. *Gujarat Journal of Extension Education*, **31**(2): 59-62.	3.86
6	Jena, Suchismita, Ahlawat, T.R., Patel, A.I., Pandey, A.K., Patel, Dharmishtha and Chaudhary, A. (2020). Comparative growth performance of papaya hybrids and their parents under reciprocal crossing system. *Journal of Experimental Agriculture International*, **42**(9):167-173.	4.69
7	Nalawade, S.V., Patel, P.R. and Patil, V.A. (2020). Biochemical constituents' variation in resistant and susceptible rice genotypes against sheath rot disease of rice. *International Journal of Current Microbiology and Applied Sciences*, **9**(5): 122-125.	5.38
8	Nalawade, S.V., Patel, P.R. and Patil, V.A. (2020). Effect of weather parameters and sheath mite population on incidence and development of sheath rot disease of rice. *International Journal of Chemical Studies*, **8**(2): 2821-2825.	5.31
9	Patel, B.K., Sandipan, P.B. Chawada, S.K. and Patel, R.K. (2020). Morphological and cultural characteristic of *Fusarium oxysporum* f. sp. *vasinfectum* (FOV) under South Gujarat. *International Journal of Current Microbiology and Applied Sciences*, **9**(12):814-819.	5.38
10	Patel, B.K., Sandipan, P.B., Chawada, S.K. and Patel, R.K. (2021). Evaluation of different biocontrol agents against *Fusarium oxysporum* f. sp. *vasinfectum* (FOV) under *in vitro* condition of South Gujarat. *International Journal of Chemical Studies*, **9**(1): 998-1000.	5.31
11	Patel, B.K., Sandipan, P.B., Chawada, S.K. and Patel, R.K. (2021). Evaluation of	5.31

	various combi product fungicides for the control of wilt (FOV) disease of cotton under in vitro condition of south Gujarat (India). *International Journal of Chemical Studies*, **9**(1): 2992-2995.	
12	Patel, B.K., Sandipan, P.B., Patel, R.K. and Chawada, S.K. (2020). Screening of different non systemic and systemic fungicides for the wilt disease of cotton under *in vitro* condition of South Gujarat. *International Journal of Current Microbiology and Applied Sciences*,**9**(12): 820-825.	5.38
13	Patel, B.K., Sandipan, P.B., Patel, R.K. and Chawada, S.K. (2021). Wilt: An important fungal disease of cotton under South Gujarat region of India. *International Journal of Chemical Studies*, **9**(1): 269-271.	5.31
14	Patel, B.K., Sandipan, P.B., Patel, R.K. and Chawada, S.K. (2021). Screening of different fungicides and biocontrol agents against *Fusarium oxysporum* f. sp. *vasinfectum* (FOV) under pot condition. *International Journal of Chemical Studies*, **9**(1): 1005-1007.	5.31
15	Patel, P.B., Usdadia, V.P. and Desai, C.S. (2020). Incidence of mango hoppers *Idioscopus nitidulus* Walker in high density mango plantation under south Gujarat Conditions. *International Journal of Chemical Studies*, **8**(4):1509-1512.	5.31
16	Poshiya, V.K., Tiwari, M.V. and Verma P.D. (2020). Constraints in adoption of recommended paddy cultivation practices in Narmada district. *International Journal of Scientific Engineering and Applied Science*, **6**(8): 97-101.	-
17	Poshiya, V.K., Tiwari, M.V. and Verma, P.D. (2020). Adoption level of recommended paddy technologies among tribal farmers. *Gujarat Journal of Extension Education*, **1**(31): 47.	3.86
18	Prajapati, A.P., Patel, P.B., Bhimani, H.D. and Desai, A.V. (2020). Population dynamics of major insect pests of cowpea and its correlation with different abiotic factors under south Gujarat conditions. *International Journal of Chemical Studies*, **8** (3):2307-2311.	5.31
19	Soni, Arti, Dhodia, A.J. and Pandya, C.D. (2020). Impact of in service training on knowledge of anganwadi workers regarding anemia and nutritional kitchen gardening. *Gujarat Journal of Extension Education*, **31**(1): 30-34.	3.86
20	Tripathi, Sonal, Patel, J.M., Singh, N., Naik, J. and Naik, V.R. (2020). Effect of different NPK levels on growth and yield attributes of broccoli (*Brassica oleracea* L.) under south Gujarat condition. *International Journal of Chemical Studies*, **8**(3): 1335-1339.	5.31
21	Zinzuvadiya, H.D., Ghetiya, L.V., Chaudhari, S.D. and Kalariya, G.B. (2020). Photographic catalogue of hymenopteran pollinators in agricultural landscape area of South Gujarat. *Journal of Entomology and Zoology studies*, **8**(5): 1330-1346.	5.53

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1 Trivedi, S.J., Patel, R.K., Bhimani, G.J. and Rathod, J.H. (2020). Soybean *ni vignanik kheti padhdhati*. NAU, Pub. No. 24/2020-21.

Books/Booklets

1 G.B. Kalariya (2020). *Khedutupayogi Sanshodhan Bhalamano*-2020, Edited & Published by Director of Extension Education, Publication No. 45/2020-21.

2 G.B. Kalariya (2020) *Kharif Lecture note*, Training & Visit System, April, 2020 put up on University website.

3 G.B. Kalariya (2020) *Rabi Lecture note*, Training & Visit System, April, 2020 put up on University website

4 G.B. Kalariya (2021) *Sherdini Jivatonu sankalit vyavsathapan, "Sherdini Adhunik Kheti Paddhati"* Publication No 70/2020-21, P. 69-79

Popular articles

Articles in News letters/Magzines

1. Panchal, Bhakti (2020). Regulation of flowering in vegetable crops under protected cultivation. *Agriculture & food e-newsletter*, **2**(11): 137-140.
2. Panchal, Bhakti and Rathod, J.H. (2020). Cassava bioenergy crop. *Agriculture & food e-newsletter*, **2**(10): 129-130.
3. Butani, J.B. and Pandya, C.D. (2021). Cremi an congo Haemorrhagic fever: A zoonotic disease. *Gaudhuli*,**1**(15):6-8.
4. Patel, S.A. (2020). *Hadakava- ek jivlen pratisancharit rog. Gaudhuli*. **1**(15): 13-18.

Articles in Daily News Paper

1. Bhinsara, D., Jadav, N.K and Verma, P.D. (2020). *Saragava achatna samay no shshthya vardhak ghascharo*. *Krishi Khojo*. August 20.
2. Butani, J.B. and Pandya, C.D. (2020). *Krimi janya kongo Hemrejik fever: marfate manushya ma felato ek itardi janya rog.* August 16.
3. Butani, J.B. and Pandya, C.D. (2020). *Krimi janya kongo Hemrejik fever: marfate manushya ma felato ek itardi janya rog*. Gaudhuli. November 11
4. Butani, J.B. and Pandya, C.D. (2020).*Pashu marfate manushyama felato itardi janya rog vishe jano*. *Krishi Prabhat*. June 03.
5. Butani, J.B. and Pandya, C.D. (2020). *Pashu marfate manushyama felato itardi janya rog*. *Krishi Prabhat.* (Repeated)
6. Butani, J.B. and Pandya, C.D. (2020). *Vachhardi na uttam Sharirik vikas mate vaigyanik dhabe*. *Krishi Prabhat*, August 20.
7. Chauhan, G.G.,Patel, S.A., Dobariya, J.B., Javiya, P.P., Vuhaniya, B.M. and Prajapati, H.A. (2020). Soil preparation and varieties of Elephant foot yam. *Krishi Prabhat*, May 23.
8. Chavan, S.M. and Pandya, C.D. (2020). Lockdown ma 0.5 hectare *mathi tarbuch ni kheti kari* 1.55 *lakh ni upaj medvi*. *Sandesh.* May 05.
9. Javiya, P.P., Patel, S.A., Prajapati, H.A. and Vahuniya, B.M. *Nagali ni kheti- vaigyanik abhigam sathe. Krishi Jivan.* August 20.
10. Patel, R.S., Prajapati, H.A., Patel, K.V. and Patel, S.A. (2000). *Falpakonma prachalit savrdhan ni rito ane teno samay*. *Krishi Prabhat*, June 20.
11. Patel, S. A. (2020). *Pratisancharit rog swine flue visheni mahiti ane savcheti na pagla. Godarshan Guide*. September 20, Page no. 9-11.
12. Patel, S. A.; Javiya, P. P. ; Prajapati, H. A.; Vahuniya, B.M.; Patel, R. S. and Patel, K.V.(2020). *Dudhala pasuonu shiyalani thandi same rakshan. Godarshan Guide.* December 20. Page no 13-15.
13. Patel, S. A.; Javiya, P. P.; Prajapati, H. A.; Vahuniya, B. M. (2020). *Pasuoma lalpesab no rog: phosphorus ni unap. Godarshan Guide*, October 05.
14. Patel, S.A. (2020). *Anaj-kobi–rajko ma rahela saponin namna zeritatva ne jano*. *Krishi Prabhat*, May 20.
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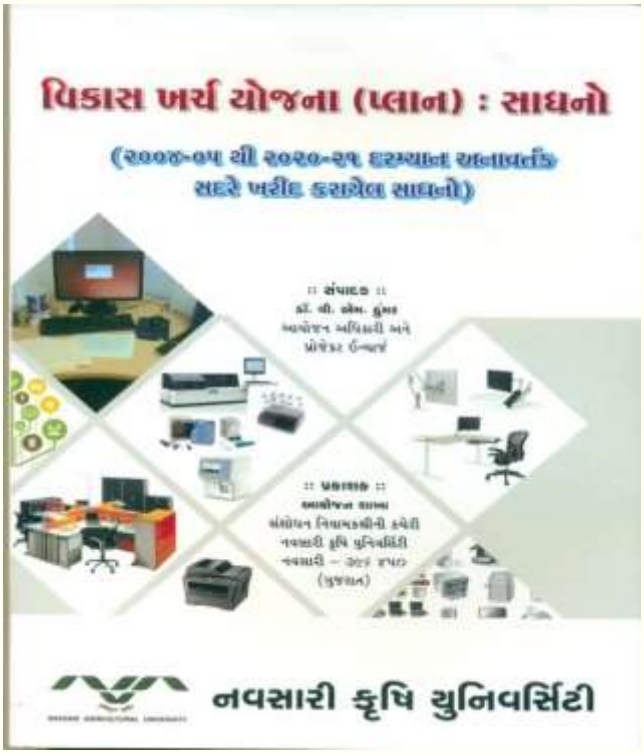


Books

Folders

18. Directorate of Students' Welfare, Navsari

The Directorate of Students' Welfare of Navsari Agricultural University is functioning with the aim to develop skills, talent, personality and high human values of university students. For inculcating these qualities various activities of sports, cultural programme, literary events, training, counseling, placement guidance, NCC, NSS and Yoga, have been organized throughout the year. This office encourages and inspires students of the University to participate in National level competitions and make financial provisions for the same.

Students Representative Council (SRC)

Constituent colleges and polytechnics of Navsari Agricultural University, Navsari, forms the Student's Representative Council (SRC) every academic year. The SRC in adherence to the provisions of its constitution plays role in ensuring the general welfare of all students by serving as the voice of all students by presenting issues necessary for a smooth academic and social environment. Members of the SRCs work together with the University administration. The Principal, being the President of the SRC, nominates the Staff Advisory Committee in consultation with the Chairman of the SRC. The Council is formed with a view to provide the proper platform for overall personality development of the students through training, counseling and guidance in their co-curricular activities and education. The SRC of each college enthusiastically encourage students to participate in various activities like (1) Planning Forum (2) Sports-Games (3) Debate / Elocution / Extempore competitions (4) College Magazine (5) Cultural Programmes (6) NCC, (7) NSS, (8) Yoga related activities, *etc*. in addition to activities framed by Central and State Ministry of Education as well as Ministry of Sports and Youth Affairs from time to time.

Student Amenities

Hostel Facilities

Being residential requirement of various degree programmes, there is provision of 36 hostels for accommodating boys and girls students separately and 3554 students (2397 boys and 1157 girls) were accommodated in the hostels. Every hostel block is provided with care taker, mess with PNG gas supply and well equipped dining hall, T.V. room, solar water heater, water cooler with mineral water plant, washer man, newspaper and other facilities.

Details of hostels of different faculties situated in the main and sub campuses

SN	Name of Hostel / Block	No. of Rooms	Accommodation Capacity
N.M. College of Agriculture, NAU, Navsari			
1	Navoday Boy's Hostel	71	157
2	Navnit Boy's Hostel	71	157
3	Navrang PG Boy's Hostel (New PG Block)	58	116
4	Navrang Boy's Hostel (Old PG Block)	54	54
5	Maitri Girl's Hostel	32	128
6	Kasturba Girl's Hostel	24	72
7	Nandani Girl's Hostel	33	99
ASPEE College of Horticulture & Forestry, NAU, Navsari			
8	Bagayat Boy's Hostel **(**Horticulture- UG)	36	108
9	Vivekanand Boy's Hostel (Horticulture–UG)	68	136
10	Forestry Boy's Hostel **(**Forestry -UG)	30	90
11	Sankalp PG Boy's Hostel **(**Horticulture& Forestry- PG)	50	100
12	Ansuya Girl's Hostel **(**Horticulture& Forestry-UG)	23	92
13	New PG Girl's Hostel **(**Horticulture& Forestry -PG)	21	42

Vanbandhu College of Veterinary Science & Animal Husbandry, NAU, Navsari			
14	Eklavya Boy's Hostel	65	195
15	Gargi Girl's hostel	46	138
College of Fisheries Science, NAU, Navsari			
16	Sagar Hostel	33	99
17	Meenakshi Girl's Hostel	34	102
ASPEE Agribusiness Management Institute, NAU, Navsari			
18	AABMI PG Boy's Hostel	44	88
College of Agriculture, NAU, Sub-campus Bharuch			
19	Brugu Boy's Hostel (Block –A)	48	144
20	Rewa Girl's Hostel	38	114
College of Agriculture, NAU, Sub-campus Waghai			
21	Dandakvan Boy's Hostel	54	162
22	Shabri Girl's Hostel	30	90
ASPEE Shakilam Biotechnology Institute, NAU, Sub-campus Surat			
23	Boy's Hostel	50	100
24	Kaushalya Girl's Hostel	30	90
College of Agricultural Engineering and Technology & Polytechnic Agricultural Engineering, NAU, Sub-campus Dediapada			
25	Vishvakarma Boy's Hostel	56	112
26	Shakuntla Girl's Hostel	16	48
Horticulture Polytechnic, ACHF, NAU, Navsari			
27	Nandanvan Boy's Hostel	24	48
28	Girl's Hostel	12	36
Polytechnic in Animal Husbandry, NAU, Navsari			
29	Sahdev Boys' Hostel	33	99
Polytechnic In Horticulture, ACHF, NAU, Paria			
30	Parshuram Boy's Hostel	24	72
31	Sarswati Girl's Hostel	12	36
Polytechnic in Agriculture, NAU, Bharuch			
32	Bhrugu Boy's Hostel (Block-B)	48	144
33	Farmer's Hostel	04 (2 Seated) 08 (4 Seated)	40
Polytechnic in Agriculture, NAU, Waghai			
34	Vanraj Boy's Hostel	36	108
Polytechnic in Agriculture, NAU, Vyara			
35	Boy's Hostel	36	108
36	Savitri Girl's Hostel	10	30

International Student's Hostel

The International Student's Hostel (ISH) is established by NAU with the financial aid from ICAR to provide accommodation facilities to the eligible international male post graduate students with following objectives:

- To facilitate comfortable residential accommodation
- To provide friendly, comfortable well-furnished and secured accommodation under one roof for students of different countries
- To provide a healthy competitive and diverse cultural learning environment.

SN.	Types of rooms	No. of rooms	Capacity	No. of students registered	Country
1	AC suit room	04 (2 seated)	08	11	Afghanistan
2	AC room	16 (2 seated)	32		
Facilities: RO Systems, Water coolers, TV with Cable connection in each room, Solar Water heater system, Kitchen with dining hall					

Hostel Management

For smooth and efficient management of all the hostel blocks and to provide better academic environment to all the students staying as well as to look after their all routine works/activities, there is sufficient supervisory staff consisting of a rector, assistant rectors, store keepers, care takers/attendants. Moreover, Director of students' welfare, Principal and Dean of various faculties, staff of Executive Engineer is also providing necessary help and fund as per the need time to time.

Mess Management

There are self-messes in each hostel block managed by the students themselves and monitored by the concerned assistant rector in supervision and guidance of Head Rector. The management of each self-mess is handled by Mess Committee consisting of four/five student members. The secretary and *Kothari* maintain mess account, store and make necessary purchases through cooperative store or places approved by mess committee.

Hostel Welfare Committee

To look after all the hostel welfare related activities like maintenance, cleaning, drinking water facilities, mess, health, cultural activities, entertainment, various competitions and others, a Hostel Welfare Committee is working which is consisting of (a) Principal-Chairman, (b) Rector-Vice-Chairman, (c) Executive Engineer or his representative, (d) Assistant rector, (e) General Secretary of the Student's Union, (f) One Hostel Student's representative per 50 students nominated by the Rector, and (g) Chairman of the SRC. The committee reviews time to time, at least once in three months, measures to be taken to ensure proper working of the utility services, food management/ accommodation, health and other facilities provided in the hostel.

On-Campus Hostels

Navoday Boy's Hostel

Navnit Boy's Hostel

Navrang PG Boy's Hostel **(**New PG**)**

Navrang PG Boy's Hostel **(**Old PG**)**

Maitry Girl's Hostel

Kasturba Girl's Hostel

Nandini Girl's Hostel

Bagayat Boy's Hostel

Vivekanand Boy's Hostel

Forestry Boy's Hostel

Sankalp PG Boy's Hostel

Ansuya Girl's Hostel

New PG Girl's Hostel

Eklavya Boy's Hostel

Gargi Girl's Hostel

Sagar Boy's Hostel

Meenakshi Girl's Hostel

AABMI PG Boy's Hostel

Nandanvan Boy's Hostel

Girl's Hostel

Sahdev Boys' Hostel

International Student's Hostel

Off-Campus Hostels:

Bhrugu Boy's Hostel, Bharuch

Rewa Girl's Hostel, Bharuch

Dandakvan Boy's Hostel, Waghai

Sabari Girl's Hostel, Waghai

Vanraj Boy's Hostel, Waghai

Boy's Hostel, Surat

Kaushalya Girl's Hostel, Surat

Boy's Hostel, Vyara

Savitri Girl's Hostel, Vyara

Vishvakarma Boy's Hostel, Dediapada

Shakuntla Girl's Hostel, Dediapada

Parshuram Boy's Hostel, Paria

Sarswati Girl's Hostel, Paria

Health Facilities

Primary Health Center, NAU, Navsari provides basic health care medical facilities to the students and staff of the Navsari Agricultural University, Navsari. A service of the Medical officer is available on contract basis along with supported staff for X-Ray Technician and Laboratory Assistant. Free health checkup, X-Ray facility, laboratory testing and medicines are provided to the students and staff (including their family members) of the Navsari Agricultural University. Our medical laboratory is well equipped with hematological and biochemical (semi- automatic) analyzer and X-Ray machine.

During the period under report, a total of 1524 patients were treated as OPD and laboratory facilities were utilized for confirmatory diagnosis of diseases. A total of 57 hematological, 43 biochemical parameters, 27 serum immunological and 11 urine samples were evaluated to reach at confirmatory diagnosis. Moreover, X-ray examination was also performed in 32 patients. Covid-19 vaccination camp was organized by jointly effort of Karmchari Kalyan Mandal, NAU, Navsari, Director of Students Welfare, NAU and District Health Department, Navsari at Primary Health Center, NAU on 22.03.2021.

Financial Assistance to the students

The University provides various Scholarships and Financial Assistance to the students on merit basis. During the year 2019-20, the following scholarships were provided at graduate and post graduate level to the students of all the faculties on merit basis as under:

A. NAU UG Girls meritorious fellowship

This fellowship is given to five undergraduate girl's students of various faculties based on merit in 12th board or equivalent examination for the period of eight semesters. The details of fresh and renewal fellowship awarded during the year are as follow:

Faculty	Fresh	Renewal	Total
	No. of Students	No. of Students	
Agriculture	05	16	21
Horticulture	05	17	22
Forestry	05	10	15
Veterinary	00	16	16
Agri. Biotechnology	04	11	15
Agril. Eng. Tech.	00	00	00
Fisheries Science	00	01	01
		Total	**90**

B. NAU PG fellowship

NAU annually awards one fellowship in each of its faculties separately for both Master as well as Doctorate degree. The details of fresh and renewal fellowship awarded during the year are as follow:

Faculties	Fresh		Renewal		Total
	No. of Students		No. of Students		
	M.Sc.	Ph.D.	M.Sc.	Ph.D.	
Agriculture	02	00	02	01	05
Horticulture	02	00	01	00	03
Forestry	01	01	03	01	06
Veterinary	00	00	03	01	04
A.B.M. & I.C.T.I.	**MBA**	**Ph.D.**	**MBA**	**Ph.D.**	
	02	00	01	01	04
TOTAL					**22**

Physical Education

The university lays a great emphasis on the role of games and sports to keep the students physically efficient, mentally alert, morally sound and socially well behaved. These activities are arranged through various games and sports like Athletics, Basketball, Volleyball, Cricket, Kabbadi, Kho-Kho, Table tennis, Badminton, Chess and Yogic excessive under over all supervision of Director of Students' Welfare. The university provides sufficient games and sports material to all the hostels as well as university/college level team. Due to COVID-19 pandemic situation events were not organized at Navsari Agricultural University, Navsari during the year 2020-21.

National Service Scheme (NSS)

The aim of NSS is mounting responsibility through social services and realization of work and discipline in student volunteers so as to make them responsible true citizens of India. NSS is in operation in 14 colleges of the university. During the year, the university performed various activities through a strength of 1400 NSS volunteers for regular activities and 700 for the special camp. The distribution of the volunteers in different units is as under:

SN	Name of College / Polytechnic	Allotment of Volunteers	
		General Activity	Special Camp
1	N. M. College of Agriculture, College, Navsari	150	75
2	ASPEE College of Horticulture and Forestry, Navsari	150	75
3	College Veterinary Science and Animal Husbandry, Navsari	150	75
4	College of Agricultural, Bharuch	100	50
5	College of Agricultural, Waghai	100	50
6	Polytechnic Agricultural Engineering, Dediapada	100	50
7	Polytechnic Agricultural, Waghai	100	50
8	Polytechnic in Agricultural, Vyara	100	50
9	Polytechnic in Agricultural, Bharuch	100	50
10	Polytechnic in Horticulture, Navsari	100	50
11	ASPEE Shakilam Biotechnology Institute, Surat	75	38
12	College of Agricultural Engineering, Dediapada	75	37
13	Polytechnic in Animal Husbandry, Navsari	50	25
14	Polytechnic in Horticulture, Paria	50	25
	Total NSS volunteers	**1400**	**700**

Summary of Unit-wise NSS Activities

SN	Unit Name	No. of Activities	Volunteers Participated
1	N. M. College of Agriculture, Navsari	11	500
2	ASPEE College of Horticulture and Forestry, Navsari	14	403
3	College of Veterinary Science & A.H., Navsari	05	200
4	College of Agricultural Engineering and Technology, Dediapada	10	207
5	Polytechnic in Agricultural Engineering, Dediapada		
6	College of Agricultural, Waghai	04	280
7	ASPEE Shakilam Biotechnology Institute, Surat	07	14
8	Polytechnic in Agriculture, Waghai	04	93
9	Polytechnic in Agriculture, Vyara, Tapi	05	168
10	College of Agricultural, Bharuch	03	142
11	Polytechnic in Agricultural, Bharuch	03	92
12	Polytechnic in Horticulture, Navsari	03	183
13	Polytechnic in Animal Husbandry, Navsari	05	159
14	Polytechnic in Horticulture, Paria	06	192
	Total	**83**	**2633**

Organization of NSS Special Camps

Due to COVID-19 pandemic, this year, no NSS Special Camps were organized.

National Cadet Corps (NCC)

It is a matter of proud for any educational institute to have an ample and affluent scope for students' co-curricular activities. It really carves students' careers in all potential dimensions which we consider constructive and creative in every way not only for the students themselves; but, it is also affirmative for reinforcing the foundation of our beloved Motherland, *India.*

NCC units are active in N. M. College of Agricultural, ASPEE College of Horticulture & Forestry and Vanbandhu College of Veterinary Science and A.H., Navsari and their cadets are taught Discipline, Patriotism, Brotherhood, Sportsmanship and Spirit of Adventure by organizing various camps in which students have been enrolled. Total 80 Parades were conducted round the year in which students were taught weapon training, map reading, civil defense, first aid, field craft and participated in army attachment camp.

Academic Excellence Medals Awarded in 16th Convocation (2020-21)

SN	Name of Medal	Name of Students
1	Chancellor's Gold Medal for Doctoral degree	Ravindra Kumar Dhaka
2	Chancellor's Gold Medal for Master's degree	Kaldate Supriya Bhimrao
3	Vice Chancellor Gold Medal for B.Sc. Agri.	Vadodariya Himani Pravinbhai
4	Vice Chancellor's Gold Medal for B.Sc. Horti.	Sojitra Gopi Arjanbhai
5	Vice Chancellor's Gold Medal for B.Sc. Forestry	Preeti
6	Vice Chancellor's Gold Medal for B.V.Sc. & A.H. (Veterinary)	Meenal
7	Vice Chancellor's Gold Medal for Agri. Biotechnology	Mirali Roy
8	Vice Chancellor's Gold Medal for Agri. Engineering	Panchani Nishad Pradipbhai
9	Vice Chancellor's Gold Medal for Fisheries Science	Halpati Reena Prakashbhai
10	"Dr. Jayantilal V. Majmudar Gold Medal" for the UG student of N. M. College of Agriculture, Navsari for securing highest OGPA in the Subject of Plant Breeding during B.Sc. (Hons.) Agri.	Vadodariya Jaimin Mansukhbhai
11	"Matrushree Sukhiben Lallubhai Patel Gold Medal" for highest OGPA in Agronomy (Thesis Work in Weed Management) Post Graduate level	Patel Rimabahen Hasmukhbhai
12	"Late Shri Pramodbhai Desai, The Surat District Co-operative Bank Ltd. Gold Plated Silver Medal" in the subject of Agril. Economics and Extension Education for B.Sc. [Agriculture].	Dhaduk Mayank Hitendrabhai
13	"Late Shri Pramodbhai Desai, The Surat District Co-operative Bank Ltd. Gold Plated Silver Medal" in the subject of Plant Protection (Agril. Entomology and Plant Pathology) for B.Sc. [Agriculture].	Rabari Nareshbhai Nagjibhai
14	"Late Shri Pramodbhai Desai, The Surat District Co-operative Bank Ltd. Gold Plated Silver Medal" in the subject of NRM(Agronomy and Soil Science) for B.Sc. [Agriculture]	Mobh Dineshbhai Pithabhai
15	"Shri Khedut Sahakari Khand Udhyog Mandli Ltd. Bardoli Gold Plated Silver Medal" in the subject of Agronomy for B.Sc. [Agriculture].	Mobh Dineshbhai Pithabhai
16	"Brig. Anil Adlakha Gold Plated Silver Medal" in the subject of Crop Improvement (Agril. Botany and Plant Physiology) for B.Sc. [Agriculture].	Vadodariya Jaimin Mansukhbhai
17	"Late Babubhai Jashbhai Patel Gold Plated Silver Medal" for highest OGPA in B. Sc. (Agril.)	Vadodariya Jaimin Mansukhbhai
18	"Lalbhai Naik Gold Plated Silver Medal sponsored by Sahakari Khand Udhyog Mandail Ltd.,Gandevi" for highest OGPA in B.Sc. (Agri.)	Vadodariya Jaimin Mansukhbhai
19	"ASPEE Foundation Gold Plated Silver Medal" for a student who obtains the highest OGPA in B. Sc. (Horticulture).	Vashi Henil Dipam
20	"ASPEE Foundation Gold Plated Silver Medal" for a student who obtains the highest OGPA in B. Sc. (Forestry).	Preeti
21	"ASPEE Foundation Gold Plated Silver Medal" for the student B. Sc. (Hons.) Agriculture with highest OGPA in the Subject of Plant Protection	Rabari Nareshbhai Nagjibhai
22	"Gulabbhai Mehta Gold Plated Silver Medal", sponsored by Sahakari Khand Udhyog Mandali Ltd., Gandevi for the student of M. Sc. (Agri.) and Ph.D. in sugarcane or any	Lokesh Kumar Saini

	subject.	
23	"ASPEE Foundation Gold Plated Silver Medal" for M.Sc. (Horticulture) either in the subject of Fruit Science or Vegetable Science.	Shah Smit Bhartiben
24	"ASPEE Foundation Gold Plated Silver Medal" for M.Sc. (Horticulture) either in the subjects of Floriculture and Landscape Architecture or Post Harvest Technology.	Sangeetha Priya S
25	"ASPEE Foundation Gold Plated Silver Medal" for Ph.D. (Horticulture) either in the subjects of Fruit Science or Vegetable Science or Floriculture and Landscape Architecture or Post Harvest Technology.	Ganta Koteswara Rao
26	"ASPEE Foundation Gold Plated Silver Medal" for Ph.D. (Forestry) in any subject.	Ravindra Kumar Dhaka
27	“Kalptaru Gold Medal Silver Medal” for M.Sc./M.Tech./Ph.D. (Agriculture/ Horticulture/PHT & PE)	Raghavendra H R
28	"ASPEE Foundation Gold Plated Silver Medal" for MBA (ABM).	Rashmi Bhat K.
29	"Late Jayaben Nandlal Vyas and Nandlal Pitambar Vyas Gold Plated Silver Medal" for a student who obtains the highest OGPA in B. V. Sc. & A.H. (Veterinary)	Meenal
30	"ASPEE Distributors' Association Gold Plated Bronze Medal" in the subject of Plant Protection for B.Sc. [Agriculture]	Rabari Nareshbhai Nagjibhai
31	"Dr. D. H. Chavda Gold Plated Bronze Medal" in the subject of Plant Breeding and Genetics for B.Sc. [Agriculture]	Vadodariya Jaimin Mansukhbhai
32	"Late Shri Bhulabhai Karshanji Patel Gold Plated Bronze Medal" for a student who obtains the highest OGPA in B.Sc. (Horticulture)	Vashi Henil Dipam
33	"Late Dr. Vitthalbhai Jeevrajbhai Patel Gold Plated Bronze Medal" for a student who obtains the highest OGPA in B.Sc. [Forestry]	Preeti
34	"Late Dr. H. U. Joshi Gold Plated Bronze Medal" in the subjects of Plant Pathology for M. Sc. (Agriculture)	Thesiya Mayur Rajeshbhai
35	"Late Mrs. Indumatiben and Dr. Pravinbhai Shukla Gold Plated Bronze Medal" in the subject of Production Technology of Medicine Plants for M. Sc. [Horticulture]	Jyoti Uppar
36	"Late Purshottam R. Patel Gold Plated Bronze Medal" in the subject of Agril. Economics for M.Sc. (Agriculture)	Gadhethariya Drashti Popatlal
37	"Guruhari P. P. Hariprasad swamiji Gold Plated Bronze Medal" award in the subjects of Agronomy for M. Sc. [Agriculture]	Srikumar Debasis Swain

19. Financial Management, Navsari

The Navsari Agricultural University, Navsari is primarily a Gujarat State Government funded body and its financial and proprietary affairs are looked after by Comptroller and Planning Officer under the supervision of Vice-Chancellor of the University.

Sources of Finances

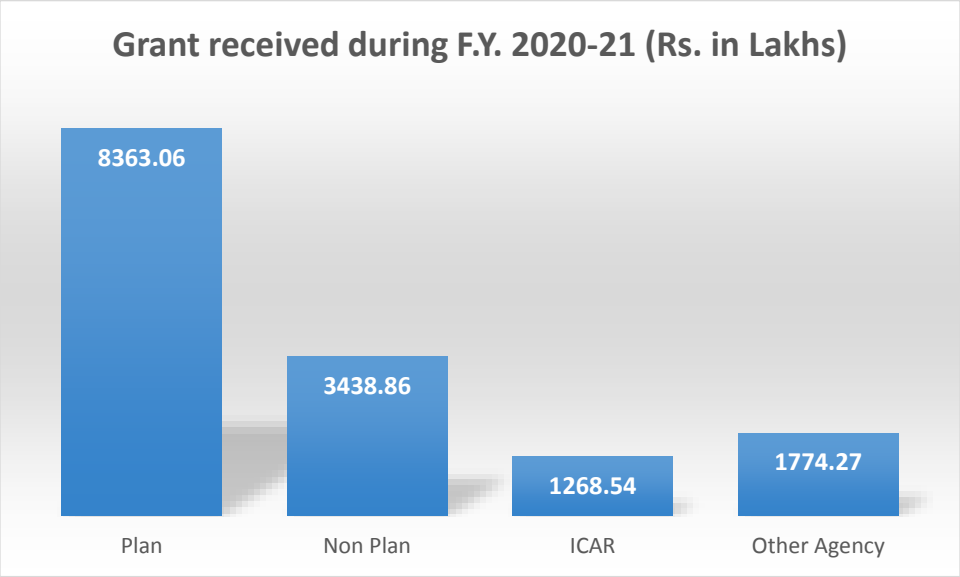
Mainly Government of Gujarat, ICAR and other agencies support the financial assistant of the University. During the year 2020-21, for all round activities of the University major financial assistance received from Government of Gujarat (79.50%), followed by ICAR (8.55%) and other agencies (11.95%). Moreover, University also generated Rs. 1,158.62 lakhs utilizing its own resources by selling seeds, plantlets, planting materials and farm produces, *etc* during 2020-21. Thus, overall University received grants of Rs. 14,844.74 lakhs for the purpose of education, research and extension activities during the year 2020-21.

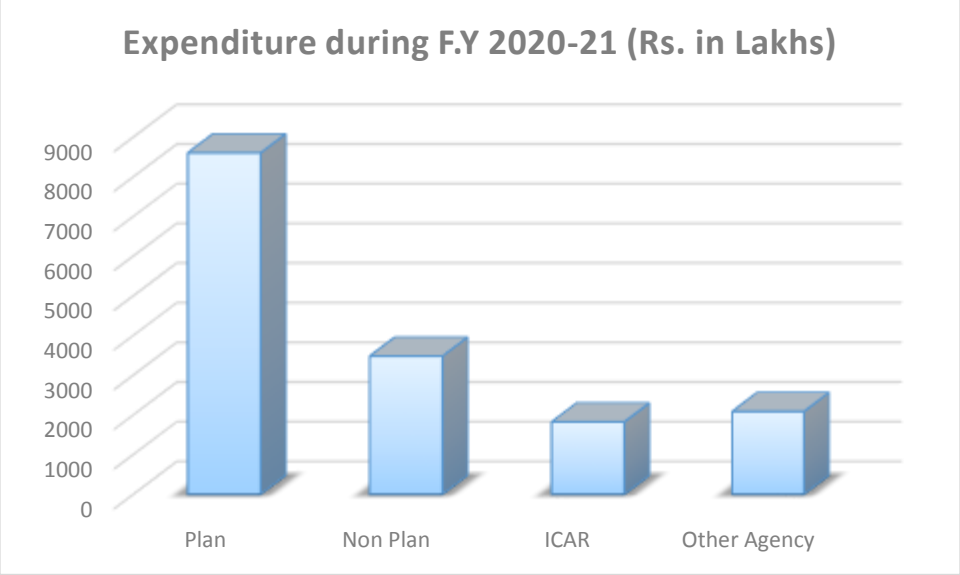
Budget Allocation and Expenditure

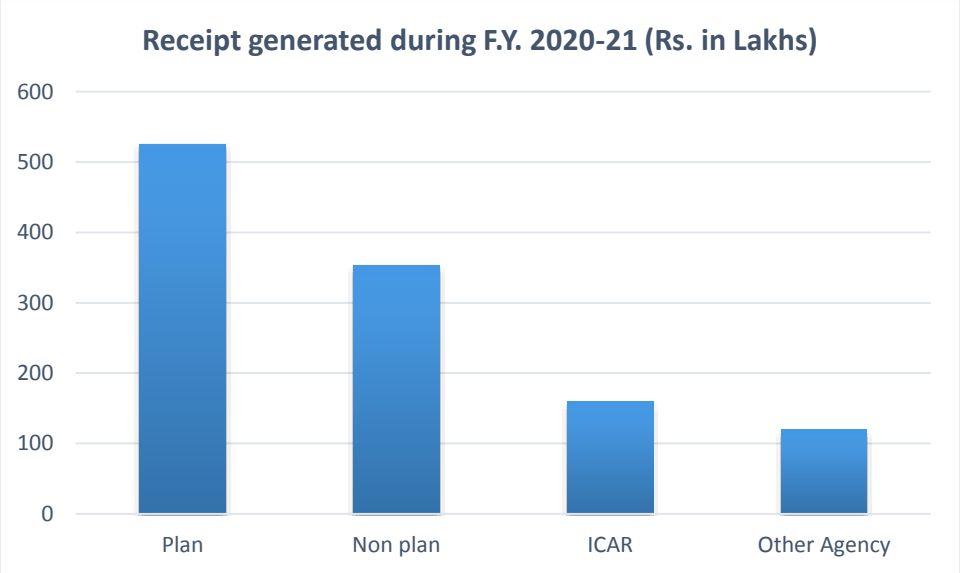
The budget proposal for the Plan and Non Plan projects are prepared on the basis of actual requirement to run the ongoing and new projects/programmes within the available resources. The budget proposals are developed by the Comptroller and Planning Officer of the University and submitted to Department of Agriculture & Cooperation, Government of Gujarat, Gandhinagar for final approval and then submitted to Board of Management for distribution and utilization of grant. The budget control is done on the basis of budget report submitted periodically for review.

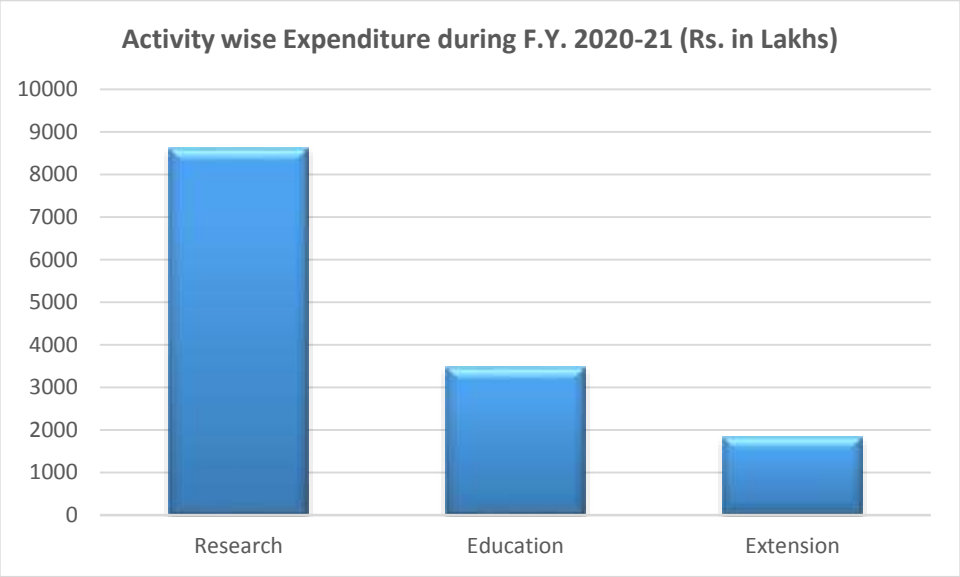
Budget and expenditure during reporting period (in Lakh Rupees)

Particular	Head	2020-21
Grant	Plan	8363.06
	Non plan	3438.86
	ICAR	1268.54
	Other Agency	1774.27
	Total	**14844.73**
Expenditure	Plan	8604.07
	Non plan	3476.86
	ICAR	1820.70
	Other Agency	2083.38
	Total	**15985.01**
Receipt	Plan	525.50
	Non plan	353.44
	ICAR	159.82
	Other Agency	119.87
	Total	**1158.62**
Activity	Research	6139.07
	Education	5338.11
	Extension	3711.66
	Administration	796.17
	Total	**15985.01**


Grant received during F.Y. 2020-21 (Rs. in Lakhs)
8363.06
3438.86
1268.54
1774.27
Plan
Non Plan
ICAR
Other Agency


Expenditure during F.Y 2020-21 (Rs. in Lakhs)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
Plan
Non Plan
ICAR
Other Agency


Receipt generated during F.Y. 2020-21 (Rs. in Lakhs)
600
500
400
300
200
100
0
Plan
Non plan
ICAR
Other Agency



Finance Committee

During the period under report XXVIII Meeting of Finance Committee was held on October 03, 2020 at NAU, Navsari. Structure of financial committee is given below:

SN	Designation	Positions
1	Vice Chancellor, NAU, Navsari	Chairman
2	Secretary, Finance Department, GoG, Gandhinagar	Member
3	Secretary, Agriculture Department, GoG, Gandhinagar	Member
4	Selected Member of Board of Management	Non-official Member
5	Director/Dean Nominated by Vice Chancellor	Member
6	Registrar, NAU, Navsari	Ex-official Member
7	Comptroller, NAU, Navsari	Member Secretary

20. Summary of Annual Report on 'Strengthening and Development of Higher Agricultural Education in India'

Summary of ICAR Grant received during the period under report 2020-21

SN	Grant Details	Grant Received (Rs.)	Grant Utilized (Rs.)	Refunded to ICAR (Rs.)
1	Development Grant	1,11,59,828.00	1,11,59,828.00	0.00
2	Library Strengthening	0.00	0.00	2,168.00
3	NTS-UG & PG	86,06,220.00 (including unspent Rs. 13,94,352/-)	79,78,930.00	6,27,290.00
4	Student READY	66,78,000.00 (including unspent Rs. 18,000/-)	66,44,386.00	33,614.00
5	Internship for Veterinary Graduates	14,31,000.00 (including unspent Rs. 81,000/-)	14,31,000.00	0.00
6	ICAR PG Scholarship	36,79,180.00 (including unspent Rs. 13,120/-)	36,51,920.00	27,240.00
7	ICAR-JRF/SRF	39,30,333.00 (including unspent Rs. 60,003/-)	39,24,693.00	**5,640.00**
Total		3,54,84,561.00	3,47,90,757.00	6,95,952.00

All New/Existing Civil Works Repair & Renovation under taken out of the Development Grant

SN	Name of the Civil Work Undertaken	Location of Civil Work (Specify college and place)	Cost (Rs. in lakhs)
1	Solar Roof Top System 6 KV	New PG Girls Hostel, Navsari	3.00
2	Repair and Renovation of doors, windows, grill and grill colour, plastic roofs and lamp	Sankalp PG Boys Hostel, Navsari	2.00
	Renovation of Floriculture and L. A. Lab	Horticulture College, Navsari	1.25
	Refurnishing of PHT Lab	PHT, Navsari	0.50
	Refurnishing of Vegetable Science Lab	Horticulture College, Navsari	1.50
3	Renovation of Hostel	Forestry UG Boys Hostel, Navsari	3.00
	NRM Lab renovation	NRM Laboratory, Navsari	0.75
4	Paver blocks at AABMI boys' hostel	AABMI Boys' Hostel, Navsari	2.00
5	Starter	University ground	0.10
6	Treadmill	Gymnasium	1.45
7	Submersible pump	University ground	0.45
		Total	**16.00**

All Information Technology equipments including all Hardware/ Software (Computers/ Laptops/ Printers/ Scanners/ UPS/ Software etc) purchased/replaced out of the Development Grants: (Rs. in lakhs)

SN	Name of Laboratory where Equipment installed	Name of equipment	Cost of equipment (Rs. in lakhs)
N M College of Agriculture, Navsari			
1	UG/PG Lecture Hall (Exam Control Room)	Automatic Bell System	1.15
	Department of Extension Education	Computer up graduation	0.50
		Sugarcane Expert System Software	0.98
		Web camera	0.02
		UPS battery	0.04
		Miscellaneous	0.04
ASPEE College of Horticulture, Navsari			
2	PHT Lab	UPS 1 KVA	0.50
		Total	**3.23**

Details of Sports Facilities Strengthened by ICAR:

SN	List of Sports Facilities	Cost (Rs. in lakhs)
ASPEE Agribusiness Management Institute, Navsari		
1	TT Bats	0.06
College of Agriculture, Bharuch		
2	Sony 1 way portable pa system	0.25
	Movable badminton Net poles with Net (pair)	0.20
College of Agriculture, Waghai		
3	Air Walker	0.57
	Three wheel shoulder build	0.58
	Leg press	0.54
	Double twister	0.46
	Surf board- outdoor gym equipment	0.49
	Chest press double	0.32
College of Veterinary Science & A. H., Navsari		
4	YenoxAluminium Alloy frame Graphite Handle Badminton Racquets (20)	0.09
	Yonex Synthetic materials Badminton Shuttlecock (20)	0.02
	Khanna Vegetable tanned leather Red Cricket Ball (39)	0.14
	Total	**3.72**

Total number of smart classroom developed

SN	Name of Colleges	Number & Name of classroom	Smart facilities created
1	N. M. College of Agriculture, Navsari	7 Classrooms (*i.e.* G-1, G-2 & G-3, Upgraded 4 Classroom UG-3 (F-1, F-2 & Chemistry UG Classroom) & Chemistry PG Classroom - 1)	LCD Projector, Interactive Board & Smart Class Room Equipment's
2	College of Agriculture, Bharuch	Total 7 Classrooms (Under Graduate Classroom–3 and PG Classroom-4)	Digital podium along with projector PA system, Internet facility and power backup
3	College of Agriculture, Waghai	3 Classrooms	Projector with touch screen monitor
4	ASPEE College of Horticulture, Navsari	5 Classrooms (D-7, D-8,D-1, D-2 and D-6)	Interactive board, LCD Projector, AC
5	College of Forestry, Navsari	03 Nos. of UG Classrooms	LCD Projectors & White boards
6		02 Nos. of PG Classrooms	LCD Projectors & White boards
7	ASPEE Agribusiness Management Institute, Navsari	3 Classrooms (2 on the 1st Floor and 1 on the 2nd Floor)	Fully multimedia class rooms
8	College of Veterinary Science & A. H. , Navsari	07 Nos. of UG/PG Classrooms	All class room equipped with Multimedia device and Internet facility
9		Exam hall 1 and Exam hall 2	LCD Projector
10	ASPEE Shakilam Biotechnology Institute, Surat	06–Classrooms	All class room equipped with Multimedia device and Internet facility

Equipment purchased/replaced under Development Grants:

SN	Name of Laboratory where Equipment installed	Name of Equipment's	Cost (Rs. in lakhs)
N. M. College of Agriculture, Navsari			
1	Plant Pathology laboratory, Department of Plant Pathology	Objective microscope	0.31
		Olympus Biological Microscope	1.54
	Food Quality	Hot Air Oven	0.54
		Centrifuge	0.24
		Vortex Mixers	0.34
	PG Lab, Department of Soil Science & Agricultural Chemistry	pH meter	0.20
		EC meter	0.21
		Hand held EC meter (Portable)	0.05
	College Unit A-3 Table	Automatic Sanitized Machine	0.49
	Refurbishing of F-1 and F-2 UG classrooms	Purchase of Smart Class Room Equipment for Refurbishing of Smart Class Rooms	4.95
	Refurbishing of Chemistry UG & PG classrooms	Purchase of Smart Class Room Equipment for Refurbishing of Smart Class Rooms	4.95

College of Agriculture, Bharuch			
2	Agronomy	Mini Power Weeder and miscellaneous	3.0
	Agri Engineering	Stabilizer	3.44
		Solar Pv characteristic Kit	0.24
		Solari Meter	0.22
		Luxmeter	0.10
		Digital temperature indicator	0.23
		Digital CO2 meter and miscellaneous	0.96
	Genetics and Plant Breeding	Liquid nitrogen Container	0.51
		Air purifier (2 Nos.)	0.66
		Gradient PCR	4.74
		Ice flanking machine and miscellaneous	2.39
	Horticulture	Flour mill cum atta maker	0.27
		Freezer	0.85
		Crown corking machine	0.05
		Can reformer	0.80
		Can retorter and miscellaneous	4.28
	Soil Science and Agril. Chemistry	Quartz / Steel distillery (2 Nos.)	1.10
		Double distillery	1.19
		Vacuum pump	0.25
		Exhaust Fan (6 Nos.)	0.23
		Infiltrometer	0.14
		Voltage stabilizer (2 No.)	0.62
		EC meter	0.25
		pH meter	0.25
		Flame photometer	0.87
		Water bath	0.32
		N digestion unit	1.30
		Wet sieve shaker and miscellaneous	2.47
	Plant Pathology	Fridge (523 Liter capacity, Three star (2 Nos.) and miscellaneous	1.25
College of Forestry, Navsari			
3	Central Instrumentation Lab	Deep freezer	0.36
		Mahua seed decorticator (power operated)	0.30
		Smart television	0.49
		Mild steel wheel barrow (2 Nos.)	0.12
		Earth Auger	0.17
		Solar light	0.04
	FBTI laboratory	Power bank	0.18
		USB Digital microscope (2 Nos.)	0.24
		Criterion dendrometer	1.80
		Deep freezer	0.32
		Microwave oven	0.21
	FPU Laboratory	Pulverizer	0.25
ASPEE College of Horticulture, Navsari			
4	Fruit Science lab.	Plan AcromaticTrinocular Microscope with camera Module (Digital)	1.50
	PHT Lab	Variable speed motor with control panel	0.50
	Floriculture and L. A. Lab	3 Phase, 5 HP submersible pump	0.20
	Floriculture and L. A. Lab	Portable power sprayer (4 stroke petrol)	0.16
	Floriculture and L. A. Lab	Temperature and Humidity data logger with USB interface	0.24

	Vegetable Science Lab	Illuminated Physical Purity board	0.50
	Vegetable Science Lab	Seed divider	0.45
	Vegetable Science Lab	Breeding kits	0.15
	Vegetable Science Lab	LED TV	0.25
	Vegetable Science Lab	Digital Thermometer	0.05
	Refurbishing of conference rooms	Purchase of Smart Class Room Equipment for Refurbishing of Smart Class Rooms	4.65
	Refurbishing of PG A-7 classrooms	Purchase of Smart Class Room Equipment for Refurbishing of Smart Class Rooms	4.90
ASPEE Agribusiness Management Institute, Navsari			
5	Silviculture Laboratory, CoF, Navsari	Criterion Dendrometer	1.79
	FPU Laboratory, CoF, Navsari	Mahua flower stamen remover	0.30
	Silviculture Laboratory, CoF, Navsari	Digital calliper	0.17
	Tree Improvement laboratory, CoF, Navsari	Spotting scope with accessories	0.22
	Wooden decorates workshop, CoF, Navsari	Bamboo slicing machine	0.44
College of Veterinary Science & A. H., Navsari			
6	Veterinary Parasitology	Deep Freezer	3.49
	Dept. of Veterinary public Health and Epidemiology	Microprocessor Based Manual or automatic with ATC probe pH Meter	1.77
		Electronic Weighing Scale	1.24
ASPEE Shakilam Biotechnology Institute, Surat			
7	Division of Microbial and Environmental biotechnology	Vacuum rota evaporator	3.50
		Electrophoresis system and power pack	2.00
	Division of Plant Biotechnology	Spectrometer with accessories	0.24
		Polarimeter	0.16
		Over Headed mechanical stirrer	0.37
		Newton ring apparatus	0.25
		Resolving power of Telescope setup	0.19
		Sodium Lamp	0.22

Number of Student Beneficiaries availing RAWE under Student READY in the University

SN	Name of Colleges	No. of Students	Total Amount (Rs.)
1.	N.M. College of Agriculture, NAU, Navsari	110	19,80,000.00
2	College of Agriculture, Bharuch	60	10,80,000.00
3	College of Agriculture, Waghai	57	10,26,000.00
4	ASPEE Shakilam Biotechnology Institute	27	4,70,386.00
5	College of Forestry, Navsari	80	10,98,000.00
6	ASPEE College of Horticulture, Navsari	110	9,90,000.00
	Total	**444**	**66,44,386.00**

RAWE – Rural Agricultural Work Experience

Summary of Internship of Veterinary Graduates (ICAR- Internship) for the year 2020-21

SN	Name of College	No. of Students	Total Amt (Rs.)
1	College of Veterinary Science and Animal Husbandry, NAU, Navsari	159	14,31,000.00
	Total	**159**	**14,31,000.00**

Number of Student Beneficiaries availing National Talent Scholarship (NTS-UG) in the University:

SN	Name of Colleges	No. of Students	Total Amount (Rs.)
1	N.M. College of Agriculture, Navsari	52	16,92,000.00
2	College of Agriculture, Bharuch	19	6,09,000.00
3	College of Agriculture, Waghai	06	2,16,000.00
4	ASPEE College of Horticulture, Navsari	16	5,76,000.00
5	College of Forestry, Navsari	18	5,94,000.00
6	ASPEE SHAKILAM Biotechnology Institute, Navsari	10	3,60,000.00
7	College of Veterinary Science & A. H., Navsari	37	10,74,900.00
	Total	**158**	**51,21,900.00**

Number of Student Beneficiaries availing National Talent Scholarship (NTS-PG) in the University

SN	Name of Colleges	No. of Students	Total Amount (Rs.)
1	N.M. College of Agriculture, Navsari	35	15,00,000.00
2	ASPEE College of Horticulture, Navsari	2	38,710.00
3	College of Forestry, Navsari	1	60,000.00
4	ASPEE Agribusiness Management Institute, Navsari	12	5,98,320.00
5	College of Veterinary Science & A. H., Navsari	15	6,60,000.00
	Total	65	28,57,030.00

Summary of ICAR-PG Scholarship [Erstwhile Junior Research Fellowship (JRF)]

SN	Name of Colleges	No. of Students	Total Amount (Rs.)
1	N.M. College of Agriculture, Navsari	13	13,14,000.00
2	ASPEE College of Horticulture, Navsari	17	18,14,320.00
3	College of Forestry, Navsari	03	4,73,040.00
4	ASPEE Agribusiness Management Institute, Navsari	01	50,560.00
	Total	**34**	**36,51,920.00**

Summary of Scholarship under Senior Research Fellowship (ICAR-JRF/SRF) [Erstwhile ICAR-SRF Scholarship]

SN	Name of Colleges	No. of Students	Total Amount (Rs.)
1	N.M. College of Agriculture, Navsari	10	20,70,360.00
2	ASPEE College of Horticulture, Navsari	06	18,54,333.00
	Total	**16**	**3924693.00**

Status of Experiential Learning (EL) Module established in the University: Rs. in Lakhs

Year of establishment	Name of the EL Modules	Grant Received (Rs in lakhs)	No. of Students trained under EL	Product being developed under EL	Revenue earned (Rs in lakhs)	Revolving Fund Generated (Rs in lakhs)	% Share of income distributed to students (Rs in lakhs)
N M College of Agriculture, Navsari							
2006-07	Bio-fertilizer Production Unit	NIL	26	Nauroji – Azotobacter Nauroji – Acetobacter Nauroji – Azospirillum Nauroji – Rhizobium Nauroji – PSB Nauroji – KMB Nauroji – Pseudomonas	55.56	-	-
2007-08	Plant Tissue Culture Unit	-	37	Banana plant lets	2.44	-	-
College of Agriculture, Bharuch							
2017-18	Enriched vermicompost production	49.42	-	-	-	-	-
College of Agriculture, Waghai							
2018-19	Quality Planting Material Production in Horticultural Crops	66.00	28	-	-	-	-
2018-19	Agriculture Waste Management through Vermicomposting	60.12	29	-	-	-	-
ASPEE College of Horticulture, Navsari							
2008-09	Protected Cultivation of Hi-Valued Horticultural Crops	60.00	27	Ornamental Plants (Adenium, Indoor plants and succulents) Flower Bouquets and	0.48390	0.12098	0.36292* (Note: * 75% fund is yet to be distributed among student)

				Arrangements Vegetables (Fenugreek, Green onion Brinjal, Kale, Cucumber, Tomato grafts)			
2011-12	Commercial production of horticultural crops	60.10	25	Clonal plants of citrus, mulberry, pineapple, white jamun, cherry etc., seedlings of different fruit crops like coconut, phalsa, guava, citrus, custard apple etc.	0.67098	0.16774	0.50324
2006-07	Post-harvest handling and value addition in horticultural crops	138.00	18	Mango nectar, Guava Nectar, Pineapple nectar, Orange nectar, Mango squash, Guava squash, Pineapple suash, Orange squash, Noni Juice, Tomato Ketchup, Tomato Ketchup, Mango pulp Tin can, Mango Pulp Bottle, Turmeric Powder, Turmeric	0.23342	0.5835	0.17507

				Powder, Aloe vera, Pickle, Aonla Candy			
College of Forestry, Navsari							
2015-16	Development of Quality Planting Material in Forestry	72.50	37 240	Seedlings of major commercial trees species, avenue species, medicinal and aromatic plants	1.42	Nil	Nil
2013-14	Commercial Apiculture	70.00	37	Honey, wax sheets	4.43	Nil	Nil
College of Veterinary Science & A. H., Navsari							
2013-14	Broiler and Layer Production	40.00	3	Broiler Birds (Chicken)	Nil	Nil	Nil
2014-15	Goat production Unit	65.00	1	Goat	Nil	Nil	Nil

ELU on Bio-fertilizer Production Unit

Students trained under ELP on biofertilizers

ELU on Plant tissue culture


Student performing inoculation work

ELU on Protected Cultivation of Hi-Valued Horticultural Crops

Motivation of ELP students for participation in competition and success

Commercial Production of Horticultural Crops (Batch 2020-21)


Preparation of Dragon fruit cuttings & transportation


Photographs of ELU Module on Development of Quality Planting Materials in Forestry

Visit to commercial Apiary under ELU on Commercial Apiculture

Curriculum Development & Delivery:

SN	Title of Practical/Instructional Manuals developed & Course Code
N M College of Agriculture, Navsari	
1	Ag. Extn. 3.1- Fundamentals of Agricultural Extension Education
2	Ag. Extn. 5.3- Communication Skills and Personality Development
3	Ag. Extn. 6.4- Entrepreneurship Development and Business Communication
4	Pl.Path. 6.5 - Diseases of Horticultural & Their Management-II
5	Ag. Micro 6.2 - Biopesticides and biofertilizer
College of Agriculture, Waghai	
6	Ag Chem 1.1 - Fundamentals of Soil Science
7	Ag Chem 2.2-Manures, Fertilizers and Soil Fertility Management
8	Ag Chem 3.3-Problematic soils and their management
9	Ag Ent 4.2-Principles of integrated pest management
10	Ag Ent 3.1-Fundamentals of entomology
11	Ag Ext 3.1-Fundamentals of Agricultural Extension Education
12	Ag Micro 1.1-Agricultural Microbiology
13	Agron 3.3-I-Crop Production Technology
14	Biochem 2.1-Fundamentals of Plant Biochemistry
15	Hort 1.1-Fundamentals of Horticulture
16	Hort 2.2-Production Technology for Fruits and Plantation Crops
17	Hort 3.3-Production Technology for Vegetables and Spices
18	Hort 4.4-Production Technology for Ornamental Crops, MAP and Landscaping
19	Agron 4.5-Weed Management
20	Agron 2.2-Fundamental of Agronomy

21	Maths 1.1-Elementary mathematics
22	Eng 1.1-Comprehension and Communication Skills in English
23	Agron 4.4-Crop Production Technology- II (Rabi crops)
ASPEE College of Horticulture, Navsari	
24	PGS 502-Technical Writing and Communications Skills
25	VEG 3.3 -Protected Cultivation and Precision Farming and (*e* Practical Manual)
26	VEG 3.3 - Protected Cultivation and Precision Farming (e Instructional Manual)
27	VSC 505- Seed Production Technology of Vegetable Crops (*e* Practical Manual)
College of Forestry, Navsari	
28	NRM 1.2-Environmental Studies and Disaster Management

Details of Financial Progress of Development Grant: (Rs. in lakhs)

SN	Components	Total	
	Grant-in Aid	**Allocation**	**Expenditure**
1	**Works**	0.00	0.00
1.1	**a. Land**	0.00	0.00
1.2	**b. Building**	0.00	0.00
1.2.1	Girls Hostel	0.00	0.00
1.2.2	Boys' Hostel	0.00	0.00
1.2.3	International Hostel	0.00	0.00
1.2.4	Examination Hall	0.00	0.00
1.2.5	Education Museum	0.00	0.00
1.2.6	University Auditorium	0.00	0.00
1.3	**c. Works**	0.00	0.00
1.3.1	Repair/Renovation of Hostel	10.00	10.00
1.3.2	Repair Renovation of Examination/Laboratories/Sports Facility/Green Initiatives	6.00	6.00
1.3.3	Refurbishing of Smart Class Rooms	20.00	20.00
1.3.4	Centenary Grant/Renovation of old and Historical Infrastructure	0.00	0.00
2	**Equipments**	0.00	0.00
2.1	Equipment for Central Instrumentation Facility	10.00	10.00
2.2	Equipment for UG & PG Laboratories/ Sports Facility / Green Initiatives excluding computer & its peripherals	54.43845	54.43845
2.3	Minor Equipment under Nodal Cell	0.00	0.00
3	**Computer and peripherals**		
3.1	-Computer Hardware	0.00	0.00
3.2	- Software	0.00	0.00
4	**Library Books & Journals**	**0.00**	**0.00**
4.1	Print Book	0.00	0.00
4.2	Print Journal	0.00	0.00
4.3	e-books other than CeRa	0.00	0.00
4.4	e-Journal other than CeRa	0.00	0.00
4.5	Digitization of resources	0.00	0.00
5	**Vehicles & Vessels**	**0.00**	**0.00**
6	**Livestock**	**0.00**	**0.00**
7	**Furniture and Fixture for**	**0.00**	**0.00**
7.1	Hostel	0.00	0.00
7.2	Examinational Hall	0.00	0.00
7.3	Laboratory	0.00	0.00
7.4	Class Room	0.00	0.00

7.5	Library	0.00	0.00
8	**Other**	0.00	0.00
	Total CAPITAL	100.43845	100.43845
B.	**Grant-in-Aid Salaries (REVENUE)**	**0.00**	**0.00**
C.	**Grant-in-Aid General (REVENUE)**	**0.00**	**0.00**
9	**Research & Operational Expenses**	**0.00**	**0.00**
9.1	Research Expenses	0.00	0.00
9.1.1	Curriculum Development and Delivery: Contingency Grant for UG/PG Practical and Preparation quality Instructional Manuals	2.00	2.00
9.1.2	Strenghening of UG/PG Teaching: Participation of Faculty/Ph. D. students in seminar/conferences/Trainingg Educational Tour withing country. In no case funding for travel will be allowed.	2.00	2.00
9.1.3	Support to DEAN	3.15983	3.15983
9.2	Operational Expenses	0.00	0.00
9.2.1	Student and Faculty Amenities: Tutorials for SC/ST Students: Students Counselling, Placement Cell: Health Facilities : Personality Development Recreation facilities Including Agri-Unifest&Agri-Sports	2.00	2.00
9.2.2	Best Teacher Award: Guest and Adjunct Faculty	0.00	0.00
9.2.3	Support to Nodal Cell	2.00	2.00
10	**Miscellaneous Expenses**	**0.00**	**0.00**
11	**Others**	**0.00**	**0.00**
12	**Publicity & Exhibitions**	**0.00**	**0.00**
Total Grant in Aid- Capital		**100.43845**	**100.43845**
Total Grant in Aid- salary		**0.00**	**0.00**
Total Grant in Aid- Revenue		**11.15983**	**11.15983**
Grand Total: Grant in Aid (CAPITAL+SALARY+REVENUE)		**111.59828**	**111.59828**

Ten Most Significant Achievements/Impacts out of the ICAR Development Grant provided to the University during the period under report:

1. **Strengthening of Hostel facilities:** ICAR has sanctioned repair/ refurbishing/ renovation of Hostels. This has resulted in better residential facilities for increased number of admitted girls in various degree programmes at NAU, Navsari. It also facilitated better accommodation for students despite enhancing intake over last five years. Additionally, student amenities such as solar roof top system have strengthened existing facilities. For safety of hostels particularly doors, windows, grills and important areas of the University were equipped with CCTV.
2. **Strengthening of laboratories:** Financial aid of ICAR has helped in modernization of laboratories in different constituent Colleges. Besides, purchase of basic and modern instruments/equipment's for various laboratories helped in strengthening of laboratories and replacement of older instruments.
3. **Strengthening of IT facilities:** Financial aid of ICAR has enabled IT facilities modernization. These facilities aided paperless administration and also helped students and faculty members for surfing updated scientific information round the clock. Similarly, computers with peripherals were purchased for strengthening faculty amenities for efficient teaching and timely reporting.
4. **Success of students:**During the year 2020, 86 post graduate students of NAU Navsari qualified National Eligibility Test conducted by ASRB, ICAR. About 69 students of various faculties of NAU qualified AIEEA-JRF, 37 PG students qualified ICAR-SRF.
5. **Achievements of faculties/students:**During the year 2020, a total of 79 faculties/students of NAU Navsari earned best teacher, young scientist, best oral, best poster, best research paper and best article and best thesis at National/State level.

6. **Placement of students:** A total of 135 students of UG/PG were placed including 3 in ICAR, 7 in CAU/ SAUs, 2 in State Government, 3 in foreign for higher studies and 120 in Pvt./Others.
7. **Participation in seminar, symposium, conference & capacity building of faculties:** During the period under report a total 148 faculties attended & presented research papers in seminars, symposiums and conferences including 9 Professors, 23 Associate Professors and 116 Assistant Professors availing financial support from ICAR development grant.
8. **Curriculum & development and delivery:** A total of 28 various practical / instruction manual were prepared from faculties of Agriculture, Horticulture and Forestry for improvement of higher education during the period under report in eight accredited colleges of NAU, Navsari.
9. **Academic Achievements:** Out of 33 thesis awarded in the reported year, a total of 63 research papers were published including 30 in < 5 rating and 33 in 5 to 7.5 rating.
10. **Totally, forty seven research scholars benefited from SHODH** (Scheme of Developing High Quality Research, by KCG, GoG) due to continued strengthening of existing facilities and new equipment's by the support of ICAR, New Delhi which led to better research by the scholars. It benefited 14 research scholars from ACoH and 33 from NMCA for pursuing Ph.D. programme making them eligible for two years fellowship @ Rs. 15,000 per month and contingency @ Rs. 20,000 per annum.

List of Top Five Priority Areas Related to Higher Agriculture Education Improvement that University Wishes ICAR to Support:

I Sponsoring Research Projects on cutting- edge areas
II Setting up of Incubation Cell for Agri. Start-up
III Sponsoring Innovative Doctoral Research Proposals
IV Modernization of Diagnostic Facilities
V Establishment of Staff Training Center

Glimpses of activities depicting Impact Mentioned during the period under Report

Solar roof top system at
Forestry UG Boys Hostel, Navsari

Renovation of UG laboratory
at Veterinary College, Navsari

Laboratory Teaching Manual prepared at
Veterinary College, Navsari

Seed Divider procured at ASPEE College of
Horticulture, Navsari

Spotting Scope with accessories procured at College of Forestry, Navsari

Renovation of PG Laboratory at ASPEE College of Horticulture, Navsari

Criterion Dendrometer procured at College of Forestry, Navsari

Mahua Seed Decorticator procuredat College of Forestry, Navsari

21. Executive Engineer, Navsari

Estate/construction Department of Navsari Agricultural University looks after the activities related to new construction works including irrigation and water management works (As per the requirements of different department/Scientist), and civil and electrical maintenance of buildings of the University in the main campus as well as in all sub centers of the university.

The responsibility of the department also includes construction and maintenance of roads/drainage/water supply/electricity and fencing/farm structures/irrigation facilities *etc*. as per the requirements of farm authority of all the University farms including at main campus. In addition, the division looks after transport, electricity, water supply and drainage facilities, maintenance of Guest houses and staff accommodations. The other major job is to prepare plan estimate of the construction work/Maintenance work, to accord technical sanctions as well as execution and monitoring of civil works to be carried out in the University.

Construction Committee

52nd and 53rd meeting was held on 10-11-2020 and 23.03.2021, respectively. Details of construction committee are given below:

SN	Designation	Positions
1	Vice Chancellor, NAU, Navsari	Chairman
2	Director of Research & Dean PG NAU, Navsari	Member
3	Director of Extension Education NAU, Navsari	Member
4	Comptroller NAU, Navsari	Member
5	Registrar, NAU, Navsari	Member
6	One expert and renowned Architect from Government Department or recognized University or from outside by Council of Agriculture Universities, Gujarat	Member
7	Superintendent Engineer, Roads and Public Works Department, Surat Circle/Executive Engineer, Roads and Public Works Department, Navsari	Member
8	**Executive Engineer, NAU, Navsari**	Member Secretary

Purchase Committee

During the period under report, VIII meeting was held on February 19, 2021. Structure of the purchase committee hasbeen appended hereunder.

SN	Designation	Positions
1	Vice Chancellor, NAU, Navsari	Chairman
2	Two non official members of Board of Management	Member
3	Deputy Secretary of Agriculture and cooperation Department, Government of Gujarat	Member
4	Deputy Secretary of Finance Department, Government of Gujarat	Member
5	Director of Research & Dean PGS, NAU, Navsari	Member
6	Head of Concern Department of NAU	Member
7	Registrar, NAU, Navsari	Member
8	Comptroller, NAU, Navsari	Member
9	Executive Engineer, NAU, Navsari	Member Secretary

House Allotment Committee

SN	Designation	Positions
1	Director of Research & Dean PG NAU, Navsari	Chairman
2	Principals of all Colleges, NAU	Member
3	All Deans of NAU	Member
4	Assistant Registrar(Administration), NAU, Navsari	Member
5	Director of Student Welfare, NAU, Navsari	Member
6	Comptroller, NAU, Navsari	Member
7	Research Scientist (Cotton), NAU, Navsari	Chairman of Surat Building Allotment Committee of Surat
8	Executive Engineer, NAU, Navsari	Member Secretary

Works completed during 2020-21

SN	Name of Schemes	Location	Expenditure (Rs in Lakhs)
1	Construction of Agriculture Waste Management through Vermicompost Shed College of Agriculture at NAU, Waghai	Waghai	34.00
2	Construction of Parent Guest House at NAU Waghai (Including Electrification)	Waghai	136.00
3	Construction of Pesticide Residue Laboratory at NAU, Navsari	Navsari	159.00
4	Construction of U.G Boys Hostel at NAU, Dediapada (Including Electrification)	Dediapada	426.00
5	Construction of Fisheries College Building at NAU, Navsari (Including Electrification)	Navsari	1425.00
6	Strengthening of Existing Farm Road for MCR at NAU, Surat	Surat	42.00

Works initiated during 2020-21

SN	Name of Works	Location	Expenditure (Rs. in Lakhs)
1	Construction of Bio-Pesticide laboratory (NHM) at NAU, Waghai	Waghai	40.00
2	Construction of Mushroom laboratory (RKVY) at NAU, Waghai	Waghai	40.00
3	Strengthening of Existing Farm Road for MCR at NAU, Surat	Surat	42.00
4	Construction of ADM cum laboratory building at KVK, Surat	Surat	33.00
5	Repairing and Strengthening of compound wall from ATM gate to ABM College Gate at NAU, Navsari	Navsari	9.50

22. Planning, Monitoring and Evaluation Cell, Navsari

About Planning Monitoring and Evaluation Cell

Planning, Monitoring and Evaluation cell operates under Directorate of Research, Navsari Agricultural University, Navsari. It deals with formulation of annual development plans and monitoring/ evaluation of the plans at university level. The main vision of Planning Cell is to fulfil the aspirations of farming community at large and to ensure agricultural development through effective implementation of development charges schemes.

Planning Cell looks after four basic components of planning process of the university *i.e.* planning, execution, communication of achievements and evaluation of all the schemes, according to the strategies and views decided by Department of Agriculture Cooperation and farmer's welfare, Government of Gujarat. At present, Navsari Agricultural University has in total 124 development charges schemes, including 30 educational, 16 Extension Educational and 78 Research schemes.

Development Charges Schemes (Plan)

Summary of number of Schemes with number of Sanctioned Post (2020-21)

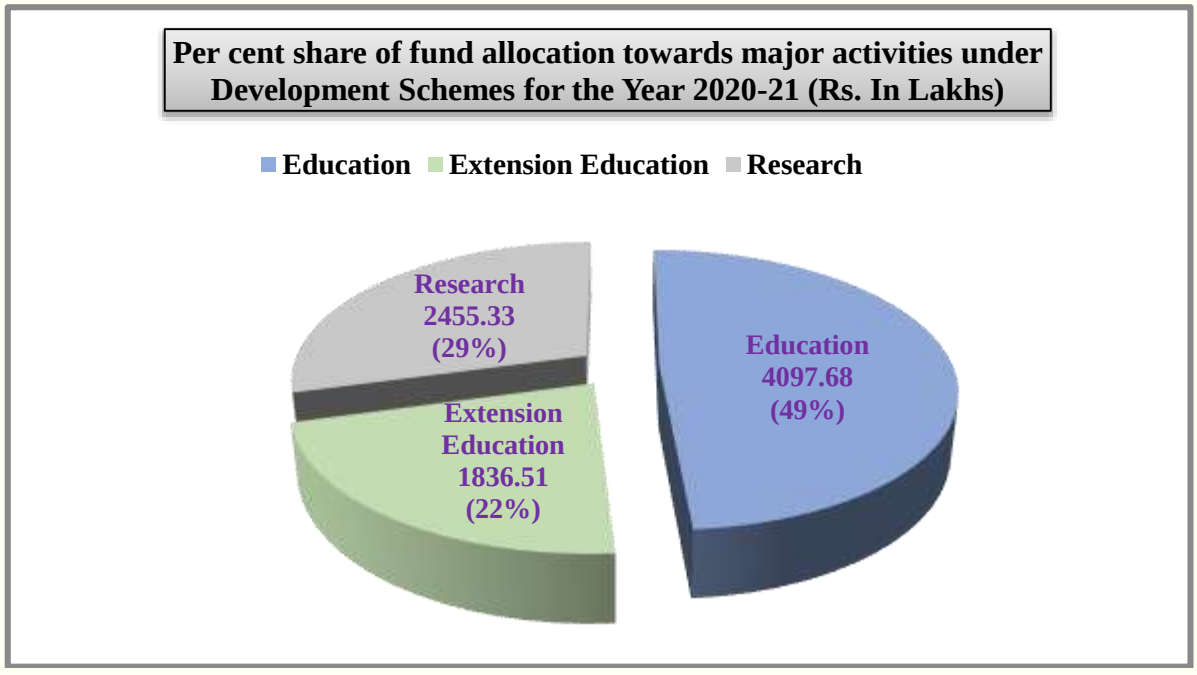
Activity	Normal Schemes			TASP Schemes			Total		
	With Posts	Without Posts	Total Posts	With Posts	Without Posts	Total Posts	With Posts	Without Posts	Grand Total Posts
Education	12	13	25	5	0	5	17	13	30
	187		187	64		64	251		251
Extension Education	4	8	12	4	0	4	8	8	16
	19		19	151		151	170		170
Research	45	14	59	12	7	19	57	21	78
	142		142	28		28	170		170
ICAR: State share	15	5	20	0	0	0	15	5	20
	74		74	0		0	74		74
Grand Total	76	40	116	21	7	28	97	47	144
	422		422	243		243	665		665

Planning and Development committee Meetings held during FY 2020-21

1	10th Planning and Development committee Meeting was held on 07/07/2020 at Conference hall of Vice Chancellor, NAU, Navsari and discussed the matters pertaining to planning, execution, achievements and evaluation of all the schemes running at on-campus and off-campus centres.	
2	11th Planning and Development committee Meeting was held on 10/09/2020 at Conference hall of Vice Chancellor, NAU, Navsari and discussed the matters pertaining to planning, execution, achievements and evaluation of all the schemes running at on-campus and off-campus centres.	

Sanctioned Budget for Development Schemes for the FY 2020-21 (Rs. In. Lakhs)

Head	Pay	Recurring	Non Recurring	Const.	Total
AER-1: Education (2415 01 277 02)	2290.36	809.28	36.28	100.00	3235.92
AER-2: Extension Education (2415 01 277 03)	142.79	125.86	1.57	0.00	270.22
AER-3: Research (2415 01 004 02)	975.60	772.15	16.55	0.00	1764.30
AER-3: ICAR State Share (2415 01 150 01)	220.50	0.00	0.00	0.00	220.50
Normal Total	**3629.25**	**1707.29**	**54.40**	**100.00**	**5490.94**
AER-2: Education (2415 01 796 03)	556.78	126.98	30.00	148.00	861.76
AER-6: Extension Education (2415 01 796 04)	1406.79	149.91	9.59	0.00	1566.29
AER-6: Research (2415 01 796 05)	266.71	176.54	3.95	0.00	447.20
AER-6: Strengthening of Research in Vet. Sci. & Animal Husbandry (2415 01 796 07)	6.10	17.23	0.00	0.00	23.33
TASP Total	**2236.38**	**470.66**	**43.54**	**148.00**	**2898.58**
Grand Total (Normal + TASP)	**5865.63**	**2177.95**	**97.94**	**248.00**	**8389.52**



New construction work sanctioned for year 2020-21

SN	Name of works	Sanctioned Grants
AER-1: Education (Normal) (2415 01 277 04)		
1	Construction of boys hostel for polytechnic at NAU, Bharuch	100.00
AER-2: Education (TASP) (2415 01 796 03)		
2	Construction of boys hostel for polytechnic at NAU, Waghai	100.00
	Grand Total (Normal + TASP)	**200.00**

EconomicImpactAssessment of Agricultural Technologies in South Gujarat

The government of Gujarat has sanctioned the new plan schemes (Development charge) Under Planning cell, Directorate of Research, Navsari Agricultural University, Navsari as per GR

No.NKV-122018-20-K.2, Dated: 23/04/2018 entitled **"Economic Impact Assessment of Agricultural Technologies in South Gujarat" (B.H 12067)** from the financial year 2018-19.

The major output in the field of research is the development of technologies for the farming community. Navsari Agricultural University has developed and recommended various technologies for the uplifment of farmers. This scheme is being implemented for proper evaluation of these technologies developed by various research schemes functioning under Navsari Agricultural University with the help of permanently selected more than 300 farmers for each of the major crops (17) of the seven districts of South Gujarat. The main aim of the project is to establish permanent machinery for collecting continuous data/information from the same farmers and studying the economic impact of various technologies developed and recommended by the Navsari Agricultural University. The findings of the study will give direction to make agricultural research more efficient in the future.

Research Activities carried out under EIA Scheme in the year 2020-21

SN	Name of activities	Total no. of activities conducted
1	E-*Krishi Gosthi*	07
2	Online *Khedut Kharch Pothi* training	01
3	EIA Farmers meet at selected village	25

23. University Placement and Counselling Cell, Navsari

A vital aspect of any university is its placement & counselling activities. University Placement and Counselling Cell, Navsari is one of the components of Director of Student's Welfare (DSW), Navsari Agricultural University (NAU), Navsari. It is fact that the ultimate value of a progressive university offering higher education programmes would be the acceptability of its students in the corporate/outer world. In addition to this, Placements has always been a prime consideration for the students and their parents in selecting a particular course, institute and university as well. Considering this, an independent ***"University Placement & Counselling Cell*** was established at University level in 2012.

Presently, this University Placement & Counselling Cell is working under the able guidance of Director of Student's Welfare in the capacity of the Chairman of the Cell, has been established with a clear view to have an integrated linkage with renowned industries and others. This cell is actively involved in counselling the students for possible areas of career opportunities and enhancing student employability in the globally competitive scenario. Apart from providing assistance for project placement and final job placement to the students and assisting in publishing separate Placement Brochure of each institute annually; the cell is determined for overall professional development of the students through regular training and development interventions; industry-academia interaction, field/industrial visits and such other activities. So, the focus is not only on providing lucrative job opportunities to the interested and eligible students; but also on instilling lifetime confidence for career and life.

Vision

- To position NAU as the most preferred recruitment destination for renowned corporate houses across the globe

Mission

- Strengthening the self image of the students and boosting their morale and motivation through counselling services
- Improving the employability of our students through customized training and professional grooming services
- Providing lucrative project placement and job placement opportunities to the interested and eligible students

Placement and Counselling cell at Institutional level

Under the direction and support of this University Placement & Counselling Cell, each of our college/institute is also having fully functional and active "Placement & Counselling Cell" at the Institute Level headed by Placement Officer of the respective institute and supported by a team of Placement Assistants. So, along with the University Placement & Counselling Cell, there are 17 Institutional Level Placement & Counselling Cells, which are actively working in the direction of ensuring holistic development of students and lucrative placement for them. The present office bearers and structure of the University Placement & Counselling Cell is as follows:

Structure of University Placement & Counselling Cell for the period 2020-21

SN	Institution / College	Name & Designation of the Official	Designation in University Placement & Counselling Cell
1	Navsari Agricultural University (NAU), Navsari	Dr. R. M. Naik DSW, NAU, Navsari	Chairman University Placement & Counselling Cell
		Dr. Mehul G. Thakkar Associate Professor (HRM) AABMI, Navsari	University Placement & Counselling Head
2	N.M. College of Agriculture (NMCA), Navsari	Dr. Priya John Associate Professor (Plant Pathology)	Placement Officer (Agriculture)
3	ASPEE College of Horticulture & Forestry (ACHF), Navsari	Dr. Alka Singh Professor & Head (FLA)	Placement Officer (Horticulture)
4	College of Forestry (CoF), Navsari	Dr. Harsha T. Hegde Assistant Professor (FPU)	Placement Officer (Forestry)
5	Vanbandhu College of Vet. Science & Animal Husbandry (VCVSAH), Navsari	Dr. Vipul R. Patel Assistant Professor (Animal Nutrition)	Placement Officer (Veterinary)
6	ASPEE Agribusiness Management Institute (AABMI), Navsari	Dr. Mehul G. Thakkar Associate Professor (HRM)	Placement Officer (ABM)
7	College of Agriculture (CoA), Bharuch	Dr. Dipak M. Pathak Associate Professor (Plant Pathology)	Placement Officer (Agriculture)
8	College of Agriculture (CoA), Waghai	Mr. Dilip M. Damasia Assistant Professor (Entomology)	Placement Officer (Agriculture)
9	ASPEE Shakilam Biotechnology Institute (ASBI), Surat	Dr. Vaibhav N. Mehta Assistant Professor in (Nanotechnology)	Placement Officer (Biotech.)
10	College of Agril. Engineering & Technology (CAET), Dediapada	Dr. Hitesh Sanchavat Asst. Professor, CAET-Dediapada	Placement Officer (Agril. Engi.)
11	College of Fisheries Science (COFs), Navsari	Dr. Haresh G. Solanki Asst. Professor @ COFs	Placement Officer (Fisheries)
12	Polytechnic in Agriculture, Vyara-Tapi	Dr. Viral N. Parmar Assistant Professor	Placement Officer (Agriculture)
13	Polytechnic in Agriculture, Bharuch-Narmada	Dr. Dipak M. Pathak Associate Professor (Plant Pathology)	Placement Officer (Agriculture)
14	Polytechnic in Agriculture, Waghai-Dang	Dr. ShreeshailRudrapur Assistant Professor (Agril. Economics)	Placement Officer (Agriculture)
15	Polytechnic in Horticulture, Navsari	Dr. Shivam T. Bhatt Assistant Professor	Placement Officer (Horticulture)
16	Polytechnic in Horticulture, Paria	Mr. Amit I. Makawana Assistant Professor (Entomology)	Placement Officer (Horticulture)
17	Polytechnic in Agril. Engineering, Dediapada	Dr. Arun P. Lakkad Assistant Professor (Soil & Water Eng.)	Placement Officer (Agril. Engg.) (since 11/06/2012)

18	Polytechnic in Animal Husbandry, Navsari	Dr. Dinesh C. Moliya Veterinary Officer	Placement Officer (Animal Husbandry)

Placement Summary

This Placement Year of 2020 was a very peculiar one, as the business landscape was badly hit by COVID-19 pandemic across the globe. Out of the different pass out students of 2020; 353 students opted higher studies and 181 students secured jobs in 62 Placement Interviews during the year. Maximum salary of 5.40 Lakhs per annum was offered to B.V.Sc. & A. H. students. Details of Placement for the year 2020 are given below:

Detail of the student placement (Total no of interview organized: 62)

Institutes	Students details*	Total passed out students	No. of Interested and Eligible students	Students Placed			Students opted Higher Studies			Salary		
				M	F	Total	M	F	Total	Min.	Max.	Median
ACoH	B.Sc. (Horti.)	58	30	15	15	30	6	8	14	1.80	3.60	2.70
	M.Sc. (Horti.)	48	30	14	16	30	6	7	13	2.40	3.60	3.00
CoF	B.Sc. (For.)	38	14	4	2	6	3	6	9	1.80	2.75	2.27
	M Sc. (Forestry)	09	04	3	1	4	0	1	1	2.10	3.60	2.40
NMCA	M.Sc. (Agri.)	143	44	1	0	1	16	13	29	2.40	2.40	2.40
	B.Sc. (Agri.)	117	50	2	1	3	53	35	88	2.00	2.50	2.25
CoA-B	B.Sc. (Agri.)	53	04	4	0	4	15	13	28	2.40	3.60	2.40
CoA-W	B.Sc. (Agri.)	50	16	10	0	10	18	8	26	1.56	2.87	2.21
AABMI	MBA (ABM)	22	22	7	0	7	0	0	0	1.68	4.00	2.95
Vet. & A. H.	B.V.Sc. & A.H.	79	31	28	3	31	31	7	38	4.20	5.40	4.80
	M.V.Sc. & A.H.	14	05	5	0	5	2	0	2	3.84	4.56	4.30
ASBI	B. Sc. (Agri. Biotech.)	24	18	2	0	2	5	3	8	1.50	1.56	1.53
CAET	B. Tech. (Agril. Eng.)	28	20	9	0	9	2	0	0	2.50	3.00	2.75
	M. Tech. (Agril. Eng.)	07	06	4	0	4	2	0	2	2.50	4.00	3.00
COFs	B.F.Sc.	15	00	0	0	0	8	7	15	-	-	-
Diploma	PIA, Vyara	35	05	3	0	3	18	2	20	1.20	1.80	1.20
	PIA, Bharuch	32	00	0	0	0	12	5	17	-	-	-
	PIA, Waghai	31	01	1	0	1	4	1	5	1.44	1.44	1.44
	PIH, Navsari	29	03	2	1	3	6	4	10	0.66	0.66	0.66
	PIH, Paria	28	03	3	0	3	2	4	6	2.00	2.32	2.04
	PIAE, Dediapada	11	04	2	0	2	4	1	5	1.20	1.50	1.25
	PIAH, Navsari	23	23	20	3	23	0	0	0	3.60	1.20	1.80
Total		**894**	**333**	**139**	**42**	**181**	**221**	**132**	**353**	**0.66**	**5.40**	-

Summary of the student placement

Total 181 Students Secured Jobs

PG: 51		UG: 95		Diploma: 35	
M	F	M	F	M	F
34	17	74	21	31	4

Total 353 Students Opted Higher Studies

PG: 62		UG: 228		Diploma: 63	
M	F	M	F	M	F
34	28	141	87	46	17

Soft Skill Development and Professional Grooming through Capacity Building Training Programmes

In order to develop the soft skill and professionalism among students of NAU, several capacity building training programmes have been organized at University level as well as at institutional level by the team of placement and counselling cell. In 2020-21, as the students were at their homes due to COVID-19 pandemic lockdown, this Cell responded well to the need of the hour by offering online training sessions. University Placement & Counselling cell conducted total 13 Online Training sessions of 44 hours duration. Total 2187 candidates of NAU participated and benefitted by these sessions.

Brief of major capacity building training programmes organized/conducted during 2020-21 is given below.

Events organized

1. Online In-house "Campus to Corporate-C2C" Training Programmes

Utilizing the power of the online platforms to the fullest possible extent, the University Placement & Counselling Cell, DSW Office of NAU, Navsari organized two Powerful Pre-Placement Preparatory Training through online mode by conducting In-house Two Full Day Career Management Training Programmes on **"Campus to Corporate – C_2C"** for 71 UG students of the ASPEE SHAKILAM Biotechnology Institute, Surat on January 19, 2021 and for 69 Diploma Horticulture students of both the Horticulture Polytechnics of Navsari and Paria on March 23, 2021.

The virtual inaugural ceremony of **"Campus to Corporate – C_2C for Students of Horticulture Polytechnics"** was organized on March 23, 2021. In the presidential address, Hon'ble Vice Chancellor, Dr. Z. P. Patel, led from the front and inspired the august gathering of 69 students and all the faculty members of both the polytechnics by sharing his own life experiences and emphasized on the importance of such training in shaping the career of students.

Total 7 lead training sessions were organized on the aspects of *Employability Scenario, Effective Resume Writing, Projecting Powerful Body Language, Power Dressing for Success, Developing and Projecting Positive Self Image-Powerful Personality Development & Impression Management Tips, Managing Online Reputation, Developing Right Attitudinal Mindset for Job Hunting and Winning the Interview*.

2. Release of Placement Brochure-2021

Every year, the University Placement & Counselling Cell and office of DSW positively push and facilitate all the institutes of NAU, Navsari to prepare, publish and distribute Placement Brochure for the passing out batch. Early publication of this important document surely serves as a bridge between the prospective employers and the high quality talent pool of our University. 2020-21 being a year of hardships for the academic institutions as there was complete lockdown due to COVID-19 pandemic for the major duration in the year. In this situations also, Navsari Agricultural University, Navsari has taken the challenge to active the drive of University Placement and Counselling Cell and brought the Placement Brochure-2021 entitled **"Presenting the Future Ready Professionals – The Agribusiness Warriors of AABMI."**

3. Thought Provoking Discourse on "Integrated Personality Development Course" by the BAPS SwaminirayanSansthan, Sarangpur Team on February 17, 2021

The University Placement & Counselling Cell of NAU, Navsari organized special interaction on possibilities of Integrated Personality Development Course (IPDC) in the syllabus or course curriculum of various educational programmes of NAU. On February 17, 2021; as the President of the Thought Provoking Discourse on "Integrated Personality Development Course (IPDC)" by the BAPS SwaminirayanSansthan, Sarangpur Team and the Hon'ble Vice Chancellor, NAU, Dr. Z. P. Patel led the discussion from the front and deliberated the feasibility of introducing this course in the syllabus/curriculum of various courses/programmes of NAU for fostering holistic development of our students. A team of three eminent saints from the world renowned BAPS SwaminarayanSansthan – Shri GyanvijaySwamiji*(BE-Chemical from DDIT, Nadiad) –The Coordinator of IPDC,* Shri PurnakamSwamiji*(MBBS) –Kothari Swamishriji-BAPS Temple-Navsari* and Shri Brahma ChintanSwamiji*(B.Sc.-Agri. from AAU, Anand) – Coordinator of Agricultural Activities at BAPS Temple, Sarangpur,* were participated in this programme.

After the discussion, Shri GyanvijaySwamiji made audio-visual presentation on the need, significance and modalities of the proposed "Integrated Personality Development Course (IPDC)" and he also shared the renowned institutions and universities of India wherein this IPDC has been offered as a pilot project and the outcome generated. Then, the Hon'ble Vice Chancellor of NAU, Dr. Z. P. Patel, stimulated thought provoking discussion amongst the presentees including the DR & Dean-PGS, Registrar, DEE, DSW, Deans and Principals of various institutions of NAU and head of University Placement & Counselling Cell. He noted that being the youngest nation of the world, our youth need to be oriented towards ethical and moral values and with technical skills, and these students should also be imparted soft skills for living a better life.

He even shared interesting anecdotes and highlighted the fact there is a lot to be learnt from our own Indian Role Model sort of Legendary Personalities. All the presentees of NAU, Navsari also gave inputs and the Hon'ble Vice Chancellor also opined that the BAPS Team should make a presentation to all the four SAUs of Gujarat and then a meeting should be arranged for chalking out the path for successful and effective implementation of such a wonderful course in the curriculum of UG courses for benefitting the students and moulding them into better responsible and ethical citizens of our worthy nation.

24. Department of Information Technology, Navsari

A well developed Department of Information Technology (DIT) for planning, coordinating, implementing, and maintenance all the IT infrastructure of the university. DIP provides services of Internet and IPsec VPN across the university. It has performed various infrastructure development and software development activities for NAU subject to different requirements arise during the period 2020-21. Details of the activities are presented hereunder.

IT Hardware/Networking Development Activities

a. New Wireless Tower Setup

Department of IT, NAU has started to establish direct p2p connectivity using wireless devices directly from Navsari Server Room. In this regard, 11 towers have been established at various remote station locations. The towers are all self-supporting. All of the towers will be utilized to provide wireless connections between different distant stations of NAU. The connection will be delivered straight from the Navsari location. Navsari and NAU distant places Danti Ubhrat, Surat, Hansot, Tanchaa, Achaalia, Bharuch, Bardoli, Vyara, Gandevi, and Paria are home to the New Towers. Using suitable wireless equipment, these towers will provide Internet and different online intranet services of NAU directly from the Navsari location. A new P2P direct connectivity from IT Server room is in progress at present for Surat, Bardoli, Vyara, Danti Ubhrat, Hansot, Tanchha, Achhalia, Mangrol sub-centers.

b. New Server Setup and Installation

IT Department has procured and deployed Hyper-Converged Infrastructure (HCI) in 4 numbers at NAU. Vsan Ready highly capable servers and one Backup server. All the new servers will be hosting upcoming new online services and will work as backbone of the all the units of NAU Online Services in near future.

c. New Fiber Optic Network Establishment

In the Navsari Campus, new about 5 km of Overhead Fiber Optic Cable based connectivity has been established in Ring Topology. The Fiber will pave high speed connectivity across the Navsari Campus and pave the way for excellent information speed for the online service and internet across the Navsari Campus. This development works paves for the major network infrastructure push for the NAU.

IT Software Development Activities

a. Setup of NAU Streaming Server

IT department of NAU has established and deployed the NAU Stream Ace Server for hosting NAU E-class. This server service works in conjunction of NAU E-class for streaming online video for using online Video features of the NAU E-class. This server is ultimate requirement for managing NAU E-class services.

b. Annual Internet Service and IPsec VPN Services

Navsari Agriculture University has procured dedicated 1:1 100 Mbps leased line and IPsec VPN Connectivity across the University. The IPsec VPN connectivity connects remote centers of Dediyapada, Bharuch, Paria and Waghai. IT department has also upgraded the NKN leased line with bandwidth of 1 Gbps and providing speed of approximate 100 Mbps. The IP Department is merging the Internet of both the Bandwidth and providing internet services to Navsari Campus and Remote centers through IPsec VPN connecting. It connects remote center with single Network of NAU.

c. Development & Deployment of NAU Drive Portal

IT department has developed the NAU drive portal for storing data on NAU servers. It will be effective and secure as data is stored on NAU servers at IT Server Room

d. Development & Deployment of E-class Portal

Navsari Agricultural University, Navsari has deployed its own developed platform for the Online E-classes for the benefits of students and faculties in June 2019. Due to present COVID-19 situation, University has adopted the own developed NAU E-class platform for the University. The Different features have been added till date. The Distinguish features of the NAU E-class facility is given below. More than 10,000 sessions are already been conducted via NAU e-Class portal.

E-classes through audio and video modes. Only Registered students can participate in the Class room. OTP based login for Faculties and Students for Secure Login. The subject wise class room are mapped for the faculties. Facility to share subject wise Video Lecture, Assignment, Old Question Papers, Practical Manual among the Students.	

e. Procurement of Transactional SMS with API Integration support.

IT department has procured 4.5 lakh Transaction SMS with API Integration support for the various online services of NAU. This SMS is used for the Online Services OTP, various Intimations to NAU students and NAU Staff as per the instructions given by the University Authorities.

f. Deployment SSL certificates for various online services of NAU

IT department has deployed SSL (Secure Socket Layer) Certificates for all the Online Services of NAU and university website www.nau.in. An SSL (secure sockets layer) certificate is a digital certificate that both authenticates the identity of a website, and encrypts sensitive information so that any passwords, addresses or credit card numbers cannot be intercepted or read by anyone other than the intended recipient.

g. Procurement & Deployment of Voice SMS Services

IT department has procured and deployed Voice SMS service for the NAU. Voice SMS service has recently started to gain popularity. It is a form of verbal communication which is automated. It works as either a recorded audio or text to speech format. There are many benefits of using a voice SMS for University's extension activities of NAU.

h. Development & Deployment of Online subjective examination at NAU

Navsari Agricultural University, Navsari has deployed module for descriptive Examination through online mode. It helps in taking examination with descriptive or subjective type questions in E-class platform, instead of other platforms. It is highly secured and customized as per the special requirements of NAU.

i. Procurement & Deployment of N-procure E-token Services

IT department has procured N-procure E-token for E-tendering processes of NAU. This New E-token has been procured and used for the E-tendering process of the various units.

j. Procurement & Deployment of SOPHOS license for 1 year at NAU

Department of Information Technology is providing services of Internet and IPsec VPN across the university. For managing Network, Internet, Network security firewall is required. NAU is using SOPHOS XG 310 firewall. IT department has procured the one Year license subscription for the SOPHOS XG 310 firewall.

k. Development & Deployment of E-shop portal for online plant selling

IT Department has deployed the new online plant selling Platform called NAU E-shop Portal on the vision of Hon'ble Vice Chancellor, Dr. Z.P. Patel. It is successfully deployed and all the remote centers and NAU campus centers who are selling plants/seedlings/saplings are actively using it. All the requests are made through this platform only and successfully many farmers have adopted it.

l. Deployment of Seqrite End Point for IT Department

IT Department NAU has procured and Deployed Seqrite End Point Protection for the Servers and the different computers of IT Department for the Security Purpose.

m. Video-conferencing facilities

IT Cell NAU has developed its own e-Learning portal to conduct Video-conferencing. Video-conference of this portal is store in the NAU Local server which highly secured and confidential.

IT department has procured ZOOM License and CISCO Webx license for the during this time period based on the requirements and instructions given by the University Authorities.

n. NAU SSO Customization

IT department has also customized the SSO (Single Sign On) Services for the different IT Services of NAU. It has made customization as per the feedback received from various stake holders of the NAU. This customization has made SSO more effective and Stable

o. NAU Live Streaming Activities

Presently, IT Department is managing Live stream Activities for the various functions of the NAU through YouTube channel "NAVSARI AGRICULTURAL UNIVERSITY" presently it is having 4.6K subscribers. IT department has Live streamed 16th Annual Convocation of NAU, Various online symposium, Webinars, International Yoga Day Celebration as per the request received from the university.

Additional Activities and Services Provided during period 2020-21

- IT cell NAU is maintaining Online Job Application Software. It provides online Job Application Service to applicants.
- IT cell NAU is providing Jobs and Admission Hall Ticket Generation Service to University based on the Requirement.
- IT Cell NAU is proving OMR Scanning software to university based on their request for Recruitment and OMR Scanning based Examinations conducted in the University.
- IT cell NAU is maintain and managing Old nau.in website and new nau.in University website. The nau.in website is managed by decentralization approach each unit is able update their section on the website through their own only.
- IT cell NAU is also operating SMS Portal for University enabling SMS to students and staff for Important Announcement. This SMS is sent as per the request received from different units.
- IT Cell NAU is managing and maintaining online KIOSK Server developed for the Farmer Community.

- IT cell NAU is hosting various Online Services like Paddy Expert System, Sugarcane Expert System and various online services as per the needs of the University at IT Server Room.
- IT Cell NAU is managing nau.in based e-mail services for the University Employees and Planning to start nau.in based E-mail service accounts for the students of NAU.
- IT Cell NAU is providing various Live Streaming, Webcasting Services through for the NAU as per the needs of the University. It is also providing various events live through YouTube.
- IT Cell NAU is managing online complaint management software for Logging complaint for Internet and Networking Issues across the University. It is been managed by the IT Cell NAU.
- IT Cell NAU is hosting and provide service support for the NAHEP CAAST website for the university.
- IT Cell NAU also provides User Manual for each NAU applications/portals which helps user to easily understand the working applications/portals.
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- Download Centre of SSO provides helpful information to the SSO user. User can download user manual, NAU LOGO, SSO APP for android and many more.
- IT Cell NAU has created a NAU YouTube channel which helps farmers to get valuable Agriculture information. Video on important topic of agriculture is created by NAU Scientist, that video is uploaded to YouTube channel by IT Cell and help farmers to receive that valuable information at any time anywhere.
- IT Cell is also providing support to the various online Software in development for the University like Online Financial Accounting System, Online Cashbook Management software, Online Fees and University Income Management software, Online Payment Management Systems, Online Auditing Management system for Comptroller Office, Online HRMS for Registrar Office.

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