# ANNUAL REPORT 2017-18





NAVSARI AGRICULTURAL UNIVERSITY, NAVSARI - 396450 (GUJRAT)

#### ANNUAL REPORT 2017-18

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#### Published and Printed by Directorate of Research

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#### Acknowledgement

Sincere thanks to the following University authorities, scientists and representatives of their offices for providing necessary inputs for the preparation of the report

- Hon'ble Vice Chancellor
- Director of Extension Education
- Registrar
- Principal, N. M. College of Agriculture
- Principal, ASPEE College of Horticulture
- Principal, Vanbandhu College of Veterinary Sci. & A. H.
- Principal, ASPEE Agri-business Management Institute
- Principal, College of Forestry
- Principal, College of Agriculture, Bharuch
- Principal, College of Agriculture, Waghai
- Principal, ASPEE Shakilam Agricultural Biotechnology Institute, Surat
- Principal, College of Agriculture Engineering, Dediyapada
- Director of Student's welfare
- Comptroller Office
- Planning Officer
- Executive Engineer
- Director of Information Technology
- Librarian
- Unit Heads
- Research Scientists

## **12<sup>th</sup> ANNUAL REPORT 2017-18**

## NAVSARI AGRICULTURAL UNIVERSITY

## (01-04-2017 to 31-03-2018)



NAVSARI AGRICULTURAL UNIVERSITY

## NAVSARI AGRICULTURAL UNIVERSITY ERU CHAR RASTA, NAVSARI – 396450 (GUJRAT)

(Published In Pursuance of Section 49 of the Gujarat Agricultural University Act, 2004)



### 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 centres at 15 locations to carry out need based research and 5 Krishi Vigyan Kendras to undertake dissemination of newer technologies to end users of seven districts of south Gujarat.

I am pleased to submit before you the Twelfth Annual Report for the year 2017-18 of Navsari Agricultural University. The University has admitted a total of 469 UG students were admitted in seven UG degree programmes. Besides, the University admitted 218 students in 42 masters and 61 students in 24 doctoral degree programmes. University also admitted 222 students in four diploma courses offered by seven Polytechnics. During the period under report, 113 PG students qualified NET organized by ASRB, New Delhi, 63 UG students qualified ICAR-JRF and 4 PG students qualifies ICAR-SRF examinations conducted by ICAR, New Delhi. Fruit Research Station, NAU, Gandevi received prestigious "Chaudhary Devi Lal Outstanding All India Coordinated Research Project Awards 2016" and KVK, Tapi was awarded by "Pandit Deen Dayal *Upadhyay Krishi Vigyan Protshahan Puraskar* 2017 Zonal (Zone-VIII)".

NAU pays special attention to research component and as a result scientists developed 11 new varieties of various crops including 2 each of rice, sorghum and adenium, 1 each of mung bean, pigeon pea, finger millet, tomato and Malabar neem. The University also developed 63 technologies including 26 in the field of Natural Resource Management, 16 in Horticulture, 3 in Forestry, 6 in Plant Protection, 6 in Agricultural Engineering, 5 in Animal Production & Fisheries and 1 in Basic Science for farmers and scientific community. Under Mega Seed Project, NAU has produced 4499.58 q of breeder, foundation, truthful and certified seeds, 4.99 lakh saplings of various fruits and vegetables and 36858 tissue culture plantlets of sugarcane and banana. Further, faculty members of the University published 482 research papers in international and national journals, 5 books and 23 chapters for compilation of books during the year under report. The University organized 2 ICAR sponsored winter school, 3 National seminar, 3 workshop and 2 state level seminar and also deputed 253 faculty members for attending seminar/symposium/conference, 119 faculty members for attending summer and winter schools and 108 faculty members for attending workshop/short term trainings under HRD programme.

Various extension activities like 1981 FLDs benefiting 9402 farmers, 81 farmer's day/field day, 71 farmer's *Shibir*, 34 educational tour/field visit, 69 farmer's meeting/*Krishi goshthi*, 73 seminars/workshop for famers, 26 on farm trials and 26 veterinary clinical camps for benefitting more than 22497 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 for providing continuous support. Lastly, I congratulate Director of Research and Dean PGS and entire team for bringing Twelfth Annual Report in time. I also thank all Deans, Directors, University Officers and scientists for providing valuable information.

(C. J. Dangaria)



NAVSARI AGRICULTURAL UNIVERSITY

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NAVSARI AGRICULTURAL UNIVERSITY

## **1. Executive Summary**

The Agricultural Education Division, ICAR, New Delhi had declared Ranking of Agricultural Universities 2016 on the occasion of  $89^{th}$  ICAR Foundation Day *i.e.*  $16^{th}$  July, 2017. Among all SAUs, CAUs and DUs, Navsari Agricultural University, Navsari bagged the  $22^{nd}$  position at the national level.

#### **Educational Achievements**

- **Convocation:** Thirteenth Annual Convocation was organized on 19<sup>th</sup> January, 2018. Shri O.P. Kohliji Governorshri of Gujarat and Chancellor of the University presided over the function and Prof. N.S. Rathore, Deputy Director General (Agril. Education), ICAR, New Delhi acted as Chief Guest and Honourable Minister of Agriculture, Rural Development, Fisheries, Animal Husbandry and Transport, Government of Gujarat, Shri R.C. Faldu graced the occasion as Guest of Honour.
- **Degree Awarded:** During the Thirteenth Convocation, NAU awarded various degrees to 746 students including Bachelor's degree to 433 students, Masters' degree to 236 students and Doctorate degree to 77 students.
- Medals Awarded: During the Thirteenth Convocation, a total of 34 medals including 13 medals for PG studies and 21 medals for UG studies were awarded to 13 boys and 11 girls meritorious student, further, Best Teacher Award was also conferred to one outstanding faculty of NAU.
- Admission: During the year 2017-18, total of 748 students were admitted to various degree programmes offered by NAU. Four hundred sixty nine students admitted to UG degree programme, whereas, 218 and 61 students were admitted to masters' and doctorate degree programme, respectively. Thus, overall admission to various degree programme was increased from 391 (2010-11) to 748 (2017-18) students and rise in admission was recorded near about two folds.
- A total of 222 students were also admitted to seven Polytechnics (a three year programme) during the year 2017-18.
- **Student's Success:** The students of NAU qualified national level competitive examinations like NET (113), ICAR, JRF (63) and ICAR, SRF (4) during the period under report.
- **Placement cell**: This cell of University played a vital role in placement of 216 UG and PG and polytechnic students of various faculties in Government and Non Government sectors and Banks.
- Library: During last five year, 3447 new books purchased and total books in the library were 68380. Further, 4356 periodicals, 2678 theses, 5777 reports, 180 Indian and foreign journals and 7 online databases were available in the University library.

#### Awards

Awards: Fruit Research Station, NAU, Gandevi received prestigious Chaudhary Devi Lal Outstanding All India Coordinated Research Project Awards 2016 under ICAR-AICRP (Fruits) programme as "Best Centre" on occasion of 89<sup>th</sup> ICAR foundation day and Award Ceremony at New Delhi held on 16<sup>th</sup> July, 2017. Further, KVK, NAU, Tapi was awarded by "Pandit Deen Dayal *Upadhyay Krishi Vigyan Protshahan Puraskar* 2017 Zonal (Zone-VIII)" on March 17, 2018 at IARI Campus, New Delhi. All 5 KVKs of NAU, Navsari were awarded with a cash prize of Rs. 50,000/- during the Annual Zonal Workshop of KVKs for for initiating cashless transactions facilities. Five faculty members recognized by various societies for their contribution in agricultural field. Besides, 13 faculty members of University also received Young Scientist Awards for scientific contributions by various scientific societies/ organization.

#### HRD

- Seminar/ Symposium Organized: During the period under report, NAU organized 2 ICAR sponsored winter schools on 'Pest Risk Analysis A tool in selection of quality planting material and pest forecast' and 'Approaches for Doubling Farmers Income'. Morever, University also organized National seminar on 'Sustainable Food Value Chain in Arena of Climate Change', 'Awareness and Promotion of Dry Flower Exports and Industry in Gujarat' and 'Technologies and Sustainability of Protected Cultivation of Hi-Valued Vegetable Crops'. Besides this, NAU also organized 3 workshops and 2 state level seminars.
- **Participation of Faculty:** NAU sponsored faculty members of University for attending seminar/ symposium/ conference (253), summer and winter schools (119) and workshop/short term trainings (108) during year 2017-18.

#### **Research Achievements**

- New Varieties: NAU has developed 11 new varieties of 8 crops including 2 each from rice (GR-15 and GRH-2), sorghum (GFS-6 and Phule Revati) and adenium (Gad-1 and Gad-2), 1 each from mung bean (GM-7), pigeon pea (GT-104), finger millet (GN-8), tomato (GT-7) and Malabar neem (GNMD-1).
- **Technologies Developed:** The University also recommended 63 technologies for farmers. Technologies were developed in the field of NRM (26), Horticulture (16), Forestry (3), Plant Protection (6), Agricultural Engineering (6), Basic Science (1) and Animal Production & Fisheries (5).
- During the period under report, 131 new technical programmes were approved by Research Sub-Committees for implementation at NAU, Navsari for the year 2018-19.
- Seed Production: Under Mega Seed project, NAU produced 4499.58 quintals of Breeder, Foundation and Certified/Truthful seeds of mandate crops. Simultaneously, planting materials of sugarcane (1433.96 q), fruits/vegetables (4.99 lakh), Tissue culture plantlets of sugarcane (26000) and Banana (10858) were also produced and distributed to needy farmers of south Gujarat during the period under report.
- **Research Schemes:** A total of 279 research schemes including Plan (137), Non plan (67), ICAR (24), NHM/RKVY/Other state govt. (24), GoI (14) and other agencies (13) were operating in the University in the year 2017-18.
- **Publications:** During the period under report, faculties of NAU published 482 research papers in International and National Journals, 5 books and contributed 23 chapters for compilation of books.

#### **Extension Activities**

- **Organization of** *Krishi Mahotsav*-2017: A Mega Agriculture Fair and Exhibition for Dang, Navsari and Valsad districts was organized by DEE and Dang District Administration at Police Parade ground, Ahwa, Dang on May 26, 2017 and inaugurated by Hon. Chief Minister Shri. Vijaybhai Rupani in the presence of Shri. Ganpatbhai Vasava, Minister, Tourism, Forest & Tribal Development GoG and Shri Chimanbhai Sapariya, Hon. Minister, Agriculture, Farmers Welfare and Co-operation, GoG.
- Krishi Mahotsav-2017 was celebrated from May 6, 2017 to May 27, 2017 by organizing one day seminar and exhibition at Vyara, Ahwa and Ankleshwar in South Gujarat. A team of 4-6 scientists were

present in each of these programmes to provide technical guidance. Navsari Agricultural University showcased latest technologies, varieties and practices through 30 stalls for benefitting farmers.

- **Trainings:** To disseminate latest technologies for adoption by farmers, 283 on campus and 143 off campus trainings were organized for the benefit of 18358 farmers.
- **FLDs and Other Activities:** During the year, University organized more than 1981 Front Line Demonstrations (FLDs) and 9402 farmers were benefited. Similarly, Farmers' day/Field day (81), Farmers/Farm women Shibir (71), Educational tour/Field visits (34), Farmer's meeting/Krishi Gosthi (69), Seminar & Workshop for farmers (73), on farm trials (26), Veterinary clinical camps (26) were also organized by NAU for benefitting more than 22497 farmers and farm women.
- Mass Communication: Extension services were also provided using electronic media for mass communication like telephonic contacts (2374), farm literature publication (190), agriculture literature and press notes (186) and TV and radio talks (50).
- 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. 18,567.07 lakh from various sources viz. Plan (Rs. 9,121.40 lakh), Non-plan (Rs. 6,730.56 lakh), ICAR (Rs. 1,552.29 lakh) and Other Agencies (Rs. 1,162.82 lakh). Additionally, University generated receipt of Rs. 2,098.65 lakh 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. 4,624.08 lakh), education (Rs. 8,352.71 lakh), and extension (Rs. 3,896.47 lakh) activities of the University.

#### Constructions

• Works completed: During the period under report, construction of various buildings like boys hostel and College of Agriculture at Waghai; Boys Hostel for fisheries faculty, Boys Hostel for Veterinary faculty, Girls Hostel for Veterinary faculty and Goat shed for ELU at Navsari; Boys Hostel for Polytechnic in Horticulture, Girls Hostel for Polytechnic in Horticulture and Quarters at Paria; Godown for MCRS at Surat etc. 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) Dands (6) Tapi and (7) Narmada.

#### **Geographical Location**

The head quarter of 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 per cent 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 SardarSarovar 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 1<sup>st</sup> May, 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 Dediyapada (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 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 Dediyapada.

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.

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.		

#### Chronology of Development of Navsari Agricultural University, Navsari

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	SaradarSmruti Kendra, Navsari
1980	Wheat Research Station, Bardoli
1980	Bakery School, Navsari
1982	Agricultural Diploma School, Vyara
1984	Agricultural Diploma School, Waghai
1985	KrishiVigyan 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	KrishiVigyan 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	KrishiVigyan Kendra, Dediyapada
2008	College of Veterinary Sciences and A.H., Navsari
2008	KrishiVigayn Kendra, Navsari
2008	Agricultural Research Station, Mangrol
2009	Agricultural Research Station, Dediyapada
2009	Polytechnic in Agricultural Engineering, Dediyapada
2010	Polytechnic in Horticulture, Navsari,
2010	Polytechnic in Agriculture, Bharuch & Vyara
2010	Polytechnic of Agricultural Marketing, Co-operative & Banking, Waghai
2011	KrishiVigayn Kendra, Surat
2012	College of Agriculture, Bharuch
2012	College of Agriculture, Waghai
2012	Gujarat Agricultural Biotechnology Institute, Surat
2012	Polytechnic in Animal Husbandry, Nasvari
2012	Polytechnic in Horticulture, Paria
2012	Educatorium (Agricultural Museum), Navsari
2013	College of Agricultural Engineering & Technology, Dediyapada
2013	Polytechnic of Agricultural Marketing, Co-operative & Banking, Waghai (converted to
	Polytechnic in Agriculture)
2014	College of Fisheries Science, Navsari
	1

#### 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 mordern 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, ecofriendly 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 Total Factor Productivity 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 Chacellor. Vice-Chancellor is the principal executive and academic officer of the University and ex-officio member and Chairman of the BoM, Academic, Researchand 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 subcenters.

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.

#### **Important Meetings and decisions**

#### **Board of Management**

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

<b>38</b> <sup>th</sup>	38 <sup>th</sup> Meeting of Board of Management - Date : 02.06.2017			
1.	નવસારી કૃષિ યુનિવર્સિટી, નવસારીના સને ૨૦૧૭-૨૦૧૮ના વર્ષનો ડેવલોપમેન્ટ યોજનાનું અંદાજ રૂ. ૮૫૫૧.૭૦ લાખ અને સ્થાયી ખર્ચનો અંદાજ રૂ. ૫૨૯૮.૨૩ લાખ બન્ને મળી કુલ અંદાજ રૂ૧૩૮૪૯.૯૩ લાખ નાંણા વિભાગ દ્વારા મંજુર કરેલ છે. જેને સ્વીકારવામાં આવે છે અને મંજુર થયેલ અંદાજની મર્યાદામાં નાંણાકીય વર્ષ ૨૦૧૭-૧૮માં ખર્ચ કરવા અનુમતી આપવામાં આવે છે.			
2.	આથી આંતરરાષ્ટ્રીય વિદ્યાર્થી છાત્રાલયના સર્વ સામાન્ય નિયમો અને વિનિયમો (Common Rules and Regulations for International Students' Hostel (ISH)) ને શૈક્ષણિક વર્ષ ૨૦૧૭-૧૮થી નવસારી કૃષિ યુનિવર્સિટીમાં અમલીકરણની મંજૂરી આપવામાં આવે છે.			

3.	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારીની સને ૨૦૧૭-૧૮ના વર્ષની વિકાસ ખર્ચની ચાલુ યોજનાઓ			
	અને વિભાગ-૧ હેઠળની નવી યોજનાઓ એમ મળીને કુલ રૂ૮૫૫૧.૭૦ લાખની અને સ્થાયી ખર્ચ રૂ. ૫૨૯૮.૨૩ લાખની એમ			
	મળીને કુલ રૂ૧૩૮૪૯.૯૩ લાખની અંદાજપત્રીય જોગવાઇ મંજુર થતાં અમલ કરવા તથા પુન:વિનિયોગ કરવાની સત્તા માન.			
	કુલપતીશ્રીને એનાયત કરવામાં આવે છે.			
4.	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારીનો ચાલુ નાણાંકીય વર્ષ : ૨૦૧૭-૧૮ના વાર્ષિક વિકાસ કાર્યક્રમ			
	અંતર્ગત વિકાસ ખર્ચ (Development charges) હેઠળ કૃષિ સંશોધન, શિક્ષણ અને વિસ્તરણ શિક્ષણની ચાલુ તેમજ નવી બાબતો			
	માટેની કુલ અંદાજપત્રીય જોગવાઈ રૂ૮૫૫૧.૭૦લાખની મર્યાદામાં ''વાર્ષિક વિકાસ કાર્યક્રમ ૨૦૧૭-૧૮'' ને મંજુરી આપવામાં			
	આવે છે.			
5.	It is hereby resolved and approved the modification of title and objectives of existing plan project "Establishment of elite herd of Surti buffaloes and Nucleus herds of HFK cows at Navsari" B.H. 12303-04 as follows. Title : Establishment of elite herd of Surti buffaloes and demonstration unit for Gir cows at Navsari			
	Objective :-			
	(1) To establishment an elite herd of Surti Buffaloes			
	(2) To improve and Conserve the superior germplasm of Surti buffaloes.			
	(3) To undertake ancillary studies on management, nutrition and health cover of Surti buffaloes.			
	(4) To establish a demonstration unit of Gir cows			
	(5) To standardize housing, feeding and health cover requirements for Gir cows.			
6.	It is resolved to implementing AICRP on Goat Improvement (Seed project) with staff pattern suggested by project coordinator.			
7.	It is resolved and approved the modification of the title and objectives of the ongoing scheme entitled "Surti buffalo calf rearing project (B.H. 12303-09)" at Regional Rice Research Station, NAU, Vyaraas given below.			
	1. The title of the project should be as "Conservation of Surti Buffaloes and rearing of calves"			
	2. The new modified objectives are as follows :			
	i. To conserve the native germplasm of Surti buffaloes			
	ii To serve as a demonstration unit for tribal dairy farmers.			
	iii To establish the demonstration unit for call rearing.			
8.	આથી ઠરાવવામાં આવે છે કે ફીશરીઝ કોલેજના સુચારુ શિક્ષાણ કાર્ય અને સંચાલન માટે હાલનાં તબકકે વર્ષ ૨૦૧૭-૧૮ દરમ્યાન			
	'સ્ટ્રેન્ધનીંગ ઓફ કોલેજ ઓફ ફીશરીઝ સાયન્સ ફેઝ-૨'માં દરખાસ્ત મુજબના ૦૭ ટીચીંગ અને ૦૯ નોન ટીચીંગ સ્ટાફ મળી કુલ ૧૬			
	ના મહેકમની મંજુરી માટે સરકારશ્રી ને ભલામણ કરે છે.			
9.	Resolved to start the self- finance certificate course on First Aid in Avian Health Management from August 2017.			
10.	Members of Board of Management approved the adjunct/visiting faculties viz (1) Dr. A. K. Varshney			

11.	Resolved to implement the Fifth Dean's Committee recommendations in various faculties (viz. Agriculture, Horticulture, Forestry, Agril. Engineering, Fisheries) of Navsari Agricultural University from the academic year of 2017-18.
12.	આથી ઠરાવવામાં આવે છે કે સને ૨૦૧૭-૧૮ના વર્ષથી સ્નાતક કક્ષાએ નવસારી કૃષિ યુનિવર્સિટીના વિવિધ સ્નાતક અભ્યાસક્રમોની
	કુલ બેઠકોની ૧૦ (દસ) ટકા બેઠકો ડીપ્લોમાંથી ડીગ્રી (D to D ) પ્રવેશ માટે રાખવાની રહેશે.
13.	આથી ઠરાવવામાં આવે છે કે સને ૨૦૧૭-૧૮ના વર્ષના થી સ્નાતક અને અનુસ્નાતક કક્ષાના પ્રવેશ માટે NRI/Payment બેઠકો
	જનરલ બેઠકોમાં મર્જ કરી તે મુજબ પ્રવેશ આપવાની મંજુરી આપવામાં આવે છે.
14.	The Board of Management resolved to engage the guest lecturers for teaching of B. Sc. (Agril. Biotechnology) / B. Tech (Biotechnology) courses related to Animal Science, Mathematics and English at Aspee Shakilam Agri Biotechnology Institute, NAU, Surat
15.	The Board of Management resolved and approved the 5th Deans Committee recommendations in to for B. Tech. Biotechnology course curriculum with minor modifications, in place of B. Sc. (Agril. Biotechnology) at ASPEE Shakilam Agricultural Biotechnology Institute, NAU, Surat as per ICAR guidelines from 2017-18, and to rename ASPEE Shakilam Agril. Biotechnology Institute to ASPEE Shakilam Biotechnology Institute, NAU, Surat.
16.	It is approved and recommended to implement student Ready programme and to Increase of internship allowance to the students of College of Vanbandhu Veterinary Science & Animal Husbandry from 3000/- (Pre-Revised) to 4200/- (Revised)as per the Government Resolution, effective from 30.3.2017"
17.	Members of Board of Management of NAU resolved and approved modification in eligible criteria for securing admission to ST category students in Veterinary College, Navsari may be kept as 47.5 % to keep uniformity amongst all State Agricultural University Veterinary Colleges from Academic year 2017 - 18.
18.	આથી ઠરાવવામાં આવે છે કે કન્ટ્રકશન ઓફ પી.જી. ગર્લ્સ હોસ્ટેલ એટ એન.એ.યુ. નવસારી માટે રૂ. ૬૬૨.૦૦ લાખની કિંમતના કુલ
	રૂ. ૨૫૦૦.૦૦ ચો.મીટરના બાંધકામના બનાવેલ પ્લીંથ એરિયાના અંદાજપત્રકો સંચાલક મંડળ ઘ્વારા સ્ટેચ્યુટ - એસ. ૧૨૧
	આઈટમ નં. ૮૮ (૧) (૧) થી મળેલ સત્તા મુજબ સંચાલક મંડળ રૂ. ૬૬૨.૦૦ લાખની વહીવટી મંજુરી આપવાનું સર્વાનુમતે ઠરાવે છે.
19.	આથી ઠરાવવામાં આવે છે કે કન્ટ્રક્શન ઓફ પેસ્ટીસાઇડ રેસીડ્યુ લેબોરેટરી ફોર એફ. ક્યુ. ટી. એલ. માટે રૂ. ૨૦૦.૦૦ લાખની
	કિંમતના કુલ રૂ. ૭૪૪.૦૦ ચો.મીટરના બાંધકામના બનાવેલ પ્લીંથ એરિયાના અંદાજપત્રકો સંચાલક મંડળને સ્ટેચ્યુટ- એસ. ૧૨૧
	આઈટમનં. ૮૮(૧) (૧) થી મળેલ સત્તા મુજબ સંચાલક મંડળ રૂ. ૨૦૦.૦૦ લાખની વહીવટી મંજુરી આપવાનું સર્વાનુમતે ઠરાવે
	છે.
20.	નવસારી કૃષિ યુનિવર્સિટી, ડેડીયાપાડા મુકામે કન્ટ્રકશન ઓફ બોયઝ હોસ્ટેલના કામની રૂ. ૫૫૬.૦૦ લાખની કિમતના કુલ રૂ.
	૨૧૦૦.૦૦ ચોરસ મીટરના બાંધકામના બનાવેલ પ્લીથ એરિયાના અંદાજપત્રકો સંચાલક મંડળને સ્ટેચ્યુટ- એસ. ૧૨૧ આઈટમ નં.
	૮૮ (૧)(૧)થી મળેલ સત્તા મુજબ સંચાલક મંડળ રૂ. ૫૫૬.૦૦ લાખની વહીવટી મંજુરી આપવાનું સર્વાનુમતે ઠરાવે છે.
<b>39</b> <sup>th</sup>	Meeting of Board of Management - Date : 12.01.2018
1	The Board of Management have approved the results of Under graduate and Post Graduate (Masters and Doctoral) students of NAU, Navsari.

				A	NNUAL REPORT 2017-18
2	The Board of Management have approved the list of total <b>719</b> ( <b>716</b> NAU + <b>03</b> GAU) students to award the degree certificate.				
3 Resolved to award The <b>Chancellor's Gold Medal</b> to the following candidates for th 2016-17.			tes for the Academic year		
	Sr. No	Name of the student with	l	<b>Registration Number</b>	Degree
	1.	Shravankumar		1010113024	Ph.D. (Agri.)
	2.	Oak PriyankaShrikant		2010114054	M.Sc. (Agri.)
4	Resolved to award The Vice-chancellor's Gold Medal to the following candidates for the Aca year 2016-17			didates for the Academic	
	Sr. No.	Name of the student		<b>Registration Number</b>	Faculty
	1	AGINA GOPAN		3010113002	Agriculture
	2	SHAH SMIT BHARTIBE	N	3020213044	Horticulture
	3	VARUN SAINI		3030313040	Forestry
	4	PATEL KISHAN PRAVE	EN	N5-0191-2012	B. V. Sc. & A.H.
	5	ARSHIN M. KHAN		3060813001	Agril. Biotechnology
	6	PATEL DEEPKUMAR RA	AVINBHAI	3050913023	Agri. Engineering
6	MBA., and Ph.D, PHT & PE in the faculty of Agriculture, Horticulture, Forestry and ABM as per the Appendix-A for the for the year 2016-17. Resolve to award Donors <b>"Gold Plated Bronze Medals"</b> to the Post Graduate student faculty of				
7 8	Agriculture, Horticulture, Forestry per the for the for the year 2016-17. Resolve to award Donors "Gold Plated Silver Medals" to the Under Graduate Student of the B.Sc. (Agriculture), B.Sc. (Horticulture), B.Sc. (Forestry) and B.V.Sc. A.H. (Veterinary) for the year 2016-17 as per the for the 2016-17. Resolve to award Donors "Gold Plated Bronze Medals" to the under Graduate Student of the B.Sc.				
9	(Agriculture) B.Sc. (Horticulture) and B.Sc. (Forestry) for the year 2016-17. Resolve to award Donors <b>"Dr. Jayantilal V. Majmudar Gold Medal"</b> to the under Graduate Student (AGINA GOPAN, Registration No. 3010113002) of the B.Sc. (Agriculture) for the year 2016-17				
10	Resolve Univers	Resolved that the name of the following teachers from various faculties of Navsari Agriculture University have approved for "the Best Teacher Award" for the year 2016-17.			
	Sr. No.	Name of Faculty	Name of tea	cher recommended for av	vard
	1	Agriculture	Dr. D.D.Pate College of Bharuch	el , Associate Professor D Agriculture N.avsari	epartment of Agronomy, Agriculture University,
11	આથી ખેત	ી અને ખેડૂતના ઉત્કર્ષ માટે મંજૂર થ <sup>ર</sup>	યેલ ''ફાર્મર ફર્સ્ટ પ્ર	ોગ્રામ" હેઠળ ફાળવવામાં આવેલ	ગ્રાન્ટ અને હાથ ધરવામાં આવતી
	પ્રવૃત્તિઓના સંચાલક મંડળ દ્વારા નોંધ લઈને તેના અમલીકરણ માટે મંજૂરી આપવાનું સર્વાનુમતે ઠરાવવામાં આવે છે.				
12	આથી નવસારી કૃષિ યુનિવર્સિટી અને અન્ય સંસ્થાઓ વચ્ચે થયેલ ચાર દ્વિપક્ષીય સમજૂતી કરારનામા (MoU)ની કાર્યવાહીને			રનામા (MoU)ની કાર્યવાહીને	
	સંચાલક મંડળદ્વારા મંજૂરી આપવાનું સર્વાનુમતે ઠરાવવામા આવે છે.				

13	''આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક ચાલતી કૃષિ વિસ્તરણ શિક્ષણ, કૃષિ શિક્ષણ અને કૃષિ		
	સંશોધનની વિકાસ ખર્ચ (પ્લાન) હેઠળની યોજનાઓ અનુક્રમે સ્ટેટમેન્ટ- ૫.૨.૧, ૫.૨.૨ (૧) અને (૨) અને ૫.૨.૩ મુજબ મર્જ		
	કરીને વર્ષ- ૨૦૧૮-૧૯થી સુધારા વધારા સાથે ચાલુ રાખવા મંજુરી આપવામાં આવે છે.		
14	''આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક વર્ષ-૨૦૧૮-૧૯ના અંદાજપત્રમાં ડેવલો૫મેન્ટ ચાર્જીસ		
	હેઠળ વિભાગ-૧ અંતર્ગત કુલ અંદાજીત રૂ. ૯૯૧.૬૦ લાખની નાશાંકીય જોગવાઇ સાથેના સૂચિત નવા કાર્યક્રમો સામેલ સ્ટેટમેન્ટ-		
	૫.૪.૧ મુજબ મંજુર કરવા આથી ભલામણ કરવામાં આવે છે."		
15	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી હસ્તક વિકાસ ખર્ચ યોજના અંતર્ગત આગામી વર્ષ ૨૦૧૮-૧૯ના		
	સૂચિત અંદાજપત્રમાં નવા બાંધકામો અંદાજીત રૂ. ૭૪૪.૦૦ લાખ સામેલ સ્ટેટમેન્ટ ૫.૫.૧ અને નોનરીકરીંગ સાધનો અંદાજીત		
	રૂ. પ૩૨.૫૦લાખ સામેલ સ્ટેટમેન્ટ ૫.૫.૨ એમકુલ મળીને અંદાજીત નાણાકીય જોગવાઇ રૂ. ૧૨૭૬.૫૦લાખ મંજુર કરવા આથી		
	ભલામણ કરવામાં આવે છે.		
16	It is hereby resolved that research projects sponsored by private sectors as well as public sector (other agencies) at N.A.U, Navsari during the year 2016-17 are accorded post facto approval for their implementation at NAU Navsari.		
17	It is resolved that post-facto approval is accorded for MoUs signed by NAU and approve the draft of MoUs yet to be signed by NAU, Navsari with various private companies.		
18	It is hereby resolved that Post-facto approval for the project for testing of rice hybrids, developed by different private companies, during the year 2016-17.		
19	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારી મુકામે અસ્પી બાગાયત-વ-વનીય મહાવિદ્યાલય ખાતે		
	આર.કે.વી.વાય યોજના હેઠળ પોસ્ટ હવિસ્ટડીસીઝ લેબોરેટરી બિલ્ડીંગના બાંધકામની સ્ટેચ્યુટ એ-૧૨૧ આઈટમનં. ૮૮ (૧) (૧)		
	થી મળેલ સત્તા મુજબ સંચાલક મંડળ રૂા. ૧૫૦.૦૦ લાખની વહીવટી મંજુરી આપવાનું સર્વાનુંમતે ઠરાવે છે .		
20	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારીના સને ૨૦૧૬-૧૭ (તા. ૧-૦૪-૨૦૧૬ થી તા.		
	૩૧.૦૩.૨૦૧૭)ના વાર્ષિક હિસાબને આગળની કાર્યવાહી માટે મંજુરી આપવામાં આવે છે.		
21	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારીનું સને ૨૦૧૮-૧૯ના વર્ષનું સ્થાયી ખર્ચ (Standing		
	Charges) યોજનાઓનો કુલ અંદાજ રૂ. ૮૭૦૩.૪૬ (લાખ) પૈકી યુનિવર્સિટીની સુચિત આવક રૂ. ૪૨૩.૫૭ (લાખ) બાદ કરી નેટ		
	અંદાજ રૂ ૮૨૭૯.૮૯ (લાખ) તેમજ વિકાસ ખર્ચ (Development Charges) યોજનાઓનો કુલ અંદાજ રૂ. ૧૧૬૮૩.૪૭		
	(લાખ) સરકારશ્રીમાં રજુ કરવા ભલામણ કરવામાં આવે છે.		
22	આથી ઠરાવવામાં આવે છે કે, નવસારી કૃષિ યુનિવર્સિટી, નવસારીના નાણાં સમિતિના નોન ઓફિસીયલ સભ્ય તરીકે ડૉ. આર. બી.		
	પટેલની તા. ૨૨.૧૦.૨૦૧૮ સુધી નિમણુંક આપેલ છે તેને બહાલી આપવામાં આવે છે.		
23	- આથી ઠરાવવામાં આવે છે કે, ગુજરાત કૃષિ યુનિવર્સિટીઓ અધિનિયમ - ૨૦૦૪ની કલમ ૪૮ (૫) અનુસાર નવસારી કૃષિ		
	યુનિવર્સિટી, નવસારીના સને ૨૦૧૩-૧૪ ના વર્ષનો ઓડિટ અહેવાલ અને તેના પર લીધેલ પગલાંની નોંધ ગુજરાત સરકારશ્રીને		
	ગુજરાત વિધાનસભા સમક્ષ રજુ કરવા ભલામણ કરવામાં આવે છે.		
24	સંચાલક મંડળ દ્વારા ગુજરાત એગ્રીકલ્ચરલ યુનિવર્સિટી એકટ-૨૦૦૪ની કલમ-૧૧ (૯) અન્વયે બોર્ડ ઓફ મેનેજમેન્ટની ૩૬મી		
	બેઠકના ઠરાવ નં. ૩૬.૨૧ની પુન:વિચારણા કરવા બાબતે નીચે મુજબની કમીટીની રચના કરી અરજદારશ્રીઓની દરખાસ્તની		
	ચકાસણી તે અંગેનો રીપોર્ટ તૈયારી કરી કમીટીની ભલામણ સહ સંચાલક મંડળમાં ફરીથી ૨જુ કરવાનું ઠરાવ્યુ.		

- (૧) માન. કુલપતિશ્રી (ચેરમેનશ્રી)
- (૨) કુલસચિવશ્રી (સભ્ય)
- (૩) કૃષિ વૈજ્ઞાનિક (સંચાલક મંડળના સભ્યશ્રી) ડો. આર.બી. પટેલ (સભ્ય)
- (૪) ડીનશ્રી (કૃષિવિદ્યાશાખા) (સભ્ય)

	મંજુરી આપવામાં આવે છે.
	ગુજરાત રાજય વિકાસ પથ યોજના માટે ૦.૦૪ હે. તબદીલ થનાર હોઈ, આમ કુલ ૦.૨૪ હે. જમીન જાહેર હેતુ માટે તબદલી કરવા
	પ્રધાનમંત્રી ગ્રામ સડક યોજનામાં રોડ માર્જીનમાં ૦.૨૦ હે. (૩૬મી સં.મં. બેઠક જાહેરનામુ ૫૬૭/૨૦૧૬) તબદીલ થતા અને હાલ
25	નવસારી કૃષિ યુનિવર્સિટી નવસારીના તાબા હેઠળના ઘઉ સંશોધન કેન્દ્ર બારડોલી કેન્દ્ર હસ્તકની કુલ ૮.૮૯ હે. જમીનમાંથી અગાઉ

26 The Board of Management resolves that Navsari Agricultural University is permitted to take over the land and building of CSB of Dambher for the purpose of Education and Research activities of College of Forestry on long term lease for a period 30 years as per the prevailing rules and regulation of Government of Gujarat as well as signing of MoU between NAU, Navsari and CSB, Ministry of Textile, GOI, Bengaluru.

#### Academic Council

During the year under report four meetings of academic council were held and important decisions taken were as under -

<b>36</b> <sup>th</sup>	Meeting of Academic Council - Date: 25.04.2017
1.	Resolved that the online certificate course, conducted under IIRS OUTREACH programme is recognized in which interested students / related faculty of the University may participate with prior permission of the concerned Universities authorities.
2.	Resolved to approve the intake capacity of PG students for the academic year 2017-18 as per <b>Annexure-10</b> for PG degree programs of various faculties offered by NAU, Navsari.
3.	Resolved to waive 50 % cut off marks in Common PG Entrance Examination as eligibility criteria for admitting students in various PG programmes of NAU, Navsari. However, rest of admission criteria shall remain same.
4.	Resolved to closing the Post Graduate degree programme M.Sc. (ICT in Agriculture) from academic Year 2017-18.
5.	Resolved to initiating Ph.D degree programme in the Discipline of Agribusiness Management at Navsari Agricultural University from the academic year 2017-18
<b>37</b> <sup>th</sup>	meeting of the Academic Council- Date: 27.12.2017
1.	Academic council approved the rules and Regulations for the HRD Programmes for the faculties of NAU.
2.	આથી ઠરાવવામાં આવે છે કે (૧) જે તે રાજ્ય કૃષિ યુનિવર્સિટીનો વિદ્યાર્થી રાજ્યની અન્ય યુનિવર્સિટીમાં નોકરીમાં જોડાય અને અગાઉ અભ્યાસ પૂર્શ કરવા માટે તેવા કિસ્સાઓ (૨) રાજ્ય કૃષિ યુનિવર્સિટીનો વિદ્યાર્થી અન્ય રાજ્યની કૃષિ યુનિવર્સિટીમાં કે ગુજરાત સરકારના ખેતીવાડી, પશુપાલન તેમજ સંલગ્ન વિભાગમાં નોકરીમાં જોડાય અને અગાઉ અભ્યાસ કરી ચૂકેલ અભ્યાસ પૂર્શ કરવા માંગતો હોય તેવા તથા (૩) રાજ્ય કૃષિ યુનિવર્સિટીનો વિદ્યાર્થી તે જ કૃષિ યુનિવર્સિટીમાં નોકરીમાં જોડાય અને તે જ

	યુનિવર્સિટીમાં ઇન - સર્વિસ તરીકે જોડાય તેવા કિસ્સામાં અભ્યાસમાં જોડાવાની મંજુરી આપવામાં આવે છે તથા આવા કર્મચારીઓ			
	પાસેથી અભ્યાસ પુન: શરૂ કરતા પહેલા પાંચ વર્ષ સુધી નોકરી કરશે તે બાબતનું બોન્ડ લેવાનું રહેશે અને બોન્ડના સમયગાળા પહેલા			
	નોકરી છોડવા ઇચ્છે તો પાંચ લાખની રકમ વસૂલાત કરવાની રહેશે તે મુજબ સર્વાનુમતે ઠરાવવાંમાં આવે છે.			
3.	Resolved to accord post-facto approval to Horticulture Polytechnic to implement revised course curriculum from the academic year 2017-18 as per Annexure-I of the Agenda.			
4.	Resolved to approve changes in semester-wise courses & course nos. as per item note and allow ACHF to effect these changes from the academic year 2017-18.			
5.	Academic Council recommend to the Board of Management to accord approval that Navsari Agricultural University is permitted to take over the land and building of CSB of Dambher for the purpose of Education and Research activities of College of Forestry on long term lease for a period 30 years as per the prevailing rules and regulation of Government of Gujarat as well as signing of MoU between NAU, Navsari and CSB, Ministry of Textile, GOI, Bengaluru.			
6.	Academic Council resolved to approve the proposal of the Establishment of Plant Physiology department in the faculty of Agriculture, NAU, Navsari			
7.	Academic Council resolved to approve the proposal of the Establishment of Agricultural Microbiology department in the faculty of Agriculture, NAU, Navsari.			
8.	Resolved to permit Ph.D. degree holder faculty of NAU to act as major guide of in-service Ph.D. student as special case rather than recognizing external guide/visiting faculty.			
9.	Resolved to recommend the Board of Management to approve the amendments in Revised Regulations for Games and Sports Tournaments of the Navsari Agricultural University - 2017.			
10.	Resolved to recommend the Board of Management to approve the Policy of Information Technology Resources and Services of NAU-2017.			

## **Extension Education Council**

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

9 <sup>th</sup> N	9 <sup>th</sup> Meeting of Extension Education Council - Date: 29.09.2017					
1.	ખેતી અ	ખેતી અને ખેડૂતના વિકાસના દેતૂસર મંજૂર થયેલ ''ફાર્મર ફર્સ્ટ પ્રોગામ'' હેઠળ ફાળવવામાં આવેલ ગ્રાન્ટ અને હાથ ઘરવામાં આવતી				
	પ્રવૃતિઅ	પ્રવૃતિઓની નોંધલઈને સંચાલક મંડળ તેને કાર્યોત્તર મંજૂરી આપે તે માટે વિસ્તરણ શિક્ષણ પરિષદ સર્વાનુમતે ભલામણ કરે છે.				
2.	બેકરીવ	બેકરીવાળા, નવસારી ખાતે ચાલતાં એક અઠવાડિયાવા બેકરી તાલીમ વર્ગોની પ્રવેશ ફીમાં નીચે સુચવ્યા મુજબ આગામી બેચથી				
	વધારો કરવાનું આથી વિસ્તરણ શિક્ષણ પરિષદના સભ્યશ્રીઓ દ્વારા સર્વાનુમતે ઠરાવવામાં આવે છે.					
	અ.નં.	ફી ની વિગત	હાલની ફી રૂા.	સૂચિત ફી રૂા.		
	٩	પ્રવેશ ફી	٩٥٥/-	900/-		
	ર	રીવોલ્વીંગ ફંડ (વસ્તુ વપરાશ ખર્ચ)	٩00/-	٩ <i>٥</i> 0/-		
		કુલ રૂા.	200/-	200/-		
3.	વિસ્તરણ શિક્ષણ યુનિટ હેઠળ ચાલતી ''એસ્ટાબ્લીશમેન્ટ ઓર્ફ સરદાર સ્મૃતિ કેન્દ્ર, નવસારી" (નોન પ્લાન : બ.હે. ૫૧૧૬)					
	યોજનાની ત્રણ તાંત્રિક જગ્યાઓનું નીચે કોઠામાં સૂચવ્યા મુજબ નવું નામાભિકરણ કરવાનું આથી વિસ્તરણ શિક્ષણ પરિષદના					
	સભ્યશ્રીઓ દ્વારા સર્વાનુમતે ઠરાવવામાં આવે છે.					

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અ. નં.	યોજનાનું નામ અને બજેટ સદર	યોજના મંજૂર થયાનું વર્ષ	તાંત્રિક જગ્યાનું હાલનું નામ	પગાર ધોરણ	તાંત્રિક જગ્યાનું સૂચિત નવું ગામ
٩	ર	ઉ	8	પ	٤
۹.	એસ્ટાબીલશમેન્ટ ઓફ	૧૯૭૫-૭૬	કાર્યક્રમ વ્યવસ્થાપક	१५६००-३८१००	મદદનીશ વિસ્તરણ
	સરદાર સ્મૃતિ કેન્દ્ર			(૬૦૦૦ ગ્રેડ પે)	શિક્ષણશાસ્ત્રી (સંકલની)
	નવસારી		માહિતી અધિકારી	૧૫૬૦૦-૩૯૧૦૦	મદદનીશ વિસ્તરણ
	(બ.હે. ૫૧૧૬)			(૬૦૦૦ ગ્રેડ પે)	શિક્ષણશાસ્ત્રી (તાંત્રીક)
			માહિતી મદદનીશ	૧૫૬૦૦-૩૯૧૦૦	ખેતીવાડી અધિકારી
				(૬૦૦૦ ગ્રેડ પે)	



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## **Board of Management**

Sr. No.	Name	Address with designation	
1.	Dr. C. J. Dangariya	Hon.Vice-Chancellor and Chairman	
		Navsari Agricultural University, Navsari - 396 450.	
2.	Shri Sanjay Prasad IAS	Principal Secretary, Agriculture and Co-operation Department, Gujarat State, Sachivalaya, Gandhinagar-382010.	
3.	Shri Milind Toravane	Secretary, Finance Department (Expenditure)	
		Gujarat State, Sachivalaya, Gandhinagar-382010.	
4.	Shri A.T. Parmar	Deputy Secretary (Higher education),	
		Education Department, Gujarat State, Sachivalaya, Gandhinagar-382010.	
5.	Dr. B. M. Modi	Director of Agriculture, KrushiBhavan, Gujarat State, Gandhinagar-382010.	
6.	Dr. A. J. Kachhiya Patel	Director of Animal Husbandry, Krushi Bhavan, Gujarat State, Gandhinagar-382010.	
7.	Dr. P. M. Vaghasiya	Director of Horticulture, KrushiBhavan, Gujarat State, Gandhinagar-382010.	
8.	Dr.G.R.Patel	Director of Extension Education, Navsari Agricultural University, Navsari - 396 450.	
9.	Dr. Z. P. Patel	Dean & Principal, faculty of Agriculture, Navsari Agricultural University, Navsari - 396 450.	
10.	Dr. R. B.Patel	Member, Retd. Scientist, Navsari	
11.	Dr. Suresh Pal	ICAR representative, Director, CAES, Godhara	
12.	Dr.R. R. Kaswala	Member, Retd. Scientist, Navsari	
13.	Dr. V. A. Solanki	Registrar and Secretary	
		Navsari Agricultural University, Navsari	

## **Academic Council**

Sr. No	Name	Address with designation
1.	Dr. C. J. Dangaria	Vice-Chancellor, NAU, Navsari
2.	Dr. S. R. Chaudhary	I/C Director of Research and Dean P.G. Studies, NAU, Navsari
3.	Dr. G. R. Patel,	I/C Director of Extension Education, NAU, Navsari
4.	Dr. Z. P. Patel	Dean Faculty of Agriculture, College of Agriculture, NAU,
		Waghai
5.	Dr. C. V. Savalia	I/C Director of Students Welfare, N.A.U., Navsari
6.	Dr. B. N. Patel	I/C Dean Faculty of Horti. and Forestry, Aspee College of Horti.
		& Forestry, NAU, Navsari
7.	Dr. H. R. Pandya	I/C Dean Agri. Business Management, NAU, Navsari
8.	Dr. N. H. Kelawala	Dean, College of Veterinary Science & Animal Husbandry,
		NAU, Navsari

9.	Dr. K. G. Patel	Principal, College of Agriculture, Bharuch
10.	Dr. M. K. Arvadia	Principal, Principal, N.M.C.A., NAU, Navsari
11.	Dr. P. K. Shrivastava	Principal, College of Forestry, Navsari
12.	Er.P. R. Pandey	Principal, College of Agricultural Engineering & Technology, Dediyapada
13.	Dr. B. G. Solanki	Res. Scientist, Cotton, NAU, Surat
14.	Dr. M. B. Patel	Retired Professor & Head, Agril. Entomology, N.M.C.A., NAU, Navsari
15.	Dr. N. L. Patel	Retired Principal, Aspee College of Horticulture & Forestry, NAU, Navsari
16.	Dr. P. M. Desai	Retired Research Scientist, Livestock Research Station, NAU, Navsari
17.	Dr. P. R. Bhatnagar	Head of Institution, Central Soil & Water Conservation Research & Training Institute, I.C.A.R., Vasad Centre, Anand
18.	Dr. P. S. Pandey	Assistant Director General (Education Planning & Home Science), ICAR, New Delhi
19.	Shri Kiran Patel	M.D., Aspee Agricultural Research & Development Foundation, Mumbai
20.	Dr. U. G. Patel	Retd. Research Scientist, Cotton Research Station, Surat
21.	Dr.R. M. Patel	Principal, Gujarat Agri. Biotechmology College, N.A.U., Surat
22.	Dr.V.A. Solanki	Registrar, Member - Secretary NAU, Navsari

## **Research Council**

Sr. No.	Name	Designation
1.	Dr. C. J. Dangaria	Hon. Vice-Chancellor, NAU, Navsari
2.	Dr. S. R. Chaudhary	I/c Director of Research, NAU, Navsari
3.	Dr. G. R. Patel	Director of Extension Education, NAU, Navsari
4.	Dr. K. A. Patel	Associate Director of Research (Agri.), NAU, Navsari
5.	Dr. S. R. Chaudhary	Associate Director of Research (Ani. Sci.), NAU, Navsari
6.	Dr. Z. P. Patel	Dean, Faculty of Agriculture, NAU, Navsari
7.	Dr. B. N. Patel	Dean, Faculty of Horticulture & Forestry, NAU, Navsari
8.	Dr. N. H. Kelawala	Dean, Faculty of Veterinary Science,, NAU, Navsari
9.	Dr. V. P. Usdadiya	Convener (NRM) & Research Scientist (I/C), Soil and Water Management Unit, NAU, Navsari
10.	Dr. B.G. Solanki	Convener (Crop Improvement) & Research Scientist, Main Cotton Research Station, NAU, Surat
11.	Dr. S. P. Saxena,	Convener (Plant Protection) & Professor, Dept. of Entomology, ACHF, NAU, Navsari
12.	Dr. D. K. Sharma,	Convener (Horticulture) & Research Scientist (Horti), AES, NAU, Paria

13.	Dr. Manmohan J.R.Dobariyal	Convener (Forestry), Associate Professor, (Silviculture) and Dept. of Silviculture Agroforestry, College of Forestry, NAU, Navsari
14.	Dr. H.D. Bhimani	Convener (Basic Sci.) & Associate Professor, Dept. of Plant Pathology, NMCA, NAU, Navsari
15.	Dr. S.H. Sengar,	Convener (Agril. Engg.) & Associate Professor, CAE, Dediyapada, Narmada
16.	Dr. J.J. Makadia	Convener (Social. Sci.) & Professor & Head, Dept. of Economics, NMCA, NAU, Navsari
17.	Dr. Sandhya S. Chaudhary	Convener (Animal Prod.) & Professor & Head, Dept. of Vet. Physiology and Biochemistry, Vanbandhu College of Veterinary Science & Animal Husbandry, NAU, Navsari
18.	Dr. V.S. Dabas	Convener (Animal Health) & Professor & Head, Dept. of Vet. Surgery & Radiology, Vanbandhu College of Veterinary Science & Animal Husbandry, NAU, Navsari
19.	Dr. Sanjay Singh	Head & PI, Central Horticulture Experimental Station, Vejalpur, Godhra-Baroda Highway, Godhra-389 340(Gujarat)
20.	Dr. Anil R. Chinchmalatpure	Principal Scientist and Head, ICAR-Central Soil Salinity Research Institute, Regional Research Station, Near Jyotinagar Water Tank. Zadeshwar Road, Maktampur P.O., Bharuch 392012. Gujarat
21.	Dr. M.K. Arvadia	Principal, N.M. College of Agriculture, NAU, Navsari
22.	Dr. K. G. Patel	Principal, College of Agriculture, NAU, Bharuch
23.	Dr. V.A. Solanki	Professor & Head, Dept. of Plant Pathology, NMCA, NAU, Navsari
24.	Dr. P. K. Shrivastava	Principal, College of Forestry
25.	Dr. H.R. Pandya	Principal, Aspee Institute of Agril. Business Management, NAU, Navsari
26.	Manharbhai Chhotubhai Patel	Umbel, Ta. Kamrej, Dist. Surat
27.	Dr. B. M. Modi	Director of Agriculture, Gujarat state
28.	DR. R. A. Sherasiya	Director of Horticulture, Gujarat state
29.	Dr. Hitaben Patel	Director of Animal Husbandry, Gujarat state

## **Extension Education Council**

Sr. No.	Name	Designation
1.	Dr. C. J. Dangaria	Hon. Vice Chancellor, Navsari Agricultural University, Navsari
2.	Dr. S. R. Chaudhary	I/C Director of Research & Dean P.G. Studies, Navsari Agricultural University, Navsari
3.	Dr. Z. P. Patel	Dean, N.M. College of Agriculture, Navsari Agricultural University, Navsari

4.	Dr. B. N. Patel	Dean, Aspee College of Horticulture & Forestry, Navsari Agricultural University, Navsari	
5.	Dr. N. H. Kelawala	Dean, Vanbandhu College of Veterinary Science & Animal Husbandry, Navsari Agricultural University, Navsari	
6.	Dr. H. R. Pandya	Dean, AspeeAgri Business Management Institute, Navsari Agricultural University, Navsari.	
7.	Er. P. R. Pandey	Principal, College of Agriculture Engineering & Technology, Navsari Agricultural University, Dediapada	
8.	Dr. R. M. Patel	Principal, ASPEE SHAKILAM Agricultural Biotechnology Institute, Navsari Agricultural University, Surat	
9.	Dr. R. D. Pandya	Professor & Head, Department of Extension Education, N.M. College of Agriculture, NAU, Navsari	
10.	Dr. O. D. Vanparia	Associate Professor (Extension), Aspee College of Horticulture & Forestry, Navsari Agricultural University, Navsari	
11.	Dr. M. R. Bhatt	Principal, Agriculture Polytechnic, Navsari Agricultural University, Maktampur, Bharuch	
12.	Dr. C. K. Timbadia	Programme Co-ordinator, Krushi Vigyan Kendra, Navsari Agricultural University, Navsari	
13.	Prof. M. D. Lad	Assistant Research Scientist, Wheat Research Station, Navsari Agricultural University, Bardoli, DistSurat	
14.	Shri Narendra Revar	Programme Coordinator, Jivan Trith, Gandhi Chowck, Valiya, DistBharuch	
15.	Shri Ramkumar Sinh	Organizer & Managing Trustee, Suruchi Shixan Vasahat Trust, Navsari Road, Dhuliya Char Rasta, Bardoli, DistSurat	
16.	Shri Rakesh Variyar	Additional chief Programme Executive, Bharatiya Agro Industries Foundation (BAIF), Vrundavan Campus, At. Lachhakadi, Post: Gangpur, Ta. Vansada, DistNavsari	
17.	Director of Agriculture	Krishi Bhavan, Sector - 10 A, 'CH' Road, Gandhinagar- 382 010	
18.	Director of Horticulture	Krishi Bhavan, Sector - 10 A, 'CH' Road, Gandhinagar- 382 010	
19.	Director of Animal Husbandry	Krishi Bhavan, Sector - 10 A, 'CH' Road, Gandhinagar- 382 010	
20.	Shri Manojbhai Naranbhai Patel	At. Shekhpur, Post/Via-Sayan, Patel Faliyu, Ta. Kamarej, Dist Surat, Pin-394130	
21.	Smt. Lilaben Shingabhai Gamit	At Bedi, Junu Patel Faliyu, Post-Vazarda, Ta. Songadh. Dist Tapi	
22.	Dr. S. D. Kavad	Associate Professor (Extension), Directorate of Extension Education, NAU, Navsari	
23.	Dr. G. R. Patel	Director of Extension Education, Navsari Agricultural University, Navsari	

## **Planning and Development Committee**

Sr. No.	Name	Designation
1.	Dr. C. J. Dangaria	Hon. Vice Chancellor, NAU, Navsari
2.	Dr. S. R. Chaudhary	Director of Research & Dean PG Studies, NAU, Navsari
3.	Dr. G. R. Patel	Director of Extension Education, NAU, Navsari
4.	Dr. C. V. Savaliya	Director of Student Welfare, NAU, Navsari
5.	Dr. V. A. Solanki	I/C Registrar, NAU, Navsari
6.	Shri. D. T. Chaudhari	Comptroller, NAU, Navsari
7.	Dr. Z. P. Patel	Dean Faculty of Agriculture, NAU, Navsari
8.	Dr. B. N. Patel	I/C Dean Faculty of Horticulture, NAU, Navsari
9.	Dr. N. H. Kelawala	Dean & Principal, College of Veterinary Sci. & A.H., NAU, Navsari
10.	Dr. H. R. Pandya	Dean ABM, NAU, Navsari
11.	Dr. P. R. Pandey	I/C Principal Faculty of Agri. Engg., NAU, Navsari
12.	Dr. K. D. Tandel	I/C Librarian, NAU, Navsari
13.	Shri. H. T. Bhalsod	Executive Engineer, NAU, Navsari
14.	Dr. Anil Chinchmalatpure	Principal Scientist, CSSRI, Bharuch
15.	Dr. M. B. Patel	Retd. Professor & Head Entolology
16.	Dr.Suraj D. Savalia	Paston Food Industry, Navsari
17.	Dr. P. K. Shrivastav	Principal, Forestry College, NAU, Navsari
18.	Dr. M. K. Arvadia	Principal, NMCA, NAU, Navsari
19.	Dr. K. G. Patel	Principal, College of Agriculture, NAU, Bharuch
20.	Dr. R. M. Patel	Principal, Aspee Sakilam Biotechnology Institute, Surat
21.	Dr. K. A. Patel	Associate Director of Research, NAU, Navsari
22.	Dr. T. R. Ahlawat	Associate Director of Research, NAU, Navsari
23.	Dr. A. N. Sabalpara	Retd. Director of Research, NAU, Navsari
24.	Dr. D. Z. Patel	Retd.Joint Director of Agriculture
25.	Dr. V. M. Thumar	Planning Officer, NAU, Navsari

## SC/ST Cell

Sr. No.	Name and Designation	Position
1	Dr. J. B. Solanki, Asso. Prof., Veterinary college, Navsari	Chairman
2	Mr. D. T. Chaudhari, I/C Comptroller, NAU, Navsari	Member
3	Dr. V. K. Parmar, Asso. Prof., Dept. of Hort., NMCA, Navsari	Member Secretary
4	Mr. B. D. Chaudhari, Asst. Prof., AABMI, Navsari	Member
5	Dr.MukeshParmar, Asst. Prof., ACHF, Navsari	Member
6	Dr. A. P. Rathod, Asst. Prof., CoA, Waghai	Member
7	Mr. A. N. Vanazariya, Head clerk, KVK, Vyara	Member
8	Mr. R. R. Rav, Senior Clerk, Cotton Research Station, Bharuch	Member
9	Mr. S. B. Chaudhari, Junioir Clerk, MSRS, Surat	Member

#### **Gender Committee**

Sr. No.	Name and Designation	Position
1	Dr. SandhyaChaudhary, Professor, Veterinary College, Navsari	Chairman
2	Dr. Manjushree Singh, Asst. Prof., NMCA, Navsari	Member
3	Dr. Alka Singh, Assoc. Prof., ACHF, Navsari	Member
4	Topper student of the concerned faculty Member	
5	Mrs. Raxaben R. Patel, Office Superintendant, Administrative	Member
	cum Account Office, NAU, Navsari	
6	Head of Unit to which the case relates. In case involving the	Member
	non -teaching employees, the Registrar or his nominee shall	
	be the member	
7	Mrs. Harshaben Shah, Gram Seva Trust, Kharel Ta. Gandevi	Member
8	Mrs. Sushilaben S. Patel, Steno Grade-II, NMCA, Navsari	Member

## 3. Events and Awards

#### **THIRTEENTHANNUAL CONVOCATION**

Thirteenth Annual Convocation of Navsari Agricultural University, Navsari was held on January 19, 2018. Governorshri, Gujarat State and Chancellor of the University, Shri O.P. Kohliji presided over the function, Prof. N.S. Rathore, Deputy Director General (Agril. Education), ICAR, New Delhi, acted as Chief Guest and Honourable Minister of Agriculture, Rural Development, Fisheries, Animal Husbandry and Transport, Government of Gujarat, Shri R.C. Faldu acted as Guest of Honour during the convocation ceremony. First of all, Dr. C.J. Dangaria, Honourable Vice Chancellor, NAU, Navsari delivered the welcome speech and appraised the house about all round development of the University in the field of education, research and extension. He informed the gathering about accreditation of the University and its constituent colleges for five years (2017-22), achievements and success of faculty and students, release of nine varieties and 54 technologies for farmers during the period under report. He also informed about conferment of various prestigious awards to NAU including Best Innovative University, ABP News National Education Award, Education Leadership Award, Bharat Vikas Award and Best Center of AICRP (Fruits) Award.

Guest of Honour, Shri R.C. Faldu ji congratulated outgoing students and impressed upon concerns and strategic approaches of Government of Gujarat for uplifting the farmers and agriculture in Gujarat. Further, he appreciated the University for excelling in the field of education, research and extension for benefitting farmers of the Gujarat state.

Prof. N.S. Rathore, Deputy Director General (Agril. Education), ICAR, New Delhi, delivered convocation address and briefed about developments made in the field of agriculture and higher agricultural education. He impressed upon need of development of rainfed agriculture, promotion of integrated farming, studies on climate change. He emphasized on development of low cost, light weight, multipurpose and women friendly farm implements to promote participation of women and youth in agriculture. Lastly, he congratulated students for receiving awards and degrees.

President of the function and Honourable Governorshri, Shri O.P. Kohli ji congratulated students for successful completion of various degree programmes and advised them to be prepared for facing challenges in new chapter of life. He extolled students to be "Job Provider" rather than "Job Seeker". Hon'ble Governor shri emphasized the role SAUs in the transition of India from a Developing Nation to a Developed Nation. He was of the opinion that the useful technologies should be modified to suit our farmers and agriculture of India. He further opined that the farmers should be made self sufficient and the input costs of agriculture should be reduced to make agriculture an attractive occupation. He advised out-going students to be sensitive and work for the upliftment of poor farmers to make their degrees meaningful.

During the convocation, various degrees were conferred to a total of 746 students, including Bachelor's degree to 433 students, Master's degree to 236 students and Doctorate degree to 77 students. Moreover, 34 medals including 13 medals for PG studies and 21 for UG studies were awarded to 13 boys and 11 girls for excelling in academics. Lastly, the convocation ended with vote of thanks proposed by Dr. V. A. Solanki, Registrar of the University.

## Glimpses of 13<sup>th</sup> Annual Convocation



#### "Krushi Mahotsav-2017" Mega event

A Mega Agriculture Fair and Exhibition for Dang, Navsari and Valsad districts was organized by DEE and Dang District Administration at Police Parade ground, Ahwa, Dang on May 26, 2017 and inaugurated by Hon. Chief Minister Shri. Vijaybhai Rupani. Other eminent dignitaries present on this occasion were Shri. Ganpatbhai Vasava, Minister, Tourism, Forest & Tribal Development GoG; Shri Chimanbhai Sapariya, Hon. Minister, Agriculture, Farmers Welfare and Co-operation, GoG. The Exhibition comprised of 100 stalls for exhibiting various technologies, varieties of crops, farm implements etc., by Navsari Agricultural University, Line Departments and Input dealers. More than 20,700 farmers visited the exhibition and fair.



Krishi Mahotsav-2017 was celebrated from May 6, 2017 to May 27, 2017 by organizing one day seminar and exhibition at Vyara, Ahwa and Ankleshwar in South Gujarat. Shri. Chimanbhai Sapariya, Hon. Minister, Agriculture, Farmers Welfare and Co-operation, GoG addressed farmers at Vyara.

A team of 4-6 scientists were present in each of these programmes to provide technical guidance. Navsari Agricultural University showcased latest technologies, varieties and practices through 30 stalls for benefitting farmers.

#### **Organization of ICAR sponsored Winter-Schools**

## 1. Capacity Building Programme on "Pest Risk Analysis - A tool in selection of quality planting material and pest forecast"

Navsari Agricultural University organized a winter school between November 1 to 21, 2017 on "Pest Risk Analysis - A tool in selection of quality planting material and pest forecast" at ASPEE College of Horticulture and Forestry, Navsari campus. Dr. C. J. Dangaria, Hon'ble Vice Chancellor, NAU. Navsari presided over the inaugural function and briefed participants about the progress made by Navsari Agricultural University in different spheres of agriculture. He encouraged them to do farmer centric research so as to improve the livelihood of

farming community. Dr. M. B. Chetti, ADG (HRD), ICAR addressed the participants in the inaugural function of the winter schools and extolled them to take full benefit of such training programmes. Also present on this occasion were Dr. S. R. Chaudhary, Director of Research and Dean PG Studies and Dr. C.B. Patel, Former Member, Board of Management, NAU, Navsari. It comprised of 44 lectures delivered by 31 eminent experts and 3 field visits. This winter school was attended by 25 participants from different states of India.

#### 2. Capacity Building Programme on "Approaches for Doubling Farmers Income"

Navsari Agricultural University organized another winter school on "Approaches for Doubling Farmers Income" at College of Agriculture, Bharuch from November 1 to 21, 2017. Nearly, 70 resource persons delivered 97 lectures on diverse topics pertaining to doubling farmers income. This winter school also included 11 exposure visits to research stations, progressive farmers, NGO's and reputed Institutes which benefitted 25 participants.

#### Organization of Seminar/Symposium/Workshop

## National seminar on "Sustainable Food Value Chain in Arena of Climate Change"

A one day National Seminar on "Sustainable Food Value Chain in Arena of Climate Change" was organized by Navsari Agricultural University in association with National Council for Climate Change Sustainable Development and Public Leadership (NCCSD) and ICAR on 2nd June, 2017 at Swami Vivekananda Hall, ACHF, Navsari. The seminar was







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inaugurated by Hon. Union Minister of state for Agriculture, Farmers Welfare and Panchayati Raj-Govt. of India, Shri Parshottam Rupala, by lighting the lamp followed by floral welcome of dignitaries. Dr. C. J. Dangaria, Hon. Vice-Chancellor, NAU welcomed Hon. Union Minister of state for Agriculture by presenting a bouquet of flowers.

#### National Seminar on "Awareness and Promotion of Dry Flower Exports and Industry in Gujarat"

A National Seminar cum Exhibition on 'Awareness and Promotion of Dry Flower Exports and Industry in Gujarat' was organised by Navsari Agricultural University in collaboration with APEDA and NHM, Navsari at ASPEE College of Horticulture and Forestry, NAU, Navsari, Gujarat on June 11, 2017. The seminar was attended by more than 200 scientists, entrepreneurs, farmers, students and local artisans. Dr. T. Janakiram, Additional Director General (Horticulture), ICAR, New Delhi as the chief guest, Dr. R. A. Sherasiya, Director Horticulture, Gujarat as the Guest of Honour and Dr.



C. J. Dangaria, Vice Chancellor of NAU as the president graced the inauguration function. The exhibition demonstrated technologies of flower drying and various dry flower arrangements using local flora and fauna. **National Seminar on "Technologies and Sustainability of Protected Cultivation of Hi-Valued Vegetable** 

#### Crops"

National Seminar on "Technologies and Sustainability of Protected Cultivation for Hi-Valued Vegetable Crops"three days programme, was organized by Department of Vegetable Science, ASPEE College of Horticulture, Navsari Agricultural University and The Horticultural Society of Gujarat in collaboration with Gujarat Council on Science and Technology (GUJCOST) during February 01-03, 2018. The Seminar was attended by more than 400 scientists, students, greenhouse growers and entrepreneurs. The inaugural ceremony of the seminar was enlightened by the gracious



presence of dignitaries, Hon'ble Vice Chancellor and the President of ceremony, Dr. C.J. Dangaria; MLA, Navsari Assembly Constituency and Inaugurator of function Shri Piyushbhai Desai; Former Director of DRDO, Former Director, Life Science, DRDO, New Delhi and Guest of Honour, Padma Shree Prof. Brahma Singh; Emeritus Scientist, ICAR- Indian Agricultural Research Institute and Special Guest, Dr. Pritam Kalia; Director of Research, Navsari Agricultural University, Dr. S.R. Chaudhary; President, The Horticultural Society of Gujarat and Former, Principal and Dean, ASPEE College of Horticulture, Dr. N.L. Patel; Principal and Dean, ASPEE College of Horticulture, Dr. N.L. Patel; Principal and Dean, ASPEE College of Horticulture, Dr. Sanjeev Kumar. On this occasion, two English books entitled **"Technologies and Sustainability of Protected Cultivation of Hi-Valued Vegetable Crops"** and **"Book of Abstracts"** and one Gujarati book entitled "*Shakbhaji Pakoman Rakshit Khetinee Tantriktao*" were released by the dignitaries. The exhibition exclusively meant for farmers was opened by Hon'ble Vice Chancellor, Navsari Agricultural University Dr. C.J. Dangaria and other dignitaries, focussing majorly on various technological developments made by Department of Vegetable Science on greenhouse technology.

#### Workshop on "Communication Skills for Effective Extension Services"

Off campus workshop on "Communication Skills for Effective Extension Services" was jointly organized by Extension Education Institute, Anand and Directorate of Extension Education, NAU at Navsari during July 11-13, 2017. Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU inaugurated the workshop, in the presence of Dr. A.C. Patel, Course Director, EEI, Anand. Total, 34 scientists from 7 KVKs and different faculties of NAU participated in the programme.

#### Seminar on "Organic Farming"

A seminar on Organic Farming was jointly organized by KVK, Navsari; District Panchayat, Navsari and ATMA, Navsari on July 28, 2017. This programme was organized under the Chairmanship of Dr. C.J. Dangaria, Hon'ble Vice-Chancellor, NAU, in the presence of DDO, Navsari, District Officials, Organic farmers etc. On this occasion, Navsari District Organic Farmer's Co-operative Society (NOFCO) was also established. This society would improve the access of farmers to good quality inputs and also help them market their produce efficiently. About 119 farmers participated in this seminar.

#### Workshop on "Economic Zoology"

Workshop cum Hands-On training programme on Economic Zoology for students was jointly organized by KVK, Surat and Science College, Vankal from September 4 to 10, 2017. The main objective was to increase awareness and acquaint students with technical aspects of Honeybee rearing. Apart from that, information was also provided on sericulture, lac culture, vermiculture, fisheries and poultry farming. Nearly, 130 students participated in this programme and were awarded certificates.

#### Seminar on "Role and Scope of Fertigation in Agriculture"

Two days seminar on "Role and Scope of Fertigation in Agriculture" was organized by Soil and Water Management Research Unit, NAU under PFDC during February 22-23, 2018 at Navsari. The inauguration session chaired by Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU, in presence of Dr. G.R. Patel, DEE and officer from KRIBHCO, Surat. Lectures were delivered by various experts on role and scope of fertigation in agriculture, cost economics, research and development in fertigation for different crops *etc*. More than 100 farmers and 40 participants attended the programme.









#### Workshop on PPV & FRAAwareness and Crop Diversity

NAU, Navsari organized one day programme on Protection of Plant Varieties and Farmer's Right Act and Crop Diversity on March 27, 2018. The programme was graced by Dr. K.V. Prabhu, Chairperson,



PPV& FRA; Dr. S.B. Gurav, ADR, MPKV, Pune; Shri R.S. Sengar, Deputy Registrar, PPV and FRA; Dr. Sunil Chaudhary, DR & Dean PGS and Dr. G.R. Patel, DEE. Different lectures were delivered by experts and scientists regarding PPV & FRA. More than 650 farmers and farm women attended this programme. During this event, stalls were also set up exhibiting different land races of fruits, vegetables, floriculture, pulses, cereals, sugarcane etc.

#### Sherdi Pak Parishanvad

"Sherdi Pak Parishanvad" was organised by Gujarat State Sugar Federation, Gandhinagar and Main Sugarcane Research Station at NAU Navsari on May 13, 2017. Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU, Shri Ketanbhai N. Bhatt, MD, Gujarat State Sugar Federation, (GSSF) Gandhinagar; Dr. P.P. Naiknavare, MD, National Federation Cooperative Sugar Factory, New Delhi; Shri Mansinhbhai K. Patel, Chairman GSSF and Mahuva Sugar, Shri Ishvarsinh T. Patel, State Minister (Cooperation) (Chairman), Shri J. B, Patel Chairman Gandevi Sugar; Dr. J. P. Singh, Chief Cane Advisor, NFCS, New Delhi and Shri Ratilal C.Patel, Vice Chairman,



Gandevi sugar graced this occasion. Dignitaries spoke about the current status of sugarcane cultivation, progress made in sugarcane cultivation and the problems faced by growers and sugar factories and appealed to scientists to develop technologies for benefitting sugarcane growers.

#### Mango Pakparisanvad

A one day programme on mango *pakparisanvad* was organized by ASPEE College of Horticulture and Forestry, NAU, Navsari on October 6, 2017. Dr. B.N. Patel, Principal and Dean, ACHF welcomed all the farmers and dignitaries and spoke about the importance of mangoes from the consumer and grower point of view. The programme was inaugurated by Dr. C. J. Dangaria, Hon'ble Vice Chancellor, NAU, Navsari. Scientists from Fruit Science department delivered lectures regarding production technology of mango, pest-disease management and marketing of mangoes.

#### Khedut Shibir on "Scientific Techniques for Tuber Crops"

A *Khedut Shibir* on "Scientific Techniques for Tuber Crops" was organized on August 22, 2017 by AICRP on Tuber Crops, ACHF, NAU, Navsari in collaboration with ATMA Project. This Shibir was attended by 113 tuber crop growers of Chikhali and Khergam area. On this occasion Dr. C.J. Dangaria, Hon'ble Vice-Chancellor, Navsari Agricultural University, Navsari and the Director of Research and Dean P.G., Dr. S.R. Chaudhary spoke about the medicinal value and importance of Tuber Crops in our


daily diet. Dr. C. J. Dangaria appreciated the contribution of women in agriculture, their skillfulness, deep understanding and commitment to agriculture. Shri S. I. Tailor, Director of ATMA Project, Navsari delivered his lecture by narrating a short story. A small exhibition with live samples and value added products made from Tuber Crops was displayed outside Swami Vivekananda Hall.



Khedut din & Juvar pak parisavad at MSRS, Surat A total of 10 one day training programs for farmers on 09-Oct-2017. Hon' Vice-chancellor Dr. C. J. were organized at ARS, NAU, Tanchha under Sardar Dangariya, Diector of Research Dr. S. R. Chaudhary, Sarovar Narmada Nigam Limited, Gandhinagar Director of Extension Education Dr. G. R. Patel, funded project. Improved package of practices and Associate Director of Research Dr. K. A. Patel, technologies in various crops like cotton, pigeonpea, District Agriculture Officer Mr. N. J. Gamit and other wheat and green gram were demonstrated to the NAU scientists graced the occasion.



farmers. The inputs including seeds and fertilizers for farmer's field demonstrations were also distributed to the 324 farmers during training programs.



11/10/2017



Fifty farmers from the Veravadar, Moti Dhorai, Two days Farmer's training Program was organized Rajgadh, Mevasha and Methapar villages of by MCRS, NAU, Surat in collaboration with ATMA Bhavnagar District visited at MCRS, NAU, Surat on project, Banaskantha district on 3<sup>rd</sup> and 4<sup>th</sup> October, 2017

# **CERTIFICATE COURSES**

## **Diploma course for Input Dealers**

A valedictory programme was organized on June 16, 2017 under the Chairmanship of Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU in the presence of Dr. G.R. Patel, Director of Extension Education, NAU, Navsari NAU on the completion of a one year duration diploma course for Input Dealers. Forty input dealers from South Gujarat were awarded certificates during the valedictory programme by the Hon'ble Vice Chancellor of NAU, Navsari.

# Certificate Course in "Nature and Wildlife Photography"

The closing ceremony of the one year certificate course on Nature and Wildlife Photography was held at Vivekanand hall on **July 30**, **2017.** Students were conferred certificates by the Chief Guest Dr. Shamsher Singh, Assistant Director General of Police, Surat, Shri Puneet Nayyar, IFS, Deputy Conservator of Forest, Shri Raghavji Madhad, Writer & Columnist, Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU, Dr. B N. Patel, Dean ACHF and Dr. P.K. Shrivastava, Principal, COF. Renowned advertising photographer Shri Raju Pathak was also present on the occasion.

### **Photo Exhibition**

The fifth exhibition of a one year Certificate Course in Nature and Wildlife Photography (CCNWP) was organized from July 28 to 30 2017, at the College of Forestry, NAU, Navsari. The exhibition was inaugurated, by Hon'ble Vice Chancellor Dr. C.J. Dangaria, in the presence of Dr. S.R. Chaudhary, DR & Dean PGS, Dr. Dr. G.R. Patel, DEE, NAU, Dr. V. A. Solanki, Registrar, NAU, Dr. N. H. Kelawala, Principal & Dean, College of Veterinary Science & Animal Husbandry, Dr. B N. Patel, Dean

ACHF and Dr. P.K. Shrivastava, Principal, COF. The exhibition was open for general public for three days, along with photographs developed by students. Photographs of renowned photographer Shri Vineet Vohra were also displayed.

# Certificate course for "Input dealers"

Valedictory function of second "Certificate in Agricultural Extension Services for Input Dealers" of six months duration was organized on November 8, 2017 under the Chairmanship of Dr. C.J. Dangaria, Hon'ble Vice Chancellor of NAU in the presence of Dr. G.R. Patel, Director of Extension Education, NAU, Navsari. In all, 40 input dealers received the certificate under the second programme conducted at ATIC, NAU, Navsari.









### Certificate Course on "First aid in Avian Health Management"

A Certificate course on "First aid in Avian Health Management" was conducted during August-December 2017. Total fifteen participants were admitted in this course. The course included lectures and practicals on feeding, housing, management and first aid aspects of the birds including a field visit to Surat Municipal Zoo. The course will be helpful in providing first aid care to injured birds. It is the first of its kind in Gujarat state.



### National Level Agribusiness Management Fest "Agri-Innovatia-2018"

ASPEE Agribusiness Management Institute, Navsari Agricultural University organized a National Level Agribusiness Management Fest "Agri-Innovatia-2018" on January 23, 2018. Around 100 PG agribusiness management students from 8 prestigious universities and institutes of the country including NAARM-Hyderabad, IABM-Bikaner, IABMI-Anand, PGIABM-JAU, Ganpat University, MPKV-Pune participated in this event. Fest was inaugurated by Hon'ble Vice Chancellor Dr. C.J. Dangaria who in his inaugural address inspired students to participate in the events enthusiastically. Other dignitaries DR& Dean PGS Dr. S. R. Chaudhary, Registrar Dr. V.A. Solanki and Mr. Sataporn Tipmani, Head, Hatchery Unit, CP Aquaculture Ltd. along with Principal of AABMI Dr. H.R. Pandya also remained present.

### **Recorder training**

The College of Veterinary Science & A. H., Navsari and Department of Animal Husbandry, Government of Gujarat, Gandhinagar organized two days recorder training under the project of National Livestock Mission on Genetic improvement of Surti Goat. This training was organized twice in the month of November i.e. November 16-17, 2017 and November 27-28, 2017. Approximately 100 recorders from five different districts of South Gujarat region availed the benefits of these training programs.

### Training programme on "Scientific Dairy Farming"

Department of Veterinary & A.H Extension, College of Veterinary Science & A.H, NAU, Navsari in collaboration with Gujarat Vidhyapith, Ahmedabad organized three training programs each of two days duration at Navsari Campus on "Scientific Dairy Farming" in June-July 2017. Total, 104 dairy farmers benefited from this skill based training program.







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### **Training programme on "Poultry Farming"**

Instructional Livestock Farm Complex, College of Veterinary Science and A.H., NAU, Navsari, organized four training programmes, each of two days duration in Poultry Farming in collaboration with Gujarat Vidyapith, Ahmedabad in Sep-Oct., 2017. A total of 166 trainees attended these programmes.

### **Training programme on "Goat Farming"**

Three day on campus training program on "Profitable Goat Farming through Scientific Interventions" was jointly organized by Livestock Research Station and Vanbandhu College of Veterinary Sciences under AICRP on goat improvement during December 19-21, 2017. In the said training, 25 goat farmers including people from different professions like doctors, dentists and MBA graduates from different parts of Gujarat and Maharashtra state participated and successfully completed the training program.

### **Bakery Training**

Bakery unit running under the Directorate of Extension Education conducted one 20 week duration course and 3 courses of one week duration, benefitting 9 and 16 participants respectively during the period July to Dec. 2017.

### Training Programme on "Soil Health Cards"

A one week training programme for technical staff on Soil Health Card, chemical analysis of soil and fertilizer recommendation were organized by Directorate of Extension Education during July 24-29, 2017 at NAU, Navsari. Dr. C. J. Dangaria, Hon'ble Vice Chancellor of NAU, Navsari presided over the inaugural function. Total 20 trainees from Department of Agriculture representing five districts of South Gujarat viz. Surat, Tapi, Valsad, Navsari & Dangs participated in the programme.

#### **Skill Development Training on Florist**

Skill Development Training on 'Florist' was successfully conducted by Navsari Agricultural University, Navsari in association with Agriculture Skill Council of India (ASCI) and Directorate of Arecanut and Spice Development (DASD), Ministry of Agriculture and Farmers Welfare, Government of India from January 8 to 31 2018. Shri Piyushbahi Desai, MLA, Navsari inaugurated the training program on January 8, 2018. Dr. C. J. Dangaria, Hon'ble Vice Chancellor of Navsari Agricultural University presided over the inaugural function, Chief Guest, Dr.

Naveen Patle, Deputy Commissioner (Horticulture), Guests of Honour, Dr. S.R. Chaudhary, Director of Research, Dr. G.R. Patel, Director of Extension Education and Dr. A. N. Sabalpara, Former Director of Research, Dr. B.N. Patel, Dean, ASPEE College of Horticulture, Mrs Alkaben, Mayor of Navsari and Mrs





Sheelaben, Garden chairman, Navsari Municipality and experts, students, local artisans and farmers were also present in the inauguration function. Twenty five people were trained in this program.

### Workshop-cum-Training on CFLDs on Pulses and Oilseeds

Workshop-cum-Training on CFLDs on Pulses and Oilseeds for KVKs of Gujarat was jointly organized by ICAR-ATARI, Zone-VIII, Pune and Directorate of Extension Education, NAU during January 29-31, 2018 at NAU, Navsari. The programme was chaired by Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU, Navsari in the solemn presence of Dr. Lakhan Singh, Director ICAR-ATARI, Zone-VIII Pune and Dr. G.R. Patel, DEE, NAU, Navsari. Nodal officers for CFLDs from 30 KVKs of Gujarat participated in the programme. A review of Farmer FIRST and ARYA programme was also done.

# **Celebration of Days**

### **Celebration of "World Environment Day**

World Environment Day was celebrated on June 5, 2017 in ASPEE College of Horticulture and Forestry by planting 1600 seedlings of Eucalyptus and Casuarina in the ELP Unit of College of Forestry. Dr. C. J. Dangaria, Hon'ble Vice Chancellor, NAU, Dr. S. R. Chaudhary, Director of Research & Dean PGS, Dr. B N. Patel, Principal & Dean, ACHF, Dr K. A. Patel, ADR, NAU and Dr. P.K. Shrivastava, Principal, COF along with faculties and staff of ASPEE College of Horticulture & Forestry participated in the plantation drive.

### "International Yoga Day" Celebration

"International Yoga Day" Celebration was celebrated at various colleges/places at NAU on June 21, 2017. Hon'ble Vice Chancellor Dr. C. J. Dangaria and other University officers and supporting administrative staff performed Yog at Sports Complex. Similarly, Deans and faculty members of various colleges practiced Yog in their respective Colleges.

# "Van Mahotsav - 2017"

Van Mahotsav programme was celebrated from July 18 to 21, 2017 at Horticulture Polytechnic, College of Veterinary Science & Animal Husbandry, Instructional Farm of Forestry and Rambhas Farm, Hill Millet Research Station, Waghai. Hon'ble Vice Chancellor Dr. C.J. Dangaria was present on all these occasions to encourage the plantation drive at various centers of the University. Dr. S.R. Chaudhary, DR & Dean PGS, Dr. B. N. Patel, Dean ACHF, Dr. P.K. Shrivastava, Principal, COF, Dr. N.H. Kelawala, Principal & Dean, College of Veterinary Science & Animal Husbandry, Dr. C.V. Savalia, DSW and Dr. H.R. Pandya, Dean, ASPEE Agribusiness Management Institute also participated in plantation activities of NAU.







### "World Honeybee Day" Celebration

More than 200 people participated in one day training cum workshop on beekeeping organized on World Honeybee Day -August 19, 2017 by ASPEE College of Horticulture and Forestry. The inaugural function was presided by Dr. Sunil Chaudhary, DR & Dean PGS, Dr. Yogeshwar Singh, Ex. Executive Director of National Bee Board, New Delhi was the Chief Guest and Dr. G. R. Patel, Director of Extension Education was the Guest of Honour. Dr. Yogeshwar Singh delivered a lecture on beekeeping and its benefits to farmers by pollination, different scientific methods of beekeeping.



### "New India Manthan - Sankalp se Siddhi" Programme

Programmes on "New India *Manthan - Sankalp se Siddhi*" were organized by KVKs operating under NAU from August 19 to 30, 2017. Shri. V.V. Vaghasiya, Hon'ble State Minister of Agriculture, Govt. of Gujarat, Members of Parliament and Members of Legislative Assembly graced these events. Several programmes were organized which included a video message of Hon'ble Prime Minister followed by a pledge by different stakeholders for doubling the farmers' income by the year 2022. Technical information was shared by experts from different KVKs with farmers. About 3941 farmers and farm women participated in these programme at different places.



### "Swachata Diwas - 2017"

*Swachata Diwas* was celebrated by College of Forestry on October 2, 2017 by engaging in cleanliness drive around the college and students hostel. Students and faculties of the college took a pledge for maintaining cleanliness around the college and their residential areas. To promote cleanliness among students, a competition was organized and various prizes were distributed to students.

### "National Unity Day" Celebration

College of Agricultural Engineering and Technology and Polytechnic in Agricultural Engineering at Dediapada celebrated National Unity Day on the birthday of Shri Sardar Vallabhbhai Patel on October 31, 2017. About 70 students attended a lecture delivered by Prof. T. V. Chavda, NSS PO, CAET, Dediapada about importance of unity in nation building.

### "World Bamboo Day" Celebration

World Bamboo Day was celebrated on the September 18, 2017, in the College of Forestry, under the Presidentship of Hon'ble Vice Chancellor, Dr. C.J. Dangaria, with the participation of approximately 100 farmers, stake holders like CIBAT, Dhurva BAIF, Sarvoday Trust and final year students of the college.





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Dr. Dhiraj Mittal, IFS, DCF, South Dangs, in his speech emphasized upon bamboo based agriculture and bamboo based economy, convergence of all stake holders on common platform for sharing of ideas, role of bamboo in soil conservation and importance of treated bamboo. Dr. Dangaria, Hon'ble Vice Chancellor highlighted the possibilities of research on carbon sequestration potential of varieties of bamboo for sustainable use in the era of climate change.

### "World Veterinary Day" and Animal Health Check -up Camp

World Veterinary Day was celebrated by KVK, Navsari on November 10, 2017 in Nani valzar village. Dr. C.J. Dangaria, Hon'ble Vice-Chancellor, NAU and Dr. G.R. Patel, Director of Extension Education graced this occasion. Dr. Parmar, Professor, Animal Science delivered a lecture on feeding management. Surgery was also performed in some of the animals. About 84 famers participated in the event and camp.

World Fisheries Day was celebrated by KVK, NAU, Navsari on November 21, 2017 in order to create awareness about conservation of fisheries resources. Dr. N.H Kelawala, Principal & Dean, Veterinary College, Dr. Borichanger, Nodal Officer guided participants in the programme. More than 60 farmers, farm women and students attended this event.

### Celebration of "Constitution Day of India"

"World Fisheries Day" Celebration

AABMI celebrated the Constitution Day of India on November 26, 2017; wherein 100+ Diploma and PG Students and Faculty Members of AABMI and Polytechnic in Animal Husbandry, Navsari enthusiastically participated and enriched themselves with patriotism through valuable inputs from the Hon'ble Vice Chancellor of NAU, Navsari, Dr. C. J. Dangaria and Director of Student's Welfare, Dr. C. V. Savalia.

### "Agricultural Education Day" Celebration

Agricultural Education Day was celebrated by College of Forestry on December 3, 2017, by organizing a lecture and quiz for UG and PG students of forestry. Approximately, 35 students participated in both the events. AABMI organized an Essay Writing Competition as a mark of celebrating **Agricultural Education Day** on December 3, 2017; wherein 8 MBA (ABM) students enthusiastically participated. The winners of both events were felicitated with prizes.

Agriculture Education Day was also celebrated by five KVKs functioning under umbrella of NAU. Lectures of scientists / experts on scope & importance of agricultural education, agriculture development and competitions were organized. About 426 students, farmers and farm women participated in this celebration.

### "World Soil Day" Celebration

KVKs under NAU celebrated World Soil Day on December 5, 2017. During this celebration, 175 Soil Health Cards were distributed to farmers. This programme was organized at 5 different places in which 370 farmers participated.





### "Jai Kisan Jay Vigyan" Celebration

The Govt. of India celebrates "*Jai Kisan Jai Vigyan*" week from December 23 to 29 every year on the birth anniversary of Shri Atal Bihari Vajpayee and Late Shri Chaudhary Charan Singh, two former Prime Ministers of India keeping in view their immense contribution for promoting use of science in the welfare of farmers. KVKs of NAU organized different activities to celebrate the week. Nearly 309 farmers and farm women benefitted from these programmes held at Vyara, Waghai and Dediapada KVKs.



### "International Day of Forests"

International Day of Forests was celebrated on March 21, 2018 in ASPEE College of Horticulture and Forestry with participation of approximately 250 students in several events to generate awareness about forests among students. The day began with an inaugural function presided over by Hon'ble. Vice Chancellor Dr. C.J. Dangaria, Chief Guest Dr. Rajan Shethji and Guest of Honor Dr. Sandip Kumar. During the day, team competitions on Phyto hunt, quiz and Taranephulonkiyadonke (identification of flora and fauna) competition were organized, in which 16 teams comprising of 4 students in each team participated. The day ended with distribution of prizes to winning teams.

### "International Women Day: Digital Era for Women Empowerment"

KVK, NAU, Navsari organized International Women Day Programme on March 28, 2018 at KVK, Navsari. This programme was chaired by Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU. The importance of digital era for women empowerment was illustrated by the experts. About 120 women from different villages of Navsari district actively participated and received information on usefulness of Digitalization in farm operations.



An exhibition on Ornamental Plants and Flower Arrangement was held on February 2, 2018. Padmashree Prof Brahmashree inaugurated the exhibition in the presence of Hon'ble Vice Chancellor Dr. C.J. Dangaria, as President of the function, Dr. B.N. Patel, Dean, ASPEE College of Horticulture, Mrs Sheelaben, Garden Chairman, Navsari Municipality scientists, experts, students, local artisans and farmers were also present to grace the inauguration function. 500 visitors including school students, people from the city visited.





# **NATIONAL RECOGNITIONS**

Fruit Research Station, NAU, Gandevi received prestigious **Chaudhary Devi Lal Outstanding All India Coordinated Research Project Awards 2016** under ICAR-AICRP (Fruits) programme as "**Best Centre**" on occasion of 89th ICAR foundation day and Award Ceremony at New Delhi held on 16th July, 2017.

### Best Krishi Vigyan Kendra Award-2017

Shri Narendra Modi, Hon'ble Prime Minister of India bestowed KVK, NAU, Tapi with "Pandit Deen Dayal Upadhyay Krishi Vigyan Protshahan Puraskar 2017 Zonal (Zone-VIII)"on March 17, 2018 at IARI Campus, New Delhi on the occasion of

10th National Conference of KVKs. KVK, Tapi was recognized for its outstanding contribution in agricultural extension.

### **Cash Prize to KVKs for Cashless Transaction**

All 5 KVKs of NAU, Navsari were awarded with a cash prize of Rs. 50,000/- during the Annual Zonal Workshop of KVKs of Gujarat and Rajasthan held during June 11-13, 2017 at JAU, Junagadh for initiating cashless transactions facilities within a week of installing POS Terminal Machines

### Best Teacher Award -2018

Dr. D. D. Patel, Associate Professor, Department of Agronomy, College of Agriculture, Navsari Agricultural University, Bharuch recieved the **Best Teacher Award** in Agriculture Faculty of Navsari Agricultural University during 13<sup>th</sup> Annual Convocation on dated January 19, 2018.

### **Young Scientist Award**

- Dr. Sunil S. Patil, Assistant Professor, Dept of Genetics and Plant Breeding, College of Agriculture, Navsari Agricultural University, Bharuch campus, Bharuch was awarded the "Young Scientist Award" during June 24-25, 2017 by International Journal of Tropical Agriculture and Serials Publication Pvt. Ltd. New Delhi, India.
- 2. Dr. D. M. Pathak, Associate Professor & Head, Department of Plant Pathology, College of Agriculture, Bharuch was awarded "Outstanding Scientist Award" during June 24-25, 2017 by International Journal of Tropical Agriculture and Serials Publication Pvt. Ltd. New Delhi, India.
- Dr R. R. Waghunde, Assistant Professor, Department of Plant Pathology, College of Agriculture, Navsari Agricultural University, Bharuch campus, Bharuch awarded "Young Scientist Award 2017" during June 24-25, 2017 by International Journal of Tropical Agriculture and Serials Publication Pvt. Ltd. New Delhi, India.





- 4. Dr D. M. Pathak, Associate Professor (Plant Pathology), College of Agriculture, Bharuch was awarded the Outstanding Scientist Award-2017 in IJTA, V International Conference on Agriculture, Horticulture and Plant Science, organized by Academic Research Journals, New Delhi during June 24-25, 2017.
- 5. Dr R. R. Waghunde, Assistant Professor (Plant Pathology), College of Agriculture, Bharuch was awarded the Best Young Scientist Award-2017 in IJTA V International Conference on Agriculture, Horticulture and Plant Science, organized by Academic Research Journals, New Delhi during June 24-25, 2017.
- 6. Dr. Sunil Patil, Assistant Professor (Genetics and Plant Breeding), College of Agriculture, Bharuch was awarded the Best Young Scientist Award-2017 in IJTA V International Conference on Agriculture, Horticulture and Plant Science, organized by Academic Research Journals, New Delhi during June 24-25, 2017.
- 7. Mr. Kirti Bardhan, Assistant Professor (Plant Physiology), CoF received Young Achiever Award 2017 by Society for Advancement of Human and Nature (SADHNA), Dr Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.) on February 28, 2018.
- Mr. Kirti Bardhan, Assistant Professor (Plant Physiology), CoF received Young Scientist Award by Combined Society for Educational Research and Development during Research Excellence and Academic Award 2018 ceremony at N. L. Dalmia Institute of Management Studies and Research, Mumbai on March 10, 2018.
- 9. Dr. Pramod Kumar Dubey, Assistant Professor (Agronomy), Dept. Agri. Chem. & Soil Sci., ACOH, achieved Young Scientist Award during "International Conference on Food and Agriculture" ICFA-2018 organized during March 29-31, 2018 at Dhanbad, Jharkhand.
- 10. Dr Alka Singh was conferred Young Scientist Award 2017-By IJTA and Serial Publications Pvt. Ltd., New Delhi.
- Dr. R. P. Gunaga, Associate Professor, College of Forestry, ACHF, NAU received Young Scientist Award in the 6<sup>th</sup> Academic brilliance Award- 18 from EET CRS, Noida (Delhi NCR) on 28<sup>th</sup> January 2018.
- 12. Dr. Dileswar Nayak, received Young Scientist Award by Combined Society for Educational Research and Development during Research Excellence and Academic Award 2018 ceremony at N. L. Dalmia Institute of Management Studies and Research, Mumbai on 10th March, 2018.
- 13. Dr. Vipul Parekh Assistant Professor received "Young Scientist Award" from Society for Scientific development in Agriculture & Technology.

### **Academic recognitions**

- 1. Dr. Mehul G. Thakkar, Associate Professor, HRM, AABMI, has been conferred the "Best Career Counsellor Award" on April 16, 2017 for successfully conducting 78 Career Counselling/Guidance Programmes and thereby helping thousands of SSC and HSC students. The award was conferred to him by *Amdavadi Champaneri Modh Ghanchi Gnati Kelavani Mandal* and Mahila Creative Group, Surat.
- 2. Successively for the 3<sup>rd</sup> year, Dr. Mehul G. Thakkar, Associate Professor, HRM, AABMI, has been elected as the "National Council Member-2017-18" of the Top Most Premier National Level Professional Association/Body of HRD & Training-Development in India with International

affiliations – the Indian Society for Training & Development (ISTD), New Delhi (Vadodara Chapter) in May, 2017.

- 3. Dr. Mehul G. Thakkar, Associate Professor in HRM & University Placement & Counseling Head was conferred the prestigious "Teaching Excellence Award-2017" by Higher Education Forum-Gujarat Chapter on November 18, 2017 in recognition of his contribution to teaching.
- 4. Dr. Alka Singh was conferred Fellowship of Horticulture Society of India for her contribution in Horticulture, New Delhi, New Delhi on December 16, 2017.
- 5. Dr. J.R. Pandya Assistant Professor, NMCA was elected as "Zonal President", West Zone Indian Society of Mycology and Plant Pathology, Udaipur during 2017.

# **Best Research Paper/ Thesis Award**

- 1. Ms. Bhumi J. Patel, Dr. Diwakar Singh, Mr. Pravin Prajapati, Dr. Kiran P. Suthar, Mr. Vipul B. Parekh and Dr. Taslim Ahmad, received Best Research Paper Award for the paper entitled "Differential gene expression in rice (*Oryza sativa* L.) in response to salinity stress through cDNA-AFLP" during April 1, 2017 at the conference on "Biotechnological innovations in Agriculture, Health and Environment" held at School of Biotechnology, Madurai Kamraj University, Madurai, Tamilnadu during March 30 to April 1, 2017.
- Dr. S.N. Saravaiya, Dr. Sanjeev Kumar and Dr. B.N. Chaudhari, Department of Vegetable Science, ACoH, NAU, Navsari received 'Best Article Award' from Vice Chancellor, Anand Agricultural University, Anand for an article entitled "*Vivid Upyogi Shakbhajee Vrukash: Sargavo*" published in Krushi Govishya 70 (4):, August 28-35, 2017
- 3. Alka Singh was conferred with All India Best Publication Award 2017 with a plaque, certificate and cash prize of Rs 1000 for the research paper entitled, 'TRV- based virus induced gene silencing in gladiolus, a monocotyledonous ornamental plant' authored by Alka Singh, Pushpendra Kumar, Jiang Cai-Zhong and Reid Michael S by the Society for Advancement of Human and Nature, Nauni, Solan, HP.
- 4. Dr. M. D. Khunt Assistant Professor, NMCA received Dr. R. C. Patel award for best research work done by Ph. D. Student by Plant Protection Association of Gujarat (PPAG) held on 19 August, 2017.
- 5. Dr. C. T. Khasatiya, Associate Professor and Head, Department of Veterinary Gynecology and Obstetrics, was presented with the Second Best Paper Award for his research paper entitled "Effect of hormonal and herbal therapy at calving on postpartum estrus and fertility response and serum hormonal profile on crossbred cows" published in Indian Journal of Dairy Science during year 2016 by the Indian Dairy Association during 46<sup>th</sup> Dairy Industry Conference organized at Kochi during Feb. 08-10, 2018.
- 6. The Best Research Article Award was presented to Dr. C. T. Khasatiya, Associate Professor and Head, Department of Veterinary Gynecology and Obstetrics, for his research paper entitled "Comparative evaluation of different therapies on post-partum fertility and blood biochemical profile in Holstein Friesian Crossbred cows" by Intas Polyvet for his research article published in Intas Polyvet journal Vol. 18 (2017) No. I, under Research Article category.
- Rajkumar B. K., Conferred with Best Doctoral thesis award at National conference on Technological Challenges in Social, Environmental and Agricultural Reforms (TECHSEAR-2017) held on 9th and 10th September, 2017 at Auditorium, ICAR – Indian Institute of Rice Research (IIRR), Rajendranagar, Hyderabad – 30, organized by Green Reap Welfare Society (Regd. No. 655).

### **Oral Presentation Award**

- 1. Dr. M. S. Sankanur, Dr. N. B. Singh, Dr. Sanjeev Thakur, Dr. Saresh N. V. and Dr. Archana Verma received the First Prize in Oral Presentation for the paper entitled "Morphometric and biochemical profiling of promising Myrobalan accessions (*Terminalia chebula* Retz.) for nutritional security: an multipurpose fruit yielding agroforestry tree" in the "National Conference on Climate Change and Agricultural Production" from April 6 to 8, 2017 held at Bihar Agricultural University, Bhagalpur, Bihar.
- 2. Best Oral Paper Presentation was awarded to a paper entitled "Relative gene expression analysis of B-casein milk protein gene and its transcription regulatory genes at two stages of lactation in Jafrabadi buffalo" authored by G. Pandya, U. Ramani, M. Janmeda, V. Kharadi, B. Brahmkshtri, D. Nikhil, K. Tyagi and P. U. Gajbhiye in the V Annual Convention of Society of Veterinary Science and Biotechnology and the National Seminar on "Opportunities and Challenges of Translational Research in the Frontier Areas of Biotechnology" held at College of Veterinary Science and Animal Husbandry of Orissa University of Agriculture and Technology, Bhubaneshwar during September 22–23, 2017.
- 3. Best Oral Paper Presentation was awarded to a paper entitled "Growth hormone gene polymorphism in Surti and Mehsani goats by PCR-RFLP" authored by J. Bayan, V. Kharadi, U. Ramani, M. Janmeda, K. Tyagi and Gaurav Pandya in the V Annual Convention of Society of Veterinary Science and Biotechnology and the National Seminar on "Opportunities and Challenges of Translational Research in the Frontier Areas of Biotechnology" held at College of Veterinary Science and Animal Husbandry of Orissa University of Agriculture and Technology, Bhubaneshwar during September 22 -23, 2017.
- 4. Dr. Virendra Kumar Singh was conferred with Best Paper Presentation (Oral) for paper entitled 'Effect of yeast (*Saccharomyces cerevisiae*) supplementation on rumen health parameters in Surti buffalo calves' co-authored by Sandhya S Chaudhary, Tanvi D Manat and Rana Ranjeet Singh during XXVI Annual Conference of Society of Animal Physiologists of India (SAPI) held on December 21-22, 2017 at College of Veterinary Science, Bidar, KAFSU, Karnataka.
- 5. Mr. Kirti Bardhan, Assistant Professor (Plant Physiology), CoF received II Prize in oral presentation during National Seminar on Technologies and Sustainability of Protected Cultivation for Hi-Valued Vegetable Crops, held at NAU, Navsari on February 1-3, 2018.
- 6. Dr. Pramod Kumar Dubey, Assistant Professor (Agronomy), Dept. Agri. Chem. & Soil Sci., ACoH was awarded the Best Oral Paper Presentation for a paper entitled "Organic Farming in Pigeon pea under South Gujarat Region" presented in the International Conference on Food and Agriculture, ICFA-2018 organized during March 29-31, 2018 held at Dhanbad, Jharkhand.
- 7. Dr. Pramod Kumar Dubey, Assistant Professor (Agronomy), Dept. Agri. Chem. & Soil Sci., ACoH was awarded the Best Oral Paper Presentation for a paper entitled "Organic Farming in Vegetable Crops Under Protected Cultivation" presented in the National Seminar "Technologies and Sustainability of Protected Cultivation for Hi-Valued Vegetable Crops" held at ACOH, Navsari Agricultural University, Navsari, Gujarat During February 01-03, 2018.
- 8. Mr. Gautam R. Parmar, Assistant Professor received the "Best Oral Presentation Award" for a paper titled "Marketing of greenhouse vegetables through organized retail: A review on prospects and challenges" (Principal Author: Gautam Parmar, Co-authors: Swati Sharma, Alpesh Leua, Ruchira Shukla); presented in the National Seminar on "Technologies and Sustainability of Protected Cultivation for Hi Valued Crops" organized by ACoH, NAU, Navsari during February 1-3, 2018.

- 9. Dr. P. R. Patel has received Best Paper Presentation Award for the research paper entitled " Bio-Efficacy and Phytotoxicity of Proquinazid 20 EC against Powdery Mildew of Mango (*Oidium mangiferae*)" during National Seminar on "Technologies and Sustainability of Protected Cultivation of Hi-Valued Vegetable Crops" held at ASPEE College of Horticulture and Forestry, NAU, Navsari, Gujarat, India during February 01-03, 2018.
- 10. Kumar Sanjeev, Patel, N. B. and Saravaiya, S. N. have received Best Paper Presentation Award for the research paper entitled "Pruned side shoots as propagation material in greenhouse cucumber production system" during National Seminar on "Technologies and Sustainability of Protected Cultivation of Hi-Valued Vegetable Crops" held at ASPEE College of Horticulture and Forestry, NAU, Navsari, Gujarat, India during February 01-03, 2018.
- 11. Futuristic Turfgrass Breeding and Management Strategies by Roshni Agnihotri, Y.C. Gupta, S.L. Chawla and Priyanka Sharma was adjudged Best Oral Presentation during the session New paradigms in extension Approaches in National Conference on floriculture for Rural and Urban Prosperity in the Scenario of Climate Change at CAE and PHT, CAU, Ranipool, Silkkim (February 16-18, 2018).
- 12. Effect of media and foliar spray of primary nutrients (NPK) on growth and yield of anthurium (*Anthurium andreanum*) var. Tropical under greenhouse by Tatte Sumathi, S.L. Chawla, Sudha Patil, T.R. Ahlawat and Dipal Bhatt was adjudged Best Oral Presentation during the session Organic Floriculture, Climate Change and Sustainable Floriculture in National Conference on Floriculture for Rural and Urban Prosperity in the Scenario of Climate Change at CAE and PHT, CAU, Ranipool, Silkkim (February 16-18, 2018).
- Effect of vase solutions on cut flowers of different varieties of heliconia authored by Unnatiben R. Patel, Sudha Patil and S. L. Chawla adjudged as Best Oral Presentation in National Conference on Floriculture for Rural and Urban Prosperity in the Scenario of Climate Change held at CAE&PHT (CAU), Ranipool, Sikkim from Feb. 16-18<sup>th</sup>, 2018
- 14. Vertical garden- a novel concept of urban ornamental horticulture authored by M. A. Patel, S. L. Chawla, H. P. Shah, Sudha Patil and Dipal Bhatt adjudged as best oral Presentation in National symposium on Recent Advances in Floriculture and Urban Horticulture in Global Perspective, January 4-5, 2018.
- 15. Dr. K. B. Rakholiya received Best Oral paper Presentation award during National Seminar on "Technologies and Sustainability of protected cultivation for Hi-Valued Vegetables crops"NAU, Navsari for paper entitled "Biopriming of tomato seed for the management of damping off disease" held during01-03-2018.
- 16. Rajkumar B. K., B. Fakrudin, Suvarna Patil., Gaurav Chaudhari., 2017. Awarded best oral presentation "Introgression of stay-green and water use efficiency QTLs into popular M35-1 sorghum variety using marker-assisted selection" at international symposium on Emerging Biological Trends in 21<sup>st</sup> Century organized by school of sciences, PP Savani University, Kosamba, Gujarat, India on November 05, 2017.

### **Poster Presentation Award**

1. Mr. Mukesh Kumar, Dr. N S Thakur, Mr. Kirti Bardhan and Mr. J B Bhusara, received the Second Prize in Poster Presentation for the paper entitled "Growth and physiological parameters of *ocimum spp.* under teak Ocimum spp. based silvi-medicinal and sole cropping systems" in the National Conference on Climate Change and Agricultural Production from April 6 to 8, 2017 held at Bihar Agricultural University, Bhagalpur, Bihar.

- 2. Dr. Alka Singh was conferred the Best Poster Paper award for the paper entitled, 'Standardization of Grafting Techniques in Adenium' authored by Alka Singh, Ankit Bhandari, Mamilla Sindhuja and B N Patel in the National Conference on Floriculture for Rural and Urban Prosperity in the Scenario of Climate Change at CAE and PHT, CAU, Ranipool, Silkkim during February 16-18, 2018.
- 3. Standardization of drying technique of rose var. Top Secret, Gold Strike and Rewine authored by Alka Singh, A.J. Bhandari and H.P. Shah was adjudged as Best Poster Paper in the National Seminar cum Exhibition on 'Awareness and Promotion of Dry Flower Exports and Industry in Gujarat. June 11, 2017 NAU, Navsari.
- 4. Desai, K. D., Sheth, S. G., Navya, K. and Chaudhary, Sahdev have received best poster award entitled "Hi-valued vegetable crops organically grown under protected Structure" in the thematic area of "Emerging Trends in Protected Cultivation" during National Seminar on "Technologies and Sustainability of Protected Cultivation for Hi-valued Vegetable Crops" held at ASPEE College of Horticulture and Forestry, Navsari Agricultural University, Navsari during 01-03 February, 2018.
- 5. Microgreen Production Micro Revolution Through Hydroponic authored by Ranjita Kulkarni and Sudha Patil was adjudged as Best Poster Presentation in National seminar on Technologies and Sustainability of Protected Cultivation for Hi- valued held at ACHF, NAU from Feb. 01-03<sup>rd</sup>, 2018.
- Agnihotra farming- A sacred fire to floriculture authored by Ranjita Kulkarni, Sudha Patil and S. L. Chawla was adjudged as Best Poster Presentation in National Conference on Floriculture for Rural and Urban Prosperity in the Scenario of Climate Change held at CAE&PHT (CAU), Ranipool, Sikkim from Feb. 16-18<sup>th</sup>, 2018.
- 7. Dr. P. B. Patel Second best poster paper presentation on "Eco-friendly management of thrips by optical manipulation under protected cultivation in vegetable garlic during winter season" in National Seminar on Technologies and sustainability of Protected Cultivation for Hi-Valued Vegetable Crop

### **STUDENTS ACHIEVEMENTS**

- Mr. Vishal R. Bhimani MBA (ABM) student secured the **Second Prize in "Debate Contest"** at the Gujarat Inter Agricultural University Cultural and Literary Competition at NAU, Navsari on October 5, 2017.
- Western Zone Veterinary Physiology Quiz Competition was organized by the Department of Veterinary Physiology and Biochemistry at Veterinary College, NAU, Navsari on November 24, 2017. Ten teams comprising of students from Maharashtra, Gujarat, Chhattisgarh and Madhya Pradesh (M.P.) participated in the competition. The team of College of Veterinary Science and Animal Husbandry, NAU, Navsari (Meenal-III year B.V. Sc & A.H., and Thakor Hiralben Prabhatsinh -II year B.V.Sc & A.H.) were declared the winner and qualified to represent West Zone at National Veterinary Physiology Quiz to be held at Veterinary College, Bidar (Karnataka).
- Meenal and Hiral Thakor, students of College of Veterinary Science and Animal Husbandry were **runners up in the National Veterinary Physiology Quiz Competition** held on December 21, 2017 at the XXVI Annual Conference of Society of Animal Physiologists of India (SAPI) organized at College of Veterinary Science, Bidar, KAFSU, Karnataka.

### **GUEST LECTURES**

# Guest Lecture on "Need for Second Green Revolution in India"

Mr. Rakesh Sharma, Territory Manager Traits, Mahyco Monsanto Biotech (India) Pvt. Ltd. delivered a talk on the topic "Need for Second Green Revolution in India" on December 1, 2017. He discussed challenges faced by Indian Seed Industry and threw light on the strategies to be implemented by different stakeholders for growth of Indian Seed Industry.



### Guest Lecture on "Unleashing the Hidden Potentials-Moving from Loser to Winner"

AABMI organized a Guest Lecture on "Unleashing the Hidden Potentials-Moving from Loser to Winner" in association with NMA, Navsari on October 7, 2017 for 90 PG students and 37 faculty members. Mrs. Madhavi Shah - the NMA Coordinator briefed about the underlying objectives, key takeaways and modalities of the programme. In his presidential remarks, the Hon'ble Vice Chancellor of NAU, Navsari - Dr. C. J. Dangaria congratulated the institute for taking such initiative and



urged the august gathering to believe in "Self Empowering Oneself". Then Reiki Master Guru Ajit Telangji mesmerized participants with valuable research based insights on development of positive personality.

### Guest Lecture on "Agri-Export: A Brief Insight"

Ms. Bansari Nishar Shah, an alumnus of the Institute and a budding Agri-Entrepreneur-Exporter Nishar Farms delivered a talk on the topic "Agri-Export: A Brief Insight" on September 18, 2017.

### Guest Lecture on "Scope of Agricultural Engineers in Micro Irrigation Sector"

Student startup Committee, CoAE&T, Dediapada organized a one day workshop and invited a guest lecturer and expert, Er. Paresh Parsana, State Head, Irrilink Drip Irrigation Industries for delivering a talk regarding scope of agricultural engineers in micro irrigation sector" on December 16, 2017.

#### Memorandum of Understanding Signed

A Memorandum of Understanding was inked with M/s Eco-Phillip at Jalgaon, Maharashtra for commercial production and marketing of Banana pseudostem based liqiud Organic Nutrients on April 17, 2018 at Navsari. This MoU was signed by Dr. S.R. Chaudhary, DR and Dean, PGS, NAU and Mr. Rahul Patil, Proprietor, Eco-Philip in the presence of Hon'ble Vice Chancellor, Dr. C.J. Dangaria.



### **VISIT OF DIGNITARIES**



Kendra, NAU, Surat on July 22, 2017



Brena Buswell, Lexington and other team members Visit of Dr. Naveen Patle, Deputy Commisioner-December 11, 2017



Shri R.C. Faldu, Hon'ble. Minister of Agriculture, Dr. K.V. Prasad, Director, ICAR-Directorate of 2018



Shri Chhabilendra Roul, Additional Secretary (DARE) Dr. G. Kallo Former DDG (Crops) and Vice & Secretary (ICAR), New Delhi visited Krishi Vigyan Chancellor, JNKVU, Jabalpur visited Agricultural Educatorium on September 20, 2017



from USA visited Agricultural Educatorium on Horticulture, New Delhi visited ACOH college on January 8, 2018



GoG, visited SWMRU, NAU, Navsari on January 19, Floriculture Research, Pune visited Floriculture Farm on February 16, 2018

#### ANNUAL REPORT 2017-18



8.2018



ICAR-NBAIR, Bangalore visited NAU on 08-11-2017 visited AES, Paria on dated 05.6.2017



Mr. Carlos Dias, Counsellor, Embassy of Republic of Members of PRT team of ICAR and Vice Chancellor Angola visited Banana Pseudostem Project on March Dr. C.J. Dangaria sir interacting with students under Experiential Learning (20/9/2017)



Dr. M. Mohan, Principal Scientist (Entomology), Dr. Prakash Patil, Project Coordinator ICAR-AICRP-F



Visit of Shri Chhabilendra Roul, Additional Secretary Member of NSP Monitoring team :- Dr. P. S. Shukla, Station, NAU, Surat (22.07.2017)



(DARE) & Secretary (ICAR) at Main Cotton Research GBPAUT, Pantnagar & Dr. N. K. Gupta, Seed Technology, Jodhpur visited Seed Museum and Seed Production Plots at different station of NAU, Navsari

#### ANNUAL REPORT 2017-18



Visit of Dr. Prabhakar, PC AICRP-SM, to AICRP-Small Millets project, HMRS, Waghai experiments (state and AICRP) on 11/10/2017



Visit of Dr. Nirmala kumari, Principal Scientist, Plant Breeding and Dr. Subshree, Scientist (Agronomy) ICAR, AICRP-SM, Bangalore to HMRS, NAU, Waghai on 06/10/2017 -07/10/2017



factory visited MSRS Farm on 02/06/2017



Shri. Mansingbhai Patel, Chairman of Mahuva Sugar Director of Research Dr. S. R. Gadakh, MPKV, Rahuri, Maharashtra Visited MSRS on 17/11/2017



Field visit of Hon. Vice Chancellor Dr. C. J. Dangaria to Visit of AICRP monitoring team to Niger Experiments experiment plots at NRS Vanarasi on 13th October, at Vanarasi on 15-16 November, 2017 2017



# 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, Dediyapada (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 programme. At present, NAU offers seven Undergraduate, 46 Masters and 26 Doctoral degree programmes in agriculture and allied science.

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

Sr.		No. of	No. of Degree Programmes					
No.	Faculty	Departments	UG	Intake	Masters	Intake	Ph.D.	Intake
1.	Agriculture	11	1	242	12	126	09	33
2.	Veterinary	18	1	77	15	47	7	9
3.	Horticulture	07	1	66	7	47	5	12
4.	Forestry	05	1	66	4	14	3	4
5.	Biotechnology	05	1	55	0	0	0	0
6.	Agribusiness Management	04	0	0	1	37	0	0
7.	Agricultural Engineering	04	1	30	3	11	0	0
8.	Fisheries Science	04	1	20	0	0	0	0
Total		58	7	556	42	282	24	58

#### **Details of Degree Programmes of NAU**

# PG Degree Programmes Faculty: Agriculture

Sr. No.	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	Yes
7	Agril. Economics	Yes	Yes
8	Extension Education	Yes	Yes
9	Agril. Statistics	Yes	Yes
10	Agril. Meteorology	No	No
11	Agril. Microbiology	Yes	No
12	Biochemistry	Yes	No
13	Plant Molecular Biology & Biotechnology	Yes	No
	Total	12	9

# **Faculty: Horticulture**

Sr. No	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	No
	Total	7	5

# **Faculty: Forestry**

Sr. No	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	No
	Total	4	3

# Faculty: Agri-Business Management

Sr. No.	Name of Disciplines	MBA
1	Agribusiness Management	Yes
	Total	1

# Faculty: M.Tech (Agriculture Engineering & Technology)

Sr.No	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	Yes	No
4	Renewable Energy Engineering	No	No
	Total	3	0

# Faculty: Veterinary Science & A.H.

Sr. No	Name of Disciplines	M.V.Sc.	Ph.D.
1	Veterinary Surgery & Radiology	Yes	Yes
2	Veterinary Physiology	Yes	Yes
3	Veterinary Biochemistry	Yes	Yes
4	Animal Biotechnology	Yes	No
5	Gynecology (ARGO)	Yes	No
6	Animal Nutrition	Yes	No
7	Veterinary Pharmacology & Toxicology	Yes	Yes
8	Veterinary Microbiology	Yes	Yes
9	Livestock Production and Management	Yes	No
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	No	No
	Total	15	7

### **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, 748 students were admitted in different UG and PG degree programmes offered by the NAU. This included 469 students in UG programmes, 218 in Masters and 61 in Ph.D degree programmes of the University. During the year 2017-18, admissions to undergraduate degree programme was increased from 193 (2010-11) to 469, thus intake of UG degree programme was increased by **243** percent.

Thus overall admission to various degree programmes was increased from 391 (2010-11) to 748 (2017-18) students and increase was recorded as high as **191** percent.

# **Students Admitted**

Sr. No.	Degree programme	No. of Students admitted
Underg	graduate	
1.	B.Sc. (Hons.) (Agriculture)	246
2.	B.Sc. (Hons.) (Horticulture)	49
3.	B.Sc. (Hons.) (Forestry)	16
4.	B.V.Sc. and A.H.	78
5.	B.Sc.(Biotechnology)	32
6.	B.Tech (Agril.Engineering)	23
7	B.Sc.(Fisheries Science)	25
	Total	469
Master	S	
1.	M.Sc. (Agriculture)	108
2.	M.Sc. (Horticulture)	45
3.	M.Sc. (Forestry)	05
4.	M.V.Sc.	19
5.	M.B.A (ABM)	34
6.	M.Tech.	07
	Total	218
Ph. D.		
1.	Agriculture	38
2.	Horticulture	13
3.	Forestry	03
4.	Veterinary	04
5.	M.Tech.	02
6.	Ph.D. (ABM)	01
	Total	61
	Total Admission	748

# Students admitted to Polytechnic 2017-2018

Sr. No.	Courses	No. of Students admitted
1.	Polytechnic in Agriculture, Bharuch.	33
2.	Polytechnic in Horticulture, Navsari.	30
3.	Polytechnic in Agriculture, Vyara.	35
4.	Polytechnic in Agriculture, Waghai.	35
5.	Polytechnic in Agricultural Engineering, Dediapada.	24
6.	Polytechnic in Animal Husbandry, Navsari	34
7.	Polytechnic in Horticulture, Paria	31
	Total Admission	222

### Syllabus implemented

External system of examination for B.Sc. (Agri) is being implemented as per the recommendations of ICAR and 4<sup>th</sup> 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.

### **Pass out students**

During the year 2017-18, total 439 undergraduate students including 244 B.Sc.(Agriculture), 66 B.Sc.(Horticulture), 27 B.Sc.(Forestry), 48 B.V.Sc. & A.H, 26 B.Sc. (Agril. Biotechnology) and 28 B.Tech. (Agri. Engineering & Technology) passed out from different faculties of NAU.

A total of 249 students completed their postgraduate studies at NAU. Out of 249 post graduates, 44 students completed Ph.D. and 205 students completed masters in Agriculture (109), Horticulture (32), Forestry (16), Veterinary (15), ICT in Agriculture (06) and Agribusiness Management (27) during the year 2017-18.

### **Experiential Learning Units**

Presently, seven 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. The details of ELP are given as under:

Sr. No.	Name of ELP Unit	Sanctioned during	Name of Institute
1.	Bio fertilizer	2006	N. M. College of Agriculture, Navsari
2.	Onion Dehydration	2006	Aspee College of Horticulture, Navsari
3.	Tissue Culture	2007	N. M. College of Agriculture, Navsari
4.	High-tech Horticulture	2008	Aspee College of Horticulture, Navsari
	(Floriculture)		
5.	Commercial Apiculture	2011	College of Forestry, Navsari
6.	Commercial Horticulture	2011	Aspee College of Horticulture, Navsari
7.	Broiler and Layer	2013	Vanbandhu College of Veterinary Science & Animal
	Production unit		Husbandry, Navsari
8.	Goat Production Unit	2014	Vanbandhu College of Veterinary Science & Animal
			Husbandry, Navsari
9.	Quality Planting Materials	2015	College of Forestry, Navsari

Sr No	Fooulty	No. of Students qualified				
Sr. 10.	Faculty	ICAR-JRF	ICAR-SRF	ARS	NET	
1	Agriculture	22	4	0	67	
2	Veterinary	16	0	0	07	
3	Horticulture	04	0	0	32	
4	Forestry	07	0	0	5	
5	Agricultural Biotechnology	08	0	0	0	
6	Agribusiness Management	0	0	0	2	
7	Agri. Engineering	06	0	0	0	
	Total	63	4	0	113	

### Student's Achievements at National Level Competitions (2017-18)\*

\* details are given in respective Colleges

### **RAWE Programme / National Talent Scholarship (NTS)**

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

Sr. No.	Year	N. M. College of Agriculture	ASPEE College of Horticulture and Forestry	College of Vet. Sci. & A.H.	Aspee Shakilam Agri Biotechnology Institute	Total
1	2010-11	72	32	-	-	104
2	2011-12	68	29	-	-	97
3	2012-13	59	54	-	-	113
4	2013-14	84	55	-	-	139
5	2014-15	94	91	-	-	185
6	2015-16	118	107	-	-	225
7	2016-17	178	127	-	-	305
8	2017-18	212	110	22	28	372

### **National Talent Scholarship**

NTS financed by ICAR, New Delhi was granted to a total of 136 students including 58 students of Agriculture, 46 from Horticulture & Forestry, 22 students of Veterinary Sciences, 2 students of Agricultural Biotechnology and 8 students of Agribusiness Management faculties of the University during the year 2017-18.

### **Teacher's Strength**

During the year 2017-18 a total strength of teacher working at different faculties was 464 including one Director, four Principal/Dean, two Associate Director, 34 Professor and its equivalent, 106 Associate Professor and its equivalent and 324 Assistant Professor and its equivalent.

# StaffPosition

### **Details of activity wise Posts filled**

Name of Post	Education	Research	Extension	Total
Professor	28	6	00	34
Associate Professor	74	29	3	106
Assistant Professor	209	78	37	324
Total	311	113	40	464

# 5. N. M. College of Agriculture

Navinchandra Mafatlal College of Agriculture known as N. M. College of Agriculture was the first educational institute related to agriculture in the region of south Gujarat established in May-1965 with a vision to impart agricultural education and uplift the socio-economic status of the agricultural based community. The college was affiliated to Gujarat University, Ahmedabad from 1965 to 1968, South Gujarat University, Surat from 1968 to 1972 and erstwhile Gujarat Agricultural University (GAU) from 1972 to 2004 respectively. With the promulgation of GAU in 2004, N M College of Agriculture became the constituent college of Navsari Agricultural University (NAU). During the year 2014-15 N. M. College of Agriculture has completed its fifty years of establishment. Since last fifty years the institute achieved a noteworthy recognition for its quality education, research and extension and has been rendering a ceaseless service in the form of generating quality trained human resources and technologies for the betterment of its ultimate users and blossomed into one of the leading agricultural college of Gujarat.

To keep in pace with the advancement and requirement of the agricultural education system, the college adopted the revised academic curricula recommended by different Dean's committee from time to time to maintain the standard of teaching. To offer on hand training to the students while learning, the college has been successfully running the Experimental Learning programme (ELP) with the establishment of Biofertilizer Production Unit and received magnificent appreciation from ICAR and Nationwide. Above the all, the college had also implemented the "Best Teacher Award Scheme" as per ICAR guide line since 2011 to encourage the morality and dedication of the faculties towards teaching. The college has twelve departments to impart quality teaching to the students enrolled in undergraduate and postgraduate degree programme. After 2004 under the flagship of Navsari Agricultural University, the college flourished with all types of infrastructural facilities to attract more students at national and international level to pursue their UG and PG degree programmes. The college has implemented the V Deans committee recommendations from 2017 to cope with the need based and recent advancement of higher education. Since its inception NMCA has generated more than 3508 undergraduate and 1873 (1480 M. Sc. and 393 Ph. D.) post graduate students so far. A total 134 undergraduate and 126 postgraduate students had obtained their respective degrees during the year under report. A total 29 research projects are funded by various agencies viz., GoG Scheme, other agency, ICAR, DST and IMD going on in NMCA. The department of plant pathology has produced around 56093 litres of biofertilizers of different strains. The department of Entomology has produced 1181 trichocards and 510 chrysocards for the benefit of the farmers. Department of Genetics and Plant Breeding has produced 10270 banana tissue culture plants.

Overall 20 students of N. M. College of Agriculture have qualified ICAR JRF exam, 67 qualified ICAR NET exam, four students have cleared ICAR SRF exam and three students got admission in deemed university of ICAR during the year 2017-18. This success at national level competitive examinations reflects the ability of students, excellent teaching facilities, hardworking teaching staff and conducive atmosphere of education at N. M. College of Agriculture, NAU, Navsari. The college publishes "*Navkrushak*" magazine every year, which is a sign of extracurricular activities of students as well as faculties of N. M. College of Agriculture.

### **List of Departments**

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

# Academic programmes

Degree Programme	Duration	Total Credit (Th+P)
B. Sc. (Hons) Agriculture	8 Semesters	88+97=185
M.Sc. (Agri.)	4 Semester	54
Ph.D.	6 Semester	73

# Under Graduate syllabus (as per fifth Deans' recommendations)

Semester	Number of Courses	Total Credit (T+P=)
First Semester	11	14+8=22
Second Semester	11	16+8=24
Third Semester	10	15+9=24
Fourth Semester	12	15+9=24
Fifth Semester	11	14+10=24
Sixth Semester	11	14+11=25
Seventh Semester	2	0+22=22
Eight Semester	1	0+20=20
	Total	185

### **Post Graduates programmes**

Sr. No.	Department/subject	Masters' Degree	Doctoral Degree (Yes/No)
1.	Department of Agronomy	Yes	Yes
2.	Department of Soil Science and Agril. Chemistry	Yes	Yes
3.	Department of Agricultural Statistics	Yes	Yes
4.	Department of Entomology	Yes	Yes
5.	Department of Agricultural Economics	Yes	Yes
6.	Department of Plant Pathology	Yes	Yes
7.	Department of Agricultural Engineering	Yes	No
8.	Department of Horticulture	Yes	No
9.	Department of Genetics and Plant Breeding	Yes	Yes
10.	Department of Extension Education	Yes	Yes
11.	Food Quality Testing Laboratory	Yes	No
12.	Department of English	Yes	No
13.	Department of Animal Sciences	Yes	No
	Total	13	8

# Students Information

<b>Summary</b>	of	students	admitted	during	the	vear	2017-18
•						•	

Degree	Condon	Intake	Con	SEDC	SC	ст	ST CRSE	ICAR		Foreign	Total
Degree	Gender	capacity	Gen	SEDU	SC	51	CDSE	Guj	Other*	roreign	Total
B.Sc.	Male		53	12	2	5	3	-	8	-	83
(Hons.)	Female	112	22	6	4	9	4	-	6	-	51
Agri.	Total	1	75	18	6	14	7	0	14	0	134
MSo	Male		44	14	5	5	-	-	9	2	79
(Aori)	Female	125	11	8	1	1	-	-	8	-	29
(11511.)	Total		55	22	6	6	0	0	17	2	108
	Male		4	7	1	5	-	-	1	-	18
Ph. D.	Female	33	9	2	1	1	-	-	7	-	20
	Total		13	9	2	6	0	0	8	0	38
Gr	and Total		143	49	14	26	7	0	39	2	280

**Gujarat** \* Other State

Summary of students enrolled

Degrees	Voor	Condon	Com	SEDC	50	ст	CDSE	IC	CAR	Equian	Tatal
Degree	ycai	Gender	Gen	SEDC	SC	51	CDSE	Guj	Other*	roreign	Iotai
	1	Male	53	12	2	5	3	-	8	-	83
		Female	22	6	4	9	4	-	6	-	51
	2	Male	40	23	7	8	-	-	6	-	84
		Female	18	3	3	14	1	-	2	-	41
B.Sc.	3	Male	62	21	1	10	-	-	7	-	101
		Female	13	6	5	10	4	-	5	-	43
	4	Male	30	26	4	14	-	-	3	-	77
		Female	22	10	3	12	-	-	9	-	56
		Total	260	107	29	82	12	0	46	0	536
	1	Male	44	14	5	5	-	-	9	2	79
		Female	11	8	1	1	-	-	8	-	29
M. Sc.	2	Male	27	14	5	5	-	-	13	1	65
		Female	17	11	2	10	-	-	16	-	56
		Total	99	47	13	21	0	0	46	3	229
	1	Male	4	7	1	5	-	-	1	-	18
		Female	9	2	1	1	-	-	7	-	20
	2	Male	12	2	1	2	-	-	4	-	21
Ph. D.		Female	5	0	0	0	-	-	1	-	6
	3	Male	10	0	1	2	-	-	3	-	16
		Female	2	1	0	1	-	-	1	-	5
		Total	42	12	4	11	0	0	17	0	86
	Gra	nd Total	401	166	46	114	12	0	109	3	851

**Gujarat** \* Other State

# Summary students of passed out (2017-18)

	Distribution of students in different classes									
Gender	First with Distinction	First class	Second class	Passed class	Total					
Under Graduate										
Male	19	37	21	1	78					
Female	40	16	-	-	56					
Total	59	53	21	1	134					
Post Graduate (Master)										
Male	15	48	14	-	77					
Female	13	16	3	-	32					
Total	28	64	1		109					
Doctoral										
Male	4	8	-	-	12					
Female	4	1	-	-	5					
Total	8	9	-	-	17					

# **Students Financial aid**

Name of the	Under-g	graduate	Mas	sters	D	octorate	
fellowship	No. of Students		No. of S	Students	No. of Students		Total
	Male	Female	Male	Female	Male	Female	
NTS-UG	20	12	-	-	-	-	22
NTS-PG	-	-	15	18	-	-	33
ICAR-JRF	-	-	-	-	3	3	6
ICAR-SRF	-	-	-	-	2	-	2
STUDENT READY	63	39	-	-	-	-	102
INSPIRE	-	-	-	-	1	1	2
NAU PG fellowship	-	-	1	1	1	1	4
NAU Girls meritorious fellowship	-	16	-	-	-	-	16
ASPEE JRF	-	-	5	-	-	-	5
SC/ST/fellowship	8	9	4	2	1	2	26
SEBC fellowship	73	25	25	21	9		153
Total	164	101	50	42	17	7	371

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Cut off marks for admission to UG degree Programme (2017-18)

Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
General	40	67.16
ST	35	45.83
SC	35	52.81
OBC/SEBC	40	61.83
	Category General ST SC OBC/SEBC	CategoryMinimum requirement of Marks (%) (PCB)General40ST35SC35OBC/SEBC40

Number of students qualified JRF during year/Number of UG students passed out

Year	Number of students got JRF	Number of UG students passed out
2017-18	0	134

# **Students qualified ICAR JRF**

Sr. No.	Name of the students	Subject/s /Rank obtained	Sr. No.	Name of the students	Subject/s /Rank obtained
1.	Arpita Meena	Agronomy/431	11.	Malek Shanabanu Hafizmiya	Social Science/337
2.	Priyanka Saini	Agronomy/484	12.	Patel Hetalben Mukeshbhai	Social Science/202
3.	Rahulkumar Raushan	Agronomy/422	13.	Patel Jaivikkumar Kaushik	Social Science/228
4.	Raushankumar	Agronomy/377	14.	Patel Snehalkumar Atulbhai	Social Science/220
5.	Thanki Aishwary	Agronomy/409	15.	Pithiya Neeta devshibhai	Social Science/282
6.	Adithya G. Raj	Soil.Sc.Ag. Chem./438	16.	Jat Monika	Entomology/512
7.	Chauhan Aditi Rajeshbhai	Soil.Sc.Ag. Chem./411	17.	Dharajiya Chaman K.	Entomology/423.8
8.	Geeta	Soil.Sc.Ag. Chem./412	18.	Kaneteeya Hasmukh G.	Entomology/390.8
9.	Mamta	Soil.Sc.Ag. Chem.	19.	Agina Goapn	Plant Science/477
10.	Patel Abainav Nalinchandra	Soil.Sc.Ag. Chem./328	20.	Lekshmi Vijayn R.	Plant Science/377

# Students Performance at M.Sc. Level

Year	Number of M.Sc/M.V.Sc passed outs qualified SRF or admission in Ph. D in ICAR Deemed University	Students qualify NET examination	Number of M.Sc/M.V.Sc passed outs
2017-18	4	67	109

### **Students qualified SRF**

Sr. No.	Name of the students	Reg. Number	Subject	Rank/Marks
1.	Stuti Debapriya Behera	2010115111	Agronomy	85.25/200 Gen
2.	Dinesh Kumar	2010115035	Agronomy	93/200 Gen
3.	Kalpana Bhoya	2010115014	Agril. Ento.	21.75/200 ST, PH
4.	Pooja Gamit	2010115042	Agril. Econ.	61.25/200 ST

# Students qualified entrance examination (Ph.D.) of ICAR Deemed University

Sr. No.	Name of the students	Reg. Number	Subject/s /Rank obtained
1.	Vivek T. S.	2010115118	Agril. Entomology
2.	Onte Santosh	2010115105	Agronomy
3.	Dinesh Kumar	2010115035	Agronomy

# **Students qualified National Eligibility Test (NET)**

Sr. No.	Name of the students	Subjects	Sr. No.	Name of the students	Subjects
1.	Patel N. M.	Agril. Ento.	35.	Santosh Onte	Agronomy
2.	Godhani H. S.	Agril. Ento.	36.	Dinesh Kumar	Agronomy
3.	Hadiya G. D.	Agril. Ento.	37.	Bachcha Ram Varma	Agronomy
4.	Konkani P. P.	Agril. Ento.	38.	Rameti Jangir	Agronomy
5.	Patel Jignesh D.	Agril. Ento.	39.	Tajane Diksha S.	Agronomy
6.	Rathod Karishma R.	Agril. Ento.	40.	Pagar Ram Dhanraj	Agronomy
7.	Thorat Sajnu S.	Agril. Ento.	41.	Borse Dipak Kashinath	Agronomy
8.	R. Naganna Chennaiah	Agril. Ento.	42.	Chaudhari Vishakha D.	Agronomy
9.	Chauhan Rinkikumari C.	Agril. Ento.	43.	Anil Kumar Mawalia	Agronomy
10.	Mahendrakumar B. N.	Agril. Ento.	44.	Ghevariya T. V.	Pl. Patho.
11.	Patel R. K.	Agril. Ento.	45.	Dore R	Pl. Patho.
12.	Kachhela H. R.	Agril. Ento.	46.	Kishan Kumar Sharma	Pl. Patho.
13.	Zinzuvadiya H. D.	Agril. Ento.	47.	Bipinchandra Vahunia	Pl. Patho.
14.	Vivek T. S.	Agril. Ento.	48.	Arjunsinh Rathva	Pl. Patho.
15.	Prajapati J. N.	Agril. Ento.	49.	Chaudhary Dinesh H.	Pl. Patho.
16.	Srinivas G.	Agril. Ento.	50.	Chaudhary Mahesh M.	Pl. Patho.
17.	Dalvaniya D. G.	Agril. Ento.	51.	Kapadiya Rasik K.	Pl. Patho.
18.	Bhadani D. J.	Agril. Ento.	52.	Akhila K.	Soil Sc.& Ag. Che.
19.	Sathish B.N.	Agril. Ento.	53.	Priyanka Pannu	Soil Sc.& Ag. Che.
20.	Patel Minalben B.	GPB	54.	Saxena Mitulkumar I.	Soil Sc.& Ag. Che.
21.	Jay Prakash	GPB	55.	Sourav Choudhary	Soil Sc.& Ag. Che.
22.	Parmar Reena D.	GPB	56.	Gohil Narasinhbhai S.	Soil Sc.& Ag. Che.
23.	Vekariya Rajesh D.	GPB	57.	Lokesh kumar Saini	Soil Sc.& Ag. Che
24.	Dipesh Borwal	GPB	58.	Kudache Akshay N.	Crop Physiology
25.	Shreya Sen	GPB	59.	Jadhav Sagar Kanjibhai	Crop Physiology
26.	Rathod Ashish	GPB	60.	S. Sree Ganesh	Crop Physiology
27.	Pampania Arashi	GPB	61.	Babhore Jayeshkumar	Crop Physiology
28.	Ganvit Rakesh	GPB	62.	Tengli Mahesh B.	Agri. Extn.
29.	Chaudhary Mahendra	GPB	63.	Munni Kumari	Agri. Extn.
30.	Sangani Jaydeep	GPB	64.	Dhodia Arpit J.	Agri. Extn.
31.	Patel Himalaya	GPB	65.	Amruta Babu	Ag. Econ.
32.	Alok Shive	GPB	66.	Meghana Y. L.	Ag. Econ.
33.	Ramprakash Gupta	GPB	67.	Abuj Bhagyashree B	Biochemistry
34.	Deep Singh Rajpurohit	Agronomy			

### **Placement Cell**

Dograa	Total Passed	Hi stu	gher Idies	Govt.	Private	NGOs	Abroad	Self-	Un-
Degree	out	Guj	Other State	Jobs	Jobs		for job	urship	employed
B.Sc.	134	69	24	10	25	2	-	4	-
M.Sc.	109	51	11	20	29	4	-	4	-
Ph.D.	17	-	-	7	10	-	-	-	-
Total	260	120	35	37	64	6	-	8	-

## Guj-Gujarat

# **Students' activities:**



Cleaning of Hostel premises on the occasion of Swachha Bharat day by the student of N M College of Agriculture on 2 October, 2017



Thalassemia Check Up Camp organized by NMCA on 24 Feb, 2018



Cyber Crime and Traffic Awareness Seminar organized by NMCA in central examination hall on 6 March 2018



Special NSS camp organized at Kilad, Waghai (Dangs)by NSS unit NMCA during 19 to 25 March 2018.

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Annual Gathering of N.M. college of Agriculture "NISARGA-2017"





Hon'ble Vice Chancellor of NAU Dr. C. J. Dangaria with other dignitaries, inaugurating the intercollegiate cultural competition "GUNJAN-2017 on 26 September, 2017

Hon'ble Vice Chancellor of NAU Dr. C. J. Dangaria addressing the gathering on the occasion of intercollegiate cultural competition "GUNJAN-2017 on 26 September, 2017

# NSS activities 2017-18

Sr. No.	Activity	No of Volunteers
1	International Yoga Day 21 June, 2017	25
2	Orientation Programme 8 September, 2017	110
3	Celebration of Swatchhata Pakhawada 9 September, 2017	150
4	Celebration of Gandhi Jayanti (Swatchhta programme) 2 Oct, 2017	50
5	National Unity day celebration, 31 October, 2017	65
6	Shortcut to Success Lecture by Bhrmakumaris 7 November, 2017	75
7	Blood Donation Camp, 24 February, 2018	78
8	Thalassemia Check Up Camp, 24 February, 2018	110
9	Cyber Crime and Traffic Awareness Seminar, 6 March, 2018	185

# **Ongoing Educational/research/ Extension projects at College**

Sr. No.	Name of the projects	Funding agency	Location	
1	AICRP on IFS	ICAR	Dept. of Agronomy	
2	Establishment of Forage Research Station at Navsari	Govt. of Gujarat	Dept. of Agronomy	
3	Research in Weed Control at Navsari	Govt. of Gujarat	Dept. of Agronomy	
4	Monitoring of Karnal Technology at Abbott Healthcare Pvt. Ltd. Jhagadia	Other Agency	Dept. of Soil Science and Agril. Chemistry	
5	Scheme for strengthening research in agricultural economics	Govt. of Gujarat	Dept. of Economics	
6	The scheme for interlocking and exploring export potentiality for horticultural crops in South Gujarat at Navsari	Govt. of Gujarat	Dept. of Economics	
7	Research on Tillage Technology	Government of Gujarat	Dept. of Engineering	
8	Gramin Krishi Mausam Seva (GKMS)	Other Agency	Dept. of Engineering	
9	Forecasting Agricultural output using Space, Agro-meteorology and land based	Other Agency	Dept. of Engineering	
10	Research Studies on Mulberry Sericulture in South Gujarat Region	Government of Gujarat	Dept. of Entomology	
11	Scheme on forecasting weather and pest and Disease	Government of Gujarat	Dept. of Entomology	
12	Strengthening Research in Biological control of crop pests	Government of Gujarat	Dept. of Entomology	
13	All India Coordinated Research Project on Honey Bees& Pollinators	ICAR	Dept. of Entomology	
14	Evaluating Impact of Neonicotinoids on Pollinators	Other Agency	Dept. of Entomology	
15	AINP on Agricultural Acarology	ICAR	Dept. of Entomology	
16	Strengthening of Food Quality Testing	Government of	Food Quality Testing	
	Laboratory	Gujarat	Laboratory	
17	Status of Pesticides Residues in Agricultural Produce in South Guiarat	Government of Guiarat	Food Quality Testing	
18	Centre of Advanced Agricultural Science and	ICAR/World Bank	Food Quality Testing	
10	Technology	TOTAL WORK	Laboratory	
19	Genetic improvement and physiological	Government of	Department of	
	evaluation of Ginger, Turmeric and Sesbenia (Dhaincha)	Gujarat	Genetics and Plant Breeding	
20	Establishment of Department of plant Physiology, Tissue Culture and Bio- Technology at Agriculture College, Navsari	Government of Gujarat	Department of Genetics and Plant Breeding	
21	AICRP (spices) Volunteer center	ICAR	Department of Genetics and Plant	

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**Faculty information** 

					Composition of filled post								
		Sancti-	Filled posts	Educational qualification				Domicile state		Gender			
Sr. No.	Name of the Post	oned posts		Master		Doctoral		Cuiarat	Other	Mala	Famala		
				G	OS	G	OS	Gujarat	state	Wate	Female		
1	Professors	11	5	-	-	6	-	6	-	6	-		
2	Associate Professors	27	18	-	-	17	-	14	4	16	2		
3	Assistant Professors	57	40	16	2	16	7	29	11	29	11		
	Total	95	63	16	2	38	7	48	15	50	13		
Perce total	entage of filled post		66.31										

G: Gujarat, OS: Out State

### **Educational/Infrastructural Facilities:**

The college has five lecture halls and one seminar hall with LCD facility for proper teaching and learning process at UG and PG degree programme. Almost all departments possess spacious laboratories and PG lecture hall, well equipped with latest equipments. The college has a Central Instrumentation Laboratory having sophisticated instruments like X-ray, UV-vix-Spectrophotometer, Nitrogen Analyser, Image Analyzer, L. C. pro, HPLC, NMR, FTNIR, Blood Analyzer, Deep freeze up to -80°C, Microwave Digester, Super Critical Extractor, Atomic Absorption Spectrophotometer etc. The college has well equipped biofertilizer and biopesticide laboratory consists of isolation, inoculation, quality control, fermentation chamber and production rooms with well sprinted instruments viz., Automatic bollttle filling machine, fermentors, BIOLOG, PCR and Gel DOC etc. The college has its own computer laboratory to facilitate various software related training to students. The college has well equipped ELP on biofertilizers and tissue culture where students get hands on training on production of various biofertilizers and banana tissue culture plants on large scale.

The college has 20 ha instructional farm. The college possesses six well managed hostels namely Navoday, Navneet, two PG Hostels and two girls hostels. All hostels are located close to college and capable to accommodate almost all the students. The institute is very well supported with research facilities 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.

# **Experiential Learning Unit**

Title of ELU	ELU on Plant tissue culture
Year of establishment	2011
Name of Manager	Dr. A. V. Narwade
Activities	Hands on training on plant tissue culture variety G-9. In this process explants is selected and it is sterilized further then media is prepared. After media preparation the explants is inoculated and it is multicultured further. Afterwords rootings and hardening is done. Other related activities of plant tissue culture techniques also performed.
No. Students Beneficiaries	18
Amount earned per student	Nil



Title of ELU	ELU on biofertilizers
Year of establishment	2008
Name of Manager	Dr. Lalit Mahatma
Activities	In this ELU procedure for the establishment of Biofertilizers Production Unit and minimum facilities required for the commercial production of Biofertilizers are done. License procedure for the production and marketing of Biofertilizers through different agencies. Formulation of different Biofertilizers and mass production technology of different Biofertilizers viz., <i>Acetobacter, Azotobacter, Rhizobium</i> for the different crops, <i>Azospirillum</i> , Phosphate Solublizing Bacteria, Potash Mobalizing Bacteria and <i>Pseudomonas</i> . Quality analysis of different Biofertilizers formulations. Efficacy analysis in different conditions. Cost benefits analysis. Packaging and marketing of different Biofertilizers.
No. Students Beneficiaries	18
Amount earned per student	Nil


Production, demonstration and selling of bioagents at biocontrol laboratory

Trichoca (Nos.)	<mark>rds</mark> )	Chrysoca (Nos.)	rds	Beauveria bassiana (kg)		Metarhizium (kg)		Verticillium (kg)	
Production	Sold	Production	Sold	Production	Sold	Production	Sold	Production	Sold
1181	508	510	64	76	63.5	66	61.5	39	35.76

#### **Research publications**

- 1. Verma, B. R., Virdia, H.M. and Dinesh Kumar. (2017). Effect of Integrated Weed Management on Yield, Quality and Economics of Summer Sorghum (Sorghum bicolor L.).*International Journal of Current Microbiology and Applied Science*, 6(8): 1630-1636. (NAAS-5.38)
- 2. Verma, B.R., Virdia, H.M. and Dinesh Kumar. (2017). Integrated Weed Management in Sorghum. *The Bioscan*, Special issue 10: 167-173. (NAAS-5.32)
- 3. Chaudhary, S. R. and Virdia, H. M. (2018). Effect of spacing and irrigation on linseed (*Linum usitatissimum* L.) under south Gujarat condition. *Multilogic in Science*, 7(25): 33-35. (NAAS-5.20)
- 4. Jangir Rameti, Arvadiya, L. K. and Sunil Kumar (2017). Growth and yield of mustard (*Brassica juncia* L.), dry weight of weeds and weed control efficiency influenced by different planting methods and weed management. *International Journal of Current Microbiology and Applied Sciences*, (6)7:2586-2593. (NAAS-5.38)
- 5. Thakor, K.P. Usdadia, V.P. Savani, N.G., Arvadiya, L.K. and Patel, P. B. (2018). Effect of irrigation schedule and nitrogen management on productivity, profitability of summer pearl millet grown under clay soils of south Gujarat. *International Journal of Agricultural Science and Research*, 6(4):10-12.(NAAS-4.13)
- 6. Jangir Rameti, Arvadiya, L.K. and Rajpurohit, D. S. (2018). Effect of different planting methods and weed management practices on yield and economic of mustard (*Brassica juncea* L.) and weed population, weed dry matter accumulation, weed control efficiency, weed index, nutrient content and uptake by weeds. *International Journal of Current Microbiology and Applied Sciences*, 7(2):2588-2599. (*NAAS-5.38*)
- Chaudhari H.C., Patel, S.Y., Arvadiya, L. K. and Gamit, D.R. (2018). Weed management in tomato (Solanum lycopersicum L.) under south Gujarat conditions. Trends in Biosciences, 11(30):3602-3605. (NAAS-3.94)
- 8. Chaudhari, H.C., Patel, S.Y., Arvadiya, L. K. and Gamit, D.R. (2018). Yield and nutrient uptake by tomato as influenced by weed management practices.*International Journal of Chemical Studies*, 6(5):689-691.(NAAS-5.31)

- 9. Joshi, M. P., Pankhaniya, R. M. and Khan, N. M. (2018). Response of pearl millet (*Pennisetum glaucum* L.) to levels and scheduling of nitrogen under south Gujarat condition. *International Journal of Chemical Studies*, 6(1) 32-35.(NAAS-5.31)
- Bavalgave, V. G., Deshmukh, S. P., Tanki, J. D. and Usdadia, V. P. (2017). Effect of integrated weed management practices on winter season sorghum. *International Journal of Chemical studies*,5(5): 2075-2078 (NAAS-5.31)
- 11. Gudadhe Nitin, Tanki, J. D., Pankhaniya, R. M., Ardesana, R. B. and Bavalgave, V. G. (2017). Response of rabi hybrid castor to rate and source of nitrogen with and without biofertilizer. Indian journal of fertilizers, 13(7):42-46 (NAAS-2.66)
- 12. Rathod Manishaben, Bavalgave, V. G., Patil, V. A., and Deshmukh, S. P. (2018). Growth, yield and quality of sweet corn as influenced by spacing and INM practices under south Gujarat condition. *International Journal of Economic plants*,5(4): 170-173 (NAAS-4.08)
- 13. Rathod Manisha, Bavalgave, V. G., Tandel Bhumika, and Gudadhe, N. N. (2018). Effect of spacing and INM practices on growth, yield and economics of rabi sweet corn under south Gujarat condition. *International Journal of Chemical studies*,6(5): 247-250 (NAAS-5.31)
- 14. Makadia, J.J., Khatri, R.T. and Mistry, H.H. (2017). Economic viability of layer poultry farms in Navsari district of Gujarat. *Trends in Bioscience*, 10(43): 8991-8996. (NAAS 3.94)
- 15. Makadia, J.J., Mistry, H.H. and Kute, S.B. (2017). Impact of soil health card on fertilizers consumption and yield of sugarcane and kharif paddy in Gujarat State. *Economic Affairs*, 62(1):61-68 (NAAS-4.82)
- Banakara, K. B., Patel, J. B. Borse., D. K. (2018). Pre-harvest crop modelling of *kharif* rice using weather parameters in valsad district of south Gujarat. *Trends in Biosciences*, 11(1): 41-44 (NAAS-3.94)
- Aalok Shiv, Vinita Ramtekey, Vadodariya, G.D., Modha, K. G. and Patel, R. K.(2017). Genetic variability, heritability and genetic advance in F<sub>3</sub> progenies of mungbean [*Vigna radiata* (L.) Wilczek]. *International Journal of Current Microbiology and Applied Sciences*,6(12): 3086-3094. (NAAS-5.38)
- Patel, M. B., Patel, R. K., Modha, K. G., Vadodariya, G. D. and Parmar, V. K. (2017). Genetic studies on fruit yield and yield attributes of brinjal (*Solanum melongena* L.)*Trends in Biosciences*, 10(29): 6215-6219. (NAAS-3.94)
- 19. Dhoot Rupal, Modha, K.G., Dhirendra Kumar and Meenakshi Dhoot.(2017). Correlations and path analysis studies on yield and its components in mungbean (*Vigna radiata* (L.) Wilczek). *International Journal of Current Microbiology and Applied Sciences*, 6(5): 370-378. (NAAS -5.38)
- 20. Dhoot Rupal, Modha, K.G., Kumar, D., Dhoot, M. and Ahirwar, C. (2017). Analysis of correlations and path on yield and its components in F<sub>2</sub>population of mungbean (*Vigna radiata* (L.) Wilczek), *Int. J. Pure App. Biosci.* 5(3): 803-808. (NAAS -4.74)
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#### **Book Chapters**

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#### HRD Programmes Participation of Scientists

Particulars	Participants
Seminar/Symposia/Conference	21
Winter/Summer Schools	17
Workshop/Short term training	15
Total	53

# 6. College of Agriculture, Bharuch

The full-fledged College of Agriculture at Bharuch was started with multi-functional activities like Teaching, Research and Extension Education under Navsari Agricultural University, Navsari. This center is working for development of new technologies as per demand of the area. Looking to the growth and development of agriculture in the area or as a whole in Gujarat in recent era there is a huge demand of agricultural education in the region, especially, Bharuch as there is industrial development based on agriculture. There is shortfall of Agricultural graduates in the agro based industries and allied *viz;* banks and other government and non-government organizations. Therefore the college of Agriculture was started with financial support of Govt. of Gujarat during current year *i.e.* 2012.

#### **OBJECTIVES**

- To impart higher education in agriculture science and technology to create a cadre of agriculture professionals to meet the demand of agriculture sector of the state in general and south Gujarat in particular.
- To prepare ample human resource to carry out basic and modern applied research in agriculture and allied fields.
- > To cater the need for knowledge workers in our rural society and focus on life time employability rather than lifetime employment.

# **Celebration of YOGA Week**

# CELEBRATE YOGA WEEK (13 TO 20 JUNE 2017) 21<sup>st</sup> JUNE INTERNATIONAL YOGA DAY



#### **DEPARTMENTS**

The College of Agriculture, Bharuch is the most prestigious constituent of Navsari Agricultural University, Navsari started in 2012. It performs a dynamic and innovative education programme to meet the modern challenges of scientific manpower, vital and relevant research and effective extension services. Presently, the college has eleven departments, equipped with good quality instruments, experienced faculties and fully planned academic calendar.

# **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

Degree Programme	Duration	Total Credit (T+P)
B. Sc. (Hons) Agriculture	8 Semesters	89+97=186

# **Under Graduate syllabus (as per fifth Deans' recommendations)**

Semester	Number of Courses	Total Credit (T+P= )
First Semester	11	14 + 8 = 22
Second Semester	11	17 + 7 = 24
Third Semester	10	15 + 9 = 24
Fourth Semester	12	15 + 10 = 25
Fifth Semester	11	14 + 10 = 24
Sixth Semester	11	14 + 11 = 25
Seventh Semester	2	0 + 22 = 22
Eight Semester	1	0 + 20 = 20
	Total	89 + 97 = 186

# **Student Information**

Summary of students admitted during the year 2017-18

Degree Cando		Intake	Con	Con SEPC	SC .	ст		ICAR		Foreign	Total
Degree	Genuer	capacity	Gen	SEDC	SC	51	CDSE	Guj	Other*	I UICISII	IUtal
B.Sc.	Male		23	11	-	3	2	-	1	-	40
(Hons.)	Female	60	5	3	2	5	-	-	2	-	17
Agri.	Total		28	14	2	8	2	-	3	-	57
Grand	l Total		28	14	2	8	2	-	3	-	57

**Gujarat** \* Other State

Summarv	of stud	ents er	rolled
Summary	or state		II UIICU

Dograa	VOOR	Condor	Con	SERC	SC	ST	CRSE	IC	CAR	Foreign	Total
Degree	ycai	Genuer	Gen	SEDC	50	51	CDSE	Guj	Other*	Foreign	IUtal
	1	Male	23	11	-	0	0	-	01	-	40
	1	Female	05	0	02	0	-	-	02	-	17
	2	Male	19	10	01	03	01	-	-	-	34
	2	Female	06	02	01	05	02	-	-	-	16
B.Sc.	2	Male	23	10	02	03	-	-	-	-	38
	5	Female	06	04	01	03	03	-	-	-	17
	1	Male	15	10	03	04	03	-	-	-	35
	4	Female	13	03	-	03	-	-	-	-	19
	Te	otal	110	53	10	29	11	-	03	-	216
	Gran	d Total	110	53	10	29	11	-	03	-	216

Gujarat \*\* Other state

# Summary students of passed out (2017-18)

	Distribution of students in different classes								
Gender	First with Distinction	First class	Second class	Passed class	Total				
	Under Graduate								
Male	17	17	0	0	34				
Female	7	10	1	0	18				
Total	24	27	1	0	52				

# **Students Financial aid**

Name of the	Under -	graduate	Ma	sters	Γ	octorate		
fellowship	No. of Students		No. of S	Students	No. of Students		Total	
	Male	Female	Male	Female	Male	Female		
NTS-UG	01	02	-	-	-	-	03	
STUDENT READY	34	18	-	-	-	-	52	
SC/ST/fellowship	14	20	-	-	-	-	34	
SEBC fellowship	36	14	-	-	-	-	50	
Total	85	54	-	-	-	-	139	

# Cut off marks for admission to UG degree Programme (2017-18)

Sr. No.	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	40	64.72
2	ST	35	49.60
3	SC	35	61.37
4	OBC/SEBC	40	62.94

# Number of students qualified JRF during year/Number of UG students passed out

Year	Number of students got JRF	Number of UG students passed out
2017-18	Nil	52

## **Students qualified ICAR JRF**

Sr. No.	Name of the students	Reg. Number	Degree	Duration	Subject/s /Rank obtained
1.	Chovatia Sanketkumar Jitendrabhai	3010713008	B. Sc. (Hons.) Agri	2017	Plant Sciences (374 out of 650)
2.	Patel Himanshukumar Vaktabhai	3010713036	B. Sc. (Hons.) Agri	2017	Statistical Sciences (365 out of 650)

#### **Placement Cell**

Degree Programmes	Total Passed out	Hi stı Guj	gher Idies Other State	Govt. Jobs	Private Jobs	NGOs	Abroad for job / Study	Self Entrepreneur- ship	Un employed
B.Sc.	52	29	00	00	09	00	02	01	-
Total	52	29	00	00	09	00	02	01	-

# Guj-Gujarat Students activities:



NSS Special Camp at Nikora Village Di. Bharuch dated 12/03/2018to 18/03/2018



NSS Special Camp at Nikora Village Di. Bharuch dated 12/03/2018 to 18/03/2018

#### ANNUAL REPORT 2017-18



Inter College Table Tennis (women) Tournament at CaA Waghai on 12-09-2017 CoA Bharuch: Winner



GSA Inter University Kabaddi Tournament (men) at AAU, Anand on 23/24-11-2017 (NAU winner)



West Zone Inter University Kabaddi tournament on 19-22/11/2017



Zone Table Tennis (men) tournament at Jagaran Lake city University, Bhopal on 23-25/01/2018 West - Thakor Nirav participated from NAU



Gujarat Inter Agricultural University cultural and literary competition at NAU, Navsari on 12-09-2017 Winner in mime



Bharuch District level elocution 31-10-2017 CoA, Bharuch: Winner

#### NSS activities 2017-18

Sr. No.	Activity	No of Volunteers				
1	Blood Donation	24				
2	Yoga Day	78				
3	Swachhata Abhiyan	236				
4	Teachers Day	91				
5	Thalesammia Checkup Camp	92				
6	Special Camp	81				

**Faculty information** 

				Composition of filled post								
Sr.	Name of the Post	Sanc- tioned	Filled	Educ	ationa	l qualific	cation	Don st:	nicile ate	Gender		
No.		posts	posts	Master		Doctoral		Guja-	Other	Male	Female	
				G	OS	G	OS	rat	state			
1	Professors	04	00	-	-	-	-	-	-	-	-	
2	Associate Professors	11	11	-	-	08	03	08	03	10	01	
3	Assistant Professors	16	16	03	-	11	02	10	0	11	05	
<b>Total</b> 31 27		03	-	19	05	18	09	21	06			
Percentage of total filled post			11.11		70.37	18.52	66.67	33.33	77.78	22.22		

G: Gujarat, OS : Out State

#### Educational/Infrastructural Facilities:

The faculties of COA are working for Teaching, Research and Extension Education. There are 11 departments in the college which are involving in teaching Undergraduate courses and are also guiding PG students actively. All the departments have well established laboratories for undergraduate practical work. The college has almost all the infrastructure & physical facilities *i.e.*, Crop museum/cafeteria, seed /fertilizer museum, vermi-composting unit, NADEP unit, all types of farm machinery and equipments (Tractor, Solar water pump, Laser leveller, Power tiller, Sub soiler, Cultivator), pH meter, EC meter, Precision balance, Thermo hydrometer, Centrifugal machine, Magnetic stirrer, Hot plate, Shaking machine, Ville mil, Spectrophotometer, Flame photometer, Double beam uv Visible spectrophotometer, Vertical shaker, Rotary flask shaker, Automatic nitrogen distillation system KEL+, Digital precision oven, K-jeldal digestion unit, Muffule furnace, Quartz distillation unit, CO2 analiser under NRM group. However, Net House, Incubator, Hot Air Oven, Dryer, Pulper, Muffle Furnesh, Deep Freezer, Garden tools etc. from horticulture department. Thirty five computers with Net connection are available for student in statistics department. In plant protection group, Student Microscope, Binocular Microscope, Trinocular Microscope, Insect Cabinet, Autoclave, Hot air oven, Laminar air flow, BOD Incubator are available for students. The instruments like, Hot air oven, Autoclave-verticle, Electronic balance, Micro centrifuge machine, Trinocular microscope, Monocular research microscope, Thermal cycler PCR, ELISA Reader, Gel documentation system, Digital pH meter, Water bath with temperature control, Electrophoresis unit available in PBG department. Agricultural Engineering department is well established with the model of 2 stroke and 4 stroke engine,

submersible pump, wind mill, solar fencing system, sprinkler as well drip irrigation for student practical work. The Animal Science department is well established with the facilities of various instruments like Nitrogen Analyzer, Fibre extraction system, Soxhlet's apparatus, Atomic absorption system, Muffle furnace, Hot air oven and other instruments for student practical purpose. The department has also various animal models and other models for demonstration.

#### **Experiential Learning Unit**

During the year Education Division, ICAR, New Delhi sanctioned a Experiential Learning Unit entitled "Enriched vermicompost production" for providing hands on training and also providing opportunity to earn while learn to undergraduate of the College of Agriculture, Bharuch.

#### **Research publications**

- Sharma, S., Patel, R. H., Surve, Vaishali H. and Kumawat. S. (2017). Effect of irrigation schedule and organic manures on growth and water use efficiency of fenugreek (*Trigonella foenum-graecum* L.) under middle Gujarat conditions. *International Journal of Seed Spices*, 7(1): 29-34. (NAAS-3.91)
- 2. T. U. Patel, M. J. Zinzala, D. D. Patel, H. H. Patel and A. P. Italiya (2017). Weed management influence on weed dynamics and yield of summer lady's finger. *Indian Journal of Weed Science*, 49(3):363-365. (NAAS-5.17)
- 3. N. H. Garaniya, Dr. B. A. Golakiya, Dr. A. H. Bapodra and Dr. B. D. Solanki (2018). Phytopharmacological study of methanolic seed extracts of red *Abrus precatorius* L. *Journal of Pharmacognosy and Phytochemistry*, 7(1): 339-342. (NAAS-3.94)
- 4. Thanki, P. M., Deepa Hiremath, Alok Shrivastava and R.D. Dhandukia. (2017). Production and marketing dynamics of major vegetables in Bharuch district of South Gujarat. *International Research Journal of Agricultural Economics and Statistics*, 9(1): 184-193. (NAAS-4.24)
- 5. Deepa Hiremath, R. L. Shiyani and Alok Shrivastava (2018). "Factors influencing productivity of major crops in various districts of Gujarat. A socio- economic analysis in the context of climate change. *International Research Journal of Agricultural Economics and Statistics*, 9(1): 149-155. (NAAS-4.24)
- 6. R. B. Patel, D. R. Patel, J. P. Makati and R. R. Patel (2018). Evaluation of Insecticides against Pest Complex of Cashew. *International Journal of Economic Plants*, 5(1):36-39. (NAAS-4.08)
- 7. G. Netravathi, Chauhan, N.B. and Dhandhukia, R. D. (2017). Implementation of IPM technologies by the pigeon pea growers. *Guj. J. Ext. Edu.*, 28(2): 233-235. (NAAS-NA)
- 8. Vyas, H. U., Vanparia, O. D. and Patel, G. R. (2017). Impact of forest land allotment on economic and social empowerment of tribals in South Gujarat. *Guj. J. Ext. Edu.*, 28(2): 343-345. (NAAS-NA)
- 9. Vyas, H. U., Vanparia, O. D. and Patel, G. R. (2017). Socio-economic change occurred as a result of convergence of farmers' clubs and farmers' interest groups in Anand District. *Guj. J. Ext. Edu.*, 28(1): 136-138. (NAAS-NA)
- 10. H. N. Patel (2017). Heterosis and Inbreeding depression in Rustica tobacco [*Nicotiana rustica L.*] for yield and quality parameters over environments. *Trend in Bio-sciences*, 10(15):2742-2744. (NAAS-3.94)
- 11. H. N. Patel (2017). Combining Ability Analysis for Yield and its Components in Bread Wheat. *Electronic journal of plant breeding*, 8(2):404-408. (NAAS-4.97)
- 12. S. S. Patil, D. T. Desai, P. P. Patil and S. R. Patel (2017). Genotype x environment interaction for fruit yield and component characters in okra [Abelmoschus esculentus (L.) Moench]. *Electronic journal of plant breeding*, 8(3): 787-791. (NAAS-4.97)
- 13. H. N. Patel, Dinisha Abhishek, Alok Shrivastava and S. R. Patel (2018). Genetic Analysis for Heterotic Traits in Bread Wheat *(Triticum aestivum* L.) Using Six Parameters Model. *Int. J. Curr. Microbiol. App.Sci*, 7(6): 239-249. (NAAS-5.31)

- 14. Virendra Singh, Alok Shrivastava, K. G. Patel, Deepa Hiremath, P. N. Kore and Lokesh Yadav (2018). Consistency of aonla candy for better immunity. *Journal of Pharmacognosy and Phytochemistry*, 7(3S): 475-478. (NAAS-5.21)
- 15. Virendra Singh, Alok Shrivastava, K. G. Patel, Rita Markam and Deepa Hiremath (2018). Study of biochemical changes and microbial load of custard apple RTS beverage for better human health and nutrition. *Journal of Pharmacognosy and Phytochemistry*, 7(3S): 367-371. (NAAS-5.21)
- Sunil Suresh Patil, Dipak T. Desai, Prashant P. Patil and Sunayan R. Patel (2017). Genotype x environment interaction for fruit yield and component characters in okra [*Abelmoschus esculentus* (L.) Moench]. *Electronic Journal of Plant Breeding*, 8(3): 787-791. (NAAS-4.97)
- 17. Zinzala M. J., Patel T. U., Patel H. H., Patel D. D., Patel H. M. and Italiya A. P. (2017). Summer okra as influenced by weed management. *AGRES An International e-Journal*, 6(1): 129-133. (NAAS-3.65)
- 18. Savaliya D. V., Patel T. U., Patel D. D., Arvadiya L. K., Patel P. S. and Patel D. K. (2017). Weed management in coriander. *AGRES–An International e-Journal*, 6(1): 142-146. (NAAS-3.65)
- 19. N. N. Chaudhari and D. D. Patel (2017). Effect of integrated nitrogen management on productivity, quality of pearl millet and soil fertility of clay soils under south Gujarat conditions. *Research on Crop*, 18 (2): 219-224. (NAAS-4.75)
- 20. Sankat K. B., Patel J. G., Patel D. D., Vadodariya K. V. and Pawar S. L. (2017). Feasibility of high density planting system and its fertilizer requirement in cotton (*Gossypium hirsutum* L.). *AGRES An International e-Journal*, 6(4): 666-674. (NAAS-3.65)
- 21. Patel C. P., Patel D. D., Patel T. U., Joshi M. P. and Patel H. N.(2017). Effect of weed management on growth and yield of summer sesame (*Sesamum indicum* L.). *AGRES An International e-Journal*, 6(4): 675-681. (NAAS-3.65)
- 22. Patel C. P., Patel D. D., Patel T. U., Joshi M. P. and Patel H. N.(2017). Effect of herbicides on weeds growth and yield of summer sesame (*Sesamum indicum* L.). *AGRES An International e-Journal*, 6(4):711-716. (NAAS-3.65)
- 23. Lipne S. V., Prajapati D. R., Patel T. U., Patel D. D. and Patel H. N.(2018). Effect of planting geometry and mulching on watermelon (*Citrullus lanatus* thunb.) under drip irrigation. *AGRES*-An International e-Journal, 7(1): 103-110. (NAAS-3.65)
- 24. Mawalia A. K., Patel J. G., Patel D. D. and Vishnu V. (2018). Effect of subsoiling and preparatory tillage practices on juice quality and economics of sugarcane (*Sachharum officinarum* L.) under south Gujarat condition. *International Journal of Pure and Applied Bioscience*, 6(2):1358-1365. (NAAS-5.38)
- 25. Mawalia A. K., Patel J. G., Patel D. D. and Kumar D. (2018). Nutrient uptake by sugarcane as influenced by different subsoiling and preparatory tillage operations. *International Journal of Current Microbiology and Applied Sciences*, 7(6):2939-2947. (NAAS-4.74)
- 26. Gohil D. J., Patel K. H., Italiya A. P., Patel D. J., Thanki P. M. and Patel D. D. (2018). Assessment of micronutrient status and their correlation with some soil properties in soil of Valsad district, Gujarat. *AGRES–An International e-Journal*, 7(2):204-211. (NAAS-3.65)
- Zinjala M. J., Patel T. U. and savaliya D. V. (2017) weed intensity and okra (Abelmoschus esculentus L. Moench) yield as influenced by different weed management practices under south Gujarat. *Advance in life science*, 5 (17): 6950-6953. (NAAS-3.15)
- 28. K. B. Sankat, J. G. Patel, K. H. Patel and S. L. Pawar (2018). Nutrient content and uptake by cotton *(Gossypium hirsutum L.)* under high density planting system. *Trends in Biosciences*, 11(4): 418-24. (NAAS-3.94)
- 29. Patel, J. D., Patel, D. R. and Thorat, S. S. (2017). Effect of Sowing Period on Incidence of Pod Borers on Pigeonpea *Cajanus cajan* (L.) Millsp. *Trends in Biosciences*, 10(25): 5338-5341. (NAAS-3.94)

- 30. R. M. Jalondhara, D. R. Patel and Alok Shrivastava (2017) Screening of pigeonpea genotypes against pod borer complex. *International Journal of Economic Plants*, 4(3):116-118. (NAAS-4.08)
- D. H. Chaudhary, D. M. Pathak, M. D. Jehani and M. M. Chaudhary (2017). Efficacy of Bioagents Against *Macrophomina phaseolina* (Tassi) Goid. Causing Dry Root Rot of Soybean [*Glycine Max* (L.) Merr.]. *International Journal of Trends in Biosciences*, 10 (15): 2659-61. (NAAS-3.94)
- 32. Rathava, A. Pathak, D. M., Vahunia, B. and Patel, N. Y. (2017). Efficacy of Bioagents Against Colletotrichum lindemuthianum Causing Anthracnose of Cowpea [*Vigna unguiculata* (L.) Walp]. *International Journal of Trends in Biosciences*, 10(23): 4626-28. (NAAS-3.94)
- 33. Dinesh H. Chaudhary, D. M. Pathak and Mahesh M. Chaudhary (2017). In Vitro Efficacy of Fungicides against Dry Root Rot (*Macrophomina phaseolina*) of Soybean. *International Journal of Current Microbiology and Applied Sciences*, 6(8): 112-115 (NAAS-5.38)
- Pawar M. B., Patel S. R., Patel H. N., Patil S.S., Dinisha A., Patel N.N. and Srivastava A. (2017). Heritability studies in Okra (*Abelmoschus esculentus* L.). *Trend in Bio-sciences*, 10(30): 6289-6294. (NAAS-3.94)
- 35. B. A. Chaudhari, S. R. Patel, P. B. Patel, P. M. Mistry, R. R. Makwana and S. S. Patil (2017). Genetic Analysis for Quantitative Traits Using line x tester Mating Design in Rice (*Oryza sativa* L.). *AGRES–An International e-Journal*, 6(1): 16-27. (NAAS-3.65)
- Patel, P. S. and Patel, J. J. (2017). Population dynamics of thrips (*Thrips tabaci* Lindeman) on onion in relation to weather parameters. *AGRES- An International e-Journal*, 6(3): 525-530. (NAAS-3.65)
- Patel, P. S. and Patel, J. J. (2017). Impact of spacing and organic fertilizers on incidence of thrips (*Thrips tabaci* Lindeman) infesting onion. *AGRES- An International e-Journal*, 6(3): 494-499. (NAAS-3.65)
- 38. Makvana, R. M, Patel, J. J. and Pathak, D. M. (2017). Succession of major pests of cowpea and its relation with weather parameters. *AGRES- An International e-Journal*, 6(4): 696-703. (NAAS-3.65)
- Makvana, R. M. Patel, J. J. and Pathak, D. M. (2017). Impact of spacing and organic fertilizers on incidence of pod borers infesting cowpea. *AGRES- An International e-Journal*, 6(4): 723-732. (NAAS-3.65)
- 40. Thakriya H. R., Singh Virendra, Bhanderi D. R.; Shrivastav A. And Unnati Ahir (2017). Effect of soaking treatments and scion on growth and success of epicotyls grafting in mango. *Internal Journal of Chemical Studies* 5(5):1641-1645. (NAAS-5.31)
- 41. Chaudhari, B. A., Patel S. R., Patel P. B., Mistry P. M., Makwana, R. R. and Patil, S. S. (2017). Genetic analysis for quantitative traits using line x tester mating design in rice (*Oryza sativa* L.). *AGRES–An International e-Journal*, 6(1): 16-27. (NAAS-3.65)
- 42. Nayak, A. J.; Patel, S. R. and Shrivastva, A. (2017). Heterosis studies for yield and its components traits in sesame [*Sesamum indicum* L.]. *AGRES An International e-Journal*, 6(1):38-48. (NAAS-3.65)
- 43. R. P. Gupta and S. R. Patel (2017). Heritability studies in cowpea [*Vigna unguiculata* (L.) Walp.]. *Trends in Biosciences*, 10(23), 4751-4755. (NAAS-2.70)
- 44. R. P. Gupta, S. R. Patel, K. G. Modha and P. B. Wadekar (2017). Generation Mean Analysis for Yield and Yield Components in cowpea [*Vigna unguiculata* (L.) Walp.]. *Int. J. Curr. Microbiol. App. Sci*, 6(7):2231-2240. (NAAS-5.70)
- 45. Chaudhari M. H., Patel, S. R., Chaudhari V. B. and Nayak, A. J. (2017). Studies the magnitude of heterosis for seed yield and its components in sesame [*Sesamum indicum* L.]. *Intl. J. Dev. Res.*, 7(8): 14282-14288. (NAAS-4.60)

- 46. Pawar, M. B., Patel, S. R., Patel, H. N., Patil, S. S., Dinisha A., Patel, N. N. and Srivastava, A. (2017). Heritability Studies in Okra (*Abelmoschus esculentus* L.). *Trends in Biosciences*, 10(30): 6289-629. (NAAS-3.94)
- 47. Chaudhari, M. H., Patel, S. R. and Chaudhari, V. B. (2017). To estimate the general combining ability and specific combining ability for seed yield and contributing characters in sesame (Sesamum indicum L.). *Intl. J. Curr. Res.*, 9(9): 57721-57727. (4.77) (NAAS-4.77)

#### **B. BOOK PUBISED**

- 1. N. H. Garaniya, B. A. Golakiya and A. H. Bapodara (2017). *Abrus precatorius* L. A Medicinal Herb. Lambert Publication, 978-3-659-77214-6.
- 2. Jayeshkumar Kahodariya and Narendrakumar Garaniya (2017). Molecular Characterisation of Cotton (Gossypium Spp.). Lambert Publication, 978-3-330-33675-9.

#### HRD Programmes

#### **Participation of Scientists**

Particulars	Participants
Seminar/Symposia/Conference	12
Winter/Summer Schools	14
Workshop/Short term training	2
Total	28

# 7. College of Agriculture, Waghai

College of Agriculture, Navsari Agricultural University, Waghai was established by the Government of Gujarat under Tribal Sub-Plan as a constituent college of Navsari Agricultural University with the vision to built, a top class institution of learning, dedicated to excellence in Agricultural sciences, industrial technology and allied fields, research and development, extension and training for global competitiveness and cooperation, College of Agriculture started functioning from 2012-13 and students were admitted to four years B.Sc. (Hons.) Agriculture degree programme for the first time in July, 2012. Since inception, 153 undergraduate students have graduated from College of Agriculture, Waghai.

College of Agriculture, Waghai has been accredited by National Agricultural Education Accreditation Board of ICAR in 2018. The college has already implemented the recommendations of Fifth Dean's committee reports.

The constructions of Polytechnic and Degree college building have been completed in 2014-15 and 2017-18, respectively. The college building consists of ultra-modern auditorium with all necessary AV aids, smart class rooms has digital projector and CCTV cameras, well equipped laboratories of Entomology, Plant Pathology, Soil Science and Agricultural Chemistry, Genetics and Plant Breeding and Horticulture. College has computer laboratory with high speed internet facility to enable students for global competitiveness. College is also planning to establish language laboratory in near future.

The college is aiming to provide the best amenities to students. The Boys hostel "Dandakaranya" with capacity of 162 students and Girls hostel "Shabri" with capacity of 93 students. The College has playground for various sports activities and Gymnasium for boys and girls separately. The students are participating in college, university, inter university and national level sports *viz.*, kabbaddi, kho-kho, badminton, volley ball, cricket and basket ball and cultural competitions *viz.*, drama, folk dance, mono acting, mimicry, musical events, agri unifest *etc.* and won number of prices/medals.

College also conducts Student Ready and RAWE programme for 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 biannually publishes "Dandakaranya" magazine 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 will also be the priority in near future."

1	Agronomy	8	Animal Science
2	Soil. Sci. & Agri. Chemistry	9	Agricultural economics
3	Horticulture	10	Agricultural engineering
4	Genetics and Plant breeding	11	Statistics & Computer science
5	Entomology	12	English
6	Plant Pathology	13	Physical education
7	Extension education		

#### **List of Departments**

Academic Programmes

Degree Programme	Duration	Total Credit (T+P)		
B. Sc. (Hons) Agriculture	8 Semesters	89+97=186		
M.Sc. (Agri.)	4 Semester	-		
Ph.D.	6 Semester	-		

# **Under Graduate syllabus**

Semester	Number of Courses	Total Credit (T+P=)
First Semester	11	14+8=22
Second Semester	11	17+9=26
Third Semester	10	15+9=24
Fourth Semester	12	15+10=25
Fifth Semester	11	14+10=24
Sixth Semester	11	14+11=25
Seventh Semester	01	0+20=20
Eight Semester	01	0+20=20
	Total	89+97=186

# **Student Information**

# Summary of students admitted during the year 2017-18

Degrees	Condon	Intake capacity	Gen	SEBC	SC	ST	CRSE	ICAR		Foreign	Total
Degree	Genuer				SC	51	CDSE	Guj	Other*	rurugii	10141
B.Sc.	Male		25	11	3	1	2	-	-	-	42
(Hons.)	Female	60	3	3	0	7	0	-	-	-	13
Agri.	Total		28	14	3	8	2	-	-	-	55
Grand	l Total		28	14	3	8	2	-	-	-	55

Gujarat \* Other State Summary of students enrolled

Degree	NZ		C	CEDC		CT	CDCE	Ι	CAR	Equian	
Degree	Year	Gender	Gen	SEBC	SC	51	CBSE	Guj	<b>Other*</b>	Foreign	lotal
	1	Male	25	11	3	1	2		-	-	42
		Female	3	3	0	7	0	-	-	-	13
	2	Male	22	11	2	1	0	-	-	-	36
		Female	4	0	0	7	3	-	-	-	14
B Sc	3	Male	16	12	5	3	1	-	-	-	37
<b>D</b> .5 <b>C</b> .		Female	5	2	0	5	1	-	-	-	13
	4	Male	15	17	3	1	2	-	-	-	38
		Female	5	5	1	8	1	-	-	-	20
	Total		95	61	14	33	10		-	-	231
	То	Total									
	Grand	l Total	95	61	14	33	10		-	-	213

Gujarat \*\* Other state

#### Summary students of passed out (2017-18)

	Distribution of students in different classes									
Gender	First with Distinction	First class	Second class	Passed class	Total					
<b>Under Graduat</b>	e									
Male	4	28	6	-	38					
Female 10		9	1	-	20					
Total	14	37	7	-	58					

#### **Students Financial aid**

Name of the	Under-g	graduate	Mas	sters	D	octorate	
fellowship	No. of S	Students	No. of S	Students	No. of Students		Total
	Male	Female	Male Female		Male	Female	
SC/ST/fellowship	20	25	-	-	-	-	45
SEBC fellowship	36	08	-	-	-	-	44
Total	56	33	-	-	-	-	99

# Cut off marks for admission to UG degree Programme (2017-18)

Sr. No.	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	40	59.66
2	ST	35	48.23
3	SC	35	43.25
4	OBC/SEBC	40	56.15
5	Other Board	-	31.80

# Number of students qualified JRF during year/Number of UG students passed out

Year	Number of students got JRF	Number of UG students passed out
2017-18	-	58

# Placement Cell/ Counseling Centre established and functional (year-wise number of placements during the last five years may be given)

Degree	Total Passed	TotalHigherPassedstudies		Govt. Private			Abroad	Self-	Un-	
Programmes	out	Guj	Other State	Jobs	Jobs	NGOs	for job	Entrepreneu- rship	employed	
B.Sc.	58	30	-	-	17	-	-	-	11	
M.Sc.	-	-	-	-	-	-	-	-	-	
Ph.D.	-	-	-	-	-	-	-	-	-	
Total	58	30	-	-	17	-	-	-	11	

#### **Guj-Gujarat**

#### **Students activities**



Safai abhiyan on Gandhi Jayanti on 02/10/2018





Seminar on HIV AIDS on 09/02/2018

Special camp, Rajendrapur, Waghai on 05/02/2018 to 11/02/2018



Blood donation camp on 09/03/2018



RARI- visit, SKNAU, Jaipur during study tour on 26/10/2018



Technology institute visit, CCSHAU, Hisar during study tour on 20/10/2018



College of horticulture visit, Himachal during study tour on 22/10/2018



RCA, visit at MPUAT, Udaipur during study tour on 27/10/2018

#### NSS activities 2017-18

SN	Activity	No. of Volunteers
1.	International Day of Yoga	100
2.	Mind Power Workshop	90
3.	'Swachata Pakhwadiya celebration'	90
4.	Organ Donation Seminar	100
5.	Soil Health Day Celebration	80
6.	Hon. Prime Minister's Live speech	80
7.	Tree Plantation Program	50
8.	Safai abhiyan on Gandhi Jayanti	85
9.	Celebration of Sardar Patel Jayanti	90
10.	Republic Day Celebration	95

#### **Faculty information**

				Composition of filled post									
Sr.	Name of the Post	Sanctioned	Filled		Educ: qualif	ational ication		Domicil	e state	Gender			
No.		posts	posts	Master		Doctoral		Gujarat	Other	Male	Female		
				G	OS	G	OS		state				
1	Principal	01	01										
2	Professors	03	01	-	-	01	-	01	-	01			
3	Associate Professors	08	07		-	07	-	03	04	06	01		
4	Assistant Professors	16	16	07	-	05	04	11	05	16	-		
Total		28	24	07		13	04	15	09	23	01		
Percentage of total filled post			86 %	29%	-	54%	17%	62.5%	37.5%	96%	4%		

#### G: Gujarat, OS: Out State

#### **Research publications**

- 1. Pisal R.R., Neeraj Kumar and Shukla S.P. (2017) Long term trend analysis of rainfall at heavy rainfall zone of South Gujarat, India. *Indian Journal of Soil Conservation* 45 (2): 168-175. (NAAS 5.20)
- 2. V. T. Shinde, K. N. Tiwari, M. Singh, and S. Rajendiran, (2017) "Restoration of Mine Affected Area Soil for Enhanced Crop Production using Diverse Fertilizer Treatments". *Journal of the Indian Society of Soil Science*, 65(1): 62-71. Print ISSN: 0019-638X. Online ISSN: 0974-0228 (NAAS 5.23)
- 3. Y. A. Garde (2017). Effect of dietary supplementation of Garlic (Allium sativum) and Black pepper (Piper nigrum L.) powder on growth performance of Broilers in Konkan region of India. *Indian Journal of Hill Farming*, Vol. 30 (2) pp 331-334. ISSN: 0970-6429 (NAAS-4.94)
- 4. V. T. Shinde, K. N. Tiwari, S. Nandgude and M. Singh, (2017) "Water Quality Assessment and Application of SWAT Model for Hydrologic Simulations in a Mined Watershed". *Climate Change and Environmental Sustainability*, 5(2): 111-121. Print ISSN: 2320-6411. Online ISSN: 2320-642X (NAAS-4.86)
- K. B. Patel, T. U. Chaudhari, V. B. Patel, (2018). "The Mathematics of Duckworth –Lewis in Cricket", International Research Journal of Engineering and Technology, e-ISSN: 2395-0056, p-ISSN: 2395-0072, pg. 84-86

- 6. T. U. Chaudhari, (2018). "A comparative study of Power point teaching in Mathematics in Urban and Rural schools", International Multilingual Research Journal Vidyawarta. ISSN- 2319 9318, pg. 132-133.
- 7. Patel K. B. (2018). Effect of kapalbharti and omkar pranayama on the vital capacity. International Research Journal of Engineering and Technology, e-ISSN: 2395-0056, p-ISSN: 2395-0072, pg. 84-86
- 8. Patel K. B. (2018). An Effect of Yoga and Pranayam on Academic Performance of College Students. International Research Journal of Engineering and Technology, e-ISSN: 2395-0056, p-ISSN: 2395-0072, pg. 84-86
- **9.** V. T. Shinde, K. N. Tiwari, M. Singh, and B. Uniyal, (2017) "Impact of Abandoned Opencast Mines on Hydrological Processes of the Olidih Watershed in Jharia Coalfield, India". *Environmental Processes (Springer)*, 4:697–710. Print ISSN: 2198-7491. Online ISSN: 2198-7505

#### **HRD Programmes**

#### Participation of Scientists in Conference/ Seminars/ Symposia/ Workshops/Trainings (2017-18)

Particulars	Participants
Seminar/Symposia/Conference	06
Winter/Summer Schools	03
Workshop/Short term training	09
Total	18

# 8. Aspee College of Horticulture

ASPEE College of Horticulture and Forestry was established in 1988 after sanction by the Government of Gujarat *vide* Resolution No. GKV-1087-3174 K-2, dated 4-11-1988. The College was established with objectives to bring out trained human resource, to generate new knowledge through research in relation to production and quality as well as to plan effective transfer of technology (TOT) for development of horticulture sector in the state and improving the environment. For establishment of this college the generous donation of Rs. 40 lakh was provided by ASPEE Foundation, Malad, Mumbai for Agricultural Research and Development and therefore, the college derived it's name as ASPEE College of Horticulture.

The first batch of 30 students was admitted as per the guidelines of Gujarat Agricultural University and at present intake capacity of this college for Under Graduate is 66 students. Academic Council of Gujarat Agricultural University, approved course curriculum for B.Sc. (Hons.) Horticulture degree programme as per ICAR.

	Core Departments								
1	Fruit Science and PSMA	3	Floriculture and Landscape Architecture						
2	Vegetable Science	4 Post Harvest Technology							
Allied Departments									
5	Agricultural Botany	11	Agricultural Extension						
6	Plant Pathology	12	Agricultural Economics						
7	Entomology	13	Agricultural Statistics						
8	Agril. Chemistry and Soil Science	14	Agricultural Meteorology						
9	Agricultural Engineering	15	English						
10	Plant Molecular Biology & Biotechnology								

#### **List of Departments**

#### Academic programmes

Degree Programme	Duration (Semester)	Total Credit (T+P)
B. Sc. (Hons) Horticulture	8	180
M.Sc. (Horti.)	4	55
Ph.D.	6	75

#### **Post Graduates Programmes**

Subjects of PG degree programme	Master's Degree	Doctoral Degree (Yes/No)
Fruit Science	Yes	Yes
Vegetable Science	Yes	Yes
Flori. & Land. Architecture	Yes	Yes
Post Harvest Technology	Yes	Yes
PSMA	Yes	No
Horticultural Entomology	Yes	Yes
Plant Pathology	Yes	Yes

**Under Graduate syllabus** (as per fifth Deans' recommendations)

Semester	No. of Courses	Total Credit (Th+P)
First Semester	10	14+09=23
Second Semester	11	13+10=23
Third Semester	10	12+09=21
Fourth Semester	10	15+09=24
Fifth Semester	09	13+09=22
Sixth Semester	10	15+10=25
Seventh Semester	12	0+20=20
Eight Semester	06	0+20=20
	Total	180

# **Student Information Summary of students admitted during the year 2017-18**

Degree	Condon	Intake	Con	SERC	SC	SТ	CBSE	ICAR		Foreign	Total
Degree	Genuer	capacity	Gen	SEDU	SC	51		Guj	Other*	roreign	Iotai
B.Sc.	Male		14	06	03	01	02	-	03	-	29
(Hons.)	Female	70	05	04	-	07	01	-	03	-	20
Horti.	Total		19	10	03	08	03	-	06	-	49
MGa	Male		05	05	01	02	-	-	05	-	18
(Horti)	Female	45	13	04	01	03	-	-	06	-	27
(110111.)	Total	1	18	09	02	05	-	-	11	-	45
	Male	13	04	01	-	01	-	-	-	-	06
Ph. D.	Female		03	01	-	-	-	-	03	-	07
	Total		07	02	-	01	-	-	03	-	13
Grand	l Total		44	21	05	14	03	-	20	-	107

# Guj-Gujarat, \* Other State Summary of students enrolled

						~		Ι	CAR		
Degree	year	Gender	Gen	SEBC	SC	ST	CBSE	Guj	Other*	Foreign	Total
	1	Male	14	06	03	01	01	-	03	-	28
		Female	05	04	-	07	01	-	03	-	20
	2	Male	18	10	-	02	01	-	-	-	31
		Female	07	11	03	07	01	-	-	-	29
B.Sc.	3	Male	13	10	01	04	02	-	02		32
		Female	08	10	03	04	02	-	02	-	29
	4	Male	10	12	02	01	03	-	02	-	30
		Female	12	10	03	06	01	-	01	-	33
		Total	87	73	15	32	12	-	13	-	232

	1	Male	06	04	01	01	-	-	04	-	16
		Female	09	03	01	04	-	-	05	-	22
M. Sc.	2	Male	04	03	01	-	-	-	02	-	10
		Female	06	03	01	03	-	-	05	-	18
		Total	25	13	04	08	-	-	16	-	66
	1	Male	03	01	-	01	-	-	0	-	05
		Female	03	01	-	-	-	-	03	-	07
	2	Male	01	04	-	-	-	-	01	-	06
Ph. D.		Female	02	01	-	-	-	-	-	-	03
	3	Male	04	-	-	01	-	-	-	-	05
		Female	01	-	-	-	-	-	-	-	01
		Total	14	07	-	02	-	-	04	-	27
	Grand Total		126	93	19	42	12	-	33	-	325

Summary students of passed out (2017-18)

	Distribution of students in different classes									
Gender	First with Distinction	First class	Second class	Passed class	Total					
<b>Under Graduat</b>	e									
Male	13	16	02*	-	31					
Female	25	09*	01	-	35					
Total	38	25	03	-	66					
Post Graduate (	(Master)									
Male	06	11	-	-	17					
Female	05	10	-	-	15					
Total	11	21	-	-	32					
Doctoral										
Male	-	-	-	-	10					
Female		_	-	_	03					
Total	-	-	-	-	13					

\*Old students

Students' Financial aid

Name of the fellowship	Under-graduate		Mas	sters	Doctorate		
	No. of Students		No. of S	tudents	No. of Students		Total
	Male	Female	Male	Female	Male	Female	
NTS-UG	08	07	-	-	-	-	15
NTS-PG	-	-	09	09	-	-	18
ICAR-JRF	-	-	04	05	-	-	09
ICAR-SRF	-	-	-	-	-	-	-
STUDENT READY	30	33	-	-	-	-	63
INSPIRE	-	-	-	-	-	-	-
NAU PG fellowship	-	-	02	02	-	03	07
NAU Girls meritorious fellowship	-	24	-	-	-	-	24

ASPEE JRF	-	-	02	01	-	-	03
SC fellowship	05	10	01	03	01	-	20
ST fellowship	07	24	01	09	01	01	43
SEBC fellowship	30	27	07	06	03	03	76
Total	80	125	26	35	5	07	278

# Cut off marks for admission to UG degree Programme (2017-18)

Sr. No	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	(120) 40%	56.41
2	ST	(105) 35%	41.75
3	SC	(105) 35%	43.21
4	OBC/SEBC	(120) 40%	54.30

# Number of students qualified JRF during year/Number of UG students passed out

Year	Number of students got JRF	Number of UG students passed out
2017-18	-	63

# Students qualified ICAR JRF

Sr. No.	Name of the students	Reg. Number	Subject/s /Rank obtained
1.	Anjali G. P.	2020217003	Horticulture/31 Rank
2	RanjitaKulkarni	2020217029	Horticulture/23 Rank
3	Jyoti Upper	2020217012	Horticulture/36 Rank
4	AdarshGuddadanath	2020217001	Horticulture/14 Rank

# **Students Performance at M.Sc. Level**

Year	Number of M.Sc/M.V.Sc passed outs qualified SRF or admission in Ph. D in ICAR Deemed University	Students qualify NET examination	Number of M.Sc passed outs
2017-18	-	32	32

#### **Students qualified National Eligibility Test (NET)**

Sr.	Name of the	Reg. Number	Sr.	Name of the students	Reg. Number
No.	students		No.		
			Fru	iit Science	
1.	Ankita Mantri	2020216018	9.	Khushbu Rathod	2020217030
2.	Mahida Archanaben Vasharambhai	2020216015	10.	Hiralal Chaudhari	2020214007
3.	Khalasi Devang Natvarlal	2020216011	11.	Bagul Hemant	1020217003
4.	Patel Malhar	2020216024	12.	Ahir Unnati	1020217001
5.	Halpati Ankita	2020216009	13.	Thakariya Hitesh	-
6.	Laxmi Bagewadi	2020216013	14.	Jay Chawda	2020216004
7.	Smita Chaudhari	2020217034	15.	Madhusudan	2020216014
8.	Zarna Patel	2020217026			

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	Vegetable Science									
1.	Punna Samatha Sree	2020216028	6.	Anjali Patel	2020216022					
2.	Narasimhamurthy P N	2020216021	7.	Nishtha Patel	2020213031					
3.	Avisha Ram budhani	2020216001	8.	Pooja Naik	2020216020					
4.	Goswami Rahulpuri Ashokpuri	2020216008	9.	Velamala Sravni	1020217013					
5.	Hiral Chaudhari	2020216010								
			Flo	riculture						
1.	Desai Supal Alpesh	2020216006	5.	NaikBhoomi Parimal	2020216019					
2.	Gamit Dipika Raysingbhai	2020216007	6.	Patel Ritalben Jayantibhai	2020216025					
3.	Kitty Rajan	2020216012	7.	Patel Vipulkumar Hirabhai	2020216026					
4.	Meghalakshmi Guddad	2020216017	8.	Patel Khyati Mahendrabhai	1020217008					

Placement Cell / Counseling Centre established and functional (year-wise number of placements during the last five years may be given) 2017-18

Degree	Total	Hi stu	gher Idies	Govt	Private		Abroad	Self-	∐n-	
Programmes	Passed out	Guj	Other State	Jobs	Jobs	NGOs for job		Entrepreneur ship	employed	
B.Sc.	63	42	-	4	16	-	1	0	0	
M.Sc.	27	5	-	2	20	-	-	0	0	
Ph.D.	5	-	-	2	3	-	-	0	0	
Total	95	47	-	8	39	-	1	0	0	

**Students activities:** 



Basketball (Boys) Champion



Table Tennis (Girls) Champion

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International Yoga Day Celebration on 21-06-2017



Swachhata Abhiyan on 02-10-2017



A farmer's day celebration on 03-12-2018



NSS Special camp at Gadat on 06-03-2018





NCC activities

## NSS activities 2017-18

SN	Activity	No of Volunteers
1	Road Safety and Driving Techniques for Traffic Awareness	48
	Programme (11/04/2017)	
2	World Yoga Day Celebration(21/06/2017)	36
3	Celebration of Independence Day (15/08/2017)	75
4	Hostel cleanliness (02/10/2017)	All the 1 <sup>st</sup> and 3 <sup>rd</sup>
		Semester Student
5	World Unity Day Celebration (31/10/2018)	59
6	Short cut to Success (07/11/2018)	35
7	Farmer's Day Celebration (03/12/2018)	32
8	Celebration of Republic Day (26/01/2018)	10
9	Thalassemia Check up Camp (19/02/2018)	60
10	Special Camp (05/03/2018 to 10/03/2018)	79

# NCC Activities accomplished during the year 2017-18:

SN	Name of activity	Duration	Place	No of
				Cadets
1	Army Attachment Camp	13 to 28 July 2017	Jamnagar	04
2	Army Attachment Camp	23 July - 7 August 2017	Jamnagar	10
3	Combined Annual Training Camp	27 July – 6 August 2017	Rajpipla	12
4	Independence Day	15 August 2017	Navsari	51
5	National Integration Camp	25th Sept to 6th Oct 2017	Mumbai	11
6	Pre Republic Day Camp	1 to 10 September 2017	Rajpipla	09

# **Ongoing Research projects at College**

Sr.	Budget	Name of the projects	Funding	Location
No	head		agency	
1	12940	Establishment of fruit & vegetable packaging	State Govt.	ACHF, NAU,
		research center at Navsari		Navsari
2	12017	Research in vegetable crops under protected	State Govt.	ACHF, NAU,
		conditions phase- II		Navsari
3	12021	Development of hybrids in vegetable	State Govt.	ACHF, NAU,
		especially in okra, brinjal, tomato and		Navsari
		capsicum, Navsari		
4	12022	Strengthening of organic farming cell,	State Govt.	ACHF, NAU,
		Navsari		Navsari
5	12025	Research and development in fruit crops	State Govt.	ACHF, NAU,
		(12095, 12137 merged)		Navsari
6	12935	Centre of excellence on post harvest, Navsari State Govt. ACHF,		ACHF, NAU,
		(ASPEE)		Navsari

			ANNU	AL REPORT 2017-18
7	12014/05	Tissue culture & fruit crops, Paria (merged	State Govt.	ACHF, NAU,
		with 029/12092 from 2017-18)		Navsari
8	12046/01	Establishment of research project on	State Govt.	ACHF, NAU,
		Floriculture, Navsari (ASPEE)		Navsari
9	12041	Advanced technology center of soil less	State Govt.	ACHF, NAU,
		system for production of various crops at		Navsari
		Navsari.		
10	05014/13	Scheme for research in fruit crop	State Govt.	ACHF, NAU,
		(horticulture), Navsari		Navsari
11	2006/03/0R	AICRP on tuber crops	ICAR	ACHF, NAU,
				Navsari
12	2100	AICRP on floriculture	ICAR	ACHF, NAU,
				Navsari
13	2006/03	AICRP on tuber crops	75 ICAR &	ACHF, NAU,
			25 State Govt.	Navsari
14	2044	AICRP on palms (coconut)	75 ICAR &	ACHF, NAU,
			25 State Govt.	Navsari
15	18139	Organic farming model farm and resource	State Govt.	ACHF, NAU ,
		Farm St.		Navsari
16	18172/01	Development demonstration and awarness	State Govt.	ACHF, NAU,
		programme of organic farming in South		Navsari
		Gujarat region		
17	18930/01	National Horticulture Mission	NHB	ACHF, NAU,
				Navsari
18	18930/02	National Horticulture Mission	NHB	ACHF, NAU,
				Navsari

# **Faculty information**

						C	omposit	ion of filleo	on of filled post		
Sr.	Name of the Post	Sanct- ioned posts	Filled	Educational qualification			Domicile state		Gender		
No.			Master		Doctoral		Gujarat	Other	Male	Female	
		-		G	OS	G	OS		state		
1	Professors	05	02	-	-	02	-	02	-	02	-
2	Associate	20	14	-	-	11	03	10	04	13	01
	Professors										
3	Assistant	52	46	10	03	29	04	36	10	36	10
	Professors										
Total		77	62	10	03	42	07	48	14	51	11
Percentage of		-	-	16.13	4.84	67.74	11.29	77.42	22.58	82.26	17.74
total filled post											

G: Gujarat, OS: Out State

# **Experiential Learning Unit**

Title of ELU	Module I: Protected Cultivation of Hi-Valued Horticultural Crops			
Year of establishment	2009			
Name of Manager	Dr. Alka Singh			
Activities	ELP in horticulture is flourishing with motto of learning and earning while actually undertaking the given task. In this module, experiential learning ha been provided in protected cultivation of high value flower crops, flowe arrangements and bouquet making, vegetable production etc. for period o six months. Further, they learn the skill of packaging and marketing o flowers and vegetables as well as the art and technique of value addition in flowers like flower arrangements, bouquets making and dry flowers. Th students even take contract for event management and floral decoration where they learn the tactics of marketing sector, event organization, tim management and business skill. The students enrolled under this module ar exposed to various operations of protected cultivation as mentioned below:			
	Activities in brief :			
	<ul> <li>Orientation for project formulation to establish Green House unit</li> </ul>			
	Training on production of cut flower & pot plant and vegetables for development of entrepreneurship skills in students for self employment.			
	<ul><li>Post harvest handling of cut flowers and vegetables.</li></ul>			
	> Value addition of flowers in form of bouquets and flower designing.			
	Marketing of the cut flower, value added products, pot plants and vegetables			
No. Students Beneficiaries	6			
Amount earned per student	Total profit: Rs 107427			
	75 % of profit : Rs 80571			



Hands on Production technology under protected cutlivation

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Exhibiting Ornamental plants and value added products in flowers under ELP

Title of ELU	Module II: Commercial Production of Horticultural Crops
	Components:
	Fruit Plant Nursery
	Production of Vegetable Seedlings
Year of establishment	2011-12
Name of manager	Dr. C. R. Patel, Assistant Professor (Fruit Science)
	Dr. N. K. Patel, Assistant Professor (Vegetable Science)
About ELU	Experiential Learning Programme was formulated for UG students to improve their knowledge and skills regarding different propagation methods and nursery management of fruit and vegetable crops. The main aim of this programme is to develop confidence among the students regarding entrepreneurial professional and leadership skills on propagation
	and nursery management of fruit and vegetable crops.
Activites	Orientation and project formulation:
	Students prepare plan regarding propagation of different fruit and vegetable crops and compile information about the methods of propagation to be followed for the particular crops and also collect materials, goods, media, tools, etc.
	Propagation and nursery management:
	Students propagate different fruit (mango, citrus, coconut, jamun, custard apple, carambola, passionfruit, phalsa, guava, jackfruit, fig, citrus, jamun, mulberry, cherry, pineapple, karonda, pomegranate, guava, dragonfruit, etc.) and vegetable crops (brinjal, tomato, chilli, cauliflower, cabbage, onion, pointed gourd, little gourd, moringa, etc.) through sexual as well as commercial vegetative methods by adopting scientific approach. They do all cultural practices related with nursery management and take all care and maintain plants including media preparation, bed preparation, sowing of seeds or planting of cuttings, transplanting, construction of tunnels for propagation, watering, application of nutrients, insect-pest management, etc. while propagating through rooting of cuttings / grafting / budding / layering. Students learn practical aspects of nursery management and also develop leadership while doing all these activities.

arketing and selling:
udents also learn different methods and techniques of marketing of ready to
ll propagated plants including seedlings and clonal plants of vegetable and
uit crops. They also handle cash and maintain different records related with
lling of plants. Students also take advance orders for propagation.
3. 4566



Vegetable seedlings in raised bed



Moringa seedlings ready for sell



Germinated coconut seednuts in beds



Air-layering in guava

Title of ELU	Module III: Post Harvest Handling And Value Addition In Horticultural Crops
Year of establishment	2011
Name of Manager	Dr. Dev Raj
Activities	Introduction to various preservation techniques, requirements for processing industry, GHP and GMP for processing industry, functions of various ingredients for processed products, Book and Record keeping. Plan layout

	for processing industry, recipe for processed products, and estimation of material and resources requirement.
	Procurement of raw materials, packaging materials, conversion into finished product, labeling, storage and quality evaluation of different processed products like mango pulp, jam, jellies, pickles, chutneys, natural juices, nectars, RTS, squash, appetizer, candy, chips, dehydrated and IMF products, tomato ketchup and puree, pickles, watermelon juice and nectar, watermelon and ash gourd candy, chips, dehydrated products of onion, turmeric, ginger, frozen peas, gulkand and other important value added products of fruits and vegetables. Pre-cooling and cold storage of fruits and vegetables.
	Principles of marketing, types and channels of marketing, estimation of cost of production, Govt. policy and taxation, calculation of breakeven point, marketing strategy for sale of products and marketing of prepared products.
No. Students Beneficiaries	29
Amount earned per student	Rs. 4566/-



Aloe-vera processing



Mango nectar processing



Lemon processing



Noni processing

#### **Research publications**

- 1. Bagul, H.B.; Parmar, A. B.; Parmar, B. R.; Pandey A. K., Janaendra, M, 2018 Effect of pre-sowing seed treatment on germination and growth of papaya (*Carica papaya* L.) seedlings cv. Red lady*Pherma Innovation*. 7(1): 95-97. (NAAS 5.03)
- 2. Chaudhary, H. L.; Tandel B. M.; Patel V. K.; Panchal S. B. and Patel Apeksha (2018). Effect of type of cuttings and growth regulators on rooting of wax apple (*Syzygium SamarangenseL.*). *Int. J. Chem. Studies*, 6(2): 2475-2478. (NAAS 5.31)
- 3. Devang Khalasi, A. K. Pandey and Sanjeev Kumar. 2018. Studies on Nutrient Partitioning in Mango (*Mangifera indica* L.). *Int.J.Curr.Microbiol.App.Sci.* 7(09): 2793-2796.(NAAS 5.38)
- 4. Dwivedi, Shailendra and Pandey, Avnish (2017). Devlopment of protocol for preparation preservation of ginger favored aonla candy for nutritional and biochemical evaluation. The Pherma Innovation. 6(11):pp78-83.(NAAS 5.03)
- 5. Ghadage, N. J.; Patil, S. J.; Khopade, R.Y.; Shah, N. I. and Hiray, S. A. (2017). *Effect of time and widths of girdling on flowering and yield of mango (Mangifera indicaL.) cv. Alphonso. Int. J. Chem. Studies*, 5(6): 1580-1583. (NAAS 5.31)
- 6. Gondaliya, P. J.; Tandel, Y. N.; Rathva, K. and Gangode, A. (2017). Influence of preharvest spray on physical characteristics of sapota cv. Kalipatti fruits. *Trends in Biosciences.*, 10 (28) : 6052-6054. (NAAS-3.94)
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## HRD Programmes

### **Participation of Scientists**

Particulars	Participants
Seminar/Symposia/Conference	105
Winter/Summer Schools	23
Workshop/Short term training	8
Total	136

# 9. College of Forestry

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 and separate College of Forestry was established. Meanwhile, 31 teaching faculties were appointed in the Forestry College in 2010, complying with the recommendations of IV Dean's committee of ICAR. Thus, College of Forestry started functioning independently from the year 2010. Accreditation team from ICAR, New Delhi visited the College of Forestry on 21 February 2017 for evaluation and monitoring of academic activities of the college and provided accreditation for a period of five years up to 31 March 2021. Further, College of Forestry has been accredited by ICFRE, Dehradun for a period of five years from 22 June 2018 to 21 June 2022. The College of Forestry has been rated as A\*. Total 403, B. Sc. (Forestry), 126, M. Sc. (Forestry) and 24 Ph.D. (Forestry) students passed out up to 2017-18.

### **List of Departments**

1	Silviculture and Agroforestry
2	Forest Biology and Tree Improvement
3	Forest Products Utilization
4	Natural Resource Management
5	Basic Science and Humanities

### Academic programmes

Degree Programme	Duration	Total Credit (T+P)
B. Sc. (Hons) Forestry	8 Semesters	87+98=185
M.Sc. (Forestry)	4 Semester	40+20 (Research)
Ph. D. (Forestry)	6 Semester	30+45 (Research)

\* Depends upon subject of specialization

### **Under Graduate syllabus**

(as per fifth Deans' recommendations)

Semester	Number of Courses	Total Credit (T+P=)
First Semester	08+2*	21 (13+8)
Second Semester	10+2*	25 (16+9)
Third Semester	08+1*	23 (14+9)
Fourth Semester	08+2*	24 (14+10)
Fifth Semester	06+1*+1**	23 (11+12)
Sixth Semester	08+1*+1**	25 (12+13)
Seventh Semester	07	23 (0+23)
Eight Semester	05+1*	21 (7+14)
	Total	185 (87+98)

# Post Graduates programmes

Sr. No.		Master's Degree	<b>Doctoral Degree</b>
1.	Silviculture and Agroforestry	Yes	Yes
2.	Forest Biology and Tree Improvement	Yes	Yes
3.	Forest Products Utilization	Yes	No
4.	Natural Resource Management	Yes	No

### **Student Information**

# Summary of students admitted during the year 2017-18

Degree	Condon	Intake	Con	on SERC SC		ST	CDSE	Ι	CAR	Foreign	Tatal
Degree	Gender	capacity	Gen	SEDU	SC	51	CDSE	Guj	Other*	Foreign	Total
B.Sc.	Male		2	1	-	-	-	-	3	-	6
(Hons.)	Female	66	4	3	2	1	-	-	-	-	10
Agri.	Total	1	6	4	2	1	-	-	3	-	16
M Sc	Male		2	1	1	0	0	0	0	0	4
(Aori)	Female	14	0	1	0	0	0	0	0	0	1
(11511.)	Total	1	2	2	1	0	0	0	0	0	5
	Male	4	1	1	0	0	0	0	1	0	3
Ph. D.	Female		0	0	0	0	0	0	0	0	0
	Total		1	1	0	0	0	0	1	0	3
Grand	l Total	84	9	7	3	1	0	0	4	0	24

**Gujarat** \* Other State

# Summary of students enrolled

								Ι	CAR		
Degree	year	Gender	Gen	SEBC	SC	ST	CBSE	Guj	Other*	Foreign	Total
	1	Male	2	1	-	-	_	-	3	-	6
		Female	4	3	2	1	-	-	-	-	10
	2	Male	9	6	2	3	1	-	1	-	22
		Female	5	4	1	1	1	-	1	-	13
B.Sc.	3	Male	7	6	1	4	-	-	3	-	21
		Female	3	3	-	3	-	-	1	-	10
	4	Male	10	6	1	3	1	-	1	-	22
		Female	2	2	-	2	1	-	-	-	7
	То	tal	42	31	7	17	4	0	10	0	111
	1	Male	2	1	1	0	0	0	0	0	4
M. Sc.		Female	0	1	0	0	0	0	0	0	1
	2	Male	3	0	0	0	0	0	0	0	3
		Female	3	1	0	0	0	0	0	0	4
	То	tal	8	3	1	0	0	0	0	0	12

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	1	Male	1	1	0	0	0	0	1	0	3
		Female	0	0	0	0	0	0	0	0	0
	2	Male	1	1	0	0	0	0	0	0	2
Ph. D.		Female	0	0	0	0	0	0	0	0	0
	3	Male	0	0	0	0	0	0	0	0	0
		Female	0	0	0	0	0	0	0	0	0
	To	tal	2	2	0	0	0	0	1	0	5
	Grand	l Total	52	36	8	17	4	0	11	0	128

Gujarat \*\* Other state Summary students of passed out (2017-18)

	Di	stribution of st	udents in differ	ent classes	
Gender	First with Distinction	First class	Second class	Passed class	Total
Under Graduat	e		•		
Male	3	8	5	2	18
Female	1	5	3	0	9
Total	4	13	8	2	27
Post Graduate (	(Master)		•		
Male	2	7	1	0	10
Female	2	4	0	0	6
Total	4	11	1	0	16
Doctoral			-		
Male	-	-	-	-	6
Female	-	-	-	_	0
Total	-	-	-	-	6

# **Student's Financial aid**

Name of the	Under-graduate		Mas	ters	D	octorate	
fellowship	No. of S	tudents	No. of S	tudents	No. of	Students	Total
	Male	Female	Male	Female	Male	Female	
NTS-UG	8	2	-	-	-	-	10
NTS-PG	-	-	2	1	0	0	3
ICAR-JRF	0	0	0	0	0	0	0
ICAR-SRF	0	0	0	0	0	0	0
STUDENT READY	1	0	-	-	-	-	1
INSPIRE	0	0	0	0	1	0	1
NAU PG fellowship	0	0	1	3	0	0	4
NAU Girls meritorious fellowship	0	15	0	0	0	0	15
ASPEE JRF	-	-	-	-	-	-	-
SC fellowship	3	3	0	0	0	0	6
ST fellowship	8	8	0	0	0	0	16
SEBC fellowship	18	8	1	1	2	1	31
Total	38	36	4	5	3	1	87

### **Cut off marks for admission to UG degree Programme (2017-18)**

Sr. No.	Category	Minimum requirement of	Cut of Marks (%)
		Marks (%) (PCB)	
1	General	120 (40%)	59.06
2	ST	105 (35%)	46.09
3	SC	105 (35%)	54.08
4	OBC/SEBC	120 (40%)	64.02

### **Students qualified ICAR JRF**

Sr. No.	Name of the students	Reg. Number	Degree	Duration	Subject/s /Rank obtained
1.	Poonam Chauhan	3030314004	Forestry	4 years	15
2.	Payal Patel	3030314026	Forestry	4 years	127
3.	Keyur Rathod	3030314035	Forestry	4 years	139
4.	Chirag Vaghasia	303031439	Forestry	4 years	154
5.	Ram Mayur	3030314034	Forestry	4 years	104
6.	Zankhana Patel	3030315029	Forestry	4 years	130
7.	Arun A.	3030315001	Forestry	4 years	115

# **Students Performance at M.Sc. Level**

Year	Number of M.Sc/M.V.Sc passed outs qualified SRF or admission in Ph. D in ICAR Deemed University	Students qualify NET examination	Number of M.Sc/M.V.Sc passed outs
2017-18	-	5	07

# **Students qualified National Eligibility Test (NET)**

Sr. No.	Name of the students	Reg. Number	Subject/s /Rank obtained
1.	Ravindra Kumar Dhaka	1030316002	Forestry
2.	Dhaval Prajapati	1030316001	Forestry
3.	Mevada Rambhai J.	1030317002	Forestry
4.	Patel Harpal S.	2030315008	Forestry
5.	Patel Nitinkumar V.	03-171-2011	Forestry

# **Placement Cell**

Degree Programmes	Total Passed out	Hi stu Guj	gher dies Other State	Govt. Jobs	Private Jobs	NGOs	Abroad for job	Self- Entrepren eurship	Un- employed
B.Sc.	29	15	0	0	6	1	0	0	7**
M.Sc.	5	0	0	5*	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0
Total	34	15	0	5	6	1	0	0	7**

Guj-Gujarat; \*Research positions in Ad-hoc projects; \*\*Preparing for competitive exam

### **Student's activities:**



North India tour visit to NBPGR, New Delhi on 14 March 2018



Participation of students in sports activity on 12 September 2017





Visit to J K Paper Mill nursery, Songadh on 7 September 2017



Staff and students participated in the International Yoga Day Celebration on 22 June 2017

Student's participation in special NSS camp on 6 March 2018



Students participated in annual gathering celebration on 3 April 2018

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Students involved in Teachers day celebration on 9 June 2018 at College of Forestry



Students of Forestry participated in Botanical-Fest at Waghai Botanical Garden from 7 to 9 February 2018 and received first runner's up trophy

### NSS activities 2017-18

SN	Activity	No of Volunteers
01	Road Safety and Driving Techniques for Traffic Awareness	59
	Programme (11/04/2017)	
02	World Yoga Day Celebration(21/06/2017)	36
03	Celebration of Independence Day (15/08/2017)	75
04	Hostel cleanliness (02/10/2017)	51
05	World Unity Day Celebration (31/10/2018)	59
06	Short cut to Success (07/11/2018)	35
07	Farmer's Day Celebration (03/12/2018)	32
08	Celebration of Republic Day (26/01/2018)	10
09	Thalassemia Check up Camp (19/02/2018)	60
10	Special Camp (05/03/2018 to 10/03/2018)	79

NCC Activities accomplished during the year 2017-18

Sr. No.	Name of activity	Duration	Place	No of
				Volunteers
01	Republic Day Celebration on	1 day 26.1.2018	NAU,	28
			Navsari	
02	Farewell Of NCC Cadets	1 day 24.3.2018	ACHF,	34
			Navsari	
03	Independence Day Celebration	1 day 15.8.2017	NAU,	41
			Navsari	
04	National Integration Camp Mumbai	10 days from 25.9.17 to	Mumbai	04
		5.10.2017		

# **Ongoing Educational/research/ Extension projects at College**

Year	Plan	Non-Plan	ICAR	Others	Total
2017-18	11			3	14

			Composition of filled pos				d post				
Sr	Name of	Sanc-	- Filed	Educational qualification				Domicil	e state	Gender	
No	the Post	tioned	nosts	Mas	ster	Doct	oral		Other		
110.	the rost	posts	posts	G	OS	G	OS	Gujarat	state	Male	e Female
1	Professors	5	02	-	-	0	2	-	2	2	0
2	Associate Professors	10	10	0	0	6	4	6	4	10	0
3	Assistant Professors	21	20	2	5	7	6	10	10	20	0
	Total	36	32	2	5	13	12	16	16	32	0
Perc total	entage of filled post		88.8	-	-	-	-	-	-	-	-

### **Faculty information**

G: Gujarat, OS: Out State

### **Educational/Infrastructural Facilities:**

New laboratories were made in the second floor of the College of Forestry during 2017-18. New laboratories such as laboratory of Forest Mensuration in the department of Silviculture and Agroforestry, laboratory of Soil Science in the department of Natural Resource Management were developed. Laboratory of Seed Science Technology and Forest Museum in the second floor were modified and new facilities for student were created. New instruments/ equipments were purchased for these laboratories. The instruments/ equipments such as binoculars, analytical balance, seed germinator, hot air oven, spectrometer, water bath, moisture meter *etc*. were installed in the laboratories. Other facilities like online UPS, seed cabinet were purchased. ELP units Development of quality planting materials in Forestry and Commercial Apiculture have been strengthened.

## **Details of ELP:**

### ELP Unit-1: Development of Quality Planting Material in Forestry

Title of ELU	Development of Quality Planting Material in Forestry
Year of establishment	2016-17
Name of Manager	Dr. N S Thakur
Activities	Assessment of requirement of planting stock required by various plantation agencies involved in afforestation programmes as well as surrounding farming communities. Quality seedlings production through seed and vegetative means (macro and micro propagation) and tall seedlings for planting. Assessment of quality, grading and marketing of planting stock. These activities are materialized through below given three courses <b>FWE 7.1.1 Orientation and Fundamentals of nursery management</b> <b>FWE 7.1.2 Field Exposure to nurseries</b> <b>FWE 7.1.3 Project execution</b>
No. Students Beneficiaries	29
Amount earned per student	Rs. 756/-



Vegetative Multiplication Gardens of Melia dubia (A) and Eucalyptus clones (B)



ELP trainees (2017-18 batch) visited Sadakpor High-Tech nursery on 6 September 2017

Bed preparation and mahogany seed sowing in green house by ELP trainees

# EL Unit-2: Commercial Apiculture

Title of ELU	Commercial Apiculture						
Year of establishment	2011-12						
Name of Manager	Dr. A. A. Mehta						
Activities	• Study of important bee species i.e. <i>Apis cerana indica, A. mellifera , A. florea, A. dorsata</i> and Non- <i>Apis</i> 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.						

No. Students Beneficiaries	29 4700.00				
	• Study of Economics of Bee rearing (cost benefit analysis). Project				
	• Skill and Entrepreneurship development in Beekeeping, Ethics in business,				
	• Study of quality standards for honey.				
	• Study of honey extraction, processing, marketing and selling.				
	• Visit to commercial apiary. Wax extraction.				
	• Market study of Honey bee products.				
	• Separation of Bee colonies and multiplication of colonies.				
	• Queen production and rearing technique.				
	• Study of swarming and capturing colonies or bee swarm from nature.				
	• Bee migration.				
	• Artificial feeding.				
	Trigona spp.).				
	• Survey for identifying the natural bee hives (Apis cerana and				



Apis cerana colony capturing by ELP Students



### **Research publications**

### Visit of commercial Apiary

- 1. Amlani, M.H., Tandel, M.B., Prajapati., V.M., Pathak., J. G. and L.K. Behera. (2017). Assessment of Growth Variation Among Different Species of Bamboo. *International Journal of Chemical Studies*, 5(6): 1436-1439. (NAAS-5.31).
- 2. Behera, L.K, S. K. Jha, Gunaga, R.P., Nayak, D., Tandel, M.B. and Jadeja, D.B. (2017). Genetic Variability and Correlation Study for Growth Characters Among Clones of Eucalyptus. *International Journal of Chemical Studies*, 5(6): 763-765. (NAAS-5.31).
- 3. Behera, L.K., Maheta, A.A., Dholariya, C.A., Sinha, S.K., Gunaga, R P. and Patel, S.M. (2017). Bee Foraging Activity on MPTs by Honeybee Species During Minor Honey Flow Period In South Gujrat Condition. *Int. J. of Usuf. Mngt.*, 18(1): 47-53. (NAAS-3.23).
- 4. Behera, L.K., Patel, D.P., Dholariya, C.A., Sinha, S.K., Mehta, A.A., Dobriyal, M.J. and Jadeja, D.B. (2017). Vessel parameters variation among twenty clones of Eucalyptus in South Gujarat. *Int. J. of Usuf. Mngt.*, 18(1): 41-47. (NAAS-3.23).
- Behera, L.K., Patel, D.P., Dholariya, C.A., Nayak, M.R., Gunaga, R.P., Maheta, A.A. and Jadeja, D.B. (2018). Evaluation for Chemical Properties Variation Among Clones of Eucalyptus in South Gujarat. *Multilogic in Science*, 7(25): 21-24. (NAAS-5.20).
- 6. Behera, L.K, Mehta, A.A., Shrivastava, P.K., Patel, S.M., Prajapati, V.M. and Jadeja, D.B. (2017). Genetic divergence study for growth characters among clones of Eucalyptus. *International Journal of Chemical Studies*, 5(6): 1780-1782. (NAAS-5.31).
- 7. Desai, B.S. (2017). Genetic divergence in Ashwagandha (*Withania somnifera* (l.) dunal a Review. *Journal of Medicinal Plants Studies*, 5(3): 119-122. (NAAS-3.53).
- 8. Jilariya, D.J., Thakur, N.S. and Gunaga, R.P. (2017). Quantitative and qualitative attributes of *Aloe vera* linn. grown under *Melia composita* willd. and sole cropping systems. *Indian J. of Ecology*, 44(5): 451-455. (NAAS-4.96).
- 9. Kumar, D., Thakur, N.S., Gunaga, R.P. and Susheel Singh (2017). Allelopathic propensity of the aqueous leaf extract and leaf litter of *Melia dubia* cav. on pulse crops. *Journal of Experimental Biology and Agricultural Sciences*, 5(5): 644-655. (NAAS-5.07).
- Kumar D., Thakur, N.S. and Gunaga, R.P. (2017). Allelopathic influence of leaf aqueous extract and leaf litter of Indian lilac (*Melia azedarach*) on germination, growth, biomass and grain yield of Green Gram (*Vigna radiate*) and Black Chickpea (*Cicer arietinum*). *Int. J. Curr. Microbiol. App. Sci.*, 6(10): 2669-2683. (NAAS-5.38).

- Kumar D., Thakur, N.S. and Gunaga, R.P. (2017). Effects of leaf aqueous extract and leaf litter of *Melia composite wild* on Black Gram [*Vigna mungo* (l.) Hepper]. *Allelopathy Journal*, 41(1):127-140. (NAAS-6.53).
- 12. Lakkad, A.P., Shrivastava, P.K., Sondarva, K.N. and Varma, M.G. (2017). Estimation of sediment delivery ratio at sub watershed level using Arc SWAT Model, *Current Advances in Agricultural Sciences*, 9(1): 29-35. (NAAS-4.69).
- 13. Lakkad, A.P., Dileshwer Nayak., Patel, G.R. and Shrivastava, P.K. (2017). Micro watersheds prioritization for effective soil conservation planning of sub Watershed. *Research in Environmental and Life Sciences*, 10(3): 275-279. (NAAS-3.74).
- 14. Mali, S.C, Swati Shedage and Shrivastav, P.K. (2017). Economic evaluation of sugarcane based agro forestry systems. *Journal of Tree Sciences*, 36(1): 34-37. (NAAS-3.51).
- 15. Mehta, A.A., Tandel, M.B., Behera, L.K., Patel, D.P., Dholariya, C.A. and Jadeja, D.B. (2017). Growth performance of *Chlorophytum borivilianum* sant. & Fernand accessions in Moringa based Agroforestry System. *Multilogic in Science*, 7(23): 60-63. (NAAS-5.20).
- Mehta, A.A., Tandel, M.B., Patel, D.P., Behera, L.K., Prajapati, D.H. and Jadeja, D. B. (2017). Yield performance of *Chlorophytum borivilianumsant*. & Fern and accessions in moringa based agroforestry system. *International Journal of Agricultural Sciences*, 9(10): 3976-3979. (NAAS-4.82).
- Mohanty, S., Thakur, N.S., Gunaga, R.P., Dobriyal, M.J. and Desai, B.S. (2017). Value addition in *Cymbopogon* Spp. to enhance the financial flows from *Cymbopogon* Spp *Melia dubia* cav. based silvi medicinal and sole cropping systems. *Indian Journal of Ecology*, 44(6): 812-816. (NAAS-4.96).
- Nayak Dileswar, Nivruti Patil, Behera, L.K. and Litoriya, N. (2017). Antioxidant properties variation in radiation induced genotypes of Jatropha. *Journal of Hill Agriculture*, 8(4):424-430. (NAAS-4.94).
- 19. Panchal, J.S., Thakur, N.S., Jha, S.K. and Vikas Kumar. (2017). Productivity and carbon sequestration under prevalent agroforestry systems in Navsari district, Gujarat, India. *Int. J. Curr. Microbiol. App. Sci.*, 6(9): 3405-3422. (NAAS-5.38).
- 20. Parmar A. G., Thakur, N. S. and Gunaga, R.P. (2018). *Melia dubia* Cav. leaf litter allelochemicals have ephemeral allelopathic proclivity. *Agroforestry Systems*, 1-14 https://doi.org/10.1007/s10457-018-0243-5. (NAAS-6.91).
- 21. Patel, H.S., Tandel, M.B., Prajapati, V.M., Amlani, M.H. and Prajapati, D.H. (2018). Effect of different pre-sowing treatments on germination of Red Sanders (*Pterocarpus santalinus* L.f.) in net house condition. *International Journal of Chemical Studies*, 6(2): 876-879. (NAAS-5.31).
- Patel, S.M., Tandel, M.B., Desai, M.K., Pathak, J.G., Behera, L.K. and Parmar, M.R. (2018). Economics of Cucurbitaceous vegetable Crops under Teak (*Tectona grandisl.f*) based Silvi horticultural System in South Gujarat. *International Journal of Chemical Studies*, 6(2): 119-123. (NAAS-5.31).
- 23. Raju Singh, Arunachalam, A., Dobriyal, M.J., Bhusaram J.B. and Gunaga, R.P. (2017). Crop biomass and yield patterns of dominant agroforestry systems of Navsari district Gujarat, India. *Indian J. of Agroforestry*, 19(2):72-78. (NAAS-4.53).
- 24. Shedage Swati and Shrivastava, P.K. (2018). Mangroves for Protection Of Coastal Areas From High Tides, Cyclone And Tsunami. *Int. J. of Plants & Soil Science*, 23(4): 1-11. (NAAS-4.77).
- 25. Sreekumar, R. and Gunaga, R.P. (2017). Variation in fruit and seed traits among different seed sources of *Calophyllum inophyllium* L. collected from coastal regions of Konkan India. *Int. J. Curr. Microbiol. App. Sci.*, 6(12): 441-448. (NAAS-5.38).

- 26. Thakur, N.S, Dinesh Kumar and Gunaga, R.P. (2017). Transient allelopathic propensity of Melia composita Wild. leaf litter on Chickpea (*Cicer Arietinum* L.). *Indian Journal of Ecology*, 44 (Special Issue-5): 443-450. (NAAS-4.96).
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- 28. Thakur, N.S., Jilariya, D.J., Gunaga, R.P. and Susheel Singh (2018). Positive allelospoly of *Melia dubia* Cav. Spatial geometry improve quantitative and qualitative attributes of *Aloe vera* L. *Industrial Crops & Products*, 119; 162-171. (NAAS-9.45).
- 29. Shrivastava, P.K. (2016). Water Recycling and Management in Urban Areas, Handbook of Urban and Periurban Horticulture, (Eds : Patel, N. L., Ahlawat, T.R. and Alka Singh). *Ambica Book Agency*, Jaipur, Rajasthan (ISBN: 81-87118-07-5). P. 220-229.
- Patel, R.M., Shrivastava, P.K., Dileswar Nayak and Patel, D.P. (2017). Evaluation of micro watersheds of Navsari, Book on Natural Resource Management for Climate Smart Agriculture (Eds: Sanjay Arora, Sanjay Swami and Suraj Bhan). *Soil Conservation Society of India*, New Delhi. Pp. 343-352.
- Chaudhari, P.A., Sohagiya, N.J., Sinha, S.K., Thakur, N.S. and Jha, S.K. (2017). Wood anatomical screening of short rotation trees for pulp and paper making properties: A review (Eds. Parthiban, K.T., Sreenivasan, R.), Plantation and Agroforestry: Pulpwood Value Chain Approach. *Scientific Publishers*, India. Pp.102-108.
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### HRD Programmes

### Participation of Scientists in Conference/ Seminars/ Symposia/ Workshops/Trainings (2017-18)

Particulars	Participants
Seminar/Symposia/Conference	10
Winter/Summer Schools	08
Workshop/Short term training	07
Total	25

# 10. College of Veterinary Science & Animal Husbandry

The College of Veterinary Science & Animal Husbandry was established on July 1, 2008 with funding from the Chief Ministers' Ten Point Programme (*Vanbandhu Kalyan Yojana*), Government of Gujarat with a total five year outlay for an amount of Rs. 62.62 crores under the flagship of Navsari Agricultural University. Veterinary College in the South Gujarat region caters the services to livestock farmers / owners, co-operative dairies, village level co-operative societies and pet owners especially of tribal region of South Gujarat.

On 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 (2010) were started in the college. In the year 2011, Ph.D. degree programme was also 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 in the year 2008-09. At present, the intake capacity for undergraduate programme is 80 including VCI and *Kashmiri* quota.

Infrastructural developments like construction of boys' hostel with capacity to accommodate 162 boys (2008), well planned College building to accommodate 14 departments and TVCC building to accommodate 4 clinical departments (2009) were initiated. During year 2014-15, the hostel capacity was increased to 68 rooms with accommodation capacity to 204 students. PG students are given separate accommodation in PG hostel at university level.

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.

### **List of Departments**

College of Veterinary Science and Animal Husbandry, Navsari Agricultural University, Navsari is having all the 17 departments as per VCI – 2008 and VCI – 2016. The college is also having Animal Biotechnology department in addition to the minimum required departments as per VCI.

			ANNUAL REPORT 2017-18
1	Department of Veterinary Anatomy	10	Department of Livestock Products
			Technology
2	Department of Veterinary Physiology and	11	Department of Veterinary Medicine
	Biochemistry		
3	Department of Livestock Production and	12	Department of Veterinary Surgery and
	Management		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	18	Department of Animal Biotechnology
	Toxicology		

# Academic programmes

Degree Programme	Duration	Theory	Practical	Total Credit (T+P)
		Credits	Credits	
B.V.Sc. & A.H. (VCI-	5 years (10	101	76	177
2008)	semesters)			
B.V.Sc. & A.H. (VCI-	5.5 years	50	31	81 (equivalent to 179 credit
2016)				hours as per semester system)
M.V.Sc. (Vet.)	4 Semester	44	20 (Research	64 (including research
			credits)	credits)
Ph.D.	6 Semester	30	45 (Research	75 (including research
			credits)	credits)

# **Under Graduate syllabus (as per fifth Deans' recommendations)** Semester wise Credit Hours for B.V.Sc & A.H. (VCI 2008)

Year	Semester	Number of Courses	Total Credit (T+P=)
First	Ι	06	11 + 7 = 18
	II	07	12 + 8 = 20
Second	III	08	12 + 9 = 21
	IV	09	12 + 9 = 21
Third	V	07	12 + 7 = 19
	VI	08	13 + 8 = 21
Fourth	VII	07	10 + 10 = 20
	VIII	08	10 + 8 = 18
Fifth	IX	08	9 + 10 = 19
	Х	Inter	rnship
		Total	177

# **Post Graduates programmes**

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

# Student Information

# Summary of students admitted during the year 2017-18

Dograa	Condor	Intake	Con	SERC	SC	ST	ST CBSE	ICAR		Foreign	Total
Degree	Genuer	capacity	Gen	SEDC	BC	51	CDSE	Guj	Other*	Foreign	IUtal
R V Sc	Male		27	16+1 (ex- defence)	5	6	_	-	3 (VCI)	-	58
& A.	Female	80	8	2+1 P.H.	1	5	-	-	1 (VCI)	-	18
H.	Total		35	20	6	11			4		76 (+2 Kash miri)
MV	Male		3	4	-	2	-	-	4	-	13
	Female	47	1	1	1	-	-	-	3	-	6
50.	Total		4	5	1	2	-	-	7	-	19
Ph. D.	Male	09	1+1@ = 2	1@	-	1	-	-	-	-	04
	Female		-	-	-	-	-	-	-	-	-
	Total		2	1	-	1	-	-	-	-	04
Grand	d Total		41	26	7	14	-	-	11	-	101

(a) In-service student \* Other State

# Summary of students enrolled

								Ι	CAR		
Degree	Year	Gender	Gen	SEBC	SC	ST	CBSE	Guj	Other*	Foreign	Total
	1	Male	27	18	5	7			3		60
		Female	10	3	1	6			1		21
	II sem	Male	0	0	0	3					3
	(VCI 2008)	Female	0	0	0	0					0
	2	Male	26	14	2	0			5		47
		Female	6	6	0	5			1		18
DUG	IV sem	Male	4	3	1	2					10
B. V.Sc. & A.H.	(VCI 2008)	Female	0	0	0	1					1
	3	Male	29	22	6	5			8		70
		Female	3	4	1	3			1		12
	4	Male	20	12	5	5					42
		Female	2	3	0	0					5
	5	Male	13	15	2	5					35
		Female	11	1	0	2					14
		Total	151	101	23	44			19		338
	1	Male	3	4	-	2	-	-	4	-	13
		Female	1	1	1	-	-	-	3	-	6
M. V. Sc.	2	Male	1@+ 3=4	3	2	3	-	-	3	-	15
		Female	-	-	-	1	-	-	-	-	1
		Total	8	8	3	6	-	-	10	-	35
	1	Male	1+ 1@ = 2	1@	-	1	-	-	-	-	04
		Female	-	-	-	-	-	-	-	-	-
Ph. D.	2	Male	1+2 (a) = 3	4@	1@	-	-	-	-	-	8
		Female	-	-	-	-	-	-	-	-	-
	3	Male	1@	1@	-	-	-	-	-	-	2
		Female	-	-	1@	-	-	-	-	-	1
		Total	6	6	2	1	-	-	-	-	15
	Grai	nd Total	165	115	28	51			29		388

@In-service student Gujarat \*\* Other state

# Summary students of passed out (2017-18)

	Distribution of students in different classes							
Gender	First with Distinction	First class	Second class	Passed class	Total			
<b>Under Graduat</b>	e							
Male	0	5	24	4	34			
Female	0	6	9	-	14			
Total	0	11	33	4	48			
Post Graduate (	(Master)							
Male	14 + 1@= 15	-	-	-	15			
Female	-	-	-	-	-			
Total	15	-	-	-	15			
Doctoral	Doctoral							
Male	7@	-	-	-	7			
Female	1@	-	-	-	1			
Total	8	-	-	-	8			

**@In-service student** 

# **Students Financial aid**

Name of the	Under-g	graduate	Mas	sters	D		
fellowship	No. of S	tudents	No. of Students		No. of Students		Total
	Male	Female	Male	Female	Male	Female	
NTS-UG	9	3	-	-	-	-	12
NTS-PG	7	3	-	-	-	-	10
NAU PG fellowship	-	-	1	1	1		3
NAU Girls meritorious fellowship	-	16	-	-	-	-	16
SC/ST/fellowship	14+20	3+18					55
SEBC fellowship	8	67					75
Total	58	110	1	1	1	-	171

# Cut off marks for admission to UG degree Programme (2017-18)

Sr. No.	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%) (On GUJCET basis)
1	General	40%	63
2	ST	35%	19.5
3	SC	35%	45.5
4	OBC/SEBC	40%	61.5

# Number of students qualified JRF during year/Number of UG students passed out

Year	Number of students got JRF	Number of UG students passed out		
2017-18	0	48		

# Students qualified ICAR JRF

Sr. No.	Name of the students	Reg. Number	Subject/s /Rank obtained
1.	Tank Dhairya Pradipbhai	3040413055	281
2.	Fotariya Abhi Ashokbhai	3040413012	321 (In Category-102)
3.	Dalsaniya Urmil Ratanshibhai	3040413008	392
4.	Samantara Snatasmita Purnachandra	3040413052	400
5.	Patel Dishaben Upeshbhai	3040413025	445
6.	Patel Krunal Prakashbhai	3040413028	604
7.	Mehulkumar Pandor	3040413020	721 (In Category-28)
8.	Desai Nilofar Kavalbhai	3040413011	850
9.	Usadadiya Pritkumar Maheshbhai	3040413059	856
10.	Darji Mayankkumar Virabhai	3040413010	44 (In Category-19)
11.	Patel Mayankkumar Ramanbhai	3040413030	68
12.	Patel Pragneshkumar Maheshbhai	3040413034	113
13.	Varunkumar H. Mehta	3040413060	117
14.	Patel Siddhiben Gunvantbhai	3040413041	192
15.	Solanki Krunalbhai Jitendrabhai	3040413054	242 (In (Category-31(SC))
16.	Patel Hetal Natubhai	3040413026	314 (In (Category-33(ST))

# **Students Performance at M.Sc. Level**

Year	Number of M.Sc/M.V.Sc passed outs qualified SRF or admission in Ph. D in ICAR Deemed University	Students qualify NET examination	Number of M.V.Sc passed outs
2017-18		07	15

# **Students qualified National Eligibility Test (NET)**

Sr. No.	Name of the students	Reg. Number	Subject/s /Rank obtained
1.	Jasmin A Malviya	2040416004	Veterinary Biochemistry
2.	Sawan D Rathwa	2040417004	Veterinary Physiology
3.	Jyotishree Bayan	2040415005	Animal Genetics & Breeding (63.00%)
4.	Kunvar Sunil V.	2040416003	Animal Nutrition (57%)
5.	Desai Dhruv Nitinkumar	1040417001	Veterinary Microbiology
6.	Pravin Ratre	2040416010	Livestock Production and Management
7.	Ketan A. Patel	2040413006	Livestock Production and Management

### **Placement Cell**

Degree	Total	Higher studies		Covt	Duinata	NCOr	Abroad	Self-	Un-		
Programmes	Passed out	Guj	Other State	Jobs	Jobs	ngos	for job	Entrepreneu rship	employed		
	B. V. Sc. & A.H.										
<b>2013-14</b> 32 16 01 2 2 8 0 3 0											
2014-15	34	18	02	4	2	6	0	2	0		
2015-16	41	17	01	6	4	7	0	6	0		
2016-17	37	17	02	3	5	7	0	3	0		
2017-18	48	20	02	3	6	13	0	4	0		
	M. V. Sc.										
2013-14	15			4	2	6	0	3	0		
2014-15	17			4	0	11	0	2	0		
2015-16	15			2	3	10	0	0	0		
2016-17	16			3	2	9	0	2	0		
2017-18	15			0	4	8	0	3	0		
					Ph.D	).					
2013-14	3			3	0	0	0	0	0		
2014-15	4			4	0	0	0	0	0		
2015-16	6			6	0	0	0	0	0		
2016-17	6			6	0	0	0	0	0		
2017-18	8			8	0	0	0	0	0		
Total	265	72	7	56	28	77	0	25	0		

## **Students activities:**



Educational visit of Sayajibaug Zoo, Vadodara on 25-10-2018 for practical exposure of captive wildlife management to final year students



Participation of NSS volunteers in Cyber Crime Awareness Seminar

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Participation in *Swacch Bharat Abhiyan* by NSS Unit



Participation of the students in national level literally and sports competitions at Pantnagar



Blood donation camp by NSS Unit



Participation by students in Inter-collegiate sports competitions

### NSS activities 2017-18

Sr. No.	Activity	No of Volunteers
1.	Road safety awareness programme	53
2.	International yoga day celebration	20
3.	Vanmahotsav-2017	125
4.	Swacchta oath	153
5.	<i>Jaiv urja</i> divas	47
6.	International youth day celebration	85
7.	Youth voters awareness	86
8.	Swine flu awareness	86
9.	Swaccha Bharat Abhiyan	90
10.	Green campus Abhiyan	90
11.	Boys mess cleaning	90
12.	Blood donation camp	125
13.	Blood donation awareness programme	125

		ANNUAL REPORT 2017-18
14.	Thalessemia awareness and screening camp	125
15.	Rashtriya Ekta Divas	15
16.	Flag day celebration	125
17.	Communal Harmony and National Integration awareness	125
18.	Vasant Panchmi celebration	160
19.	Cyber crime and traffic awareness programme	50
20.	Women security awareness programme	50

**Ongoing Educational/research/ Extension projects at College** 

Sr. No.	Name of the projects	Funding agency	Location
1	Establishment of Regional Animal Disease Diagnosis	Government of	Dept. of Veterinary
	and Research Laboratory	Gujarat (Plan	Microbiology
		Project)	
2	WHO-APCRI Indian Multicentric Rabies Survey-	APCRI- WHO	Dept. of Veterinary
	2017		Microbiology
3	Veterinary Clinical Research and Experiential	Government of	Veterinary Clinical
	Learning Complex	Gujarat (Plan	Complex
		Project)	
4	Evaluation and Validation of Antimicrobial and Anti-	Government of	Dept. of Vet.
	inflammatory Activity of Medicinal Plants Used by	Gujarat (Plan	Pharmacology and
	Vanbandhus of South Gujarat	Project)	Toxicology
5	Establishment of Poultry unit	Government of	Instructional
		Gujarat (Plan	Livestock Farm
		Project)	Complex
6	ELP on Broiler & Layer Production	ICAR	Instructional
			Livestock Farm
			Complex

# **Faculty information**

			Filled posts	Composition of filled post									
		Sancti-		Educ	ational	qualific	ation	Domicil	e state	Gender			
Sr. No.	Name of the Post	oned posts		Master		Doctoral		Cuiarat	Other	Mala	Famala		
				G	OS	G	OS	Gujarai	state		remate		
1	Professors	01+15	01+06	07	-	03	04	04	03	06	01		
2	Associate	11	06	04	02	04	02	04	02	06			
	Professors												
3	Assistant	49	41	30	11	23	06	29	12	33	08		
	Professors												
Total		76	54	41	13	30	12	37	17	45	09		
Percentage of total filled post			71.05										

G: Gujarat, OS: Out State

# **Experiential Learning Unit**

Title of ELU	Experiential Learning Unit on Broiler & Layer Production
Year of establishment	2013-14
Name of Manager	Dr. Y. D. Padheriya
Activities	ELP activities on Broiler rearing carried out on 194 vencobb birds. Student were acquainted with recent management practices on broiler rearing.
No. Students Beneficiaries	16
Amount earned per student	NIL



Title of ELU	Experiential Learning Unit On Goat Production
Year of establishment	2014-15
Name of Manager	Dr. N. S. Dangar
Activities	Entrepreneurship of student carried out using facilities available with Livestock Research Station, NAU, Navsari. Our Experiential learning unit will starts on commencement of new academic year.
No. Students Beneficiaries	16
Amount earned per student	NIL





#### **Research publications**

- 1. Sharma A. K., Chaudhary S.S. and Puri Gopal (2018). *In vitro* maturation of buffalo oocytes in TCM-199 media supplemented with follicular fluid, hormones and antioxidants. *Ruminant science* 6(1): 13-18 (NAAS-5.00)
- 2. Sharma A. K., Puri Gopal, Kharadi V. B. and Bhavsar S. K. (2018) In vitro production of early stage buffalo embryos in modified synthetic oviductal fluid (mSOF) medium. *Indian Journal of Animal Sciences* 88 (2): 176–180 (NAAS-5.25)
- 3. Odedara Arjun B., Chaudhary Sandhya S., Singh Virendra Kumar, Patel Pankaj A., Puri Gopal and Kharadi V.B. (2018) Effect of different temperature humidity indices on antioxidant parameters in Surti buffaloes. *Indian Journal of Animal Research* 52(1): 29-32 (NAAS-6.20)
- 4. Sharma A. K., Chaudhary S. S. and Puri G. (2017) Recovery of pre-antral follicles from goat ovarian cortex through mechanical and enzymatic procedures. *Indian Journal of Small Ruminants*, 23(1): 104-107 (NAAS-5.25)
- 5. Manat Tanvi D., Chaudhary Sandhya S., Singh Virendra K. and Patel Sanjay B. (2017). Blood profile of Vitamin A and β-Carotene during post-partum period in Surti Goats. *The Indian Journal of Veterinary Sciences & Biotechnology*, 12(3): 16-18. (NAAS-4.47)
- 6. Manat Tanvi D., Chaudhary Sandhya S., Singh Virendra Kumar, Patel Sanjay B. and Tyagi Kuldeep Kumar (2017). Oxidative stress profile during postpartum period in Surti goat. *Indian journal of Animal research*. 51 (5) 2017 : 837-840 (NAAS-6.20)
- Janmeda, Mamta., Kharadi, V. B., Pandya, G. M., Brahmkshtri, B. P., Ramani, U. V., and Tyagi, K. K. (2017). Relative gene expression of fatty acid synthesis genes at 60 day postpartum in bovine mammary epithelial cells of Surti and Jafarabadi buffaloes. *Veterinary world* 10 (5): 467:476. (NAAS - 5.71)
- 8. Janmeda, M., Kharadi, V. B., Pandya, G. M., Brahmkshtri, B. P., Ramani, U. V., and Tyagi, K. K. (2017). Variation in test day milk yield and composition at 15 and 60 day postpartum in Surti and Jafarabadi buffaloes. *Journal of Animal Research* 7(3): 451:458. (NAAS-5.68)
- 9. Pandya, G.M., Ramani, U.V., Janmeda, M., Tyagi, K.K., Kharadi, V.B., Dangar, N.S., Gajbhiye, P.U. and Brahmkshtri, B.P. (2017). Variability in test day milk yield and milk composition at day 15 and 60 of lactation in Surti and Jaffarabadi buffaloes. *Indian Journal of Dairy Science* 70(6):763-766. (NAAS- 5.26)
- Gaurav Pandya, Umed Ramani, Mamta Janmeda, Kuldeep Tyagi, Balkrushna Brahmkshtri and Vishnu Kharadi. (2018). Relative gene expression analysis of β-casein gene and its transcription regulatory genes in primary buffalo mammary epithelial cells of Surti and Jaffarabadi buffaloes. *Indian Journal of Animal Sciences* 88 (3): 319–00. (NAAS-6.19)
- 11. Gadhvi, Y.H., Kharadi, V.B., Ramani, U.V. Pandya G.P., Dangar, N.S., Brahmkshtri, B.P. and Pawar, V.D. (2017). Study on DGAT1 gene polymorphism in Surti and Banni buffaloes by PCR-RFLP. *The Indian Journal of Veterinary Sciences & Biotechnology* 13 (02): 77-82. (NAAS-4.47)
- Varghese, A., Raina, O.K., Chandra, D., Mirdha, B.R., Kelawala, N.H., Solanki, J.B., Kumar, N., Ravindran, R., Arun, A., Rialch, A., Lalrinkima, H., Kelawala, R. and Samanta, S. (2017). Serodetection of *Toxocara canis* infection in human with *T. canis* recombinant arginine kinase, cathepsin L-1 and TES-26 antigens. *Acta Parasitologica*, 62(4): 775–778. (NAAS-7.16)
- Kumar N, Varghese A, Solanki JB (2017) Scroprevalence of *Fasciola gigantica* infection in bovines using cysteine proteinase dot enzyme-linked immunosorbent assay, *Veterinary World*, 10(10): 1189-1193. (NAAS-5.71)
- Kumar, N., Das, B., Solanki, J.B., Jadav, M.M. and Menaka, R. (2017). Plastination of macroparasites: An eco-friendly method of long-term preservation. *Veterinary World*, 10(11): 1394-1400. (NAAS-5.71)
- 15. Das, B., Kumar, N., Jadav, M.M., Solanki, J.B. and Rao, T.K.S. (2017). Physio-biochemical parameters: a potential tool for target-selective treatment of haemonchosis in the small ruminants. *Tropical Animal Health and Production*, 49: 1577-1589. (NAAS-6.91)

- 16. Thakre, B.J., Solanki, J.B., Kumar, N. and Vargese, A. (2017). Comparative evaluation of conventional staining method and enzyme linked immunosorbent assay kits for the detection of bovine cryptosporidiosis. *Indian Journal of Animal Research*, 51(5): 916-921
- 17. Jadav, M.M., Kumar, N., Das, B. and Solanki, J.B. (2018). Immunodiagnostic potency of homologous antigens for natural *Paramphistomum epiclitum* infection in small ruminants in plate and paper enzyme linked immunosorbent assay. *Indian Journal of Animal Research*, 52(1): 83-91 (NAAS-6.15)
- 18. Menaka, R, Vyas, K.N. and Chaurasia, S. (2017). Histochemical studies of thyroid gland in prenatal development of Surti goat fetuses. *Ruminant Science*. 6(2): 259-261. (NAAS-5.00)
- 19. S. Chaurasia., K.N. Vyas., R. Menaka., K.M. Panchal and T.K.S. Rao (2018). Postnatal histomorphological changes in thymus of surti goat. *Indian Journal of Small Ruminant*, 24(2): 288-292. (NAAS-5.25)
- 20. Shailendra Chaurasia., R, Menaka., Thakur Krishna Shankar Rao., Brishketu Kumar and Vijay Kumar Sharma (2018). Clinical importance of lymphatic territories with special reference to mammary glands and uterus in canine: A review. *Theriogenology Insight*, 8(2): 79-86. (NAAS-4.75)
- 21. Divya Chaudhari, J. N. Mistry, S. K. Tyagi, S. K. Jhala and D. N. Suthar (2017). Comparison of face mask and endotracheal intubation techniques for general anaesthesia in rabbits. *Indian J. Vet.*, *Surgery.*, 38(1): 23-26. (NAAS-4.7)
- 22. A. J. Parmar, S. K. Tyagi, V. S. Dabas, J. N. Mistry, D. N. Suthar, R. H. Bhatt, S. K. Jhala, D. V. Pansuria and I. M. Bhatti (2017). Comparative biochemical evaluation of plaster of paris bandage and fiberglass bandage casts under compression testing. *Indian J. Vet., Surgery.*,38(1): 23-26. (NAAS-4.7)
- 23. V. S. Dabas., S. K. Tyagi, R. H. Bhatt, S. K. Jhala, D. N. Suthar and N. F. Chaudhari (2017). Surgical management of tongue laceration in a horse. *Indian J. Vet., Surgery.*, 38(2): 144. (NAAS 4.7)
- 24. Mehta, S.A., Patel, R.M., Vagh, A.A., Mavadiya, S.V., Patel, M.D., Vala, J.A. and Parmar, S.M. (2017). Prevalence of Canine Parvo Viral Infection in Dogs in and around Navsari District of Gujarat State, India. *The Indian Journal of Veterinary Sciences & Biotechnology* 13(2): 67-72. (NAAS-4.47)
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- 27. S. M. Pandya, K. K. Sharma, I.H. Kalyani and Pramod Sakhare (2017) Study on host predisposing factors and diagnostic tests for canine parvovirus (CPV-2) infection in Dogs. *Indian Journal of Animal Research* 7(5):897-902. (NAAS-6.20)
- 28. S. G. Malaviya, I. H. Kalyani, K. K. Sharma, P. S. Sakhare and D. R. Patel (2017). Prevalence of toxigenic Escherichia coli (E.coli) and rotavirus among neonatal calves in south Gujarat region (india) using classical and PCR based methods. *Ruminant Science* 6(1). (NAAS-5.00)
- K.K.Sharma, I. H. Kalyani, J. Mohapatra, S. D. Patel, D. R. Patel, P. D. Vihol, A. Chatterjee, Dinesh R. Patel, B. Vyas (2017) Evaluation of the oncolytic potential of R2B Mukteshwar vaccine strain of Newcastle disease virus (NDV) in a colon cancer cell line (SW-620). *Archives of Virology*, 162(9): 2705-2713. (NAAS-8.16)
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- 33. Patel K. R., Savalia V. C., Kumar R., Kalyani H. I., Gupta S. and Suthar P. A. (2018). Isolation, Identification and Molecular Characterization of *Vibrio parahaemolyticus* from Shrimp Samples from South Gujarat of Navsari District. *Journal of Animal Research*, 7 (6):1-06. (NAAS-5.68)
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- 36. Savani,H.R., Khasatiya,C.T., Swati Saxena and Patel, S.B. and Singh,V.K. (2018). Serum Progesterone, Oestradiol-17β, FSH and LH levels in Anestrus Surti buffaloes treated with Ovsynch alone and in combination with PRID. *Indian J.Vet.Sci.Biotech*.13 (03):27-32. (NAAS-4.47)
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- 53. Priti D. Vihol, Jatin H. Patel, Jignesh M. Patel, Vijendra S. Dabas, Irshadullakhan H. Kalyani, Chandrakant F. Chaudhari and Ashish C. Patel (2017). Identification of pathogenic *Leptospira* spp. carrier goats using Polymerase Chain Reaction (PCR). *International Journal of Current Microbiology and Applied Sciences*. 6(12):2174-2183 (NAAS-5.38)
- J. M. Patel, M. C. Prasad, P. D. Vihol, I. H. Kalyani, M. G. Prajapati, H. C. Parmar, R. D. Varia and K. M. Patel (2017). Seroprevalence of Leptospira hardjo in Cattle of Gujarat, India. *International Journal of Current Microbiology and Applied Sciences*. 6(11): 1304-1310. (NAAS-5.38)
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- Dangar, N. S. and Vataliya, P. H. (2018). Reliable Methods of Estimation of Genetic, Phenotypic and Environmental Trend for Production Traits in Gir Cattle. *The Indian veterinary journal*, 95(03): 35-39. (NAAS-4.42)
- 57. Dangar, N. S. and Vataliya, P. H. (2018). Genetic, Phenotypic and Environmental Trend for Milk Yield and Production Efficiency Traits in Gir Cattle. *International Journal of Livestock Research*, 07(09): 36-42. (NAAS-5.36)

### **International Book Published**

Patel, D.R., Kalyani, I.H. and Sharma, K.K. (2017) Characterization of BoHV-1 in bovine of Southern Gujarat, Lambert Academic Publishing, Germany (International Book ISBN no. 978-3-330-33572-1).

### HRD Programmes

### **Participation of Scientists**

Particulars	Participants
Seminar/Symposia/Conference	26
Winter/Summer Schools	10
Workshop/Short term training	01
Total	37

# **11. Aspee Agribusiness Management Institute**

The glut of opportunities are available for competent agribusiness professionals in various agricultural related industries, educational and others institutions. The Navsari Agricultural University (NAU), is a retort to the need by establishing the ASPEE Agribusiness Management Institute (AABMI) in 2007and Doctoral Degree Programme – Ph. D. (Agribusiness Management) since 2017. The core philosophy of AABMI is to build and sustain the relationship between farming community and professional agencies involved in it. The institute is second time accredited up to 2021 by the Indian Council of Agricultural Research (ICAR), New Delhi.

# **PG Degree Programmes**

The institute is offering following flagship professional Post graduate programme

**1. MBA (Agribusiness management)** programme to prepare managers, business leaders and entrepreneurs in food and agribusiness sectors to respond to the challenges faced by these sectors. The MBA (ABM) is a full time 2 years PG Programme.

**2. Ph.D (Agribusiness Management)** is 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).

## **List of Departments**

1	Agribusiness Marketing Management
2	Agribusiness Economics and Finance
3	Human Resource Management
4	Agribusiness Operation and IT

## Post Graduates programmes

Degree Programme	Duration	Total Credit (Th+P)		
MBA (ABM)	4 Semesters	52+15=67		
M.Sc. (IT in Agri.)	4 Semester	32+36=68		
Ph.D. (ABM)	6 Semester	75		

## **Student Information**

Summary of students admitted during the year 2017-18

Degrees	Condon	Intake	Con	SEDC	50	SТ	CDSE	Ι	CAR	Foreign	Total
Degree	Gender	capacity	Gen	SEDC	SC	51	CDSE	Guj	Other*	roreign	Total
MBA (ABM)	Male	37	7	7	-	2	-	11	5	-	16
	Female		11	3	1	3		16	2		18
	Total		18	10	1	5	-	27	7	-	34
	Male	04	1	-	-	-	-	1	-	-	1
Ph. D.	Female		-	-	-	-	-	-	-	-	-
	Total		1					1			1
Grand	l Total		19	10	1	5		28	7		35

**Gujarat** \* Other State

# Summary of students enrolled

Degrad		Condon	Com	SEDC	SC	ст	CDSE	Ι	CAR	Fausian	Tatal
Degree	year	Gender	Gen	SEBC	SC	51	CBSE	Guj	Other*	Foreign	Iotal
	1	Male	7	7	-	2	-	11	5	-	16
		Female	11	3	1	3	-	16	2	-	18
MBA (ARM)	2	Male	12	4	1	4	-	18	3	-	21
		Female	5	-	-	1	-	5	1	-	6
	Total		35	14	2	10	-	50	11	-	61
	1	Male	-	-	-	-	-	-	-	-	-
M. Sc. (IT in		Female	-	-	-	-	-	-	-	-	-
	2	Male	0	1	-	0	-	1	-	-	1
AG)		Female	2	3	-	1	-	6	-	-	6
	То	tal	2	4	-	1	-	7	-	-	7
	1	Male	1	-	-	-	-	1	-	-	1
Dh D		Female	-	-	-	-	-	-	-	-	-
$(\mathbf{A}\mathbf{P}\mathbf{M})$	2	Male	-	-	-	-	-	-	-	-	-
		Female	-	-	-	-	-	-	-	-	-
	То	tal	1	-	-	-	-	1	-	-	1
	Grano	d Total	38	18	2	11	-	58	11	-	69

Gujarat \*\* Other state

# Summary students of passed out (2017-18)

	Distribution of students in different classes						
Gender	First with Distinction	First class	Second class	Passed class	Total		
MBA (ABM)							
Male	1	16	4	-	21		
Female	2	2	2	-	6		
Total	3	18	6	-	27		
MSc (IT)							
Male	1	-	-	-	1		
Female	5	-	-	-	5		
Total	6	-	-	-	6		

# Student's financial aid

Name of the fellowshin	Mas		
Name of the fellowship	No. of S	Total	
	Male	Female	
NTS-PG	5	3	8
ICAR-JRF	2	-	2
NAU PG fellowship	-	3	3
SC/ST/fellowship	5	6	11
SEBC fellowship	5	3	8
Total	17	15	32

### **Students Performance at M.Sc. Level**

Year	Number of MBA passed outs qualified SRF or admission in Ph. D in ICAR Deemed University	Students qualify NET examination	Number of M.Sc/M.V.Sc passed outs
2017-18	Nil	2	33

List of M.Sc. students passed outs qualified SRF or admitted in Ph. D in ICAR Deemed University Students qualified National Eligibility Test (NET)

Sr. No.	Name of the students	Reg. Number	Subject/s /Rank obtained	
1.	Piyush Suvagia		Management (CBSE-UGC)	
2.	Tanuja Rathod	2070515025	Management (CBSE-UGC)	

#### Placement Cell - 2018

Degree	Total Passed out	Higher studies		Govt.	Private	NCOS	Abroad	Self-	Un-
mes		Guj	Other State	Jobs	Jobs	NGUS	for job	urship	employed
MBA (ABM)	34	1		3	19	-	-	-	11
Total	34	1		3	19				11

### **Student's Achievements:**



Students of AABMI, batch 2017-19, **Ms. Disha Sutariya** secured 1<sup>st</sup> **prize** in "**Extempore Contest**" and Ms. **Rashmi Bhat K** secured the 1<sup>st</sup> **prize** in "**Elocution Contest**" at "**Intercollegiate Literary Competition-2017**" conducted by AABMI on September 22, 2017.



The students of AABMI were participated in different eight events atNational Level Agribusiness Management Fest "AGRI-INNOVATIA-2018. The team of Ad Mad Show, Vala Jitendra, Upasana Maniya, Patel Kiran, Sherathiya Pooja won first prize, Muddasir Ahmadwon first prize in Debate and Yaddaki Vinay –became Runner Up in On the Spot Photography event.

#### ANNUAL REPORT 2017-18



2018.



Agri Asia 2017 International Exhibition visit

faculty members; Dr. Swati Sharma and Prof. Gautam 2017-18 batch. A group of 35 students with faculty Parmar on 3, September, 2017 at Mahatma Mandir, members Dr.Ruchira Shukla and Dr.Alpesh Leua to interact with many companies from India and enthusiastically interacted with Managing Director Overseas who participated in this International Shri Suraj Savalia regarding the opportunities and Exhibition. The students also attended the different challenges in food processing industry. seminars which created combination of technical guidance along with practical knowledge for the students.



Disha Sutariya won second prize in one minute Disha Sutariya won second prize in one minute challenge game event in National Management fest challenge game event in National Management fest held at Ganpat University held on 3<sup>rd</sup> - 4<sup>th</sup> February, held at Ganpat University held on 3<sup>rd</sup> - 4<sup>th</sup> February, 2018.



**Exposure Visit of 10<sup>th</sup> Batch** 

7<sup>th</sup> Agri Asia 2017 International Exhibition and Exposure visit of MBA (ABM) students to Patson Conference was attended by the students of Foods (India) Pvt. Ltd at Sisodra, Navsari on MBA(ABM) and M.Sc. (ICTA) along with two 30/08/2017 as a part of orientation programme of Gandhinagar, Gujarat. The students got the privilege visited the premises of processing unit and





### **Remarkable Job Placement**

The training and placement cell of AABMI conducted 20 placement interviews of reputed and leading Agro etc. They placed 26 students out of 35 from MBA package of Rs. 6.5 lacs offered by Sumitomo Chemical (I) Pvt. Ltd.to five students our institute.

### **Industrial Interaction**

The Placement and Training Cell of AABMI continuously work on industry interaction, talk and training programes in this regard Ms. Bansari Nishar Shah alumnus of ASPEE Agribusiness Management Institute, Budding Agri-Entrepreneur (Exporter), Nishar Farms delivered talk on the topic "AGRI-EXPORT: A BRIEF INSIGHT" on 18th September, 2017. She gave an overview of export procedures and highlighted on the major prospects and risks associated with export of various fruits and vegetables from India.

Mr. Rakesh Sharma, Territory Manager Traits, Mahyco Monsanto Biotech (India) Pvt. Ltd. delivered talk on the topic "NEED FOR SECOND GREEN REVOLUTION **IN INDIA**" on 1<sup>st</sup> **December, 2017.** He discussed various challenges faced by Indian Seed Industry at present and he threw light on the strategies to be implemented by different stakeholders for the growth of Indian Seed Industry. The both talk was organized by Dr. Alpesh Leua and Dr. Swati Sharma

### Agri Scape -2017

The 7<sup>th</sup> issue of AGRISCAPE (2016-17) in-house magazine of AABMI was published and released in December, 2017. The magazine presented 16 featured articles on varied topics of agribusiness contributed by students and faculty members and included Industries comprising Inputs, Finance, NGO, Retail features like agriinfocast, entrepreneur speak, Fun Off the beat, Tour diary etc. The magazine was edited (ABM) and MSc (ICTA) programmes. The highest and compiled by Dr. Ruchira A. Shukla and Dr. Swati Sharma and with Advisory Support from all the faculty members of AABMI.

### **Ongoing Educational/research/ Extension projects at College**

Sr. No.	Name of the projects	Funding agency	Location									
1	Strengthening Institute of Agribusiness	State Government	NAU,Navsari									
	Management-(B.H.12245)	Plan Project										
2	Post Graduate Programme of Information and	State Government	NAU,Navsari									
	Communication Technology (B.H. 12988)	Plan Project										
3	Centre for Research in Agricultural	State Government	NAU,Navsari									
	Marketing(B.H.12951)	Plan Project										
	Name of	Sanct ioned posts		Composition of filled post								
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Sr			Filled posts	Edu	Educational qualification				Domicile state		Gender	
No.	the Post			Master		Doctoral		Gujar	Other	Male	Female	
				G	OS	G	OS	al	state			
1	Professors	1	1*	-	1*	-	1*	-	1*	-	1*	
2	Associate	2	2	2	-	2	-	2	-	2	-	
	Professors											
3	Assistant	4	4	3	1	-	1	3	1	3	1	
	Professors											
	Total	7	7	5	2	2	2	5	2	5	2	
Percentage of total filled post			100	71.42	28.57	28.57	28.57	71.42	28.57	71.42	28.57	

#### **Faculty information**

\* Associate Professor against the post

G: Gujarat, OS: Out State

### **Educational/Infrastructural Facilities:**

The institute has adequate infrastructure as class rooms and conference hall withwell equipped with LCD, Interactive board, Multimedia facilities, projector, computer and Plasma TV. The Institute has its own reading room facility. Institute regularly subscribes various magazines, journals and business newspapers. 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 has separate Activity Rooms with all required amenities within itself.



## **Research publications**

- 1. Augustine, Iisa and Shukla, Ruchira. (2017) A Study of Consumer Preferences and Market Potential for Poultry Products in Kumi District of Uganda *International Journal of Current Microbiology and Applied Sciences*6 (10) 2800-2813 (NAAS Rating- 5.38)
- 2. Parmar, Gautam R, Shukla Ruchira and Leua Alpesh (2017) "Factors Affecting Consumption of Ready to Eat and Ready to Cook Products in Navsari (Gujarat)", International Journal of Research in Business Management, vol 5 (6), (NASS-1.3.09)
- 3. Parmar, Gautam and Shukla Ruchira (2017), A Study of Consumer Behavior towards Edible Oil Usage in Navsari, Indian Journal of Economics and Development, Vol. 14 (1), 178-181 NAAS (4.82)
- 4. Sharma, Swati, (2017). Economics of Post-Harvest Losses in Jhunjhunu District of Rajasthan. International Journal of Research Commerce and Business Management, 10(1), 16-19 (NAAS Rating-4.14).

5. Sharma, Swati (2018). Economic analysis of Postharvest losses in onion in Ajmer district of Rajasthan. International Journal of Commerce and Business Management, 11(1):13-17. (NAAS Rating-4.14)

### **Chapter in Book**

- 1. Leua Alpesh, Parmar Gautam, Sharma Swati and Shukla Ruchira (2017) Export of dry flowers: Present status, challenges and strategies full paper published in Glimpses of dry flower research in National seminar on Awareness and promotion of dry flower exports and Industry in Gujarat, ACHF,NAU, Navsari in collaboration with NABARD.
- 2. ParmarGautam, Sharma Swati, LeuaAlpesh and Shukla Ruchira (2017). E- Commerce in Agriculture Input Industry: Problems and Prospects: In Tazyn Rahman (Ed.), Digital India: A Road Head (106-111), Empyreal Publishing House, Assam. (ISBN No. 978-81-930928-0-4)
- 3. Sharma Swati, Shukla Ruchira, Parmar Gautam and Leua Alpesh (2017). E-Agriculture: Transformation of Indian Agriculture via E-Commerce: In Tazyn Rahman (Ed.), Digital India: A Road Head (120-127), Empyreal Publishing House, Assam. (ISBN No. 978-81-930928-0-4)
- 4. Sharma Swati, ParmarGautam, Mittal Ramesh, Choudhary Kuldeep (2018). Indian Dairy Industry: Present Status, Challenges and Prospects. In H.Nagaraj wt.al. (Ed.), Emerging Trends in Agribusiness Management in India (333-336), Institute of Development Studies, UOM, Mysuru. (ISBN No. 978-93-85629-53-2)
- Shukla Ruchira, Sharma Swati, Parmar Gautam, Chaudhari Bhavesh, Leua Alpesh, Kuthe Surendra and Vasani Jaydeep (2018). Role of Market Intelligence, Key Issues and Strategies for Effective Marketing of Green House Vegetable Produce. In Sanjeev Kumar et.al. (Ed.), Technology and Sustainability of Protected Cultivation for Hi-valued vegetable crops. (390-412), Navsari Agricultural University, Navsari. (ISBN No. 978-81-922823-6-7)
- Parmar Gautam, Sharma Swati, Leua Alpesh and Shukla Ruchira (2018). Marketing of Greenhouse Vegetables Through Organised Retail: A Review on Prospects and Challenges. In Sanjeev Kumar et.al. (Ed.), Technology and Sustainability of Protected Cultivation for Hi-valued vegetable crops (478-494), Navsari Agricultural University, Navsari. (ISBN No. 978-81-922823-6-7)
- Shukla Ruchira, Sharma Swati, Parmar Gautam, Leua Alpesh, Mittal Ramesh (2018). Challenges and Prospects of Medicinal and Aromatic Plants marketing in India. In H.Nagaraj et.al. (Ed.), Emerging Trends in Agribusiness Management in India (337-339), Institute of Development Studies, UOM, Mysuru. (ISBN No. 978-93-85629-53-2)
- 8. Sharma, Swati., Shukla, Ruchira, Patel, Jigar and Suvagiya, Piyush.(2017) Farmer Producer Company:New Generation Business Ownership, In Keyurkumar M. Nayak (Ed.), Managing Business Through Financial Innovation in the globalised era, (99-106)Himalaya Publishing House Pvt.Ltd Mumbai(ISBN No. 978-93-5262-067-8)

#### **Extension activities**:

The national level flagship programme **Farmers FIRST** sponsored by ICAR and implemented by DDE, NAU. Under this programme, the team of AABMI proposed Entrepreneurship module "Production and marketing of Vermicompost". In this womenfarmers were selected from the adopted villages and the team conducted training programme, exposure visit and many awareness programme to create entrepreneurship instinct in the participated women, Dr. Alpesh Leua as Co-PI, Dr. Ruchira Shukla, Gautam Parmar and Dr. Swati Sharma worked as member of the module.

#### HRD Programmes Participation of Scientists

Particulars	Participants
Seminar/Symposia/Conference	8
Winter/Summer Schools	4
Workshop/Short term training	5
Total	17

## 12. Aspee Shakilam Agri Biotechnology Institute, Surat

The Aspee Shakilam Agri Biotechnology Institute (ASABI), 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 guideline and approval of university (Notification No. 613/ 2017), the institute has accepted the 5<sup>th</sup> 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 Agril. Biotechnology Institute. The institute provides various facilities including state of art instruments, modern laboratory facilities, library, e-Lab *etc*. women plant tissue culture training centre with qualified academic staff. Also, it is achieving the significant recognition for its high quality of teaching. Besides these, institute is conducting women plant tissue culture training the skill development in women.

## **Objectives**

- To promote human resource development through teaching, by conducting training programmes, organizing seminars and interactive meetings, granting scholarships for specific research and conducting examinations leading to the award of degree.
- To promote scientific innovations in relation to manufacturing, commerce and industry in general and agriculture in particular.
- To back up advance conventional research programmes in crops for speedy and sustainable output.
- To network with universities, institutions, research organizations, laboratories, industrial or commercial organizations in India or abroad for advancing scientific research.
- To act as mentor / advisors, to individuals, institutions, laboratories, (research / industrial / commercial / charitable), and other organizations and also to government bodies.

#### **List of Departments**

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

#### Academic programmes

Degree Programme	Duration	Theory Credits	Practical Credits	Total Credit (T+P)
B. Tech. (Biotechnology)	8 Semesters	102	76	184 (178 + 6 NC)

## **Under Graduate syllabus (as per fifth Deans' recommendations)**

Semester	Number of Courses	Total Credit (T+P=)		
First Semester	10	23		
Second Semester	9	23		
Third Semester	9	24		
Fourth Semester	9	24		
Fifth Semester	9	24		
Sixth Semester	8	24		
Seventh Semester	02(Student READY)	22		
Eight Semester	02(Student READY)	20		
	Total	184		

## **Student Information**

## Summary of students admitted during the year 2017-18

Dograa	Gender	Intake	Can SEBC		SC ST	CRSE	ICAR		Foreign	Total	
Degree		capacity	Uti	SEDC	be	51	CDSE	Guj	Other*	rurugn	Iotai
B.Tech	Male		12	3	2	4	-	-	-	-	21
(Biotech	Female	60	6	2	-	3	-	-	-	-	11
nology)	Total	otal	18	5	2	7	-	-	-	-	32
Grand Total			18	5	2	7					32

Gujarat \* Other State

## Summary of students enrolled

								Ι	CAR		
Degree	year	Gender	Gen	SEBC	SC	ST	CBSE	Guj	Other*	Foreign	Total
	1	Male	12	3	2	4	0	0	0	0	21
		Female	6	2	0	3	0	0	0	0	11
	2	Male	7	5	0	0	0	0	0	0	12
B.Tech		Female	5	3	0	2	2	0	0	0	12
(Biotech	3	Male	8	8	1	1	1	0	0	0	19
nology)		Female	12	1	1	3	2	0	1	0	20
	4	Male	9	2	0	1	0	0	1	0	13
		Female	5	3	2	3	0	0	0	0	13
	Та	otal	64	27	06	17	05	0	02	0	121



## Summary students of passed out (2017-18)

	Distribution of students in different classes								
Gender	First with Distinction	First class	Second class	Passed class	Total				
Under Graduate									
Male	03	06	02	02	13				
Female	02	11	00	-	13				
Total	05	17	02	02	26				

## **Students Financial aid**

Name of the fellowship	Under-g		
	No. of S	Students	Total
	Male	Female	
NTS-UG	01	01	02
STUDENT READY	13	13	26
NAU Girls meritorious fellowship		06	06
SC/ST/fellowship	04	15	19
SEBC fellowship	22	11	33
SHAKILAM foundation	03	05	08
Total	43	51	94

## Cut off marks for admission to UG degree Programme (2017-18)

Sr. No	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	40.00	36.67
2	ST	35.00	31.00
3	SC	35.00	58.40
4	OBC/SEBC	40.00	40.31

## Number of students qualified JRF during year/Number of UG students passed out

Year	Number of students got JRF	Number of UG students passed out
2017-18	02	26

## Students qualified ICAR JRF

Sr. No.	Name of the students	Reg. Number	Degree	Duration	Subject/s /Rank obtained
1	Ravikumar D. Markana	3060814016	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology /Rank: 19
2	Amiben V. Lakhani	3060814012	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology /Rank: 27
3	Dhruvinkumar N. Vadee	3060814029	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology /Rank: 248
4	Dipikakumari P. Patel	3060814020	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology/ Rank: 249/ Rank: 10 under ST category
5	Hinaben M. Makwana	3060814014	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology/ Rank: 344/ Rank: 39 under SC category
6	Ankitaben R. Parmar	3060814019	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology/ Rank: 326/ Rank: 37 under SC category
7	Minal T. Vasava	3060814031	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology/ Rank: 390/ Rank: 16 under ST category
8	Akrutiben P. Chovatiya	3060814010	B.Sc. (Agril. Biotechnology)	4 years	Plant Biotechnology /Rank: 408

#### **Placement Cell**

Degree	Total	FotalHigherStudies		Govt	Private		Abroad	Self-	Un-	
Programmes	out	Guj	Other State	Jobs	Jobs	NGOs	for job	Entrepreneu rship	employed	
B.Sc. (Agril. Biotechnology) 2015-16	40	6	1	1	16	-	-	4	12	
B.Sc. (Agril. Biotechnology) 2016-17	38	16	1 (studying Abroad)	-	5	-	-	-	16	
B.Sc. (Agril. Biotechnology) 2017-18	26	5	3	-	7	-	-	1	10	
Total	104	27	05	01	28	-	-	05	37	

### Guj-Gujarat

**Students activities:** 



Ms. ARSHIN M. KHAN received "Vice Chancellor's Gold Medal" in Faculty of Agril.Biotechnology for the year of 2016-17



Celebration of 'National Unity Day' on 31th October, 2017



Celebration of 'International Suicide Prevention Day' 10 September, 2017



Activity under celebration of "SWATCHHTA PAKHWARA (01-15 September, 2017)

#### ANNUAL REPORT 2017-18







Celebration of 'National Voter's Day' on 25January, 2018



*Swachchhta Hi Seva* campaign under Swachchh Bharat mission on 2 October, 2017



Inter University Chess competition on 14-15 September, 2018 at JAU, Junagadh

#### NSS activities 2017-18

SN	Activity	No of Volunteers
1.	Road Safety Awareness program, 11 <sup>th</sup> April, 2017	30
2.	International Yoga day, 21 <sup>st</sup> June 2017	32
3.	Tree plantation programme, 21 <sup>st</sup> July 2017	28
4.	"SWATCHHTA PAKHWARA",1 <sup>st</sup> August to 15th August 2017	26
5.	Celebration of Independence Day, 15 <sup>th</sup> August, 2017	25
6.	International Suicide Prevention Day, 10 <sup>th</sup> September, 2017	22
7.	Swatchhta Pakhwara, 01-15 <sup>th</sup> September, 2017,	30
8.	NSS day, 24 <sup>th</sup> October, 2017	24
9.	Gandhi Jayanti, 2 <sup>nd</sup> October, 2017	24
10.	National Unity day, 31 <sup>st</sup> October, 2017	49
11.	Vigilance Awareness Week, 3 <sup>rd</sup> November, 2017	50
12.	Agriculture Education Day, 3 <sup>rd</sup> December, 2017	24
13.	National Voter's Day, 25 <sup>th</sup> January, 2018	20
14.	Hostel and campus cleaning activity, 17 <sup>th</sup> February, 2018	27

#### **Ongoing Educational/research/ Extension projects at College**

Sr. No.	Name of the projects	Funding agency	Location
1.	Optimization of amylase production by soil isolate under	NAU	Surat
	solid state fermentation (SSF)		
2.	Influence of various nanoparticles on contamination in	NAU	Surat
	micropropagation of banana		
3.	Optimization of denovo regeneration protocol and	NAU	Surat
	selection of glyphosate tolerant line for Cynodon dactylon		
	variety Selection		

#### **Faculty information**

					Composition of filled post							
		Sanct-		Edu	<b>icationa</b>	l qualific	ation	Domici	Domicile state Gender			
Sr. Name o No. the Post		ioned	ed Filled posts	Master		Doc	toral	Guiarat	Other	Mala	Ermele	
		posts		G	OS	G	OS	Gujarat	state	WIAIC	remate	
1	Professors	3	1	0	0	1	0	1	0	1	0	
2	Associate	5	3	0	0	3	0	2	1	3	0	
	Professors											
3	Assistant	10	10	1	0	7	2	8	2	7	3	
	Professors											
Total		18	14	1	0	11	2	11	3	11	3	
Perc	entage of		82.35	7.14	0.00	78.57	14.28	78.57	21.43	78.57	21.43	
total	filled post											

G: Gujarat, OS: Out State

#### **Educational/Infrastructural Facilities:**

The Institute has well furnished four lecture halls, faculty room, 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 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 and Digital dry block heater, Sonicator, Incubator Shakers, Atomic Absorption Spectrophotometer, Steriozoom Microscope with camara *etc*.

The Institute has good bioinformatics computer laboratory which provides training to students. The College possesses two well managed hostels both for boys and girls. Both hostels are located close to institute and have sufficient capability of accommodating 104 boys and 90 girls' students. Institute having internet facility, locally networked and connected through wi-fi to the central server and which is available for students for their project work and preparing seminar presentations. It also access to e-books, study materials, previous question papers, daily circulars, *etc.* Internet facilities in the well-equipped internet lab, providing high speed connectivity, the student can surf the net together unlimited information.

### **Research publications**

- 1. Jay Patel and Rishee K. Kalaria. (2018). In-silico Analysis & Homology of Papaya Ring Spot Virus & Papaya Leaf curl virus coat protein, *Bulletin of Environment, pharmacology and life science*,7(8):19-28. (NAAS-4.95).
- 2. Ami Lakhani and Rishee K. Kalaria. (2018). Computational identification of microRNA and their

targets from the expressed sequence tags of Lentil (Lens culinaris) Bulletin of Environment, pharmacology and life science, 7(8):29-39. (NAAS-4.95).

- 3. V.B. Parekh; R. M Patel and D. A. Chauhan (2016) segregation analysis of compact Dwarf plant type pigeonpea (*Cajanus cajan* (L.) Millsp.). Advances in life science:5(24) 11298-302. (NAAS-3.15).
- 4. R. K. Panchal and R.M Patel (2017). Effect of Silver Nitrate on Leaf Abscission in Culture during Establishment of Explants of Custard Apple (*Annona squamosa* 1.) cv. Balanagar. *International J. of Agric. Env.& Biotech.* 263-266. (NAAS-4.69).
- 5. Smita Kadam; Pushparaj Singh and R.M. Patel (2017). Rooting and acclimatization of *in vitro* raised plantlets of guava cv. Allahabad safeda. *Int. J. of Scientific and Research publications*. 7(8), 449-453. (NAAS-NA).
- 6. H. Abbas; R. M. Patel, V. B. Parekh; A. D. Gauswami; P. Prajapati and P. B. Patel (2017). Isolatoin and characterization of plant growth promoting bacterial endophytes and their interaction effects on rice (*Oryza sativa* L.). *Multilogic in Science*. V1(19), 160-162. (NAAS- 5.20).
- K. P. Suthar; R. M. Patel, D. Singh and M. D. Khunt (2017). Efficacy of *Bacillus subtilis* Isolate K18 Against Chickpea Wilt *Fusarium oxysporum* F. Sp. *ciceri*. *Int. J. Pure & App. Biosci.* 5 (5): 838-843. (NAAS-4.74).
- 8. Abbas, H. and Patel, R. M. (2018). Culturable endophytic bacteria from halotolerant *salvadora persica* L.: screening, isolation and plant growth promoting traits. *International Journal of Microbiology Research*, 10(3): 1074-77. (ISSN: 0975-5276 & E-ISSN: 0975-9174). (NAAS-4.77).
- 9. Abbas, H., Patel, R.M. and Parekh, V. B. (2018). Culturable endophytic bacteria from halotolerant Salicornia brachata L.: Isolation and plant growth promoting traits. *Indian Journal of Applied Microbiology*. 21(1):10-21. (*ISSN (Online): 2454289X, ISSN (Print): 22498400*). (NAAS-NA).
- H. R. Patel, R. L. Leva and Y. K. Vaghasiya. (2018). Occurance and prevention of antibiotic resistance in human pathogenic bacteria. Asian Journal of Mocrobiology, Biotechnology and Environmental Sciences. 20(1): 91-93. (NAAS-4.94).
- Vimalkumar, S. Prajapati., Sanket Ray, Jitendra Narayan, Chaitanya C. Joshi, Kamlesh C. Patel, Ujjval B. Trivedi and R. M. Patel. (2017). Draft genome sequence of a thermostable, alkaliphilic α-amylase and protease producing *Bacillus amyloliquefaciens* strain KCP2. *3 Biotech*. 7:372. (NAAS-NA).

## **BOOK:**

- 1. R. K. Kalaria, Mital H. Patel and Priyanka H. Jokhakar. (2018). Basic Terminology on Bioinformatics, Oxford Book Company publisher, New Delhi (9789350304549).
- 2. Ami Lakhani and R. K. Kalaria (2018). In Silico identification of microRNAs and their target in lentil, Lambert Publishing House, Germany. (978-613-9-88000-3).
- 3. Dhruvin Vadee and R. K. Kalaria (2018). In Silico interaction of Bio-Active compounds against Psuedomonas spp., Lambert Publishing House, Germany. (978-613-9-87197-1).
- 4. Jay D. Patel and R. K. Kalaria (2018). In Silico homology modelling of Papaya ring spot virus coat protein, Lambert Publishing House, Germany. (978-3-659-54754-6).

## **BOOK CHAPTER:**

- 1. R. K. Kalaria (2018). "IPR necessitate in Agriculture" in Purple biotechnology book, Astral publication house, New Delhi. (978-93-5124-963-4).
- 2. R. K. Kalaria (2018). "CRISPR CAS A potential tool in plant genome editing" in Green biotechnology book, Astral publication house, New Delhi. (978-93-5124-964-1).

## HRD Programmes Participation of Scientists

Particulars	Participants
Seminar/Symposia/Conference	9
Winter/Summer Schools	8
Workshop/Short term training	2
Total	19

## 13. College of Agricultural Engineering and Technology, Dediyapada

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 year 2013. The College has the mandate for conducting strategic research on design and development of technologies/equipments in the area of Farm Machinery & Power Engineering, Processing and Food Engineering, Soil and Water Engineering and Renewable Energy Engineering with extension of technologies to farmers and entrepreneurs. The college is located at Parsi Tekra, Dediapada, 72 km east from Ankleshwar railway station and 45 km south from Rajpipala.

## **Objectives :**

- To conduct under-graduate, post graduate and Ph.D. academic programmes in Agricultural Engineering to develop highly skilled and competent manpower for industries and other agencies.
- To modernize agriculture of tribal area by providing engineering inputs skills manpower & conserving natural resources e.g. soil and water with ultimate aim to increase agricultural productivity.
- To undertake need based research programme related to Agricultural Engineering for the development of agriculture in the tribal areas and the agricultural food processing industries.

## List of Departments :

- 1. Farm Machinery and Power Engineering
- 2. Soil and Water Engineering
- 3. Processing and Food Engineering
- 4. Renewable Energy Engineering
- 5. Irrigation and Drainage Engineering
- 6. Basic Engineering and Applied Sciences

## Academic programmes :

Degree Programme	Duration	Theory Credits	Practical Credits	Total Credit (T+P)
B. Tech. (Agril. Engg.)	8 Semesters	85	97	85+97=182
M. Tech. (Agril. Engg.)	4 Semester	Majo Mino Suppor Semin Resea	or 20 or 09 ting 05 nar 01 rch 20	55
Ph.D. (Agril. Engg.)	6 Semester	Majo Mino Suppor Semir Resea	or 15 or 08 ting 05 nar 02 rch 45	75

Semester	Number of Courses	Total Credit (T+P=)
First Semester	9	13+9=22
Second Semester	9	13+8=21
Third Semester	9	14+8=22
Fourth Semester	9	13+9=22
Fifth Semester	9	14+13=27
Sixth Semester	8	22+10=22
Seventh Semester	4	0+27=27
Eight Semester	4	6+13=19
То	tal	85+97=182

## Under Graduate syllabus (as per fifth Deans' recommendations)

## **Post Graduates programmes**

Sr. No	Master's Degree	Master's Degree (Yes/No)	Doctoral Degree (Yes/No)
1.	Farm Machinery and Power Engineering	Yes	No
2.	Soil and Water Conservation Engineering	Yes	No
3.	Processing and Food Engineering	Yes	Yes (In-service)

### **Student's Information** Summary of students admitted during the year 2017-18

Dograa	Gender	Intake	Con	SERC	SC	ST	CRSE	Ι	CAR	Foreign	Total
Degree		capacity	Gell	SEDU	SC	51	CDSE	Guj	Other*	roreign	Iotai
B.	Male (23)		13	10	00	00	00	00	00	00	23
Agril.	Female (00)	23	00	00	00	00	00	00	00	00	00
Engg.)	Total (23)		13	10	00	00	00	00	00	00	23
M.	Male (07)		02	03	00	02	00	00	00	00	07
Agril	Female (00)	07	00	00	00	00	00	00	00	00	00
Engg.)	<b>Total (07)</b>		02	03	00	02	00	00	00	00	07
Ph.D.	Male (02)		02	00	00	00	00	00	00	00	02
(Agril.	Female (00)	02	00	00	00	00	00	00	00	00	00
Engg.)	<b>Total (02)</b>		02	00	00	00	00	00	00	00	02
Grand '	Total (32)	32	17	13	00	02	00	00	00	00	32

**Gujarat** \* Other State

Degree	Voor	Condon	Con	SEDC	SC	ST	CDSE	IC	CAR	Foreign	Total
Degree	Ital	Genuer	Gen	SEDC	SC	51	CDSE	Guj	Other*	roreigii	Iotai
	1	Male	13	10	00	00	00	00	00	00	23
	1	Female	00	00	00	00	00	00	00	00	00
B.	2	Male	14	07	01	03	01	00	00	00	26
Tech.	2	Female	01	00	01	01	00	00	00	00	03
(Agril.	2	Male	13	05	00	01	00	00	02	00	21
Engg.)	3	Female	00	02	00	01	00	00	00	00	03
	4	Male	10	02	00	02	00	00	00	00	14
		Female	00	00	00	00	00	00	00	00	00
	То	tal	51	26	02	08	01	00	02	00	90
М.	1	Male	0	0	00	0	00	00	00	00	0
Tech.		Female	00	00	00	00	00	00	00	00	00
(Agril.	2	Male	03	02	00	00	00	00	00	00	05
Engg.)	<i>L</i>	Female	00	00	00	00	00	00	00	00	00
	То	tal	05	05	00	02	00	00	00	00	12
	1	Male	02	00	00	00	00	00	00	00	00
	1	Female	00	00	00	00	00	00	00	00	00
Ph.D.	2	Male	00	00	00	00	00	00	00	00	00
(Agril.	Ĺ	Female	00	00	00	00	00	00	00	00	00
Engg.)	2	Male	00	00	00	00	00	00	00	00	00
	3	Female	00	00	00	00	00	00	00	00	00
	То	tal	02	00	00	00	00	00	00	00	02
	Grand	l Total	58	31	02	10	01	00	02	00	104

## Summary of students enrolled (Academic year 2016-2017)

Gujarat \*\* other state

## Summary students of passed out (2017-18)

Gender	Distribution of students in different classes								
	First with Distinction	First class	Second class	Passed class	Total				
Under Graduate									
Male	13	12	2	00	27				
Female	00	01	00	00	01				
Total	13	13	02	00	28				

## Student's financial aid

Name of the	Under-g	graduate	Mas	sters	Doct		
fellowship	No. of S	Students	No. of S	tudents	No. of S	Total	
	Male	Female	Male	Female	Male	Female	
NAU PG fellowship	-	-	01	-	-	-	01
NAU Girls meritorious fellowship	-	01	-	-	-	-	0
SC/ST/fellowship	06	02	02	-	-	-	10
SEBC fellowship	23	02	03	-	-	-	28
Total	29	05	06	-	-	-	40

## Cut off marks for admission to UG degree Programme (2017-18)

Sr. No.	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	40	48.00
2	ST	35	NIL
3	SC	35	NIL
4	OBC/SEBC	40	43.33

## Number of students qualified JRF during year

Year	Number of students got JRF	Number of UG students passed out
2017-18	01	28

## Students qualified ICAR JRF

Sr. No.	Name of the students	Reg. Number	Subject/s / Rank obtained
1.	Hirapara Jaydeep G.	3050913014	20
2.	Vaghasiya Satish S.	3050913030	21
3.	Ghodasara Janak B.	3050913013	32
4.	Ramani Maulik L.	3050913026	34
5.	Bhargav Anurag M.	3050913003	179 (GN) 9 (SC)
6.	Vaghela Divyesh R.	3050913031	199 (GN)19 (SC)

## **Placement Cell**

Degree	Total	Higher studies		Govt	Private		Abroad	Self-	Un-
Programmes	Passed out	Gujarat	Other State	Jobs	Jobs	NGOs	for job	Entrepre- neurship	employed
B. Tech.	28	15	00	00	06	00	00	01	06
M. Tech.	00	00	00	00	00	00	00	00	03
Ph.D.	00	00	00	00	00	00	00	00	00
Total	28	15	00	00	06	00	00	01	06

#### NSS activities 2017-18

Sr. No.	Activities / Events	Duration	No. of Participant
1	Road Safety program	11 <sup>th</sup> April, 2017	90
2	Tree Plantation program	21 <sup>st</sup> July, 2017	80
3	Elocution compitition program	29 <sup>th</sup> July, 2017	75
4	Blood Donnation Camp	21 <sup>st</sup> August, 2017	60
5	Swachchhata program	12 <sup>th</sup> October, 2017	120
6	Atmahatya Nivaran Din	14 <sup>th</sup> October, 2017	80
7	Celebration of NSS Day	31st October, 2017	70
8	Republic Day Celebration	26 <sup>th</sup> January 2018	60
9	NSS Special Camp	$3^{rd}$ to $9^{th}$ March 2018	88

#### **Students Activities :**

College of Agricultural Engineering & Technology Dediapada has successfully organized Inter Collegiate Kabaddi Tournament-2017 on 7 November, 2017 at CAET Campus, Dediapada. In this university level tournament 9 teams of various Colleges of Navsari Agricultural University were participated. Winner team of this tournament was Veterinary College, NAU and CAET, Dediapada secured runner up position. Student startup Committee of CAET, Dediapda organized Guest lecture on "Scope of Agricultural Engineer in Micro Irrigation Sector" held on 16 December 2017. College had invited the guest lecturer and expert Er. Paresh Parsana, State head, Irrilink Drip Irrigation Industries. The educational tour of VII semester B. Tech (Agril. Engg.) students for the year 2017-18 was conducted by the Department of Renawable Energy Engineering of the college. Er. Alok Singh and Er. Tilak Chavda conducted the tour on 8-22 January, 2018 (15 Days) from Dediapada including 14 final year students.



Kabaddi Team with Runner up Trophy

College level sport event



**Blood Donation Camp** 



Nursery Development (NSS Special Camp)

#### ANNUAL REPORT 2017-18



Elocution and Essay writing competition



Annual Gathering Function (VIBGYOR-2018)



Educational Study Tour-2018



Er. Paresh Parsana, State head, Irrilink Drip Irrigation delivered a lecture in CAET Student Start up programme

## **Ongoing Educational/research/Extension projects at College**

Sr. No.	Name of the projects	Funding agency	Location
	<b>Educational Projects (M. Tech)</b>		
1	Development of adjustable self-propelled Weeder.		
2	Development and Evaluation of mini tractor operated seed cum fertilizer drill.		
3	Development of Washer cum Grader for Sapota Fruit.	College of Agricultural	College of
4	Development of sweet potato ( <i>Ipomoea Batatas</i> L.) powder blanded <i>Gulabjamun</i> .	Engineering and	Engineering
5	Thin layer drying characteristics of basil leaves ( <i>Ocimum gratissimum</i> ).	Technology Dediapada	Technology Dediapada
6	Crop water requirement estimation of summer sesame using duel crop coefficient approach.	(BH 12403)	
7	Efficacy of Drip Irrigation on summer sesame grown in Narmada district of Gujarat.		

	Educational Projects (B. Tech)		
1	Development of hand operated briquetting machine locally available biomass		
2	Estimation of potential evapotranspiration for the major crop of Dediapada region.		
3	Effect of various tillage operations on physical properties and infiltration characteristics of the soil.	College of Agricultural	College of
4	Study of wetting pattern under drip irrigation with varying discharge for the soil of Dediapada.	Engineering and	Agricultural Engineering and
5	Development of Ready-to-Eat (RTE) Bitter Gourd ( <i>Momordica charantia L.</i> ) Chips.	Technology Dediapada	Technology Dediapada
6	Development of low cost evaporative cooling system for vegetable crops for benefit of farmers.	(BH 12403)	
7	Performance evaluation of Seed cum Fertilizer drill for gram sowing.		
	Research Projects (Agresco projects)	•	
1	Development and studies of sapota (chikoo) powder based value added product (pasta) using semolina (Suji) and maida.		
2	Study on effect of SPV roof top power plant on space cooling under roof.	College of Agricultural	
3	Effect of land use/land cover changes on ground water resources of Dediapada region	and Technology	
4	Computation of crop water requirement for cotton and pigeon pea crops of Dediapada region.	Dediapada (BH 12403)	
5	Estimation of wet and dry spells in Sagbara region using stochastic analysis of long-term weather data.		
6	Modeling yield and actual evapo transpiration (Oryza sativa L.) of rice as influenced by transplanting date and weather parameters.		College of Agricultural
7	Trends of Rainfall and Temperature variation in Narmada District of Gujarat.		Engineering and Technology
8	Effect of laser leveling on water use efficiency and growth of gram crop		Dediapada
9	Design and development of raised bed former-cum-seeder for clay loam soil condition for Narmada District.		
10	Design and development of suitable furrow opener for clay loam soil condition for South Gujarat.		
11	Design, development and performance evaluation of mixed mode cabinet solar dryer.		
12	Evaluation of Solar tunnel dryer for feasibility of green leaves drying for herbal product.		

	Name of	G	Sanc- ioned Filled		Composition of filled post							
Sr.		Sanc-		Educa	Educational qualification				Domicile state		Gender	
No.	the Post	nosts	posts	Master		Doctoral		Cuiarat	Other	Mala	Famala	
		posts	-	G	OS	G	OS	Gujarat	state	Iviale	remale	
1	Professors	02	0	-	-	-	-	-	-	-	-	
2	Associate	06	1	_	_	_	1			1		
	Professors	00	1				1			1		
3	Assistant	10	0	5	3	1	0	6	3	6	3	
	Professors	10		5	5	1		0	5	0	5	
	Total	18	10	5	3	1	1	6	3	7	3	
Percentage of total filled post		55	.55	27.77	16.16	5.56	5.56	33.33	16.67	38.00	16.67	

#### **Faculty information**

## G: Gujarat, OS: Out State

#### **Research publications**

- 1. A. P. Lakkad and Sankalp Ojha. (2017) Evaluation of rainfall erosivity indices models based on daily, monthly and annual rainfall for Dediapada region of Gujarat, AGRES An International e-Journal. (NASS Rating 3.65).
- R. B. Watharkar, R. G. Burbade and K. C. Landge (2017) Effect of Packaging Material on Shelf Life and Quality Attributes of Grapes (Vitis Vinifera L.) International Archive of Applied Sciences and Technology Int. Arch. App. Sci. Technol; Vol 8 [3] September 2017: 01-08 © 2017 Society of Education, India [ISO9001: 2008 Certified Organization]. (NASS Rating 4.45).
- 3. R. G. Burbade, S.H. Sengar and A.V. Sonawane (2017) performance evaluation of developed evaporative cooling storage structure for tomato, International Journal of Science, Environment and Technology, Vol. 6, No 5, 2017, 2975–2982 2277-663X (P) ISSN 2278-3687 (O) (NASS Rating 3.98).
- 4. A. P. Lakkad, P. K. Shrivastava, K. N. Sondarva and M. G. Varma (2017) Estimation of sediment delivery ratio at sub-watershed level using ArcSWAT Model, Current advance in Agricultural Science-An International Journal (NASS Rating 4.69).
- 5. H. B. Sanchavat, H. S. Chaudhary, G. Bhautik and S. N. Singh. (2017) Field Evaluation of A Tractor Mounted Boom Sprayer. Agricultural Engineering Today. Vol.41 (4), 2017, 67-71 (NASS Rating 5.30).
- 6. K. N. Sondarva, H. D. Rank, P. S. Jayswal and K. R. Trivedi (2017) Techno economic study of summer sesame crop under drip irrigation with various irrigation interval and irrigation regimes, Research in Environment and Life science (NASS Rating 3.74).
- 7. A. P. Lakkad, G.R. Patel, K. N. Sondarva and P.K. Shrivastava (2018) Estimation of sediment delivery ratio at sub-watershed level using revised and modified USLE, Agricultural Science Digest (NASS Rating 4.21).
- 8. S. H. Sengar, R. G. Burbade, Vaghela Divyesh and Parmar Abhishek (2018) Evaluation of solar tunnel dryer for green leaves Drying, Journal of Postharvest Technology, 2018, 06(2): 38-48 (NASS Rating 3.69).

## **HRD Programmes**

#### Participation of Scientists in Conference/ Seminars/ Symposia/ Workshops/Trainings (2017-18)

Particulars	Participants
Seminar/Symposia/Conference	01
Winter/Summer Schools	04
Workshop/Short term training	02
Total	07

## 14. University Library and Knowledge Centre

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, It was renamed as Campus library by Gujarat Agriculture University in the year 1972. Again it 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 various colleges and hostels. Library is having good infrastructure facilities spread over an area of 5600 Square meter (60256 Sq feet').

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 scienced 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**

- Monday to Saturday: 07:30 a.m. to 10:00 p.m.
- Second and Fourth Saturday and all Sundays: 09:00 a.m. to 05:00 p.m.
- The library is opened on demand and as per need of the library users even on public holidays.

#### **University Library Staff position**

Sr. No.	Designation	No.
1	I/c University Librarian / Assistant Librarian	1
2	Library Assistant	1
3	Senior Clerk	1
4	Lab Attendant	1
5	Library Attendant	2
	Total	06

#### Collections (as on 31/03/2018)

1	Books	68,380
2	Gratis Books	1,922
3	E-Books	780
4	Bound volumes of periodicals	10,927
5	M.Sc. Theses	2,209
6	Ph.D. Theses	469
7	Reports	5,777
	Total Collection	90,464

## Journal / Periodicals Subscription (as on 31/03/2018)

1	Indian		148		
2	Foreign		32		
3	3 Through CeRA				
4	4 Gratis				
E-I	Resources				
1 CDs / DVDs					
On	line Database				
<b>A.</b>	Indian	B. Foreign			
CN	IIE Commodities	CAB Abstract			
Ind	iastate	VET Abstract			
Biotropica					
		Plant Pathology			
		J Gate Completed			

## Library Membership

Sr. No.	Type of Members	No. of Members
1	Faculty	642
2	Diploma Students	45
3	UG Students	686
4	PG students	507
5	Ph.D. Students	121
	Total	2001

## **Book Purchased (During last five years)**

Particulars	Numbers
Books	3447
Books	241
Subscribed Journals (Indian)	148
Subscribed Journals (Foreign)	32
Subscribed E-Resources	5

## **Library User Statistics**

Library Users	Numbers
Students	110527
Faculty	1928
Issue-Return of Books	24583
Reprography	32856
CeRA and KrishiKosh users	135805

#### Services Provided at University Library

A	Circulation Services	М.	Internet lab facilities
B.	(CAS) Current awareness services	N.	Separate Reading Room for boys and girls
C.	(SDI) Selective Dissemination Information Services	0.	Reading Room facility / Night Reading Room facility
D.	Classification Services	Р.	Book Display Services
Е.	Cataloguing Services /OPAC (Online Public Access Catalogue)	Q.	Discuss Room Services
F.	Document Delivery Services	R.	CCTV Camera facilities
G.	Indexing Services	S.	CeRA (Consortium for e-Resources in Agriculture) through ICAR
Н.	Reference Services	T.	KrishiKosh through NAIP Project (ICAR)
I.	Reprography Services	U.	e-library
J.	Online Database : CAB Database, VET Database, Plant Biotechnology, CMIE Indian Online Commodities, India State etc Services	V.	Property Counter services
K.	Inter Library loan services	W	Wi-Fi facilities
L.	Referral Services	X	Internet Base Services

15<sup>th</sup> meeting of Library Committee held on 27/09/2017

- 1. Approval granted for renewal of subscription amount of online database (e-Resources) i.e. CAB Abstract, J-Gate Complete, India state, CMIE Commodities, Plant Pathology and Bio-Tropica.
- 2. Approval granted for digitalizing of the University Library Resources i.e. Ph.D. / M.Sc. Theses, Annual Report, Annual Question Paper, NAU Publication, Rare Books etc.
- 3. Resolved to purchase necessary books for University Library and departmental library of various colleges of NAU, Navsari
- 4. Resolved to purchase foreign journals, periodicals, bulletin, magazines and news papers of vernacular language as well as in English.
- 5. It was resolved to open the separate reading room of University Library till 10:00 p.m. for library users of late night usage purpose

#### **Members of Library Committee**

Sr.	Name	Office Name & Address	Designation
NO.			
1.	Dr. C. J. Dangaria	Vice-Chancellor, NAU, Navsari	Chairman
2.	Dr. S. R.Chaudhary	Director of Research, NAU, Navsari	Member
3.	Dr. G. R.Patel	Director of Extension Education, NAU, Navsari	Member
4.	Dr.Z. P. Patel	Principal and Dean CoA, NAU, Waghai	Member
5.	Dr. B. N. Patel	Principal & Dean, ACHF, NAU, Navsari	Member
6.	Dr. N. H. Kelawala	Principal & Dean, Vety. College, NAU, Navsari	Member
7.	Dr. H. R. Pandya	Principal, AABMI, NAU, Navsari	Member
8.	Dr. R. M. Patel	Principal & Dean, ASABI, NAU, Surat	Member
9.	Dr. C. V. Savalia	Director of Student Welfare, NAU, Navsari	Member
10.	Dr. V. A. Solanki	Registrar, NAU, Navsari	Member
11.	Mr. D. T. Chaudhari	Comptroller, NAU, Navsari	Member
12.	Dr.J. D. Thanki	Professor, NMCA, NAU, Navsari	Member
13.	Dr. P. K. Shrivastav	Professor, CoF, NAU, Navsari	Member
14.	Dr.B. P. Bhramkshatri	Professor, Vety. College, NAU, Navsari	Member
15.	Dr. Alpesh K. Leua	Associate Professor, AABMI, NAU, Navsari	Member
16.	Dr.R.V. Borichanger	Nodal Officer, CoF, NAU, Navsari	Member
17.	Dr.K. G. Patel	Principal, CoA, NAU, Bharuch	Invited Member
18.	Dr.M. K. Arvadia	Principal, NMCA, NAU, Navsari	Invited Member
19.	Dr. B. L.Radadia	Directorate of I.T., AABMI, NAU, Navsari	Invited Member
20.	Er. P. R. Pandey	College of Agri. Eng., Dediapada, NAU	Invited Member
21.	Mr. Pramodkumar Sakhare	Student Representative, Vety. College, NAU,	Member
		Navsari	
22.	Mr. Ashishkumar H. Patel	Student Representative, ACHF, NAU, Navsari	Member
23.	Kum. Vishakha D. Chaudhari	Student Representative, NMCA, NAU, Navsari	Member
24.	Kum. Tanuja K. Rathod	Student Representative, ACHF, NAU, Navsari	Member
25.	Dr. K.D. Tandel	I/C University Librarian, NAU, Navsari	Member
			Secretary

# 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 2017-18 was 1,35,805. Total 85 requests were received from other agricultural universities users for available full text research articles in the NAU library and 65 full text request articles were provided by the document delivery services. Similarly 187 users have collected full length thesis information from University Library, NAU, Navsari through Krishikosh database.

#### Significant Achievements:

- 1. Available in the university library, Ph.D./M.Sc Theses, Annual Reports, Annual Questions Paper, rare books, NAU publication etc. has been fully digitized and those resources were provided to the University Library users by the institute repository Krishikosh as well as Dspace local server.
- 2. E-Theses submitted by students of NAU under Ph.D. and Master degree programme are managed through digital repository. Library has also provided all India Agricultural University Ph.D. theses through KRISHIKOSH.
- 3. University library provides AC reading room facilities to the library users.
- 4. Bibliographic records of library have been updated with KOHA Library Management Software.
- 5. Library has been providing Wi-Fi Internet facility to the users.
- 6. Library membership has been automated and circulation of books and other publications were also done through KOHA Library Management Software.



Books Exhibition 2017-18

Books Exhibition 2017-18

## **15. Research**

NAU 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.

South Gujarat is considered as the horticultural bowl of the state. This region is blessed with eleven rivers including the Narmada river traverse through the South Gujarat. Cultivated area of South Gujarat is 1385269 ha with 589076 ha irrigated area (45.12%). NAU jurisdiction area also has 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 largely 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, Navsari has its presence at 15 different locations in South Gujarat, possesses 897.26 ha land including 714.49 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, 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 Dediyapada.

#### **Research Stations of the University**

Sr.	Location	Year of	Area	Cultivated	Details of Farms
No.		Establish.	(ha)	area (ha)	
1	Navsari	1964	400.62	291.65	<ul> <li>Main Rice Research Station</li> <li>Main Sugarcane Research Station</li> <li>Soil &amp; Water Management Research Unit</li> <li>Livestock Research Station,</li> <li>Regional Horticulture Research Station</li> <li>Pulse Research Station</li> <li>Floriculture Farm</li> </ul>
					<ul><li>Vegetable Farm</li><li>Organic Farm</li></ul>
2	Bharuch	1913	39.19	31.00	<ul><li>Regional Cotton Research Station</li><li>Pulse Research Station</li></ul>
3	Surat	1896	87.58	81.21	<ul><li>Main Cotton Research Station</li><li>Main Sorghum Research Station</li></ul>
4	Paria	1972	142.73	127.73	• Agriculture Experiment Station (Horticulture)
5	Vyara	1965	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-	1966	14.47	12.00	Coastal Soil Salinity Research
	Umbharat				Station
13	Vanarasi	1989	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	714.49	

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 2017-18, a total of 279 schemes out of which 228 schemes funded by Government of Gujarat, 38 schemes funded by ICAR and GoI and 13 schemes financed by private companies and other agencies were operational.

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 6.5 lakh 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 552 technologies for the benefit of farming community. Technologies have been developed in the field of crop improvement (66), natural resource management (218), horticulture and agro-forestry (121), forestry (7), plant protection (72), agriculture engineering (33), animal health (3), animal production & fisheries (24), basic sciences (7) and social sciences (1). Over last 10 years, NAU, Navsari has developed GAP 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 66 high yielding good quality varieties of various crops including 13 varieties of cotton, 11 varieties of rice, 7 varieties of sugarcane, 5 varieties of nagli, 4 varieties of sorghum, 3 each varieties of pigeon pea, indianbean and moongbean, 2 each varieties of vari, turmeric and adenium, 1 each variety of little gourd, pointed gourd, castor, niger, tomato, brinjal and malabar neem. Moreover, NAU endorsed, 1 each variety of Pigeon pea-Vaishali, Sorghum- CSV-21F and Rice- NAUR-1 (Aerobic condition).

Out of above varieties, few varieties worth mentioning like Gujarat Sugarcane-10 with 143.00 t/ha productivity and other qualities like high sugar content in addition to moderately resistance to wilt and red rot. In pigeon pea, variety GT-104 have been released and recorded productivity is 1890 kg/ha with semi spreading in nature, having red flower colour, long pod, 5-7 seeds per pod and resistant against SMD. In rice, Gujarat Rice–15 (GR–15) bio-fortified (high zinc) long bold grain, long panicle, more productive tillers and more number of grains per paniclehas also been released.

During the year 2017-18, NAU has released 11 new varieties of 8 crops including 2 each from rice (GR-

15 and GRH-2), sorghum (GFS-6 and Phule Revati) and adenium (Gad-1 and Gad-2), 1 each from mung bean (GM-7), pigeon pea (GT-104), finger millet (GN-8), tomato (GT-7) and Malabar neem (GNMD-1).

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 218 package of practices for soil, water and nutrient management. Some of the important technologies like 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.*, intercropping of banana and turmeric in oil palm, area based cropping sequences for round the year farming, planting time and schedule of nutrient management, land configuration and utilization of banana pseudostem sap for substitution of chemical fertilizers in various crops.

Scientists of NAU developed 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 72 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, 128 technologies 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 and rejuvenation of mango. NAU, Navsari has also 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, NAU Navsari also produces quality seeds for farmers of South Gujarat. During last twelve years, the University has produced 51624.02 quintals of quality seeds including nucleus, breeder, foundation, certified and truthfully labelled seeds and 58630.48 quintals of sugarcane setts. University also produced 93.46 lakh of saplings and 23.80 lakh of tissue culture plants of banana and sugarcane during last twelve 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.

	Name of the Sub-Committees	No. of Reco		
SN		Farmers	Scientific community	NTP
1.	Crop Improvement	11	0	1
2.	Natural Resource Management	26	3	26
3.	Plant Protection	6	17	17
4.	Horticulture	16	3	28
5.	Forestry	3	5	6
6.	Agril. Engineering	6	4	8
7.	Basic Science	1	10	9
8.	Social Science	0	1	25
9.	Animal Production & Fisheries Science	5	1	9
10.	Animal Health	0	3	2
	Total	74	47	131

#### **Research recommendations for farming community**



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

## **RECOMMENDATIONS FOR FARMERS (2017-18)**

## I CROPIMPROVEMENT

## 1. Rice: Gujarat Rice – 15 (GR-15)

The bio-fortified rice culture, NVSR-6121 (5540 kg/ha) performed very well in Gujarat state and it exhibited overall 10.6 %, 19.9 % and 16.1 % grain yield superiority with easy threshability over the checks Dandi, NAUR-1 and GNR-3, respectively. It has long bold grain, long panicle, more productive tillers and more number of grains per panicle. It contains high zinc in grains (21.58 ppm) than check varieties (Dandi: 12.7 ppm, NAUR-1: 14.62 and GNR-3: 15.7 ppm) along with other good quality characters. NVSR-6121 is moderately resistant against bacterial leaf blight, grain discoloration and sheath rot. It is tolerant to brown plant hoppers and moderately resistant to stem borer, leaf folder and sheath mite. This variety recommended for transplanted rice growing areas of Gujarat.



## 2. Rice : Gujarat Rice Hybrid-2 (GRH-2)

Mid-late rice hybrid NVSR-H-1011 (6129 kg/ha) performed well in Gujarat state where it exhibited overall 7.1%, and 17.9% grain yield superiority over the best hybrid check US 312, and best variety GNR-3, respectively. Medium slender grain rice hybrid NVSR-H-1011 contains intermediate amylose and high head rice recovery. The proposed hybrid is moderately resistant against bacterial leaf blight, leaf blast, grain discolouration and sheath rot. The proposed hybrid is tolerant to insect pest like BPH, WBPH, leaf folder and stem borer. Rice hybrid NVSR-H-1011 recommended for rice growing areas of Gujarat state as GRH-2.



## 3. Pigeonpea : Gujarat Tur-104 (GT-104)

The average yield of pigeon pea variety NPMK-15-05 (GT-104) is 1890 kg/ha. It exhibited overall yield advantage of 21.9 %, 21.2 %, 12.5 % and 27.6 % over the checks Vaishali, GJP-1, AGT-2 and BDN–2, respectively. The variety GT-104 matures within 160-170 days (medium group) with semi spreading in nature, having red flower colour, long pod, 5-7 seeds per pod and cream seed colour. It has high yield potential and resistant against SMD. The pigeon pea variety GT-104 recommended for *kharif* season in Gujarat.



### 4. Mung bean : Gujarat Mung Bean-7 (GM-7)

The average yield of Mung bean variety NMK-15-08 (GM-7) is 1063 kg/ha. It exhibited overall yield advantage of 23.3 %, 6.4 %, 33.8 % and 26.2 % in *kharif* season and 12.2 %, 50.3 %, 22.7% and 12.1 % in summer season over the check varieties Meha, GM-4, GAM-5 and GM-6, respectively. It matures within 70-75 days (medium group), having indeterminate in growth habit with medium seed size and shiny green seed colour. It has high yield potential and resistant against MYMV disease. The variety GM-7 is recommended for *kharif* as well as summer seasons of Gujarat.



5. Finger millet: Gujarat Nagli-8 (GN-8)

WN-585, the finger millet early variety (3065 kg/ha), performed well with 21.3 % and 13.7 % yield advantage over national checks VL-149 and VL-352, respectively. WN-585 have attractive red coloured bold grain (2.61 g per 1000 seed



weight), good and nutritious quality, early and synchronous maturity, erect growing and non-lodging plant type. It is moderately resistant to leaf, neck and finger blast as well as foot rot diseases under field condition with tolerance reaction to pest like stem borer and aphids. WN-585 recommended for *kharif* cultivation in Gujarat as GN-8.

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#### 6. Sorghum: Gujarat Fodder Sorghum-6 (GFS-6)

The fodder sorghum variety GFS-6 (SRF-347) produced 34327 kg/ha green fodder & 11253 kg/ha dry fodder yield, which is 24.9 %, 13.8 % and 12.3 % higher in green fodder yield and 25.8 %, 11.5 %, and 21.0 % in dry fodder yield as compared to the check varieties GFS-5, CSV-21F (NC) and GAFS-12, respectively. This variety also showed superiority over checks in respect of insect infestation and fodder quality parameters with lower incidence of shoot fly and stem borer. The fodder sorghum variety GFS-6 (Gujarat Fodder Sorghum-6) is recommended for *kharif* season in Gujarat State.

#### 7. Sorghum: Phule Revati (Endorsement)

The *rabi* sorghum variety *Phule Revati* is higher yielder as compared to State and National checks. It produced average 2814 kg/ha grain yield & 8397 kg/ha dry fodder yield in South Gujarat under irrigated condition with increment of 31.7, 22.3, 62.2, 25.9 and 49 % in grain yield and 28.4, 38.9, 29.8, 16.0 and 24.4 % in dry fodder yield over local check varieties Nizer Goti, BP-53 and National check CSV-216 R, CSV-22 and CSV-29 R, respectively. While under residual moisture condition at Tanchha, it produces 2362 kg/ha grain yield, which is 33.4, 8.0, 32.7, 16.9 and 33.9 % higher over checks Nizer Goti, BP-53, CSV 216R, CSV 22 and CSV 29R, respectively. The variety produced 7977 kg/ha dry fodder yield with increment of 1.9, 11.0 and 29.7 % over checks

Nizer Goti, CSV 216R and CSV 29R, respectively. The Phule Revati also depicted superiority over checks in respect to pest & disease. The Rabi sorghum variety *Phule Revati* is recommended for endorsement in *rabi* season under irrigated and conserved moisture condition in south Gujarat.

#### 8. Tomato: Gujarat Tomato-7 (GT-7)

Tomato genotype NTL 12-01 (284.2 q/ha) performed well under South Middle and North Gujarat regions where, it exhibited overall 20.63, 20.29 and 21.04 % increased fruit yield over standard checks *viz;* JT 3 (235.6 q/ha), AT 3 (225.7 q/ha) and DVRT 2 (224.3 q/ha), respectively. The genotype showed less damage by fruit borer, whitefly as well as leaf miner as compared to standard checks. The genotype NTL 12-01 is recommended for cultivation of farmers of Gujarat regions as GT 7.

#### 9. Adenium: Gujarat Adenium-1 (GAd-1)

Adenium variety Gujarat Adenium-1 (GAd.-1) is unique

ornamental plant bearing attractive multipetalous red colored flowers with 15 petals per flower with good flower longevity. It can be propagated by grafting on local pink root stock. The nursery men dealing with ornamental plants are recommended to grow adenium variety GAd-1 under polyhouse for higher commercial value in Gujarat.









#### 10. Adenium: Gujarat Adenium-2 (GAd-2)

GAd -2 is unique ornamental plant bearing reddish purple colored flowers having dual whorls each of 5 petals i.e. 10 petals in each flower along with good flower longevity. It can be propagated by grafting on local pink root stock. The nurserymen dealing with ornamental plants are advised to grow adenium GAd-2 under polyhouse for higher commercial value.



#### 11. Malabar Neem: Gujarat Navsari Melia Dubia-1 (GNMD-1)

Malabar Neem (*Melia dubia* Cav.) tree variety GNMD-1 has performed very well in South Gujarat. After four years, the GNMD-1 has attained 10.90 m height with girth at breast height (GBH) of 49.50 cm. The volume at four years of age has been estimated 224.41 m<sup>3</sup>/ha with good biomass of 103.23 tonnes/ha. It has clear bole up to 3.70 m free from knots. Its bole is round and clean. The GNMD-1 showed superiority of 9.0, 105.6 and 47.3 % in height; 7.84, 35.6 and 17.9 % in girth at breast height, and 26.77, 278.24 and 104.60 % in volume and biomass, over checks Kshitiz (NC), Ritu (NC) and Bahumukhi (NC), respectively. No incidence of insect pest was observed in GNMD-1. The variety GNMD-1 is recommended for farmers of South Gujarat for plantation.



#### **II NATURAL RESOURCE MANAGEMENT**

# 1. Effect of water application in different layers of soil on growth and yield of drip irrigated young mango plantation

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone having 8 to 9 years old mango plantation at a spacing of 5 m x 5 m are recommended to apply irrigation water after initiation of flowering directly in vertically inserting HDPE/PVC pipe (75 mm diameter) into the soil at 40 cm depth below ground level in four side 1.5 m away from mango trunk through spaghetti tube (4 mm diameter) fitted on online dripper through drip system for getting good quality mango fruit with higher yield, net profit and water use efficiency as compared to water applied through surface drip system.

#### System details

Lateral spacing	:	5 m
Dripper discharge	:	8 lph
No. of drippers per tree	:	4
Operating pressure	:	$1.2 \text{ kg/cm}^2$
Operating frequency	:	Alternate day
Operating time	:	OctNov. :
		March-May :





120 to 202 min 206 to 330 min

#### 2. Feasibility of drip irrigation in summer rice

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing summer rice are recommended that the surface irrigation is more economical than drip irrigation as it gives higher yield with less cost. However, in scarcity of water and availability of drip irrigation system, they can adopt the drip system at 60 cm lateral spacing for getting higher water productivity and 41% saving of water with 4 to 5 irrigations of 80 mm depth to be given by surface method during initial establishment of the crop.



#### The system details are as under:

Crop spacing	:	20 x 20:40 cm (Paired row)
Lateral spacing	:	60 cm
Dripper spacing	:	60 cm
Dripper discharge	:	8 lph
Operating pressure	:	$1.20 \text{ kg/cm}^2$
System operating period	:	twice in week
Operating time	:	March to May: 110 to 125 minutes (1.2 PEF)

# 3. Study on combined effect of irrigation, fertigation and mulching levels on fruit yield and quality of water melon

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing summer watermelon are recommended to apply irrigation through drip system at 0.6 PEF, fertilize the crop @ 150:75:75 kg NPK/ha and mulch with silver black plastic sheet (25 micron and 50 % covering) for achieving higher yield and net return. The adoption of the practice saves 38 % water, gives 80 % weed control and produces good quality fruits.

#### Drip detail:

Lateral spacing	:	2 m
Dripper spacing	:	1 m
Dripper discharge	:	8 lph
Operating pressure	:	$1.20 \text{ kg/cm}^2$
System operating schedule	:	Alternate day



#### Stages wise water application and system operating time:

Plant growth stage	Water application(l/plant)	System operating time (minute)
Vegetative	2.25	20
Flowering	2.25-8.25	20-60
Fruit setting	8.25-18.00	60-135
Maturity	18.00-15.50	135-115

#### **Fertigation schedule :**

Full dose of  $P_2O_5$  and 10 % of N and  $K_2O$  applied as basal and remaining N and K through drip system in eight equal splits at weekly interval starting from 15 days after germination.

#### 4. Study on pit method of planting in sugarcane under drip irrigation

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone to planting sugarcane through pit method are recommended to dig out pit of 60 cm diameter with a spacing of  $1.75 \text{ m} \times 1.75 \text{ m}$  with a depth of 40 cm by using post hole pit digger. Sixteen sugarcane sets of two budded are to be put in pit with filling of soil and FYM/bio-compost to a depth of 25 cm below and 15 cm upper side of sets. By adopting of this method, three ratoon can be taken with higher yield and net profit as compared to two ratoon with paired row planting ( $0.6 \text{ m} \times 1.2 \text{ m}$ ) under drip irrigation.

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#### The system details are:

Lateral spacing	:	3.5 m
Dripper spacing	:	1.75 m
Size of micro tube fitted on dripper	:	4 mm
Dripper discharge	:	8 lph
Operating pressure	:	$1.2 \text{ kg/cm}^2$
Operating frequency	:	Alternate day
Operating time: October- December	:	110-157 min.
		March-June : 186-248 min.



# 5. Effect of rate and frequency of micronutrient application on production of banana under drip irrigation

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing drip irrigated banana are recommended to apply 50 g micronutrient mixture (Grade-V)/plant as soil application in two equal splits at 10 and 40 days after planting along with Precision Farming Development Centre (PFDC) package of fertilization for getting higher yield, net return, better quality of fruits and sustain the soil fertility.

Method of application	Days after planting	Urea (g/plant)	DAP (g/plant)	MOP (g/plant)
Soil application	30 <sup>th</sup>	63	40	40
	60 <sup>th</sup>	63	40	40
Fertigation	90 <sup>th</sup>	32		20
	105 <sup>th</sup>	32		20
	120 <sup>th</sup>	32		20
	135 <sup>th</sup>	32		20
	150 <sup>th</sup>	32		20
	165 <sup>th</sup>	32		20

## Schedule of fertilization as per PFDC package:

## System details:

Lateral spacing : 2.4 m, Dripper distance: 0.6 m, Dripper discharge: 4 lph,

Operating pressure :  $1.2 \text{ kg/cm}^2$  and Operating frequency: Alternate day (0.6 PEF).


### 6. Study the N and K requirement of beet root grown on coastal soils of South Gujarat

The farmers of coastal areas of South Gujarat Heavy Rainfall Agro-climatic Zone growing beet root (paired row: 20 cm x 45 cm x 75 cm, bed width: 75 cm, furrow top width: 45 cm) during *rabi* season are recommended to apply 150 kg N and 60 kg  $K_2O/ha$  in addition to common application of 60 kg  $P_2O_5$  and 10 t bio compost/ha for getting higher yield and net return.



# 7. Response of *Bt*. cotton hybrids to integrated nutrient management under coastal salt affected soil condition

The *Bt.* cotton (GCH-8 (BG-II)) growing farmers of coastal areas of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to apply 10 t bio compost/ha and 300 kg N/ha in five equal splits at 30, 60, 75, 90 and 105 DAS for getting higher seed cotton yield and net return.



# 8. Comparative performance of hybrid and variety of rice under different spacing and age of seedling under South Gujarat conditions

The *kharif* hybrid rice growing farmers of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to apply 10 t FYM/ha and transplant 18 days old seedling at 25 cm x 25 cm spacing. The crop is to be fertilized with 40,000 brickets/ha (60 Urea: 40 DAP) at 4 days after transplanting for getting higher yield and net return.

### 9. Production potential of rice hybrids under different fertility levels in South Gujarat conditions

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing *kharif* hybrid rice are recommended to apply 10 t FYM/ha and fertilize the crop @ 125:37.5:00 kg NPK for getting higher yield and net return.

# 10. Use of plant growth regulators (PGRs) for enhanced yield and quality of sugarcane

Sugarcane growers of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to plant sugarcane sets after overnight soaking in water and apply foliar spray of  $GA_3$  (35 ppm) at 90, 120 and 150 DAP for getting higher remunerative production.



# 11. Impact of integrated application of organics and inorganics in improving soil health and sugarcane productivity

Sugarcane growers of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to apply 10 x FYM ha<sup>-1</sup> with biofertilizer (*Acetobacter* + PSB @ 12.5 lit ha<sup>-1</sup>) and inorganic fertilizers as per soil test based values as well as zinc sulphate 25 kg ha<sup>-1</sup> before planting of sugarcane for getting higher cane yield, net return and sustaining soil fertility.

Ası	oer soil test anal	vsis based N	. <b>P</b> .	O,	and K.	0	fertilizes to	o be	applie	d as below:
			7 - 2	~ 5		<u> </u>				

Available soil N (kg/ha)	Recommended dose of N (kg/ha)			
0-140	375			
141-280	312.50			
281-420	250			
421-560	250			
561-700	187.50			
>700	125			
Available soil P <sub>2</sub> O <sub>5</sub> (kg/ha)	Recommended dose of P <sub>2</sub> O <sub>5</sub> (kg/ha)			
0-10	187.50			
11-20	156.25			
21-30	125			
31-40	125			
41-55	93.75			
>55	62.5			
Available soil K <sub>2</sub> O (kg/ha)	Recommended dose of K <sub>2</sub> O (kg/ha)			
0-100	187.50			
101-150	131.25			
151-200	125			
201-250	125			
251-300	93.75			
>300	62.5			

# 12. Intercropping and plant geometry in relation to mechanization in sugarcane

Sugarcane growers of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to plant sugarcane in twin row (30-120-30 cm) with intercropping of four rows of onion in 120 cm spacing to fetch higher remunerative production. The practice is suitable for mechanization in sugarcane cultivation.

# 13. Irrigation and fertilizer requirement of Indian bean variety GNIB-21

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone, growing *rabi* vegetable Indian bean (GNIB 21) are recommended to apply 4 irrigations of 50 mm depth at sowing,



branching, flowering and after first picking. The crop is to be fertilized with 40 kg N/ha as basal dose for achieving profitable yield.

# 14. Effect of row spacing and seed rate on growth and yield of sunnhemp seed crop during *rabi* season

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing sunnhemp seed crop under conserved moisture in *K*yari land after *kharif* rice are recommended to sow the crop at 45 to 60 cm row spacing using 30 kg/ha seed rate.

# 15. Integrated nutrient management in lucerne (*Medicago sativa* L.) under south Gujarat condition

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing lucerne are recommended to apply FYM 10 t/ha or biocompost 7 t/ha and fertilized the crop with 20:50:50 kg NPK/ha as basal and seed treatment of biofertilizers (*Rhizobium* + PSB each @ 10 ml/kg seed) for getting higher yield and net return.

### 16. Nutrient management in guinea grass (*Panicum maximum* Jacq) under south Gujarat condition

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing guinea grass are recommended to apply 10 t/ha FYM and fertilized the crop with 62.5-37.5-37.5 kg NPK/ha as basal as well as 37.5 kg N/ha after each cut and 40 kg  $P_2O_5$ /ha each year for getting higher yield and net return.

# 17. Cropping system diversification and/or intensification

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to adopt the ricecabbage-greengram crop sequence for securing higher production, net profit and improving soil fertility.

# 18. Response of pigeon pea to nutrient management

The farmers of South Gujarat Agro-climatic Zone growing pigeonpea under rainfed condition during *kharif* season are recommended to apply RDF (25-50-0 kg NPK/ha as basal dose) along with three sprays of 1% water soluble 19:19:19 NPK at branching, flowering and pod development stage for achieving higher yield and net return.



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# **19.** Effect of Zinc on growth and yield of Finger millet

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing finger millet are recommended to apply 25 kg  $ZnSO_4$ /ha in soil as basal dose OR give seed treatment with 30% ZnO at 10 ml/ kg seed and root dipping in 0.5%  $ZnSO_4$  with recommended dose of fertilizer (40-20-20 kg NPK/ha) to get higher yield and net return.

# 20. Effect of different organics on finger millet (Nagli)

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone growing finger millet (GN 4) during *kharif* season are recommended to fertilize the crop with 50 % N through FYM (4 t/ha) + 25 % N through biocompost (660 kg/ha) + 25 % N through castor cake (250 kg/ha) + Azotobacter, 2 l/ha + PSB, 2 l/ha for getting higher yield and net return.



#### 21. Response of vegetable Indian bean to land configuration and irrigation schedules

The farmers of South Gujarat Agro-climatic Zone growing Indian bean during *rabi* season are recommended to grow the crop on broad bed and furrow (top width of bed 90 cm, height 10 cm, distance between two beds 45 cm with distance between two rows 30 cm and within row 15 cm) and apply 6 irrigations of 40 mm depth in which 1<sup>st</sup> irrigation just after sowing and remaining 5 irrigations at an interval of 12 to 15 days. By adopting these practices, it gives higher green pod yield and net return.

# 22. Effect of spacing and fertilizer management practices on *rabi* pigeon pea under conserved soil moisture condition

The farmers of Bara track of South Gujarat region growing pigeonpea cv. GT 102 during *rabi* season under conserved soil moisture are recommended to sow the crop at 60 x 30 cm spacing and apply recommended dose of fertilizers (20:40:00 kg N:P<sub>2</sub>O<sub>5</sub>:K<sub>2</sub>O/ha) along with 1 t vermi-compost/ha + seed treatment with *Rhizobium* and PSB @ 10 ml/kg seed for getting higher yield and net return.





# 23. Studies on different package of practices in Finger millet (Nagli) under rainfed conditions (Cv.GN-4)

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone and South Gujarat Zone growing

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finger millet are recommended to adopt integrated nutrient management system for getting higher yield and net return.

#### **Components of Integrated Nutrient Management are:**

- Treat the seed with thirum @ 3-4 g/kg seeds + seedling dipping in bio-fertilizer (*Azotobacter*) for 30 minutes.
- Hand weeding.
- $30 \text{ kg N}, 20 \text{ kg P}_2\text{O}_5$  and bio compost 2 t/ha.
- Apply Azotobacter 2 kg/ha. + PSB 2 kg/ha as soil application.
- Use recommended chemical pesticides for controlling stem borer and blast.

#### 24. Influence of preceding summer crops and integrated nutrient management on cotton

The Bt cotton hybrid growing farmers of South Gujarat Agro-climatic Zone are recommended to grow summer green gram as preceding crop with recommended package of practices. They are also recommended to apply 2% banana pseudostem enriched sap as foliar spray at flowering stage with recommended dose of fertilizers (240 kg N + 40 kg  $P_2O_5$  per ha) to *Bt* cotton hybrid in *kharif* season to achieve higher seed cotton equivalent yield and net realization.

#### Fertilizer schedule for Bt cotton hybrid

- 40 kg P<sub>2</sub>O<sub>5</sub> as basal and 240 kg N applied in 5 equal splits at 30,60, 75, 90 and 105 days after sowing as top dressing
- 25. Agronomic requirements of pre released *G. hirsutum* variety in respect of plant density and fertilizer requirement under rain fed conditions. GN Cot. 26 (GBHV-170)

The farmers of South Gujarat Agro-climatic Zone growing rainfed *hirsutum* cotton (GN Cot. 26) are recommended to follow spacing of 120 cm x 45 cm with application of 150 kg N/ha for getting higher seed cotton yield and net profit. Nitrogen should be applied in two equal splits i.e., 50 % as basal and 50 % at 30-40 days after sowing.

## 26. Effect of spacing and nitrogen levels on yield in aerobic rice

The farmers of South Gujarat Heavy Rainfall Agroclimatic Zone growing aerobic rice (GNR 3)are recommended to sow crop at spacing of 20 cm between rows and apply recommended dose of fertilizers (100- 30 NPkg/ha) for achieving profitable yield.







### **III PLANT PROTECTION**

### [A] Agricultural Entomology

# 1. Dispersal of *Trichogramma chilonis* Ishii (Hymenoptera: Trichogrammatidae) in sugarcane field

Sugarcane growers of South Gujarat Heavy Rainfall Agro-climatic Zone are advised to staple trichocard stripes on lower surface of the sugarcane leaves @ 12/ha (Aprrox. 4000 parasitized eggs/stripe) keeping distance of 30 m between two stripes for effective biological control of sugarcane borers.



### 2. Population dynamics of Helicoverpa armigera (Hubner) through pheromone trap in tomato

Farmers of South Gujarat Heavy Rainfall Agro-climatic Zone III growing tomato are recommended to monitor the infestation of Helicoverpa armigera from  $3^{rd}$  to  $18^{th}$  week after transplanting tomato crop for timely management of pest.

# 3. Dissipation and persistence of combi-product of chlorantraniliprole 9.26 % + $\lambda$ cyhalothrin 4.63% in/on pigeonpea

Pigeonpea growers of South Gujarat are recommended pre-mix formulation of chlorantraniliprole 9.26 ZC +  $\lambda$ -cyhalothrin 4.63 %,twice at 15 days interval starting from 50 per cent flowering stage @ 30 g a.i./ha (4.0 ml/10l water) for the control pod borer. Preharvest interval of nine days should be observed to avoid residue problem.

Year	Crop	Pest	Pesticide with	Doses		Waiting	
			Formulation	Quantity of	Conc.	Dilution	Period
				formulation	(%)	in water	(days)
2018	Pigeon	Pod	chlorantraniliprole	220 ml/ 30 g	0.006	550L	9.0
	Pea	Borer	9.3%+ $\lambda$ -cyhalothrin	a.i./ha			
			4.6% ZC				

### **Recommendation as per CIBRC Format**

# 4. Dissipation and Persistence of Spiromesifen (22.9 SC) in Brinjal under South Gujarat Conditions

Brinjal growers of South Gujarat Heavy Rainfall Agro-climatic Zone are recommended to apply spiromesifen 22.9 SC, twice @ 96 g a.i/ha (8.4 ml/10 lit.) at 15 days interval starting from fruit setting stage for the control of red spider mite. Pre-harvest interval of one day should be observed to avoid residue problem.

Year	Crop	Pest	Pesticide with	Doses		Waiting	
			Formulation			Period	
				Quantity of	Conc.	Dilution	(days)
				formulation	(%)	in water	
2018	Brinjal	Red spider	Spiromesifen 22.9	420 ml/ 96 g	0.02	500L	1.0
		mite	%SC	a.i./ha			

# 5. Studies on bioefficacy of insecticides and botanicals against shoot fly and stem borer infesting sorghum crop

Sorghum growers of South and North Gujarat are recommended to treat seeds with thiamethoxam 30 FS @ 3 g/kg seeds before sowing or treat seeds with thiamethoxam 30 FS @ 3 g/kg seeds before sowing along with spraying of Neem base pesticide 1500 ppm @ 35 ml/10 lit of water after 30 days of emergence of crop to manage the sorghum shoot fly and stem borer.

### **AS PER CIB FORMAT**

Year	Crop	Pests	Pesticide with	Dose			Waiting	Residue
			formulation	Quantity	Conc	Dilution	Period	
				of		in water		
				formulation				
2018	Sorghum	Shoot	Thiamethoxam	3g/kg seed	-	-	-	-
		fly Stem	30 FS					
		borer						

### [B] Plant Pathology

### 1. Biological management of rice blast

The rice growers of South Gujarat Agro-climate Zone are recommended to apply two sprays of *Pseudomonas fluorescens* Waghai or *P. fluorescens* Navsari isolate @ 6 ml/l. foliar spray (108 cfu/ml) for effective management of leaf and neck blast and to get higher grain and straw yields. The first spray should be given at initiation of disease and second spray at the time of panicle emergence.

### **IVHORTICULTURE**

Leaf Blast

**Neck Blast** 

### 1. Effect of time of inarch grafting on success and survival in mango *cv*. Kesar.

Farmers and nurserymen of South Gujarat Heavy Rainfall Agro-climatic Zone I (AES-III) preparing inarch graft of mango are advised to prepare grafts throughout the year with uniform success rate and survival.

### 2. Effect of time and dose of fertilizer application on yield and quality of sapota cv. Kallipati

The Farmers of South Gujarat Heavy Rainfall Zone-I (AES–III) having sapota orchard with adult trees of cv. Kalipatti are recommended to apply 100 percent recommended dose of fertilizers @ 1000-500-500g NPK/tree/year in three splits i.e. 250-125-125g NPK/tree in June along with FYM @ 100kg/tree/year. Remaining 250-125-125g NPK/tree in October and 500-250-250g NPK/tree in February instead of two equal split i.e. in June and October. This treatment gives higher fruit yield of sapota with higher net realization in winter season in comparison to summer season.



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# 3. Effect of pruning on sapota cv. Kalipatti, at normal spacing

The farmers of South Gujarat Heavy Rainfall Agroclimatic Zone-I (AES–III) having sapota cv. Kalipatti orchards of more than 30 years old are recommended to prune 1.0 m upper terminal growth once during December month for getting gradually higher yield and net returns.

# 4. Effect of liquid manures on quality and productivity of banana and papaya grown under alternate row system.



The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-I (AES-III) growing banana and papaya under alternate row system are advised to apply 7.2 kg NADEP manure along with 2 l/plant Jeevamrut and 2 l/plant Amreetpani to each of banana and papaya crop for achieving higher yield and net return.

### Detail management for banana and papaya alternate row system:

i. Planting : Prepare the pits at 2.4 m x 1.5 m distance. Sow plant by applying 2.4 kg of NADEP manure per plant along with *PSB* and *Azatobactor* biofertilizer and *Trichoderma* and *Pseudomonas* biopesticide 2 ml or g each/plant.



- ii. 2.5 & 5 MAP: Apply 2.4 kg of NADEP manure per plant each time.
- iii. Apply liquid manures Jeevamrut and Amreetpani @ 400 ml/plant at one month interval starting from planting in 5 equal splits.
- iv. In banana, drench 500 ml 0.5% each of Trichoderma and Pseudomonas after one month of planting.
- v. In papaya, drench 400 ml 0.5% each of Trichoderma and Pseudomonas at 30 and 60 days of planting.
- vi. For plant protection measure, use the 40 fruit fly traps/ ha for control of fruit fly in papaya and alternate spray of cow urine 2%, neem oil 0.02%, neem kernel extract 0.5% for control of sucking pest and disease in the both crops as per need basis.

# 5. Integrated Nutrient Management in cauliflower (*Brassica oleracea* var. Botrytis)

The farmers of South Gujarat Agro-climatic Zone-I growing cauliflower are advised to apply 20 kg N+ 40 kg  $P_2O_5$  alongwith 20 t/ha FYM and 5.70 t/ha bio compost as basal dose. The 20kg nitrogen should be applied 30 DAT as top dressing to get higher yield and return.



### 6. Response of okra to foliar application of Silicon

The farmers of South Gujarat growing summer okra are advised to spray silicon based liquid fertilizer@2 ml/l(silicon: 0.79% w/v + boron: 0.18% w/v - OSAB-Si+) at 30,45 and 60 DAS to obtain higher yield and net income.

### 7. Performance of grafted vs. nongrafted brinjal during rainy season under South Gujarat conditions

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-I (AES-III) are advised to adopt grafting technique using wild species (*Solanum torvum*) as rootstock and pink and purple *Surati Ravaiya* brinjal as scion for better plant survival during rainy season, better fruit set, comparatively less shoot and fruit borer infestation, extended life span, higher



8. Comparative performance of different parthenocarpic cultivars of cucumber through vegetative propagation under polyhouse conditions

vield and net returns.

Farmers cultivating parthenocarpic cucumber varieties in greenhouse are advised to use newly pruned side shoots of current crop as propagating material for raising of successive crop without paying high price for seed which performs equally



well to the crop raised from seeds and concurrently, excessive plants generated from pruned side shoots can be sold for additional income.

# 9. Effect of plant growth regulators on growth, quality and yield of *Dendrobium* orchid under NVPH

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-I growing *Dendrobium* orchid under naturally ventilated polyhouse are advised to spray  $GA_3$  @50 ppm (1 g/20 lit.) at every two months interval throughout the year for getting higher spike yield and net return.



# 10. Response of gladiolus cv. Sancerre to different levels of fertilizers (N & P) in respect to growth and yield parameters

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-1 (AES-III) cultivating gladiolus are advised to apply 125: 150: 200 kg NPK/ha alongwith FYM @ 8 t/ha during bed preparation and remaining dose of nitrogen *i.e.* 125kg should be applied at 40 days after planting to produce higher yield and net return.

# 11. Standardization of nitrogen and phosphorus levels in Chrysanthemum var 'Ratlam Selection'

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-I (AES-III), growing Chrysanthemum variety 'Ratlam Selection' are advised to apply 150-100-100 kg NPK / ha along with FYM @ 10

t/ha. Full dose of phosphorus, potassium and half dose of nitrogen should be applied as basal dose whereas, remaining half dose of nitrogen should be applied after 30 days of transplanting for obtaining higher yield and net return.

### 12. Effect of different growing conditions on growth and flowering of heliconia varieties

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-1 (AES-III) are advised to grow heliconia under 25% green agro-shade net house for getting higher yield and net return.

### 13. Effect of foliar spray of polyamines and banana enriched sap on Rose (*Rosa hybrida* L.) under polyhouse conditions

Farmers cultivating rose in polyhouse are advised to give foliar application of enriched banana psuedostem sap (Novel O.L.F. @ 200 ml/10 lit. of water) 2 times at 15 days interval from second week of November to obtain higher yield and net returns.

# 14. Standardization of suitable formulation for preparation of instant mango milk shake powder

Food processors are advised that instant mango milk shake powder can be prepared using 45% of mango powder, 35% of milk powder, 20% sugar with 0.5% citric acid. The product packed in 200 gauge PP pouches (50 microns) found stable up to 6 months at room temperature.





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# 15. Standardization of protocol for the extension of shelf life of fresh sapota fruit

Farmers and entrepreneurs are advised to extend the shelf life of sapota fruits by packing in CFB box (10 kg capacity) and pre-cooling at 10°C for 8 hours. The shelf life of pre-cooled sapota fruits can be extended up to 12 days at 11°C including 3 days transportation.



# 16. Exploration and evaluation of local weed flora for value addition through drying

People interested in cottage industry and entrepreneurs are advised to use weeds for making dry flower products. Leaves of *Argyreia speciosa* can be dried in 7 days, inflorescence of *Celosia argentea* and *Setaria verticillata* in 5 days, *Cyperus rotundus* and *Dinebra arabica* in 4 days and *Eragrostis pilosa* in 3 days through press drying method at room temperature for use in dry flower products up to 6 month.

#### V FORESTRY

# 1. Growth and productivity of *Melia composita* Willd. under different spatial geometries

Farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-I are recommended to grow *Melia composita* Syn. *M. dubia* (Malabar neem, Burma neem, nimbaro) at 2 x 2 m spacing for getting higher wood biomass and economic returns.

# 2. Influence of weather parameters on foraging activity of stingless bees (*Tetragonula laeviceps*) near the nests

Farmers of South Gujarat Heavy Rainfall Agro-climatic Zone-I (AES-III) are advised to avoid application of pesticides during 13:00 to 15:00 hrs because of higher foraging activity (moving in and out of the nest) of stingless bees (*Tetragonula laeviceps*).

# 3. Nesting habitat and nest architecture of stingless bees (*Tetragonula laeviceps*) in South Gujarat condition.

While making the hive for the stingless bees (*Tetragonula laeviceps*), beekeepers are advised to keep entrance opening of hive in the range of 75 to  $150 \text{ mm}^2$  with minimum hive volume of  $1330 \text{ cm}^3$ .









### VI AGRICULTURALENGINEERING

# 1. Development of integrated rainwater resource management (iRaM) module for coastal areas of South Gujarat

Farmers of South Gujarat coast are recommended to construct ponds in lower depressions of their field, to harvest rain water for improving ground water quality along with rearing of fresh water fish (Grass carp, Catla, Rohu and Mrigal). The pond may be constructed in 10 % area with 3.0 m depth including 0.5m free board. They may rear fresh water fish even by collecting rain water or excess canal water by adopting "iRaM"(Integrated rainwater resource management) model.



### 2. Irrigation scheduling of teak seedlings grown in nurseries

It is recommended to farmers / state forest department raising teak stump in net house nurseries to irrigate the seedlings on every alternate day, for getting seedlings with superior growth. The approximate quantity of water application (ml) in poly-bags of 10 kg size, during different months should be as follows

Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
300	200	200	300	300	400	400	300

### 3. Testing and modification of sugarcane planter

The farmers of South Gujarat heavy rainfall zone (AES-III) are advised to adopt IISR, Lucknow make automatic planter with minor adjustment (i.e. $30^{\circ}$  enlargement in angle of covering device) for easy planting of sugarcane in heavy black soil. By adopting this, it can reduce fuel consumption, saves in cost of cutting and covering sets and increase higher cane yield with more net income as compared to other local make planters.



#### 4. Packaging and storage studies of drumstick 'Moringa oleifera' and its pulp

 Farmers, processors, and entrepreneurs are recommended to preserve the drumstick pod pieces by packing in glass bottle and 'A-1 tall' tin can With 2% brine covering and steam retorting at 115°C temperature for 15min and cooling. Thus, bottled and canned drumstick pod pieces can be stored safely and utilized up to 8 and 12 months, respectively.



2. F a r m e r s , processors, and entrepreneurs are recommended to preserve the drumstick pulp in glass bottle and 'A-1 tall' tin can



after sterilization, steam retorting at 121°C temperature for 10 min and cooling. Thus, bottled and canned drumstick pulp can be stored safely and utilized up to 8 and 12 months, respectively.

### 5. Technology for utilization of Orange Peel and Seed

Processors

and entrepreneurs are recommended to dry the sweet orange peel and seed below 7% final moisture content using tray dryer at 50°C drying air with tray load of



4.6kg/m<sup>2</sup> and 2.7kg/m<sup>2</sup> for 32h and 21h, respectively to extract highest orange oil with optimum d-limonene content.

# 6. Development and studies of sapota (chikoo) powder based value added product (pasta) using semolina (Suji) and maida

The processors and entrepreneurs are recommended to prepare sapota powder blended pasta by replacing 20 % of maida with sapota (chikoo) powder and by adding water @ 31% of total weight for extrusion followed by drying at 50 °C temperature to attain moisture content  $6.0\pm1.0$  %. Dried pasta can be safely stored in 200 micron thick HDPE bags up to six months at ambient temperature.



### VII BASIC SCIENCE

### 1. Effect of pre-harvest water stress on yield and post-harvest quality of cabbage (*Brassica oleraceae* var. *capitata* L.)

The farmers of South Gujarat Heavy Rainfall Agro-climatic Zone AES III growing cabbage are advised to withheld two irrigations, first at head development (35-40 DAS) and second at leaf overlapping stages (65-70 DAS) for sustaining postharvest quality, increasing yield, saving water and to get higher net return



#### VIII ANIMAL PRODUCTION AND FISHERIES

## 1. Effect of different floor types on the growth performance and behavioural traits of Surti buffalo calves during winter

Surti buffalo keepers of South Gujarat are recommended to use paddy straw as bedding material on concrete to house buffalo calves up to 6 months of age to get better growth rate during winter season.



# 2. Effect of heat ameliorative measures (fans, foggers and green net) on physiological, haematological, biochemical and productive performance of lactating Surti buffaloes

Surti buffalo keepers of South Gujarat region are recommended to house Surti buffaloes in shed having fans, foggers and rooftop whitewashed with lime for decreasing heat stress during summer season from 9 am to 5 pm (temperature decreases upto 3°C) which is beneficial in sustaining milk production.

#### 3. Effect of bedding materials on broiler performance

The Poultry farmers of south Gujarat region are recommended to use sugarcane baggase as a bedding material for rearing of broilers to minimize cost of bedding without affecting growth rate and Feed Conversion Ratio.

# 4. Study of Indian white shrimp (*Fenneropenaeus indicus*) growth under varying salinities

The brackish water shrimp growing farmers of coastal areas of Gujarat are recommended to maintain pond water salinity of 25-30 ppt (parts per thousand) in Indian white shrimp rearing for better survival, growth and economical returns.

# 5. Effect of challenge feeding on production and reproduction performance of Surti buffaloes

Farmers of South Gujarat are recommended that feeding of concentrate mixture @ 1% of body weight for 2 months before and after calving in Surti buffalo heifers increases calf birth weight, increases daily milk production and income.

#### **RECOMMENDATIONS FOR SCIENTIFIC COMMUNITY (2017-18)**

### I NATURAL RESOURCE MANAGEMENT

#### 1. Use of Plant Growth Regulators for enhanced yield and quality of sugarcane

Overnight soaking of sugarcane sets in 50ppm ethereal could be done before planting for getting higher cane yield of sugarcane in South Gujarat heavy rainfall zone.

# 2. Soil resource information for land capability classification (LCC) and Fertility capability classification (FCC) of six villages Situated at Hilly Undulating Terrain of Dang District.

Under Heavy Rainfall Agro- climatic Zone of Dang following measures are suggested for possible



improvement in yield of paddy, gram, groundnut, finger millet, pigeon pea, sorghum and vegetables grown on 0 to 5 % sloppy land and mango, cashew nut and other horticultural fruit crops grown up to 8 % slope:

- 1. Erosion must be controlled through making bunds / field bunds to restore nutrient rich surface soil considering slope of land and improve soil moisture.
- 2. Planting / sowing should be done at onset of rains with small flush of N to avoid limiting factor of moisture during dry spell. Further, N must be added in split to increase its efficiency under heavy rainfall situation.
- 3. Care must be taken in regard to source and method of P fertilizer application to combat medium to high P- fixation capacity of soils.
- 4. Organic carbon content of soil regularly be assessed and in certain cases low organic carbon containing soil must be replenished by locally available organic materials/manure. Further, available K in soil should be assessed frequently and in case of soils with low ability to supply soil K due to poor retention should be improved by frequent application of K fertilizer.

# 3. Soil and Land Restoration Planning of Six Villages of Dang District Situated at Hilly Undulating Terrain

In order to minimize erosion, washing out of nutrients in upper soil and also to increase moisture conservation for improving yield of different crops grown in Sarvar, Sodmal, Kalamkhet, Motidabdar, Daguniya and Chikhalda villages of the Dang district of heavy rainfall zone, following different soil conservation measures are suggested:

Soil conservation measures	Length (m) or No. required							
incusures	Villages							
	Sarvar	Sodmal	Kalamkhet	Motidabdar	Daguniya	Chikhalda		
Stone Bunding	4472 m	1010 m	1237 m	258 m	18969 m	1751 m		
Soil + Stone Bunding	30213 m	21739 m	12092 m	167 m	28778 m	735 m		
Field Bunding (by soil)	21184 m	19546 m	4646 m	21 m	5295 m	7479 m		
Making outlet through wire waste	87 no.	23 no.	2 no.	-	1 no.	-		
Gully Plugging	44 no.	10 no.	7 no.	-	1 no.	-		
Gabion structure	8 no.	1 no.	31 no.	-	-	-		
Masonry Foundation Outlet	142 no.	99 no.	10307 no.	90 no.	145 no.	-		
Horticultural fruit plant	12784 no.	9784 no.	11250 no.	868 no.	6434 no.	2367 no.		
Forest tree	25910 no.	14080 no.	1237 m	1390 no.	13986 no.	1751 m		

### **II PLANT PROTECTION**

#### A. Entomology

#### 1. Survey of natural enemies of rice insect pests

The parasitoids *viz.*, Telenomus sp. (0.00-31.08, Av. 9.84 % parasitization) and *Tetrastichus* sp. (0.00-7.15, Av. 1.11 %) were found parasitizing eggs of yellow stem borer; *Tachinidfly* (0.00-20.44, Av. 8.07 %), *Charops* sp.(0.00-33.73, Av. 15.33 %) and *Apanteles* sp. (0.00-66.67, Av. 13.17%) on larvae of paddy skipper; *Xanthopimpla* sp.(0.00-26.67, Av. 4.77 %) and *Brachymeria* sp.(0.00-50.00, Av. 2.69) on pupa of paddy skipper; *Apanteles* sp. (0.00-24.38, Av. 10.15 %) on larva of paddy leaf folder. Moreover, *Trissolcus* sp. and *Oenocyrtus utetheisae* (0.00-21.25, Av. 5.62 %) on eggs of paddy gundhi bug were found predominant as well as potent parasitoids in paddy agro-ecosystem under south Gujarat condition.

#### 2. Survey of natural enemies of sugarcane insect pest

The parasitoids *viz.*, *Telenomus* sp. (0.00-37.30, Av. 9.02 % parasitization) on egg mass of sugarcane top borer; *Trichogramma* sp. (0.00-50.00, Av. 7.42 %) on egg mass of sugarcane shoot borer; *Apanteles* sp.(0.00-20.83, Av. 3.17 % on *Chilo* sp.), Tachinid fly (0.00-35.00 Av. 9.58 % on Chilo sp.) and Tachinidfly (0.00-33.33, Av. 1.89 % on Sesamia sp.) on larvae of shoot borer; *Tetrastichus* sp.(0.00-50.00, Av. 12.26%) on egg mass of sugarcane pyrilla and *Encarcia* sp. (0.00-91.67, Av. 25.77 %) on puparium of sugarcane whitefly were found predominant and potent parasitoids in sugarcane agroecosystem under south Gujarat conditions

#### 3. Screening of sugarcane varieties for Mealybug resistance

Sugarcane genotypes *viz.*, Co 10015, CoN 05071 and CoN 14072 were found less susceptible against mealybug.

### 4. Screening of promising genotypes for multiple resistance against rice yellow stem borer, *Scirpophaga incertulas* Walker and sheath mite, *Steneotarsonemus spinki* Smiley of rice

Rice genotypes *viz.*, NWGR-7011, NWGR-9088, IET-23189 and IET-22649 showed multi-resistant reactions against rice yellow stem borer, *Scirpophaga incertulas* Walker and sheath mite, *Steneotarsonemus spinki* Smiley.

#### 5. Survey for assessment of losses due to mealybug infestations in the cotton fields of farmers

The loss due to mealybug infestation in cotton (based on 4-grade infested plants) was estimated to be 1.07 (0.00 to 2.97) per cent and the natural parasitism of *Aenasius bambawalei* Hayat was 8.55 (4.73 to 14.93) per cent under farmers' management practices in 21 surveyed villages of Surat and Bharuch districts.

#### 6. Survey for assessment of losses due to pink bollworm infestations in the cotton fields of farmers

The quantitative loss due to pink bollworm infestation was estimated to be 2.14 (0.88 to 3.61) per cent under farmers practices of 274 cotton fields in 21 surveyed villages of Surat and Bharuch districts during 2015-16 to 2017-18.

#### 7. Studies on species composition of sugarcane shoot borer

Sugarcane crop in South Gujarat Agro-climatic Zone was infested by complex of two species of shoot borer namely, *Sesamia inferens* (Walker) and *Chilo sacchariphagus indicus* (Kapur). Moreover, *S. inferens* was found to be predominant shoot borer species.

#### 8. Evaluation of acaricides against pigeonpea eriophyid mite Aceria cajani

Three sprays of spiromesifen 22.9 SC @ 0.005 % (2 ml/10 lit) or fenazaquin 10 EC (10 ml/ 10 lit) @ 0.01 % at 25, 40 and 55 days after sowing which effectively control pigeonpea eriophyid mite, *Aceria cajani* 

and give higher seed yield and net return. Further, the residues of these acaricides were found below determination level in pigeonpea seeds and plant residue.

### B. Plant Pathology

#### 1. Screening of sugarcane varieties for red rot resistance

Sugarcane varieties *viz.*, Co 10005, Co 10006, Co 10026, Co 10027, CoT 10367, Co 09009, Co 10031, CoT 10368, CoT 10369, PI 10131, CoN 14071, CoN 14072, CoN 14073 and CoN 14074 were found moderately resistant to red rot under artificial inoculation condition.

### 2. Screening of Sugarcane varieties for Whip smut resistance

Sugarcane varieties *viz.*, Co 10005, Co 10006, CoT 10366, CoT 10368, CoT 10369, CoVC 10061, PI 10132, CoN 14071, CoN 14072, CoN 14073 and CoN 14074 showed resistant reaction against whip smut disease under artificial inoculation condition.

## 3. Screening of promising genotypes for multiple resistance against bacterial blight, sheath rot and grain discolouration diseases of rice

Rice genotypes *viz.*, IET-23832, IET-22015, NVSR-6100 and NVSR-6137 were found multiple resistant against bacterial blight and sheath rot diseases under artificial inoculation and high disease pressure in the field and grain discoloration in normal field condition.

#### 4. Screening of promising genotypes for bacterial leaf blight disease of rice

Rice genotypes *viz.*, NVSR-348, NVSR-351, IET-18710 and NVSR-6121 were found resistant against bacterial blight disease by artificial inoculation under field condition.

#### 5. Management of Sterility Mosaic Disease of Pigeon pea

The spraying of either fenazaquin 10 EC @ 0.01 % or propargite 57 EC @ 0.1 % after 25 days of sowing and second at 15 days after first spray was found significantly most effective to manage sterility mosaic disease through vector control and gave higher seed yield and better net profit of pigeonpea in SMD nursery. Further the residues of these insecticides remained below determination level (< 0.05  $\mu$ g/ml), (< 0.03  $\mu$ g/ml) in pigeonpea seeds and plant residues, respectively.

#### 6. Epidemiology of rainfed cotton diseases under Bharuch Condition

Maximum temperature as well as morning and evening temperature of soil upto 20 cm depth showed highly positive significant effect on development of cotton root rot whereas, maximum temperature had highly positive significant effect against bacterial leaf blight of cotton, however rest of parameters showed non-significant effect on bacterial leaf blight. Maximum temperature had non-significant effect on Alternaria leaf spot but minimum temperature, vapour pressure (morning & evening), RH (morning & evening), wind speed and rainfall showed highly significant negative effect, whereas sunshine and evaporation showed highly significant positive effect on alternaria leaf spot development.

#### 7. Survey of major cotton diseases under Bharuch and Narmada districts

The maximum disease intensity of bacterial leaf blight and alternaria leaf spot of cotton were observed in 42-43<sup>rd</sup> SMW (15-28th October) i.e.14.34 per cent and 50-51<sup>st</sup> SMW (10-23rd December) i.e. 19.67 per cent in Bharuch district and 42-43<sup>rd</sup> SMW (1528<sup>th</sup> October) i.e.17.83 per cent and 50-51st SMW (10-23<sup>rd</sup> December) i.e. 21.83 per cent in Narmada district, respectively.

### 8. Current situation and status of Rice False Smut disease in South Gujarat

The disease incidence was noticed higher in Vansda Taluka. The losses due to false smut of rice was estimated to be 0.029 (Dediapada Taluka) to 2.354 per cent (Vansda Taluka) in 50 surveyed villages of 10

talukas of south Gujarat. The false smut disease of rice has attained a major status in Vansda taluka and recorded maximum loss up to 28.02 per cent in the Kavdej village on hybrid rice during Kharif 2016.

### 9. Survey of Root knot Nematode (Meloidogyne graminicola) in rice nurseries of South Gujarat

Roving Survey was conducted in rice nurseries during summer season from the year 2015-2018 and found 18.64 percent root knot disease incidence with 5.25 percent gall index in infested rice nurseries of South Gujarat. Rice root knot pathogen was identified as *Meloidogyne graminicolaand* is first reported in South Gujarat condition.

### III HORTICULTURE

### 1. Screening of salt tolerant rootstock for mango from South Gujarat region

Genotype 73-2 was found better in terms of germination, seedling growth and survival at EC 4 to 5 dSm-<sup>1</sup> salinity level. Scientists, those who are interested to work on salt tolerant rootstock of mango may take advantage in hybridization programme.

### 2. Screening and selection of superior plant types in comparison to alphonso mango

Out of the total 148 trees screened, 30 regular bearing trees (Alternate bearing index >.25) were evaluated for sensory and biochemical analysis of fruits as per fruit descriptors for mango. Three selections (25, 29 and 30) were found promising in shape of fruit, less peel, colour of pulp, pulp percentage, taste and other biochemical parameters and can be further evaluated in block plantations. Incidence of spongy tissue was not found and there was no major incidence of pest and diseases on these plants.

### 3. Determination of nutritional composition of minor fruits

Minor fruits (mentioned below) of South Gujarat are found rich in following parameters as compared to banana and sapota.

Fruits	Composition better than banana and sapota				
Palmyra palm	K (3902ppm), Ca(739ppm), P (268ppm) and Zn (2.79ppm)				
Jamun	Total phenol (241.6 mg/100g), Antioxidant activity (126.5 mg/100g), Ca (324ppm) and Mg (241ppm)				
White wax apple	Antioxidant activity (16.4 mg/100g)				
Carambola	Vitamin-C (16.1 mg/100g), Total phenol (20.8 mg/100g), Antioxidant activity (28.4 mg/100g), K (4099ppm), Ca (657ppm), Mn (3.01ppm) and Cu (2.75ppm)				
Tamarind	Carbohydrates (62.8%), Protein (2.81%), Vitamin-C (18.9 mg/100g), Total phenol (25.6 mg/100g), Antioxidant activity (30.4 mg/100g), K (12433ppm), Ca (2759ppm), Mg (1286ppm), P (1099ppm), Fe (154.3ppm), Mn (6.47ppm), Zn (7.11ppm) and Cu (6.13ppm)				
Jackfruit	Total phenol (31.8 mg/100g), Antioxidant activity (62.9 mg/100g), K (5135ppm), Ca (405ppm), Mg (533ppm) and Mn (5.12ppm)				
Star gooseberry	Protein (4.31%), β carotene (100.7 μg/100g), Vitamin-C (17.1), Total phenol (105.0 mg/100g), Antioxidant activity (83.7 mg/100g), K (4411ppm), Ca (4933ppm), Mg (1518ppm), P (545ppm), Fe (17.2ppm) and Zn (3.94ppm)				
Lasoda	β carotene (62.7 μg/100g), Total phenol (41.8 mg/100g), Antioxidant activity (55.7 mg/100g), K (4644ppm), Ca (656ppm), P (431ppm), Mn (3.51ppm) and Zn (2.06ppm)				

Kair	Protein (2.24%), Total phenol (61.5 mg/100g), Antioxidant activity (77.7 mg/100g), K (7313ppm), Ca (1011ppm), Mg (723ppm), P (999ppm) and Zn (4.71ppm)
Rayan	$\beta$ carotene (87.63 µg/100g), total phenol (157.4 mg/100g), Antioxidant activity (92.6 mg/100g), Ca (284ppm) and P (321ppm)

#### **IV FORESTRY**

#### 1. Evaluation of Eucalyptus Clones for growth and biomass

It is recommended that clone T15 grown in south Gujarat Heavy Rainfall Zone-1, situation III can be used for further breeding/ improvement programme for better productivity at 3 m x 1.5 m spacing.

#### 2. Mass propagation of Acacia mangium through axillary bud

Tissue culture scientists are informed to surface sterilize the axillary buds of *Acacia mangium* with absolute alcohol (100 %) for 1 min + mercuric chloride (0.1 %) for 6 min followed by thorough washing and culturing in MS media supplemented with combination 1.0 mg/l BAP + 0.1 mg/l Kin for shoot initiation and multiplication and further rooting the microshoots in  $\frac{1}{2}$  MS supplemented with 2.0 mg/l IBA. Vermiculite medium may be used for hardening of *in vitro* plantlets for large scale propagation of *A. mangium*.

#### 3. Effect of different salinity levels of irrigation water on young teak plants

Scientific community is hereby informed that the teak clones (*i.e.* CPT-262, CPT-266 and local) are salt sensitive and the critical limit for irrigating with saline water is EC 4.0 dS/m. Further it is advised that Na/K ratio could be used as an indirect indicator for salt tolerance in teak.

#### 4. Effect of different salinity levels of irrigation water on clones of Casuarina equisetifolia

Scientific community is hereby informed that, *Casuarina equisetifolia* cuttings could be grown successfully up to the EC 8.0 dS/m saline irrigation water, without any remarkable reduction in biomass. The critical limit of salinity of irrigation water, for *Casuarina equisetifolia* is recorded EC 16.0 dS/m. Among the tested clones, IFGTBCE-1 clone is found to be more salt tolerant and could be grown up to EC 12.0 dS/m of saline irrigation water.

# 5. Assessment of Land use / Land cover Changes in South Gujarat Using Remote Sensing and Geographical Information System

It is observed that Surat district recorded major shift (18.25 %) from forest area to orchards, plantations and gardens. Marshy lands have increased in Navsari (28.90%) and Bharuch (2.38%) district. Built up areas significantly increased in Navsari (69.09 %) followed by Narmada (44.40 %) district. The barren land may be planted with suitable forest / fruit species which will provide environmentally sustainable economic growth of the region. Therefore, policy makers, state Agriculture and Forest Departments are suggested to utilize the technique of Remote Sensing and GIS for assessing the changes in land use, at regular basis, to maintain the vegetative cover, essentially required to sustain the ecological balance of the region.

### V AGRICULTURAL ENGINEERING

#### 1. Developing program for online tour approval for NAU

The online tour approval system developed by Navsari Agricultural University can be adopted by employees of Navsari Agricultural University.

### 1. Developing mobile App for the APMC operations

Anandroid based Mobile App for APMC operations developed by Navsari Agricultural University can be used for dissemination of APMC data to the farming community.

### 2. Developing web portal for the farmers of South Gujarat Region

A web portal developed by Navsari Agricultural University for the farmers of South Gujarat Region can be used for agricultural information dissemination to the farming community.

# 3. Development of integrated rainwater resource management (iRaM) module for costal areas of South Gujarat

The scientists are recommended to use the Chandra and Sexena (1975) estimation equation for ground water regharge in Navsari cost.

$$Rx = [3.984(P - 40.64)] ^{\circ} 0.5$$

Where,

Rr = Recharge to the groundwater (cm)

P = Monthalyprecipitation(cm)

### VII BASIC SCIENCE

### 1. In-silico studies of NAL1 protein using bioinformatic approach in various cereal crops

It is informed to the scientific community that NAL1 protein structure derived using I-Tasser web server can be used as a reference model for future molecular docking experiments and validation in rice.

### 2. Metabolic profiling and anatomical study of jassid resistance and susceptible genotype of cotton

It is informed to scientific community that the molecules namely butanedioic acid, 2, 6, 10, 14, 18 - pentamethyl - 2, 6, 10, 14, 18 - eicosapentaeneandd-ribose increase whereas, octacosane and gluconic acid decrease which may be responsible for jassid resistance in cotton. Further, genotypes with higher phenol, free gossypol, trichome density and length with more leaf thickness whereas, lower reducing sugar and tannin contents should be used for selecting jassid resistant genotypes.

# **3.** Isolation, identification and exploitation of microbes from composting site for xylanase production for agro waste management

It is informed to scientific community that Xylanase producing *Bacillus licheniformis* X6 in combination with *Aspergillus terrus* XF9 degrade 15.5 % rice straw at ambient temperature after 40 days of incubation.

### 4. Microbial pigment as food additive to replace chemically synthesized colour

Yellow and orange pigments produced by bacteria *Micrococcus luteus* and *Kocuria rosea*, respectively having antioxidant activity can be used as natural colorants.

### 5. Isolation and identification of cyanobacteria as source of single cell protein

It is informed to scientific community that *Anabaena* isolate2 having high protein content (381.12  $\mu$ g/mg) and antioxidant activity (28%) has the potential to be used as single cell protein.

### 6. Isolation of important microorganisms in biodegrading crop residues

Scientific community is informed to prefer *Bacillus alkalophilus* RR isolate over *Vibrio mediterranei* ST-4 and *Bacillus okuhidensis* ST-9 for cellulose decomposition in rice straws because of minimum C:N ratio and maximum cellulose decomposition activity.

### 7. Screening of pigeon pea genotypes for qualitative characters

It is informed to scientific community that pigeonpea variety BDN-2contains high quantity of soluble protein (12.61 %), calcium (2.88 mg/kg) and magnesium (2.45 g/kg). Vaishali has high amount of iron (78.30 mg/kg), zinc (12.20 mg/kg) and molybdenum (6.02 mg/kg) content. NPK-15-25 variety has high amount of

phosphorous (0.73 %), while NPK15-05, NPK-15-14, GT-1, AGT-2 and BNP-1B have high amount of copper (80.23 mg/kg), potassium (9.86 g/kg), manganese (14.23 mg/kg), boron (98.27 mg/kg) and cobalt (12.333 mg/kg), respectively.

# 8. Molecular diversity assessment in geographical collection of Eucalyptus germplasm using DNA based marker system

Scientific community is informed to use RAPD markers OPB-14, OPH-07, OPH-13, OPH-15 and ISSR marker UBC-873 for genetic diversity analysis in eucalyptus clones. Genetically diverse clones *viz.*, CPM-2070, CPM-2306, JKSC-02 with Corymba-1, G-283 and IFGTBEC-2, JKSC-02 and Pellita-1 can be used in future breeding programmes.

# 9. Assessment of genetic diversity present in different bamboo species using DNA based marker system

It is informed to scientific community touse markers OPB-07, OPC-06, OPD-08, OPD-11 and OPD-12 for genetic diversity analysis in bamboo. Additionally, species *B. vulgaris* green and *B. vulgaris* yellow were genetically most similar species followed by *Gigantochloa atroviolacea* and *Gigantochloa rostrata*, and *Bambusa vulgaris* yellow and *Bambusa wamin*. Whereas, *Dendrocalamus giganteus* and *Guadua aungustifolia* were found to be genetically most diverse followed by *Bambusa balcooa and Guadua aungustifolia* and *Sasa auricoma* and *Dendrocalamus skkimensis*.

### 10. Assessment of genetic diversity through molecular markers in mango (Mangifera indica L.)

Scientific community is informed to use markers OPA-04, OPG-17, OPA-18 and OPB-19 for genetic diversity analysis in mango. Amarapali and Dashehari varieties were found to be genetically most similar, followed by Sonpari and Baneshan; Neelphanso and Sonpari; Dashehari and Mallika; Ratna and Sindhu and Sonpari and Alphanso. Whereas, Banglora and Neelphanso were found to be genetically most diverse varieties followed by Lal Malgoa and Amrutang; and Lal Malgoa and Vanraj.

### VI SOCIAL SCIENCE

### 1. Forecasting of rice (Oriza sativa) yield using ordinal logistic regression

The discriminant function analysis is more effective tool (model) for pre harvest forecasting of rice yield as compare to Multiple Linear Regression (MLR) technique and Ordinal logistic regression for Navsari district.

### VII ANIMAL PRODUCTION AND FISHERIES

# 1. Effect of heat ameliorative measures (fans, foggers and green net) on physiological, haematological, biochemical and productive performance of lactating Surti buffaloes

Fans, foggers and whitewashing of the rooftop with microfine lime powder of the pucca shed as heat ameliorative measures help to control mean, minimum and maximum meteorological variables (temperature, humidity, THI) to reduce heat stress by increasing glucose, triglycerides, cholesterol, reduced glutathione and total antioxidant status during hot dry season and thus sustain milk production.

### VIII ANIMAL HEALTH

# 1. Evaluation of *in vitro* antimicrobial properties of endophytes isolated from medicinal plants *Terminalia bellirica* (Baheda) and *Bixa orellana* (Sindur/Annatto seed)

Ethyl acetate extract of endophytic fungi (*Schizophyllum spp.*) isolated from *Bixa orellana (Sindur, Annato seeds)* leaves possess antibacterial activity against *Bacillus subtilis* (0.08 µg/ml), *Proteus mirabilis* (0.08 µg/ml), *Staphylococcus aureus* (0.16 µg/ml), *Pseudomonas aeruginosa* (2.56 µg/ml) and *Streptococcus pyogenes* (5.12 µg/ml).

# 2. Evaluation of *in vitro* antimicrobial properties of endophytes isolated from medicinal plants *Terminalia bellirica* (Baheda) and *Bixa orellana* (Sindur/Annatto seed)

Ethyl acetate extract of endophytic fungi (*Schizophyllum spp.*) isolated from *Terminalia bellirica* (*Baheda*) leaves possess antibacterial activity against *Staphylococcus aureus* (0.64 µg/ml), *Bacillus subtilis* (0.64 µg/ml), *Proteus mirabilis* (0.64 µg/ml), *Streptococcus pyogenes* (2.56 µg/ml), *Pseudomonas aeruginosa* (2.56 µg/ml), *Escherichia coli* (2.56 µg/ml), *and Salmonella typhimurium* (2.56 µg/ml).

## 3. Relationship of body measurements and testicular parameters on extra-gonadal sperm reserves in buck

It is recommended to use Scrotal Circumference (SC in cm) as a base for calculation of Testicular Diameter (TD) and Epididymal Weight (EW) in live bucks through following regression equations:

 $TD(cm) = -0.892 + 0.231 \text{ x SC} (R^2 = 0.904) \text{ and}$ 

 $EW(g) = -6.450 + 0.635 \text{ x SC} (R^2 = 0.792)$ 

#### Details of seed /planting material production during 2017-18

Sr. No.	Type of Seeds	Production in Quintals
1	Breeder Seed	155.91
2	Foundation Seed	401.56
3	Certified Seed	2128.97
4	Truthfully labeled/university Seed	1813.14
	Total	4499.58
5	Planting Material (Sugarcane setts)	1433.96
6	Planting Material (Sapling) (Numbers)	4,99,744
	Tissue culture Plants	
7	Sugarcane	26000
8	Banana	10858

**Research projects (2017-18)** 

S.N.	Type of project	Name of Projects	No. of Projects
			2017-18
1	GoG	Plan	137
		Non Plan scheme	67
		NHM/RKVY/Other State Govt.	24
2	ICAR/ GoI	AICRP (Including 11 TSPs)	24
		AINP (Fish Health)	1
		NICRA	2
		NFSM	2
		NHM-MIDH (Mega seed)	1
		CIBA (Diagnostic lab)	1
		ICFRE (NTFPs)	1
		IMD, GKMS	2
		DBT	1
		DST	3
3	Other Agency	Other Agency	13
		Total	279

### List of AICRPS

Sr. No.	Name of Project	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-Mango	1986-87	Paria
7	AICRP on Fruits-Banana, Sapota, papaya	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& Cocoa)	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 Small Millets	2014-15	Waghai
16	AICRP on Spices (Voluntary Centre)	2008-09	Navsari
17	AICRP on Vegetables (Voluntary Centre)	2010-11	Navsari
18	AICRP on Floriculture (Voluntary Centre)	2011-12	Navsari
19	AICRP Honey Bees and Pollinators (Voluntary Centre)	2014-15	Navsari

### **List of NICRA Projects**

Sr. No.	Name of Project
1	National Initiatives on Climate Resilient Agriculture, AES, Paria
2	National Initiatives on Climate Resilient Agriculture, Veterinary College, Navsari

### Experiential Learning Programmes implemented at NAU, Navsari

Sr. No.	Name of ELP Unit	Sanctioned during	College
1.	Bio-fertilizer production unit	2006-07	NM College of Agriculture
2.	Dehydrated onion processing and packaging unit for value addition	2006-07	
3.	Plant tissue culture unit	2007-08	ASPEE College of
4.	Hi-tech protected cultivation of Horticultural crops	2008-09	Horticulture
5.	Commercial production of Horticultural crops	2011-12	
6.	Commercial Apiculture	2011-12	
7.	Broiler and Layer Production unit	2013-14	
8.	Goat Production Unit	2014-15	Vetermary College
9.	Production of Quality Planting Materials in Forestry	2015-16	College of Forestry
10.	Enriched Vermicompost Production	2017-18	College of Agriculture, Bharuch

### New Plan Projects (2017-18)

Extension Education		
1	Strengthening of school of baking	
2	Construction of Boys Hostel at NAU, Dediyapada (TASP)	
Education		
3	Construction of PG Girls Hostel at NAU, Navsari	
Research		
4 Construction of pestiside residue lab/ food quality testing laboratory, Navsari		
Human Resource Development		

SN Center		Seminar/Symposia/	Winter/Summer	Workshop/Short
		Conference	Schools	term training
1	NMCA, Navsari	21	17	15
2	ACHF, NAU	105	23	8
3	CoA, Bharuch	12	14	2
4	CoA, Waghai	6	3	9
5	CoF, Navsari	10	8	7
6	Vety., Navsari	26	10	1
7	AABMI, Navsari	8	4	5
8	ASABI, Surat	9	8	2
9	CAET, Dediyapada	1	4	2
10	Research	46	28	57
11	Library	9	0	0
	Total	253	119	108

### **Publication**

SN	Center	<b>Research Paper</b>	Book	Book Chapter
1	NMCA, Navsari	92	0	7
2	ACHF, NAU	99	0	0
3	CoA, Bharuch	47	2	0
4	CoA, Waghai	9	0	0
5	CoF, Navsari	28	0	4
6	Vety., Navsari	57	0	1
7	AABMI, Navsari	5	0	8
8	ASABI, Surat	11	3	2
9	CAET, Dediyapada	8	0	0
10	Research	122	0	1
11	Extension	4	0	0
	Total	482	5	23

#### List of publications of Research Station MSRS, NAU, Navsari

- 1. Chaudhari, S. D., Mali, S. C., Udutha, J. V. and Chaudhari, M. N. (2018). Genetic variability analysis in sugarcane (*Saccharum spp. complex*) through mutagenesis. *International Journal of Chemical Studies*. 6(3): 2175-2179. (NAAS rating: 5.3)
- 2. Pooja K. Padhiyar, Mayuri C. Rathod, Udutha J. and Mali, S. C. (2017). Study of various combinations of soil on stevia cuttings for herbage yield and root parameters. *World journal of pharmaceutical research*, 6 (17): 792-797. (Impact factor: 8.074 (NAAS rating: 8.9)

#### **Soil Science**

- 3. Amresh Das, G.G.Patel & M.C.Patel (2017) Transforming plant wastes along with cattle dung and other Substrates into Organic Wealth through Partial Decomposition and Vermi Composting. *International Journal of Agricultural Science and Research* (IJASR). 7(4):441-446. (NAAS-4.13)
- 4. Ruplal Prasad and Amaresh Das (2017). Status of Available Phosphorus, Potassium and Micronutrients and Their Co-Relations in Surface Soils of Undulating Terrain of Dangs District (Gujarat). *International journal of agriculture sciences*, volume 9(3):3694-3699 (NAAS-4.20)
- 5. *3*. Mitul Saxena, Amaresh Das and Saurav Choudhury (2017). Chemical fractionation of Zinc and its relationship with important properties of rice grown soils. *International Journal of Chemical studies*. 5 (4):1205-1211 (NAAS-5.31)
- 6. Viralkumar A. Patel and Amaresh Das (2017), Water-stable Aggregates, Aggregate Ratio, Mean weight Diameter, Aggregate Associated Organic Carbon and Total Nitrogen in Native and Cultivated Soils under varying crops in Some Research Farms of Navsari Agricultural University with Reference to Their Suitability for Good Agriculture. *Res. in Env. and life Science*, Vol 10 (3): 265-269. (NAAS-3.74)
- Ruplal Prasad, A. Das, S. T. Shirgire, J. P. Kumar, V. K. Singhal (2017), Vertical Distribution of Available Micronutrients in Some Pedons Situated at Undulated Hilly Terrain of Dangs District, Gujarat, *Environment & Ecology* 35 (4B): 3195–3201 (NAAS-4.18)
- 8. S. M. Bambhaneeya, Amaresh Das, V.J. Zinzala, Sonal Tripathi and A. Durani (2017). Chemical properties of cotton growing soils and their rating in different talukas of South Gujarat. *International Journal of Chemical studies*.5 (6): 1413-1421. (NAAS-5.31)
- 9. S. M. Bambhaneeya, Amaresh Das, V.J. Zinzala and Sonal Tripathi (2017). Soil available nutrients status and their indexing in cotton growing areas of South Gujarat. *International Journal of Chemical studies*. 5(6): 1717-1724. (NAAS-5.31)

### HMRS, Waghai

- 10. Harshal E. Patil, Nilamani Dikshit, S. A. Aklade and Paresh A. Vavdiya. (2017) Evaluation of vegetable type Pigeon pea (*Cajanus cajan* (L.) genotypes for yield and yield contributing traits. *J. of Eco. Env. & Cons. 22 (December Suppl.)* : 247-254 ISSN 0971–765X).
- S. N. Patel, Harshal E. Patil, Raj C. Popat. (2017) Genetic diversity study in finger millet (*Eleusine coracana* L.) genotypes: A multivariate Analysis Approach. Int. J. Pure Applied Bioscience, 5 (5): 183-189. (NASS-4.63)
- 12. Kumar, S., Singh, J.P., Singh, D., Mohan, C., Sarkar, M. and Sah, H. 2017. Character Association and Path Analysis in Coriander (*Coriandrum sativum* L.) for Yield and Its Attributes. *International Journal of Pure and Applied Bioscience*, 5(1): 812-818. (NASS -5.17)
- 13. Harshal E. Patil, J. V. Patel and P. A. Vavdiya. (2017). A high yielding Little Millet variety 'GNV-3' for cultivation in south and middle Gujarat. *International J. of Tropical Agriculture;* 34 (6): 1403-1406. (NASS-3.49)
- 14. Harshal E. Patil, J. V. Patel, P. A. Vavdiya, Yogeshkumar V. Naghera and C. G. Intwala. (2017). A high yielding white colored Finger millet variety 'GNN-7' for cultivation in south and middle Gujarat. *International journal of Tropical Agriculture;* 34 (6): 1407-1411. (NASS- 3.49)
- 15. Harshal E. Patil, P. A. Vavdiya, S. Akalade and S. S. Joshi. (2017). Evaluation of vegetable type

genotypes in Pigeon pea (*Cajanus cajan* (L.) for yield and yield contributing traits. *J. of Agricultural Sciences*, 1224-1230.

- 16. Harshal E. Patil, B. K. Patel and Savankumar N. Patel. (2018). Assessment of genetic diversity in Finger millet (*Eleusine coracana* L.) through Multivariate Analysis Approach. *Journal of Economic Plants* (ISSN: Print 2349-4727, Online 2349-4735).
- 17. C. G. Intwala, Harshal E. Patil, B. K. Patel and J. V. Patel. A high yielding Finger millet variety 'GNN-6' for cultivation in hilly region in south and middle Gujarat. (2017). *International Journal of Tropical Agriculture*, 35 (4): 871-876. (NASS- 3.49)
- Harshal E. Patil, B. K. Patel and Savankumar N. Patel. (2018). Assessment of genetic diversity in little millet through Multivariate Analysis Approach. *International Journal of Tropical Agriculture*; 35 (4): 865-870. (NASS- 3.49)
- 19. Patel M. M., Patel B. K., Naik V. R., Joshi H. K. and Usadadia V. P. (2017). Effect of irrigation and sowing date on production potential of Salicornia (*Saliconrnia brachiata* Roxb.) in costal saline soil. *Journal of soli salinity and water quality*. 9 (1): 111-114. (NASS-4.94)
- 20. Harshal E. Patil, S. A. Aklade and B. K. Patel. (2017). Varietal performance of bush type French bean (*Phaseolus vulgaris* L.) for fresh pod yield and quality under hilly region of Dangs district. *Agricultural Science Digest*, 2 (1): 124-129. (NASS-4.21)
- 21. Sunil Kumar, J. P. Singh, Dhirendra Singh, C. Mohan, M. Sarkar and Hariom sah (2017). Character association and path analysis in coriander (Coriander sativum L.) for yield and its attributes. *Inter. J. of pure and applied Bioscience*. 3(1): 812-818.
- 22. Chakraborty, B., Bambharolia, R.P., Naghera, Y.V. and Sarkar, M. 2017. Exogenous application of polyamines maintains physico-chemical properties of mango (*Mangifera indica*) L. cv. Alphonso under aimbient storage. *Environment & Ecology*, 35(2): 763-767. (NASS 4.84)
- Sarkar, M. and Singh, D.K. 2017. Identification of novel genotypes for high yielding hybrid development in ridge gourd [*Luffa acutangula* (Roxb.)L.]. *Vegetable Science*, 44(2): 12-19. (NASS -4.98)
- 24. Sarkar, M. and Singh, D.K. 2018. Electrophoretic protein profile and ISSR marker based genetic relationship study in ridge gourd [*Luffa acatangula* (Roxb.)L.]. *Vegetable Science*, 45(1): 14-21. (NASS -4.98)

### CRSS, Achhaliya

25. Chaudhary N.P., Gangani M.K., Chaudhary M.N. and Anjana R.A. (2018). Combining ability analysis for green forage yield and its components in fodder Sorghum *(Sorghum bicolor (L.) Moench)*. *Trends in Biosciences*, 11 (12): 2300-2304 (NAAS- 3.94) ISSN 0974-8431.

### RRRS, Vyara

- 26. R. R. Makwana, V. P. Patel, M. M. Pandya and B. A. Chaudhary (2018). Heterosis and Inbreeding Depression for Morpho-Physioloical Traits in Rice (Oryza sativa L.) *International Journal of Pure and Applied Bioscience*, 6 (2):1477-1482. (NAAS-4.74)
- 27. R. R. Makwana, V. P. Patel, M. M. Pandya and B. A. Chaudhary (2018). Inferences on Magnitude and Nature of Gene Effects for Morpho- Physiological traits in Rice Oryza sativa L.) *International Journal of Pure and Applied Bioscience*, 6 (2):1488-1493. (NAAS-4.74)
- Jignesh R. Balat, Vipul P. Patel, Mahesh L. Visat and Ranjit N. Bhaora (2018). Variability Analysis in F<sub>2</sub> Population of Rice (Oryza sativa L.) for Yield and Related Traits. *International Journal of Pure and Applied Bioscience*, 6 (1):1021-1027. (NAAS-4.74)
- 29. HR Patel, VP Patel, PB Patel, AJ Rathod and AG Pampaniya (2018). Genetic variability, correlation and path analysis for grain yield and component traits in F3 segregating population of rice (Oryza sativa L.). *International Journal of Chemical Studies*, 6 (2):2327-2331. (NAAS-5.32)
- Chaudhary Dasharathbhai A, Kedar Nath, Tabis Bekriwala, Madhu Bala (2018). Management of *Alternaria* leaf blight of groundnut caused by *Alternaria alternate.Indian Phytopathology*. DOI 10.1007/s42360-018-0083-2 (NAAS: 5.90)

#### **SWMRU**

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- 32. Desai C. S., Madhusudan R, Raghvendra H and Naik Pooja (2018). Effect of cooling in extending the selflife of banana cultivar G-9 stored under different storage condition, *International Journal of Chemical studies*. 6(3): 872-878. (NAAS-5.31)
- Nayak, V. R.; Mistri, P. M.; Savani, N. G.; Patel, K. K. and Usadadia, V.P. (2017). Effect of irrigation and sulphur on yield of summer cluster bean under South Gujarat conditions. *Green farming* 8(2): 480-482. (NAAS-4.38)
- 34. Deshmukh, S. P. and Usadadia, V. P. Weed management influence on crop-weed competition in sorghum under south Gujarat conditions. *Indian J. of Weed Science* 49(3): 272-275.(2017). (NAAS-3.99)
- Damor, K. S., Usadadia, V. P. Arvadia, L. K., Patil V. A. and Patel, P. B. (2017). Productivity and profitability of Hybrid Rice (Oryza Sativa L.) as influenced by spacing and age of seedling under system of rice intensification. *International J. of Agriculture Innovations and Res.* 5(6): 983-985. (NAAS-3.99)
- Vishnu, V. Usadadia, V. P. Mawalia, A. K. and Patel M. M. (2017). Effect of land configuration and bio-organic on exchangeable cations and exchangeable sodium percentage of soil after harvest of chickpea (*Cicer arietinum* L.) under costal salt affected soils. *Int. J. Curr. Microbiol.App.Sci.*, 6 (4): 477-482. (NAAS-5.38)
- Thakor, K. P., Usadadia, V. P. Savani, N. G. Arvadia, L. K. and Patel, P. B. (2018). Effect of irrigation schedual and nitrogen management on productivity, profitability of summer pearl millet grown under clay soils of south Gujarat. *International J of Agriculture Innovations and Res*.6 (4): 10-13. (NAAS-3.99)
- 38. Patel, M.M. Patel, B. K. Naik, V.R Joshi, H. K. and Usadadia, V. P. .(2017). Effect of irrigation and sowing dates on production potential of salicornia in costal saline soil. *J. of soil and salinity and water quality* 9 (1) 111-114 (NAAS-4.94)
- 39. Chalodia.A.L., Reenakumari, Sukla S..P. and Patel P.B.(2017). effect of Laser leveling on crop water requirement and growth of castor crop in Heavy Rainfall zone of South Gujarat. *Trends in Bio Sceinces* 10(47): 09506-9511, (NAAS-3.94)
- 40. Patel P. B., Patel M.V. and Patel N.B. (2017) Bio-efficacy of chlorantraniliprole 35 Wg Against Lepidoptrean Pests of Okra. *Trends in Biosciences* 10(1): 359-363. (NAAS: 3.94)
- 41. Amaresh Das, M. D. Lad and A.L.Chalodia (2018) Effect of Laser Leveling on Nutrient uptake and yield of wheat, Water saving and Water productivity. *Journal Of pharmacology & photochemistry* 7(2): 73-78(NAAS:5.21)
- 42. Sharma Kishan Kumar, Vijay A. Patil, Jitendar Kumar Sharma and Akhilesh Kumar Kulmitra (2018) In vitro Evaluation of Botanicals against *R. solani* Causing Sheath Blight of Paddy. International Journal of Current Microbiology and Applied Sciences Special Issue-7 pp. 3316-3322 (NASS: 5.38)
- 43. H. Abbas, R.M. Patel, V. B. Parekh, A. D. Gauswami, P. Prajapat and P. B. Patel (2017). Isolation and characterization of plant growth promoting bacterial endophytes and their beneficial effects on rice (*Oryza sativa* L.) *Multilogic in Science*, Vol. VI, issue XIX. (NASS: 5.20)
- 44. M.M.Pandya and P. B. Patel (2017) Multivariate analysis for a collection of advance progenies of sugarcane [*saccharum* spp. hybrid] for south Gujarat region. *Multilogic in Science*, Vol. VI, Issue XIX, Jan. 2017 (NASS: 5.20)
- 45. Chaudhari, B. A.; Patel S. R.; Patel P. B.; Mistry P. M.; Makwana, R. R. and Patil S.S.(2017) Genetic analysis for quantitative traits using line x tester mating design in rice (*Oryza sativa* L.) *AGRES*-An *International e-Journal*, Vol. 6, Issue 1: 16-27. (NASS: 3.65)
- 46. Choudhari B. A., Patel S. R. Patel P. B., Mistry P. M., Makwana R. R. and Patil S. S. (2017): Genetic

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- 47. A. J. Rathod, P. M. Mistry, A. G. Pampaniya and R. S. Ganvit (2017): Genetic variability, heritability and genetic advance for grain yield and quality characters in rice (*Oryza sativa* L). *Trends in Biosciences* 10(17): 3201-05. (NASS: 3.94)
- Rathod A. J., Mistry P.M., Pampaniya A. G., Patel H. R. and Chetariya C. P.(2017): D<sup>2</sup> Statistics for grain yield and quality traits in rice (*Oryza sativa* L.), *Int. J. Pure App. Biosci.* 5(4): 54-58. (NASS: 4.74)
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- 51. Deshmukh, A.J., Sabalpara, A. N. Shinde M. S. and Patil V. A. (2017) Studies on seed biopriming in green gram, *Bioinfolet*, Vol. 14 Pp-400-404. (NAAS: 3.75)
- 52. Abhishek Shukla, P. D. Ghoghari, G.G. Radadia and G.D. Hadiya (2017). Efficacy of some pesticides against rice sheath mite, *Steneotarsonemus spinki* Smiley (Acari: Tarsonemidae). *Journal of Entomology and Zoology Studies* 5(5):1304-1309 (NAAS-5.53)
- 53. S. D. Chaudhari, M. B. Lakum and P. D. Ghoghari (2017). Laboratory Bioassay of Entomopathogenic Fungi, *Metarhizium anisopliae* Against Rice Sheath Mite, *Steneotarsonemus spinki* Smiley, *Trends in Biosciences* 10(24): 5075-7578 (NAAS-3.94)
- 54. M. B. Lakum, P. D. Ghoghari, H. D. Zinzuvadiya and Abhishek Shukla (2017). Population Dynamics of Rice Sheath Mite, *Steneotarsonemus spinki* Smilely and its Correlation with Abiotic Factors, *Trends in Biosciences* 10(29): 6201-6203 (NAAS-3.94)
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- 57. S. D. Chaudhari, and P. D. Ghoghari (2018). Biological attributes of rice sheath mite, *Steneotarsonemus spinki* Smiley on alternate hosts of rice, *Int. J. Curr. Microbiol.App. Sci.*7(2): 15896-1601 (NAAS-5.38).

### FRS, Gandevi

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- 59. Bisane, K.D. (2017). Population diversity and cyclicity of fruit Fly (*Bactrocera* spp.) in sapota orchard under south Gujarat condition. *Indian Journal of Ecology*, 44(2): 369-374. (NAAS-4.96)
- 60. Bisane, K.D. (2017). Cyclic occurrence of midrib folder, *Banisia myrsusalis Elearalis* (Walker) and leaf miner, *Acrocercops gemoniella* Stainton in sapota. *Journal of Insect Science*, 30(1): 79-83. (NAAS-4.72)
- 61. Khambhu, C.V. and Bisane, K.D. (2017). Seasonal occurrence of chiku moth [*Nephopteryx eugraphella*] (Ragonot) and bud borer [*Anarsia achrasella*] Bradley on sapota. *Entomon*, *42*(3): 207-214. (NAAS- 4.42)

### RCRS, Bharuch

- 62. M. L. Patel, A. R. Patel, R. K. Patel, B. M. Mote and Neeraj Kumar (2018). Heat Unit Requirement of Rainfed Cotton Under South Gujarat Condition. *Trends in Biosciences*, 11 (23):3194-3196. (NASS-3.94)
- 63. A.R. Patel, M.L. Patel, R.K. Patel and B. M. Mote (2018). Effect of different sowing date on phenology, growth and yield of rice-A review, 19(1). *Plant Archives* (NASS-4.41)

#### MCRS, Surat

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- 65. Wadikar P.B., Solanki, B. G., Faldu, G.O. and Narwade, A.V. (2017). Assessment Of Stability Over Environments In Upland Cotton (*Gossypium hirsutum* L.) *Multilogic in Science*, VII (XXIV), Oct, 32017 ISSN 2277-7601 (NAAS : 5.20)
- Sankat K. B., Patel, J. G., Patel, K. H. and Pawar, S. L. (2018). Nutrient content and uptake by Cotton (*Gossypium hirsutum* L.) under High Density Planting System. *Trends in Biosciences*, 11 (4): 418-424. (NAAS: 3.94)
- Vekariya V. K., Ramani, H. R., Faldu, G. O., Sankat, K. B. and Solanki, B. G. (2017). Effect of Date of Sowing on Growth and Development of Cotton. *Journal of Plant Development Science*, Vol. 9(6):595-598. (NAAS : 4.57)
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#### **Book/book chapter**

Book Chapter: Water Goverenance in India: Issues and Concerns:

Editors : Mrutyunjay Swain and S. S. Kalamkar (ISBN: 978-93-87979-31-8)

Chapter XIII : Impact of Irrigation Methods on Water Resources Management in Gujarat:pp:228-241

by: R. B. Patel, J. M. Patel, V. P. Usdadiya, N. G. Savani and K. K. Patel

### **16. Extension Education**

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

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

### **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.

#### **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.

#### **STAFF POSITION**

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

### TRANSFER OF TECHNOLOGY (ToT) CENTRES & EXTENSION SCHEMES

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

### Vocational Certificate Courses for Rural Youth & Women

S.N.	Name and location of the courses	Туре	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	Certificate	6 Months (Weekly)	40
	Input dealers, Navsari			

Gender friendly equipments for farm women

Commercial Mushroom production technology

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

9.

10.

11.

12.

13.

14.

- Seed production 1.
- 2. Organic farming
- 3. Kitchen gardening
- Farm management 4.
- 5. Dairy farming
- Flower dehydration 6.
- 7. Tissue culture
- Poultry farming 8.
- 15. Artificial insemination 16. Micro irrigation system

Farm power machinery

Soil-Water-Plant analysis

Bio-fertilizers & Bio-pesticides

Productive & beneficial insects

### **Ongoing Extension Schemes:** Extension activities through 33 Schemes

<b>S.N.</b>	Plan Schemes : Development Charges (12)
1	Strengthening of the Directorate of Extension Education, Navsari
2	Upgrading of the existing Sardar Smruti Kendra, Navsari
3	Establishment of Centre for Agril. Extension Information System, Navsari
4	Agricultural Technology Information Centre (ATIC), Navsari
5	Establishment of Agro ITI Centre for Agricultural & Horticulture, Navsari
6	Establishment of University Educational Museum, Navsari
7	Testing of University technologies on farmers' fields through adaptive trials, Navsari
8	Demonstration-cum-Training Centre for Inland Fisheries, Navsari
9	Vegetable & Fruit Crops Demon. Scheme for Tribal Upliftment, Paria
10	Strengthening of Soil and Water Management Training Centre, Navsari
11	Strengthening of Tribal Women Training Centre, Dediyapada
12	Strengthening of Extension Wing, Navsari
S.N.	Non-Plan Schemes : Standing charges (06)
1	Directorate of Extension Education
2	Establishment of Sardar Smruti Kendra, Navsari
3	Establishment of Farm Advisory Services, Navsari
4	Establishment of School of Baking, Navsari
5	Upgrading of School of Baking, Navsari
6	Bal Mandir, Navsari
S.N.	Other Agency (08)
1	Training & Visit System, Navsari (Non-Plan), Navsari
2	Training & Visit System, Navsari (Plan), Navsari
3	Soil Health Card Training, Navsari
4	Green/Net house Farmers' Training, Navsari
5	Diploma in Agricultural Extension Services for Input Dealers, Navsari
6	Certificate in Agricultural Extension Services for Input Dealers, Navsari
7	Krushi Mahotsav Programme, Navsari
8	Krushi Library, Navsari
S.N.	ICAR (07)
1	Krushi Vigyan Kendra, NAU, Vyara, DistTapi
2	Krushi Vigyan Kendra, NAU, Navsari
3	Krushi Vigyan Kendra, NAU, Dediyapada, DistNarmada
4	Krushi Vigyan Kendra, NAU, Surat
5	Krushi Vigyan Kendra, NAU, Waghai, DistDangs
6	Providing support to DEE for knowledge empowerment, technological backstopping, HRD and
	overseeing of KVKs, Navsari
7	Farmer FIRST Programme
	208
#### SALIENT EXTENSION ACTIVITIES

S.	S. Extension Brogrammes		No. of Beneficiaries				
N.	Extension Programmes	activities	Farmers	Women	Youths	Total	
1.	On campus Farmers' Training programme	283	6158	4215	1499	11872	
2.	Off campus Farmers' Training programme	143	3125	2747	614	6486	
3.	Training for Extension functionaries	16	573	56	38	667	
4.	Seminar / Workshop / Symposium for Farmers	73	1846	1923	316	4085	
5.	Seminar / Workshop / Interface / Symposium for Extension Officers	12	287	32	42	361	
6.	Farmers' day / Field day	81	1792	1618	137	3547	
7.	Agril. Fair / Agril. Exhibition	41	31487	36186	3056	70729	
8.	Farmer shibir / Farm women shibir	71	1709	3372	280	5361	
9.	9. Farmers' meeting/Krushi gosthi		3041	3191	332	6564	
10.	10. Front Line Demonstrations (KVKs)		3275	397	417	4089	
11.	11. Adaptive trials (NAU technologies)		3504	462	498	4464	
12.	12. On Farm Trials		201	17	31	249	
13.	AICRP Demonstrations	122*	532	42	84	658	
14.	Demonstrations (Research Stations)	72*	161	13	17	191	
15.	Educational Tour / Exposure visit	34	619	583	111	1313	
16.	Diagnostic team visit on farmers' field	29	136	7	9	152	
17.	Veterinary Clinic Camp/ Animal Husbandry Shibir	26	662	518	198	1378	
18.	Text SMS sent on farmers' mobile	407	146279	14428	17535	178242	
19.	Telephonic guidance	2374	2023	147	204	2374	
20.	20. Press-notes / Articles in vernacular Newspapers		Mass	Mass	Mass	Mass	
21.	Radio & TV talk	50	Mass	Mass	Mass	Mass	
22.	Farm Literature Publication	190	42156	31576	5588	79320	
23.	Visitors (dignitaries, officers, farmers, students)	838	8423	7329	1584	17336	

\* Area in Ha.

#### Seminar/Symposium/Interface organized for farmers

S.	Subject/Topic	No. of	No. of
N.		Programm	Beneficiaries
1	Paddy Crop	5	359
2	Sugarcane Crop	3	237
3	Cotton Crop	3	175
4	Fruit Crops	5	273
5	Flowers	4	164
6	Vegetable Crops	4	251
7	Pulse Crops	4	227
8	Nursery	2	91
9	Integrated Pest Management	5	307
10	Pre Harvest Technology	3	129
11	Post Harvest Technology	5	374
12	Green House Technology	3	138
13	Soil and Water Management	3	159
14	Agriculture farm Machinery	3	142
15	Animal Husbandry	5	273
16	Value Addition	5	247
17	Seed Production	4	196
18	Scientific storage of grain	3	163
19	Fishery and its Marketing	3	138
20	Prawn/Shrimp cultivation and its Marketing	1	42
	Total	73	4085

#### **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 agroclimatic 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 4089 FLDs in 793 ha. and 849 other demonstrations in 194



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

SN	Сгор	No.of Demon.
1	Paddy	1479
2	Sugarcane	184
3	Pigeon pea	528
4	Gram	423
5	Green gram	258
6	Nagli	114
7	Sweet corn	99
8	Okra	291
9	Groundnut	215
10	Maize	182
11	Mango	158
12	Sapota	49
13	Cashew	62
14	Turmeric	47
	Tota	d 4089

#### **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 2017-18, total 4464 adaptive trials were conducted on the farmer's



fields through five KVKs in South Gujarat on newly released varieties of paddy, Ragi, gram, green gram, pigeon pea, sorghum, groundnut, Soybean, Castor, Indian bean and mango. Moreover, the trials on fruit fly trap, methyl euginol, fodder sorghum, mulching, bio-fertilizer, novel organic liquid fertilizer, kitchen garden, IPM, IPDM, *etc.* were also conducted.

#### **ATMA Convergence Quarterly Meetings**

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



S.N.	Quarter	Date of Meeting	No. of Officers Participated
1.	January-March 2017	10-04-2017	20
2.	April-June 2017	07-07-2017	28
3.	July-September 2017	07-10-2017	21
4.	October-December 2017	03-01-2018	24

# Zonal Research and Extension Action Committee (ZREAC) Meetings

Directorate of Extension Education organized two ZREAC Meetings during onset of *kharif* and *rabi* seasons to review the work done in last season and to make the planning for forthcoming season in convergence mode. District wise agriculture status and feedback pertaining to problems faced by the farmers in adoption of new technology at grass root level were presented by the concerned District Officer. During the year 2017-18, the 27<sup>th</sup> and 28<sup>th</sup> ZREAC meetings were convened on 07-10-2017 and 08-02-2018, respectively.

#### Scientific Advisory Committee (SAC) Meetings of KVKs

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





S.N.	Name of KVK	Date of SAC
1	KVK Dediyapada (Narmada)	09-03-2018
2	KVK Vyara (Tapi)	12-03-2018
3	KVK Waghai (Dangs)	12-03-2018
4	KVK Navsari (Navsari)	19-03-2018
5	KVK Surat (Surat)	19-03-2018

#### **Extension Education Council meeting**

Extension Education Council is a statutory body consisting of the Vice-Chancellor as its chairman and Director of Extension, Director of Research, Deans, University Officers, Heads of the Line Departments, Extension Educationist, Innovative Farmers and Experts in the field of extension as the members. The council meets at least once in a year to review the work, discuss and deliberate the policy issues on extension system and formulate the technical programme for different units of the Directorate of Extension Education. During the year, the ninth meeting of Extension Education Council was held on 29<sup>th</sup>



September, 2017 at Navsari under the chairmanship of Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU.

#### **Review meeting of KVKs**

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



#### Visits made by DEE to KVK

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



Dr. C.J. Dangaria, Hon.VC, NAU and Dr. G.R. Patel, DEE, NAU interacting with KVK scientists

#### **Agricultural Educatorium**

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 13986 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.

# <image>

#### **Farmers visit**

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 139 farm visits were conducted and 7248 farmers had visited the SSK and 4848 visitors had visited farms at NAU Campus. Total 5298 farmers and other visitors stayed at Kisanghar-farmers' hostel (4697 from Gujarat state and 601 from other states).



#### **Certificate courses on Bakery**

Bakery Unit, DEE, NAU, Navsari organized 20week duration two certificate course on bakery during the year. Visit of different bakery units at Navari, Bardoli and Surat was organized as a part of the course. Total 27 students have participated in the training programme. Another six skill oriented training programme of one week duration on baking were organized. Total 31 youth and farm women had participated in the one week training programmes.



#### Workshop-cum-Training on CFLDs on Pulses and Oilseeds

Workshop-cum-Training on CFLDs on Pulses and Oilseeds for KVKs of Gujarat was jointly organized by ICAR-ATARI, Zone-VIII, Pune and Directorate of Extension Education, during 29-31<sup>st</sup> January, 2018 at NAU, Navsari. The programme was chaired by Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU, Navsari in the solemn presence of Dr. Lakhan Singh, Director ICAR–ATARI, Zone-VIII Pune and Dr. G.R. Patel, DEE, NAU, Navsari. Nodal officers for CFLDs from 30 KVKs of Gujarat were participated in the programme. The review of Farmer FIRST and ARYA programme was also done.



#### **NEW INITIATIVES IN EXTENSION PROGRAMMES**

#### "Certificate course" for Input dealers

Valedictory function of second "Certificate in Agricultural Extension Services for Input Dealers" of six months duration was organized on November 8, 2017 under the Chairmanship of Dr. C.J. Dangaria, Hon'ble Vice Chancellor of NAU in the presence of Dr. G.R. Patel, Director of Extension Education, NAU, Navsari. Total 40 input dealers received the certificate under the second programme conducted at ATIC, NAU, Navsari.

# Workshop on "Communication Skills for Effective Extension Services" for KVK and NAU Scientists

Off campus workshop on "Communication Skills for Effective Extension Services" was jointly organized by Extension Education Institute, Anand and Directorate of Extension Education, NAU at Navsari during July 11-13, 2017 (3 days). Dr. C.J. Dangaria, Hon'ble Vice Chancellor, NAU has inaugurated the workshop, in the presence of Dr. A.C. Patel, Course Director, EEI, Anand. Total, 34 scientists from 7 KVKs and different faculties of NAU had participated in the programme.





# One week orientation training programme for technical staff on SHC

One week orientation training programme for technical staff on Soil Health Card, Chemical Analysis of Soil and Fertilizer Recommendation were organized by Directorate of Extension Education during July 24-29, 2017 at NAU, Navsari. Total 20 trainees from department of Agriculture of five district of South Gujarat viz., Surat, Tapi, Valsad, Navsari & Dangs were participated in the programme.



#### NATIONAL FLAGSHIP PROGRAMMES / CELEBRATIONS

#### Women empowerment fortnight

Women Empowerment Fortnight was celebrated by NAU during August 1-14, 2017. Different extension programmes *viz.*, Mahila Krishi Divas, Women empowerment shibir, women training programme *etc.* were organized by KVKs of NAU in the presence of dignitaries. Experts from various fields delivered lectures on different topics *viz.*, role of women in agriculture, kitchen garden, animal husbandry, package of practices of main crops, organic farming, value addition in fruits *etc.* During the fortnight total 386 farm women participated and benefitted from the programmes.

#### "New India Manthan - Sankalp se siddhi" programme

Programmes on "New India Manthan - Sankalp se siddhi" organized by KVKs operating under NAU during 19 to 30 August 2017. Shri. V.V. Vaghasiya, Hon'ble State Minister of Agriculture Gujarat and other dignitaries, MP, MLA were participated and guided the farmers. Numbers of events were organized including the video message of Hon'ble Prime Minister followed by the pledge for New India by different stakeholders of agriculture development for strengthening the country by doubling the farmers' income by the year 2022. Technical information was delivered by experts of the KVKs to farmers. Total 3941 farmers and farm women were participated in the programme at different places.

#### Mahila Kisan Divas

Mahila kishan divas was celebrated on October 15, 2017 by five KVKs run under NAU. Lectures of scientist on role of women in agriculture, debate competition and training programmes were organized. Total 360 farm women participated in the programme and benefited.





## Celebration of "Agriculture Education Day" by KVKs

For the celebration of "Agriculture Education Day" (December 3, 2017) different programmes for the farmers were organized by five KVKs run under NAU at different places. Lectures of scientists / experts on scope & importance of agricultural education, scope of agriculture development, competitions were organized. Total 426 students, farmers and farm women participated in the programmes.

#### **Farmer FIRST Programme**

The Farmer FIRST project (FFP) entitled 'Ensuring Livelihood Security for Small and Marginal Farmers of South Gujarat' is being implemented in Pathri, Hansapore and Chijgam villages of Navsari district under NAU jurisdiction with six modules with 1000 families as partners. Different activities were organized during the period *viz.*, Trainings, interface meet were organized and critical inputs viz., earthworm, bio-fertilizer etc. were distributed to the participating farmers under the project.

## "Farmers-Scientists Interface Programme" under FFP

"Farmers-Scientists Interface Programme" was organized under Farmer FIRST Project by the Directorate of Extension Education on December 19, 2017 at Hansapore village. Dr. C.J. Dangaria, Hon. Vice Chancellor of Navsari Agricultural University inaugurated the programme in the presence of Dr. G.R. Patel, Director of Extension Education. The Co-PIs of all six modules had discussed their research findings and gave solution of the queries raised by the farmers. Total 135 farmers participated in the programme.

## "Farmers-Scientists Interface Programme" under FFP

"Farmers-Scientists Interface Programme" was organized under Farmer FIRST Programme by the Directorate of Extension Education on 31<sup>st</sup> January, 2018 at Pathri village. The programme was chaired by Dr. C.J. Dangaria, Hon. Vice Chancellor, NAU, Navsari in the solemn presence of Dr. Lakhan Singh, Director ICAR–ATARI, Zone-VIII Pune and Dr. G.R. Patel, DEE, NAU, Navsari. Dignitaries also visited the sapota orchard as well as sugarcane (variety CoN-13073) field





under FFP module and discussed with the farmers about the technologies. During the programme, Co-PIs of all six modules had discussed their research findings and suggested solutions of the queries of the farmers. Total 163 farmers of Pathri village participated in the programme.

Creation of Seed-Hubs for increasing indigenous production of pulses in India

Project on Creation of Seed Hubs for increasing indigenous production of pulses in India is being implemented by NAU (KVK, Navsari and Tapi) with the aim of production of quality seed of pulses, to provide to the farmers on need base.

		Budget allocation (Rs. In Lakhs)				Target of Seed Production							
	Name of KVK	Seed	Revolvi	<b>Revolving Fund</b>			Quantity of Seed Production (q)						
S. N.		processing & storage Infrastructure fund (2016-17)	2016 -17	2017 -18	Total allocation	Сгор	2016 -17	2017 -18	2018 -19	Total			
	Vyara,			70.00					Mungbean	150	300	300	
1	Dist:	50.00	30.00 70.		0 150.00	Pigeon pea	150	300	300	2300			
	Тарі	pi					Chickpea	200	200	400			
2	Navçari	50.00	35.00	65.00	150.00	Mungbean	150	300	350	2150			
	INAVSari	ITI 50.00 5	33.00 0	05.00	130.00	Pigeon pea	300	400	650	2130			
	Total	100.00	65.00	135.00	300.00		950	1500	2000	4450			

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

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



S.	Name of activity	No. of activities	No. of farmers participated
N.		conducted	& benefitted
1.	Visit to village by teams	79	913
2.	Interface meeting/ Goshthies	63	1890
3.	Training organized	26	681
4.	Demonstrations conducted	47	47
5.	Mobile based advisories (No.)	2132	2132
6.	Literature support provided	137	2875
7.	Awareness created	83	4150
8.	Input support provided (q)	9	47
9.	Linkages developed with other agencies	12	1961
10.	Facilitation for new varieties, seeds,	-	-
	technology		
	i. New varieties (No.)	2 Varieties/25 ha	62
	ii. Technology (No.)	6	390
	iii. Seeds (q)	4	60
	iv. New crops (No.)	-	-
	Total	2623	15208

#### Unnat Bharat Abhiyan (UBA)

Unnat Bharat Abhiyan (UBA) is a flagship programme of Ministry of HRD, GoI. The UBA aims at transformation of rural economy by connecting the institutions of higher learning with villages. Navsari Agricultural University has taken up activities under UBA in the year 2017-18. Under the UBA activities, five villages namely; Kavdej, Mankunia, Bedmal, Choundha and Vadi chonda were selected in consultation with District collector, Navsari and formed rural cluster. An MoU was made with Indian Institute of Technology, New Delhi, National Coordinating Institute for UBA on



29/08/2017. Preliminary interactions with the villagers have been completed and the district/block administration works namely; village survey and house hold survey had been carried out. These are uploaded in the reporting portal of UBA.

#### **Sub-Mission on Agriculture Mechanization**

In order to popularize the farm mechanization, KVK, Tapi under NAU organized one week duration Vocational training on "Post Harvest Management and Value Addition" in the low mechanized talukas, benefitting 20 farmers. Total grant Rs. 0.56 Lakh allotted under SMAM to NAU.



# Groundnut demonstrations by ICAR-DGR under TSP

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



Sr. No.	Implementing KVK	Season	No. of demo.	Area (ha)	Grant (Rs.)
1	KVK, Vyara, Dist : Tapi	Summer	59	20	264320
2	KVK, Dediapada, Dist: Narmada	Summer	50	20	224000
		Total	109	40	488320

#### Seminar on "Role and Scope of Fertigation in Agriculture"

Two days Seminar on "Role and Scope of Fertigation in Agriculture" was organized by Soil and Water Management Research Unit, NAU under PFDC during 22-23rd February, 2018 at PFDC, NAU, Navsari. The inauguration session chaired by Dr. C. J. Dangaria, Hon'ble Vice Chancellor, NAU, in presence of Dr. G. R. Patel, DEE and officer from CRIBHCO, Surat. Different lectures were delivered by experts on role and scope of fertigation in Agriculture, cost economics, research and development in fertigation for different crops etc. Feed backs related to fertigation were also sought



from the participants with their problems and experience. More than 100 farmers and 40 others participations were remain present in the programme.

#### **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-news letter/reports**

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

#### **Farm VCD Publication**

With a view to disseminate new agricultural technology through e-farm literature, theme based VCDs on 21 subjects mainly on package of practices of major crops of south Gujarat were published. Total 800 VCDs were prepared and distributed to the farmers during Krushi Mahotsav-2017.



**University publication:** 

1)	Book/booklets	:	30	5)	Vision document	:		1
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- Folders : 136 6) Conference proceeding : 1
- 3) Training manual : 20 7) Magazine
- 4) Pcket Diary : 1

#### **Research Papers**

2)

1. Kokani, P.P., Kalariya, G.B. and Rathod K.R.(2017). Evaluation of persistence toxicity of different insecticides against *Spodoptera litura* L. on castor (*Ricinus communis* L.) under laboratory conditions. *Trends in Biosciences*, 10(29): 6194-6196.

: 1

- 2. Thesiya, N.M., Dobariya, J.B. and Patel, N.N. (2017). Role of cluster Frontline Demonstrations in enhancement of green gram production in Dang District. *Trends in Bioscience*, 10 (32): 6856-6857.
- 3. Dobariya, J.B., Choudhary, Mahaveer and Prajapati, H.A. (2017). Knowledge and adoption level of beneficiary and non beneficiary farmers about okra production technology. *Multilogic in science*, Vol. VII, Issue XXIV: 155-157.
- 4. Kumbhani, S.R., Kavad, S.D. and Patel, G.R. (2017). Adoption of improved Indian bean production technology. *Guj. J. Ext. Edu.* 28(1):20-24.

#### **IMPACT OF EXTENSION PROGRAMMES**

#### Spread of new technology in farming community

1. New crop-sweet corn has been introduced in tribal area of Vansda Taluka, which increases 65 per cent more income.

- 2. More than 74.00 % farmers adopted the new recommended varieties of paddy (NAUR-1, GNR-2, GNR-3) because of higher yield as compared to other.
- 3. More than 61 per cent farmers adopted yellow vein mosaic resistant variety meha of green gram.
- 4. About 570 ha. of area under paddy has been covered under HYVs of paddy replacing conventional varieties in Tapi District.
- 5. SRI technology in paddy being adopted by many farmers in the area.
- 6. Around 70.00 percentages of farmers and farm women trainees adopting kitchen garden at their own backyard also getting income through selling the surplus vegetables.
- 7. Awareness among women of adopted villages increased about health due to training on nutrition education.
- 8. Tailoring proved as better option for Self Employment and better Source of income for Tribal Women, which increased the income by 70%.
- 9. About 21.00 percentages of trainee farm women are preparing mango pulp, jam, and masalas at their home rather than buying it from market.
- 10. Area under drip and sprinkler systems of irrigation increased in South Gujarat in the crops like banana, fruit and vegetables, paired row planted sugarcane etc increased from 1.0 lakh ha to 13.0 lakh ha during last decade.
- 11. Adoption rate of MIS is up very fast in the crops like sugarcane, banana, vegetables, sapota, mango *etc.* as area increased from 1.0 lakh to 13.0 lakh ha during last decade.
- 12. As an impact of soil and water management, 42.00 percentages of farmers adopted the land configuration in Gram, Wheat and Pigeon pea crops.
- Installation of piped subsurface drainage system by more than 61 farmers (132 ha) by bearing 100.00 % cost of the system.
- 14. The knowledge level of farmer about scientific cultivation of vine crops increased by 83% as a result of KVK intervention which was earlier 55%.
- 15. Farmers become aware about orchard management and getting 22.00 and 20.00 percentages higher yield in mango and sapota respectively.
- 16. Some of the technologies adopted by the farmers on large scale are: black plastic mulching in banana, papaya, water melon, *etc*.
- 17. Increased awareness about ill effect of pesticide, hence 30.00 % cost have been reduced in plant protection measures.
- 18. Total 13 unproductive village fish ponds of about 42 ha. adopted by KVK Navsari and farmers were provided with finger lings and trainings on various aspects of fish production.
- 19. Due to continuous efforts by KVK, Navsari, farmers now feeds the fish with balanced nutrients with food ingredients like ground nut oil cake, rice bran, fish meal, and wheat flour and vitamin mineral mixture *etc*.
- 20. About 50-60 per cent livestock owners are practicing scientific feeding & management of cows and timely feeding of colostrums to their new born calves.
- 21. Milk production has increased around 2 lit per day and fat content about 1.00 to 1.50 % per day due to the proper feeding and scientific management of the animals.
- 22. Problem of mastitis in lactating animals is reducing 58% by proper management of the animals.

- 23. The inter calving period in majority of the cows was reduced by 2-3 months and reach to near about 15 month.
- 24. Repeat breeding problems reduced around 52.00 %.

#### **Technologies adopted by farmers**

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

## **17. Directorate of Students' Welfare**

The Directorate of Student's Welfare of Navsari Agricultural University is functioning with the aim to develop skills, talent, personality and high human values among the students. For inculcating such qualities activities related to sports, cultural events, training, counseling, placement guidance, NCC and NSS are organized throughout the year. The Directorate encourages and inspires students of the University to participate in National level competitions and make financial provisions for the same.

#### Students Representative Council (SRC)

The Students Representative Council (SRC) in adherence to the provisions of its constitution plays role in ensuring the general welfare of all students of this university. It serves as a platform for students for presenting issues necessary for fair academic environment. The members of SRC work together with university administration. The Principal/Dean being the President of SRC, nominates Staff Advisory Committee in consultation with the Chairman, SRC. The Council is formed with a view to provide proper platform for their overall personality development through training, counseling and guidance in their extracurricular activities and education. The SRC of various colleges were enthusiastic enough to encourage students to participate in various extracurricular activities like (1) Planning Forum (2) Sports-Games (3) Literary activities like Debate, Elocution, Extempore, Essay (4) College Magazine (5) Cultural Programme (6) NCC, (7) NSS etc.

#### **Student Amenities**

#### **Hostel Facilities**

Being residential requirement of various degree programmes, there is provision of 25 hostel blocks having the accommodation facility of 2541 students (1921 boys and 620 girls). 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 facilities.

S.N.	I. Name of Hostel / Block Ro		Accommodation Capacity	Facilities
	·	<b>N.M.</b>	College of Agricu	lture
1	Navoday Boy's Hostel	68 (2 seated) 03 (3 seated)	145	R O Plant TV Solar heater system
2	Navneet Boy's Hostel	68 (2 seated) 03 (3 seated)	145	R.O. I lant, I V, Solar heater system
3	Block-B	50 (3 seated)	150	Nil
4	Block-C	50 (3 seated)	150	1111
5	Old PG Boy's	54 (Single)	54	R.O. Plant, TV, Solar heater system,
6	New PG Boy's	58 (2 seated)	116	Internet (Wi-Fi facility)
7	Maitry Girl's Hostel	32 (3 seated)	96	R.O. Plant, TV, Solar heater system
8	P. G. Girls (Nandini Hostel)	35 (3 seated)	105	R.O. Plant, TV, Solar heater system, Internet (Wi-Fi facility)
	-	<b>ASPEE Colle</b>	ge of Horticulture	e & Forestry
9	UG Horticulture Boys (Bagayat Hostel)	36 (3 seated)	108	Common Room with TV indoor game
10	UG Horticulture Boys (Vivekanand Hostel)	68 (2 seated)	136	room and reading room, CCTV Camera
11	UG Forestry Boys (Forestry Hostel)	30 (3 seated)	90	and internet with with system
12	UG Horticulture & Forestry Girls (Ansuya Hostel)	23 (4 seated)	92	

#### **College wise hostels with facilities**

13	PG Horticulture & Forestry Girls	21 (2 seated)	42	Common Room with TV, indoor game
	(New PG Girls Hostel)			and Internet with Wi-Fi system
14	PG Horticulture & Forestry Boys (New PG Boys Hostel)	50 (2 seated)	100	
	Vanbandl	hu college of V	eterinary Science	& Animal Husbandry
15	Eklavya Boy's hostel	71 (3 seated)	213	Solar Water heater, 500 liter RO Water system, Mess/Dining Hall, LED TV, Newspaper, Parking, CCTV Camera
16	Gargi Girls Hostel	48 (3 seated)	144	R.O. with Water cooler. Solar Water heater, Wi-Fi, Multi gym, Table Tennis, TV, CCTV Camera, Mess Facility
	-	Colleg	ge of Fisheries Sci	ience
17	Sahdev Hostel	32 (3 seated)	96	Solar panel s and solar water heating system, CCTV, RO System, Reading room, Television room, Sports room, Caretaker room, mess cum dining hall and other basic facilities
		<b>ASPEE Agril</b>	ousiness Manager	nent Institute
18	AABMI PG Hostel	44	80	RO, TV, Solar Water Heater, Internet
	С	ollege of Agric	ulture, NAU, Ca	mpus Bharuch
19	REWA GIRL'S HOSTEL	38 (3 seated)	114	RO water with water cooler, Dining Hall with Still Dining Tables, Water Heater, Multi Gym with Tread meal, Iron Writing Table with chair, Sanitary Pad Destroyer Machine, Wall mounting Iron Cupboard, TT Tables, Valley Ball Ground, TV Room, Sick and Parent Room, Solar System.
20	BRUGU BOYS HOSTEL A-BLOCK	48 (3 seated)	144	RO water with water cooler, Dining Hall with Still Dining Tables, Water Heater, Multi Gym, Iron Writing Table with chair, Wall mounting Iron Cupboard, TV Room, TT tables in Multi Purpose Room, Solar System.
	Poly	technic in Agr	iculture NAU, Ca	mpus Bharuch
21	Brugu Boys Hostel B-Block	48 (3 seated)	144	RO water with water cooler, Dining Hall with Still Dining Tables, Water Heater, Multi Gym, Iron Writing Table with chair, Wall mounting Iron Cupboard, TV Room, TT tables in Multi Purpose Room, Solar System.
22	Farmer's Hostel	12 (3 seated)	36	RO water with water cooler Dining Hall with Still Dining Tables, Water Heater Multi Gym, Iron Writing Table with chair Wall mounting Iron Cupboard TV Room.
		College of A	griculture, Wagha	ai
23	Boys Hostel (Dandkaranya)	52 (3 seated)	156	All facilities available
24	Girls Hostel (Shabri)	33 (3 seated)	99	

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		Polytechnic in	Agriculture, Wag	ghai		
25	Boys Hostel (Vanraj)	24 (3 seated)	72	All facilities available		
	AS	PEE Shakilam	<b>Biotechnol ogy I</b>	nstitute, Surat		
26	Boys Hostel	52 (2 seated)	104	RO. TV Room, Solar Heater, Gymnasium		
27	Kaushalya Girls Hostel	30 (3 seated)	90	RO. TV Room, Solar Heater, Refrigerator, Gymnasium		
		Polytechnic in	n Agriculture, Vya	ara		
28	Boy's Hostel	36 (3-2 seated)	90	Reading table, chair, cupboard, Bed,		
29	Savitri Girls Hostel	10 (3 seated)	30	fan, Tube light		
	Horti	culture Polytec	hnic, ACHF, NAU	J, Navsari		
30	Nandanvan Boy's Hostel	24 (2 seated)	48	Lights, fans, tables, chairs, beds, Solar heater, RO system with cooler, Dining hall, Kitchen with all utensils, TV with TV hall		
31	Horticulture Polytechnic Girl's hostel	30 (2 seated)	60	Lights, fans, tables, chairs, beds, Solar heater, RO system with cooler, Dining hall, TV with TV hall		
Colle	ge of Agricultural Engine	eering and Tech	nology & Polytec	hnic Agricultural Engineering Dediapada		
32	Vishwakarma Boys Hostel	56 (2 seated)	112	Recreation Room: TV, RO System: Near Mess: 50 lt. & First floor: 50 lt., Indoor & Gym Room: Carom, Table Tennis, Badminton, Gym system, Gym bicycle, Dining Hall with mess arrangement, Student Room: Wooden in built cupbo- ard, Bed, Table Chair, Office		
33	"SHAKUNTLA" Girls Hostel	16 (3 seated)	48	TV, RO System : Ground floor:50 lt. & First floor :25 lt.,Sports Room: Carrom, Table-Tennis, Badminton, Gym system with gymbicycle, Dining Hall with chairs & Tables, Guest Room : Sofa, bed, chair, Reading Room, Student room: Cupboards, Beds, Tables, Chairs, Office, Care Taker room		
	Pol	ytechnic in An	imal Husbandry,	NAU, Navsari		
34	Sahdev Hostel	32 (3 seated)	96	Solar panels and solar water heating system, CCTV, RO System, Reading room, Television room, Sports room, Caretaker room, mess cum dining hall and other basic facilities		
	Po	lytechnic In H	orticulture, ACH	F, NAU, Paria		
35	Parshuram Boys Hostel	24 (3 seated)	72	100 lph RO water system with 240 liter cap. Cooler, 50 lph RO water system with 40 liter cap. Cooler, Samsung LED TV 40", Fans & LED light, Mess with Dining Hall, Dining table, 1500 liter Solar water, Heater System, Cot -75 nos., Wi-Fi facility, Rector office, TV room, Store room, Toilet and bathroom on each floor		
			226			

36	Saraswati Girls Hostel	12 (3 seated)	36	50 lph RO water system with 60 liter cap. Cooler, Sony LED TV, 32", Fans & LED light, Mess with Dining Hall, 1500 liter Solar water, Heater System, Cot-30 nos., Wi-Fi facility, Dining table, Rector office, TV room, Store room, Toilet and bathroom, attached on each floor
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#### **INTERNATIONAL STUDENTS' HOSTEL**

The International Students' Hostel (ISH) is established by NAU with the financial aid from ICAR, to provide lodging 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.

Sr. No.	Types of room	No. of rooms	Capacity	No. of students registered	Country		
1	AC suit room	4 (2 seated)	08	11	Afabanistan		
2	AC room	16 (2 seated)	32	11	Alghanistan		
Facili	Facilities: RO Systems, Water coolers, TV with Cable connection in each room,						

To provide a healthy competitive and diverse cultural learning environment.

Solar Water heater system, Kitchen with dining hall

#### **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 Students Union (f) One Hostel Student's representative per 50 students nominated by the Rector (g) Chairman, 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:**





**International Hostel** 

Navoday Agriculture Boy's Hostel







**Maitry Girl's Hostel** 

**Off-Campus Hostels** 



Bhrugu Boy's Hostel, Bharuch



Shabri Girl's Hostel, Waghai



Dandkaranya Boys Hostel, Waghai



SHAKUNTLA Girls hostel, Dediapada

#### **HEALTH FACILITIES**

Primary Health Center provides basic Health care facilities to the students and staff of the Navsari Agricultural University. A service of the Medical officer is available on contract basis. Medical officer is supported by X-Ray Technician, Laboratory Assistant. Free health check up, X-Ray and laboratory testing and medicines are provided to the students and staff (including their family members) of the Navsari Agricultural University. Medical laboratory is equipped with hematological and biochemical (semi-automatic) analyzer and X-Ray machine.

During the period under report, a total of 2388 patients were treated as OPD and laboratory facilities were utilized for confirmatory diagnosis of diseases. A total of 74 hematological, 80 biochemical parameters, 30 serum immunological and 46 urine samples were evaluated to reach at confirmatory diagnosis. Moreover, X-ray examination was also performed in 121 patients for diagnosis during the year 2017-18.

#### **Financial Assistance to the Students**

The University provides various Scholarships and Financial Assistance to the students on merit basis. During the year 2017-18, 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  $12^{th}$  board or equivalent examination for the period of eight semesters. The details of fresh and renewal fellowship awarded during the year are as follow:

Fooulty	Fresh	Renewal	Total	
racuity	No. of Students	No. of Students	Total	
Agriculture	05	15	20	
Horticulture	05	19	24	
Forestry	05	10	15	
Veterinary	05	11	16	
Agri. Biotechnology	05	02	07	
Agril. Eng. Tech.	00	01	01	
Fisheries Science	00	01	01	

#### **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:

	Fresh		Ren	ewal	
Faculty	No. of Students		No. of S	tudents	Total
	M.Sc.	Ph.D.	M.Sc.	Ph.D.	
Agriculture	01	01	01	01	04
Horticulture	01	01	02	03	07
Forestry	00	01	00	03	04
Veterinary	01	01	00	01	03
	MBA	ICTI	MBA	ICTI	
A.B.M & I.C. I.I	01	00	01	01	03
A anil Ena Tach	M.Tech.				
Agin. Eng. tech.	C	)1	0	1	02

#### C. Merit and poor merit scholarship :

This fellowship is awarded to the economically backward students of various faculties of NAU. The details of fresh and renewal fellowship awarded during the year are as follow:

Fo only.	Fresh	Renewal	Tatal
Faculty	No. of Students	No. of Students	10181
Agriculture	04	12	16
Horticulture	04	06	10
Forestry	00	06	06

#### **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 students' welfare. The university provides sufficient games and sports material to all the hostels as well as university/college level team. The details of inter collegiate and inter university sports/cultural activities organized at Navsari Agricultural University, Navsari during the year 2017-18 with it result are as followed:

#### A. Results of NAU Inter Collegiate Indoor Games for the Year 2017-18

S. N.	Event & Date	Position	College Name
1	Badminton Men	Winner	Vanbandhu College of Veterinary Sc. & A.H., Navsari
	18-19/09/2017	Runner Up	N. M. College of Agriculture, Navsari
2	Badminton Women	Winner	Vanbandhu College of Veterinary Sc. & A.H., Navsari
	14-15/09/2017	Runner Up	ASPEE College of Horticulture and Forestry, Navsari
2 Table-Tennis Men		Winner	ASPEE College of Horticulture and Forestry, Navsari
3	12/09/2017	Runner Up	College of Agriculture, Bharuch
	Table-Tennis Women 12/09/2017	Winner	College of Agriculture, Bharuch
4		Runner Up	N. M. College of Agriculture, Navsari
5	Chess Men	Winner	N. M. College of Agriculture, Navsari
5	14-15/09/2017	Runner Up	ASPEE Shakilam Biotechnology Institute, Surat
6	Chess Women	Winner	College of Fisheries Science, Navsari
0	18-19/09/2017	Runner Up	College of Agriculture, Waghai

#### **B.** Results of NAU Inter Collegiate Outdoor Games for the Year 2017-18

S.N.	Event & Date	Position	College Name
1	Basketball Men	Winner	ASPEE College of Horticulture and Forestry, Navsari
	10/10/2017	Runner Up	N. M. College of Agriculture, Navsari
2	Volleyball Men	Winner	ASPEE College of Horticulture and Forestry, Navsari
	09/10/2017	Runner Up	N. M. College of Agriculture, Navsari
2 Volleyball Women		Winner	ASPEE College of Horticulture and Forestry, Navsari
3	07/10/2017	Runner Up	College of Fisheries Science, Navsari
1	Kho-Kho Men	Winner	ASPEE College of Horticulture and Forestry, Navsari
4	10/11/2017	Runner Up	N. M. College of Agriculture, Navsari
5	Kabaddi Men	Winner	Vanbandhu College of Veterinary Sc. & A.H., Navsari
5	07/11/2017	Runner Up	College of Agricultural Engineering, Dediapada
6	Cricket Men	Winner	N. M. College of Agriculture, Navsari
0	05-09/02/2018	Runner Up	College of Agriculture, Waghai

S.N.	Event & Date	Position	College Name		
1	Dahata Farrary	Winner	ASPEE College of Horticulture & Forestry, Navsari		
	Debate Favour	Runner Up	N.M. College of Agriculture, Navsari		
2	Debate Against	Winner	ASPEE College of Horticulture & Forestry, Navsari		
	Debate Against	Runner Up	Vanbandhu College of Veterinary Sc. & A.H., Navsari		
2	Elecution	Winner	ASPEE Agribusiness Management Institute, Navsari		
3	Elocution	Runner Up	N.M. College of Agriculture, Navsari		
4	Fytempore	Winner	ASPEE Agribusiness Management Institute, Navsari		
4	Extempore	Runner Up	Vanbandhu College of Veterinary Sc. & A.H., Navsari		
5	Winner		College of Agriculture, Waghai		
5	Drama	Runner Up	N.M. College of Agriculture, Navsari		
6	Group Dance (Folk)	Winner	N.M. College of Agriculture, Navsari		
0	Oroup Dance (Fork)	Runner Up	College of Agriculture, Waghai		
7	Mime	Winner	College of Agriculture, Bharuch		
/	WIIIIC	Runner Up	N.M. College of Agriculture, Navsari		
0	Mono Acting	Winner	N.M. College of Agriculture, Navsari		
0	Mono Acting	Runner Up	Vanbandhu College of Veterinary Sc. & A.H., Navsari		

#### C. Results of NAU Inter Collegiate Cultural Competition Gunjan-2017

#### **OVERALL CHAMPIONSHIP**

- **1. Winner** N.M. College of Agriculture, Navsari
- 2. Runner Up ASPEE Agribusiness Management Institute, Navsari

#### D. Results of NAU Inter Polytechnic Tournaments for the Year 2017-18

S.N.	Event & Date	Position	College Name
1	Chess Male	Winner	Polytechnic in Agriculture, Bharuch
	28-29/09/2017	Runner Up	Polytechnic in Animal Husbandry, Navsari
2	Chess Female	Winner	Polytechnic in Agriculture, Bharuch
	28-29/09/2017	Runner Up	Polytechnic of Horticulture, Paria
2	Table-Tennis Male	Winner	Polytechnic in Agriculture, Waghai
3	14/11/2017	Runner Up	Polytechnic of Horticulture, Navsari
1	Table-Tennis Female	Winner	Polytechnic in Agriculture, Bharuch
4	14/11/2017	Runner Up	Polytechnic of Horticulture, Paria
5	Volleyball Male	Winner	Polytechnic in Agriculture, Waghai
5	15/02/2018	Runner Up	Polytechnic in Agriculture, Bharuch
6	Kho-Kho Male	Winner	Polytechnic in Agriculture, Vyara
	16/02/2018	Runner Up	Polytechnic in Agriculture, Waghai

S. N.	Game / Tournament	Date	Place of Inter Uni. Tournament	No. of Players Participated	Result
1.	Gujarat State Inter Agricultural Universities Cultural Tournament	05 October 2017	Navsari Agricultural University, Navsari	32 Participants	Overall Champion - Drama Second - Dance Second - Mono acting First
2.	Gujarat State Inter Agricultural Universities Volleyball, Badminton & Table-Tennis Girls Tournament	8 to 9 November 2017	Navsari Agricultural University, Navsari	12–Volleyball Girls 04–Badminton Girls 04–TT Girls	-
3.	Gujarat State Inter Agricultural Universities Volleyball, Basketball & Badminton Tournament	18 to 19 November 2017	SDAU, SK Nagar	12–Volleyball Boys 10–Basketball Boys 04–Badminton Boys	- First Place in Basketball
4.	Gujarat State Inter Agricultural Universities Kabaddi, Kho-Kho, Table Tennis Tournament	24 November 2017	Anand Agricultural University, Anand	12–Kabaddi Boys 12–Kho-Kho Boys 04–TT Boys	<ul> <li>First Place in Kabaddi</li> <li>Second Place in Kho-Kho, Table Tennis</li> </ul>
5.	Gujarat State Inter Agricultural University Polytechnic Volleyball, Kho-Kho & Table-Tennis Tournament	28 February 2018	Anand Agricultural University, Anand	12–Kho-Kho Boys 12–Volleyball Boys 04–TT Boys	- First Place Kho-Kho, Volleyball & TT Boys
6.	Gujarat State Inter Agricultural Universities Cricket & Chess Tournament	17 to 18 March 2018	Junagadh Agricultural University, Junagadh	15–Cricket 05–Chess	- Second Place in Chess

#### E. Results of Gujarat State Inter Agricultural Universities Participation for the Year 2017-18

F. Results of National Level Inter University participation in Sports & other Co-Curricular Activity for the Year 2017-18

S.N.	Game / Tournament	Date	Place of Tournament	No. of Participants	Result
1.	West Zone Inter University Chess (Men) Tournament	27 to 31 October 2017	Jagran Lakecity University, Bhopal, Madhya Pradesh	06 Participants	-
2.	West Zone Inter University Chess (Women) Tournament	4 to 8 November 2017	Jagran Lakecity University, Bhopal Madhya Pradesh,	06 Participants	-
3.	West Zone Inter- University Kabaddi (Men) Tournament	19 to 22 November 2017	Pandit Deendayal Upadhyaya Shekhawati University, Sikar, Rajasthan	12 Participants	-

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4.	West Zone Inter- University Basketball Men Tournament	04 to 08 December 2017	M. B. College Ground, Mohanlal Sukhadiya University, Udaipur, Rajasthan	08 Participants	_
5.	West Zone Inter- University Badmin- ton (Men/Women) Tournament	19-23 December 2017	at North Maharashtra University, Jalgaon, Maharashtra	06 Men 03 Women	-
6.	West Zone Inter- University Table Tennis (Men) Tournament	23-26 January 2018	Solapur University, Solapur, Maharashtra	03 Participants	-
7.	Indian Bank National Freedom Quiz 2018	25 January 2018	MRC Nagar Raja Annamalaipuram Chennai	02 Participants	-
8.	West Zone Inter- University Table Tennis (Women) Tournament	01-05 February 2018	Jagran Lakecity University, Mugaliyachhap, Bhopal	03 Participants	-
9.	West Zone Veterinary Physiology Quiz Competition (SAPI)	24 November 2017	Navsari Agricultural University, Navsari	02 Participants	Won in West Zone and qualified for National level
10.	National level Veterinary Physiology Quiz (SAPI)	21-22 December 2017	Veterinary College, Bidar, Karnataka	02 Participants	Achieved Second position at National level
11.	XVIII All India Inter Agri. Universities Sports & Games Meet 2017-18	30 January 2018 to 03 February 2018	University Agricultural Sciences , GKVK, Bengaluru	42 Participants	Kho-Kho Men, reached Semi-Finals TT Men Team reached Quarter-Finals
12.	18th All India Inter Agricultural Universities Youth Festival AGRI UNIFEST 2018	12-16 February 2018	Sri Venkateswara Veterinary University, Tirupati	23 Participants	4th Position in Inaugural Procession
13	National Level Agri Business Management	23-24 February	Tamil Nadu Agricultural University, Coimbatore, T.N.	11 Participants	-
	(Quiz Competition)		<ul> <li>Rashmi Bhat &amp; Navla Event.</li> <li>Patel Ketu &amp; Nandan Finance Event.</li> </ul>		rst position in HR Third position in
14.	All India Veterinary College Badminton, Table-Tournament and Quiz Competition	15-17 March 2018	G. B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand	Total 16 Players Participated	-



Inter-College Volleyball Men Tournament 2017-18



AGRIUNIFEST 2017-18



Champion Teams of Gujarat State SAUs Inter Polytechnic Volleyball, Kho-Kho & Table-Tennis Tournament 2017-18



All India ICAR Sports Meet 2017-18



Participation in West Zone Kabaddi Men Tournament 2017-18

#### NATIONAL SERVICE SCHEME (NSS)



Participation in West Zone Chess Men Tournament 2017-18

The Department of Youth Affairs and Sports, Ministry of Human Resources Development, Government of India, New Delhi started NSS in 1969-70, with aim of 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 got strength of additional 1400 NSS volunteer for regular activities and 700 for the special camp. The distribution of the volunteer strength is as under.

		Allotment of Volunteers	
Sr. No.	Name of College / Polytechnic		Special
		Activity	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		37
13.	Polytechnic in Animal Husbandry, Navsari	50	25
14.	Polytechnic in Horticulture, Paria		25
	Total NSS volunteer	1400	700

#### Summary of Regular NSS Activities Unit wise

Sr. No.	Unit Name	No. of Activities	Volunteers Participation
1.	N. M. College of Agriculture, Navsari	09	848
2.	ASPEE College of Horticulture and Forestry, Navsari	09	589
3.	Vanbandhu College of Veterinary Science & A.H., Navsari	31	1828
4.	College of Agricultural Engineering and Technology & Polytechnic Agricultural Engineering, Dediapada	07	1052
5.	College of Agricultural, Waghai	10	860
6.	ASPEE Shakilam Biotechnology Institute, Surat	14	958
7.	Polytechnic in Agriculture, Waghai	14	1246
8.	Polytechnic in Agriculture, Vyara, Tapi	16	1084
9.	College & Polytechnic in Agricultural, Bharuch	09	1457
10.	Polytechnic in Horticulture, Navsari	13	1184
11.	Polytechnic in Animal Husbandry, Navsari	07	360
12.	Polytechnic in Horticulture, Paria	21	848
	Total	160	12314

#### **Special Camps of NSS**

Sr		Special Camp		
No.	Name of College / Polytechnic	Place of Camp	Date	
1.	N. M. College of Agriculture, Navsari	Kilad, Waghai	19-23/03/2018	
2.	ASPEE College of Horticulture and Forestry, Navsari	Gadat, Gandevi	5-10/03/2018	
3.	College Veterinary Science and Animal Husbandry, Navsari	-	-	
4.	College of Agricultural, Bharuch	Nikora, haruch	12-18/03/2018	
5.	College of Agricultural, Waghai	Rajendrapur, Waghai	5-11/03/2018	
6.	Polytechnic Agricultural Engineering, Dediapada	Kunbar	27/02/2018 to 05/03/2018	
7.	Polytechnic Agricultural, Waghai	Rajendrapur, Waghai	5-11/03/2018	
8.	Polytechnic in Agricultural, Vyara	Balapur, Tapi	19-25/03/2018	
9.	Polytechnic in Agricultural, Bharuch	Nikora, Bharuch	12-18/03/2018	
10.	Polytechnic in Horticulture, Navsari	Kosh, Mahuwa, Surat	03-09/03/2018	
11.	ASPEE Shakilam Biotechnology Institute, Surat	-	-	
12.	College of Agricultural Engineering, Dediapada	Kunbar	27/02/2018 to 05/03/2018	
13.	Polytechnic in Animal Husbandry, Navsari	Tiskari, Dharampur	5-11/03/2018	
14.	Polytechnic in Horticulture, Paria	Paria	12-18/03/2018	

#### 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 their cadets are taught Discipline, Patriotism, Brotherhood, Sportsmanship and Spirit of Adventure by organizing various camps in which students are enrolled. Total 80 Parades are conducted round the year in which students are taught weapon training, Map reading, Civil Defense, First Aid, Field Craft, Anti Dowry, Rally for Consumer Awareness and Tree Plantation.

#### Activities accomplished during the year 2017-18

Sr. No.	Activities	Cadets participated
1	Tree plantation	102
2	Independence and Republic day celebrations	107
3	Weapon Training for forestry students	26
4	Rally for Anti dowry	92
5	Civil defence& First Aid training	68
6	Blood donation camp	69





Celebration of Independence day

#### UNIVERSITY PLACEMENT & COUNSELING CELL Placements details (Interviews Organized : 74)

No. actual	of Eligible Students interested and ly participated in Placement Process	No. of students Placed	Higher Studies
ACHF	B. Sc. Honors (Horticulture) – 25 out of 63	25	42
(Horti.)	M. Sc. (Horticulture) – 31 out of 58	31	13
Forestry	B. Sc. Honors (Forestry) – 6 out of 29	4	13
rorestry	M. Sc. (Forestry) – 00 out of 05	-	-
	M. Sc. (Agriculture) – 3 out of 100	2	21
INNICA	B. Sc. Honors (Agriculture) – 97 out of 103	17	86
CoA-Bharuch	B. Sc. Honors (Agriculture) – 4 out of 52	04	23
CoA-Waghai B. Sc. Honors (Agriculture) – 28 out of 58		17	35
AABMI	MBA (Agribusiness Management) – 20 out of 27	18	1
	M. Sc. (ICT in Agriculture) – 00 out of 07	-	-
Veterinary Bachelor of Vet. Sci. & A. H. –13 out of 34		13	21
College Master of Vet. Sci. & A. H. – 00 out of 15		-	-
ASBI	ASBI B. Sc. Honors (Agri Biotech.) – 16 out of 26		08
CAET	B. Tech. (Agril. Engineering) – 10 out of 14	03	04
Polytechnic	Polytech. in Agriculture, Vyara – 15 out of 33	07	16
	Polytech. Agril. Eng., Dediapada – 03 out of 16	03	07
	Polytech. in Agri., Bharuch – 05 out of 30	05	11
	Polytech. in Agri., Waghai – 11 out of 29	11	04
	Polytech. in Horti., Navsari – 09 out of 31		11
	Polytech. in Horti., Paria – 00 out of 28	-	-
	Polytech. in Ani. Husb., Navsari – 31 out of 39	31	-
		216	315

### Academic Excellence Medals Awarded in 13<sup>th</sup> Convocation (2017-18)

S. N.	Name of Medal	Name of Students
1.	Chancellor's Gold Medal for Doctoral degree	SHRVAN KUMAR
2	Chancellor's Gold Medal for Master's degree	OAK PRIYANKA
2.		SHRIKANT
3.	Vice Chancellor Gold Medal for B. Sc. Agri.	AGINA GOPAN
4.	Vice Chancellor's Gold Medal for B. Sc. Horti.	SHAH SMIT BHARTIBEN
5.	Vice Chancellor's Gold Medal for B. Sc. Forestry	VARUN SAINI
6	Vice Chancellor's Gold Medal for B.V. Sc. & A.H. (Veterinary)	PATEL KISHAN
0.		PRAVEEN
7.	Vice Chancellor's Gold Medal for Agri. Biotechnology	ARSHIN M. KHAN
0	Vice Chancellor's Gold Medal for Agri. Engineering	PATEL DEEPKUMAR
0.		PRAVINBHAI
0	"Dr. Jayantilal V. Majmudar Gold Medal" in the Subject of Plant	AGINA GOPAN
9.	Breeding for Highest OGPA in B.Sc. (Hons.) Agri.	
	"Late Shri Pramodbhai Desai, The Surat District Co-operative	GA IERA KISHAN
10.	Bank Ltd. Gold Plated Silver Medal" in the subject of Agril.	PR AVINRH A I
	Economics and Extension Education for B.Sc. [Agriculture].	
	"Late Shri Pramodbhai Desai, The Surat District Co-operative	
11.	Bank Ltd. Gold Plated Silver Medal" in the subject of Plant	LAT MONICA
	Protection (Agril. Entomology and Plant Pathology) for B.Sc.	
	[Agriculture].	
	"Late Shri Pramodbhai Desai, The Surat District Co-operative	
12	Bank Ltd. Gold Plated Silver Medal" in the subject of Natural	ADITHYA G RAJ
12.	Resources Management (Agronomy and Soil Science) for B.Sc.	
	[Agriculture]	
	"Shri Khedut Sahakari Khand Udhyog Mandli Ltd. Bardoli Gold	
13.	Plated Silver Medal" in the subject of Agronomy for B.Sc.	PRIYANKA SAINI
	[Agriculture].	
	"Brig. Anil Adlakha Gold Plated Silver Medal" in the subject of	
14.	Crop Improvement (Agril. Botany and Plant Physiology) for B.Sc.	AGINA GOPAN
	[Agriculture].	
15.	"Late Babubhai Jashbhai Patel Gold Plated Silver Medal" for	AGINA GOPAN
	highest OGPA in B. Sc. (Agril.)	
	"LalbhaiNaik Gold Plated Silver Medal sponsored by Sahakari	
16.	Khand Udhyog Mandail Ltd., Gandevi" for highest OGPA in B.Sc.	AGINA GOPAN
	(Agri.)	
17.	"ASPEE Foundation Gold Plated Silver Medal" for a student who	VARUN SAINI
	obtains the highest OGPA in B. Sc. (Horticulture).	
18.	"ASPEE Foundation Gold Plated Silver Medal" for a student who	ASWANI J S
	obtains the highest OGPA in B. Sc. (Forestry).	

19.	"Aspee Distributors' Association Gold Plated Bronze Medal" in the subject of Plant Protection for B.Sc. [Agriculture]	JAT MONICA
20.	"Dr. D. H. Chavda Gold Plated Bronze Medal" in the subject of Plant Breeding and Genetics for B.Sc. [Agriculture]	AGINA GOPAN
21.	"Late Shri Bhulabhai Karshanji Patel Gold Plated Bronze Medal" for a student who obtains the highest OGPA in B.Sc. (Horticulture)	ASWANI J S
22.	"Late Dr. VitthalbhaiJeevrajbhai Patel Gold Plated Bronze Medal" for a student who obtains the highest OGPA in B.Sc. [Forestry]	VARUN SAINI
23.	"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 subject.	PANDYA MIHIRKUMAR MAHESHBHAI
24.	"ASPEE Foundation Gold Plated Silver Medal" for M.Sc. (Horticulture) either in the subject of Fruit Science or Vegetable Science.	JNYANA RANJAN DIGAL
25.	"ASPEE Foundation Gold Plated Silver Medal" for M.Sc (Horticulture) either in the subjects of Floriculture and Landscape Architecture or Post Harvest Technology.	LAVANYA TAHASILDAR
26.	"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.	GHADAGE NITISH JAGANNATH
27.	"ASPEE Foundation Gold Plated Silver Medal" for Ph.D. (Forestry) in any subject.	SHASHI BHUSHAN SHARAN PANDEY
28.	"Kalptaru Gold Medal Silver Medal" for M.Sc./M.Tech./Ph.D. (Agriculture/ Horticulture/PHT & PE)	LOKESH KUMAR SAINI
29.	"Late Jayaben Nandlal Vyas and Pitambar Nandlal Vyas Gold Plated Silver Medal" for a student who obtains the highest OGPA in B. V. Sc. & A.H. (Veterinary)	PATEL KISHAN PRAVEEN
30.	"ASPEE Foundation Gold Plated Silver Medal" for MBA (ABM).	SUVAGIYA PIYUSHKUMAR ARVINDBHAI
31.	"Late Dr. H. U. Joshi Gold Plated Bronze Medal" in the subjects of Plant Pathology for M. Sc. (Agriculture)	VANTHANA M.
32.	"Late Mrs. Indumatiben and Dr. Pravinbhai Shukla Gold Plated Bronze Medal" in the subject of Production Technology of Medicine Plants for M. Sc. [Horticulture]	ASHWINI YADDALAGUNDI
33.	"Late Purshottam R. Patel Gold Plated Bronze Medal" in the subject of Agril. Economics for M.Sc. (Agriculture)	VARSHA SHRIPATI KANUGADE
34.	"Guruhari P. P. Hariprasadswamiji Gold Plated Bronze Medal" award in the subjects of Agronomy for M. Sc. [Agriculture]	RAMETI JANGIR

## **18. Financial Management**

The Navsari Agricultural University 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 2017-18, for all round activities of the University major financial assistance received from Government of Gujarat (85.37%), followed by ICAR (8.36%) and other agencies (6.26%). Moreover, University also generated 2098.65 lakhs utilizing its own resources by selling seeds, plantlets, planting materials and farm produce during 2017-18. Thus, overall University received Rs. 18567.07 lakhs for education, research and extension activities during the year 2017-18.

#### **Budget Allocation and Expenditure**

The budget proposal for the Plan and Non Plan are prepared on the basis of actual requirement to run ongoing and new 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.

Particular		2017-18
	Plan	9,121.40
	Non plan	6,730.56
Grant	ICAR	1,552.29
	Other Agency	1,162.82
	Total	18,567.07
	Plan	8,147.32
	Non plan	6,607.56
Expenditure	ICAR	1,484.48
	Other Agency	1,558.31
	Total	17,797.67
	Plan	516.19
	Non plan	675.51
Receipt	ICAR	53.86
	Other Agency	853.09
	Total	2,098.65
	Research	4,624.08
Activity	Education	8,352.71
Acuvity	Extention	3,896.47
	Administration	924.40
	Total	17,797.66

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#### **BUDGET AND EXPENDITURE**



#### **Receipt generated 2017-18 (Rs in Lakh)**





## Activity wise Expenditure 2017-18 (Rs in Lakh)



#### **Finance Committee**

Sr. No.	Designation	Position
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-officio Member
7	Account Officer, NAU, Navsari	Member Secretary

**Meetings of Finance Committee** 

Sr. No.	Particulars of Meeting	Date
1	13 <sup>th</sup> Meeting of Finance Committee	21/04/2017
2	14 <sup>th</sup> Meeting of Finance Committee	11/09/2017

## **19. Strengthening and Development of Higher Agricultural Education in India**

#### Summary of ICAR Grant received during the period under report 2017-18

Sr.	Grant Details	Amount
No.		(Rs. in <i>lakhs</i> )
1	Development Grant	527.35
2	Library Strengthening	82.00
3	Winter School	11.81
4	ELU	7.50
5	NTS-UG	38.49
6	NTS-PG	
7	RAWE	54.72
8	JRF	11.01
9	SRF	1.19
	Total	734.07

#### All New/Existing Civil Works Repair & Renovation under taken out of the Development Grant:

Sr. No.	Name of the Civil Work	Location of Civil Work (specify	Cost		
	Undertaken	college and place)	(Rs. in lakhs)		
N. M. College of Agriculture					
1.	Repair / Renovation Statistics Lab.	Department of Statistics	5.00		
2.	Repair / Renovation Toilet Block C	College Building	6.00		
3.	Repair / Renovation Toilet Block D	College Building	6.00		
4.	Repair / Renovation of Soil Science UG Lab	Department of Soil science and Ag. Chemistry	9.00		
5.	Repair / Renovation of Soil Science PG Lab	Department of Soil science and Ag. Chemistry	8.00		
6.	Repair/RenovationofBiochemistry Lab.	Department of Soil science and Ag. Chemistry	9.00		
7.	Repair / Renovation Toilet Block E	College Building	9.00		
8.	Repair / Renovation Toilet Block A	College Building	9.00		
9.	Repair / Renovation Toilet Block B	College Building	9.00		

College of A	griculture, Bharuch		
10.	Refurbishing of Reading room	College premises	9.00
11.	Modernization of e-library room	Library	9.00
12.	External development of boys hostel	Boys hostel, Bharuch	9.00
13.	Renovation/repair (Rewiring) of Boys Hostel	Boys hostel, Bharuch	9.00
14.	Electrification repair (rewiring) of boys hostel	Boys hostel, Bharuch	2.00
15.	CRC cupboards shutters with framing at boy's and girl's hostel and repair of gate	Boys & Girls hostels, Bharuch	18.00
16.	Ministerial staff and principal office lobby partitioning etc.	Staff and principal office	3.00
ASPEE Col	lege of Horticulture, Navsari	· · · · ·	
17.	Plumbing work	Ansuya girl's hostel	0.29
18.	Solar water heater	Vivekanand hostel	1.54
19.	Drinking water facility	Girl's hostel	0.32
20.	Solar water heater	Forestry hostel	1.54
21.	Grill for Protection	PG hostel (Horti.)	0.26
22.	RO system	Ansuya girls hostel	0.37
23.	Plumbing and minor repairing	PG girls hostel	0.19
24.	Parking stand	PG girls hostel, Ansuya girls hostel, forestry boys and PG boys hostel	3.75
25.	Repair and replacement of doors and windows	Vivekanand boys hostel	9.00
26.	Colour works	Bagayat hostel	3.00
27.	Drinking water facility	Vivekanand hostel	0.31
28.	Pipeline repairing	Old boys hostel (horti.)	0.49
29.	Colour work	Boys hostel (horti.)	2.00
30.	Alluminium works in kitchen	Girls hostel	0.20
31.	Kitchen and wash basin repairing	UG girls hostel	0.39
32.	Repair and renovation	Vegetable lab. (tissue culture)	3.00
33.	Drainage repairing	Forestry boys hostel	0.50
34.	Street light facilities	forestry and Horti hostel	0.40
35.	Paving block road	Between two hostel of Horti and forestry	0.50
36.	Colour work	Ansuya girls hostel and new PG girls hostel	0.40

37.	Grill colour and window	Ansuya girls hostel and new PG	0.88
20	repairing	girls hostel	0.12
38.	Electrification repairing	Ansuya girls hostel	0.12
39.	Electrification repairing	New PG girls hostel	0.13
40.	Electrification repairing	Forestry boys hostel	0.38
41.	Bathroom and wash basin repairing	Boys and girls hostel	0.24
42.	Solar heater water repairing	PG boys hostel	0.24
College of F	ørestry		
43.	College of Forestry, NAU, Navsari	Partitioning of FPU lab (Masonry, Electrification and colouring work)	5.00
44.	Partitioning, Masonry, Electrification and coloring work	Basic Science lab	5.00
45.	Partitioning of Examination Hall Masonry, Electrification and coloring work	Examination Hall	5.00
46.	Renovation and platform for Laboratories	Silviculture and Seed Tech Laboratories	5.00
47.	Refurbishing/Renovation of Tree Improvement Laboratory	Tree Improvement Laboratory	18.00
ASPEE Agr	ibusiness Management Institute, N	Javsari	
48	Front Elevation of AABMI covering Galvanized sheet and Galvanized pipes	ASPEE Agribusiness	
		Management Institute	0.93
10.		Office of Director Information	
		Technology	
	Toilet block repairing of Office of Director Information Technology	ASPEE Agribusiness	0.68
49.		Management Institute	
		Office of Director Information	
		Technology	
50.	False ceiling	ASPEE Agribusiness	4.57
		Management Institute	
		Three class rooms and Faculty	
		block	
51.	New Parking shed	ASPEE Agribusiness	5.00
		Management Institute	
College of Veterinary Science & A.H., NAU, Navsari			
52.			10.55
	UG Girls & Boys Hostel	Parking	10.00
53.	UG Girls & Boys Hostel UG Boys Hostel	Parking Electrification of Hostel Road	10.00 2.00
53. 54.	UG Girls & Boys Hostel UG Boys Hostel UG Boys Hostel	Parking Electrification of Hostel Road Hostel Approach road & Paver	10.00 2.00 3.00
53. 54.	UG Girls & Boys Hostel UG Boys Hostel UG Boys Hostel	Parking Electrification of Hostel Road Hostel Approach road & Paver blocking	10.00 2.00 3.00
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56.	Veterinary Public Health	Repairing & Renovation of Department	1.73
57.	Veterinary Extension	Repairing of Laboratories	1.03
58.	Veterinary Public Health	Repairing & Renovation of Laboratories	1.92
59.	Veterinary Parasitology	Repairing & Renovation of Laboratories	1.14
60.	Animal Genetics & Breeding	Repairing & Renovation of Block - B	10.10
61.	Veterinary Microbiology	Repairing & Renovation of Laboratories	1.14
62.	Veterinary Surgery & Radiology	X – Ray Room	7.00
DSW, Navsa			
63.	Sport complex	Apoxy coating to basket ball coat	2.00
		Total	258.28

# **Details of Sports Facilities Strengthened by ICAR:**

SL No	List of Sports Facility	Cost	
51. 110.	List of Sports Facility	(Rs. in lakhs)	
Main Un	iversity (DSW), NAU, Navsari		
1.	Organized Gujarat State Inter Uni. Staff Tournament	1.30	
2.	Placement Cell Banner & Refreshments to outside interviewers	0.14	
3	Training given to students by Indian Society for Development,	0.44	
	Vadodara	0.11	
	Participated in All India Veterinary College Badminton, Table -		
4	Tennis and Quiz Competition at Pantnagar, (UK) and Gujarat State	1.60	
т.	Agricultural Universities Cricket & Chess Competition at JAU,	1.00	
	Junagadh		
5.	ISDT, Vadodara Training T.A./D.A.	0.02	
6	Participated in National Level Agri. Business Management	0.45	
0.	PRABANDHAZ Tournament held at Coimbatore	0.45	
7.	Purchase of Kho-Kho Poll for sports complex	0.38	
8.	Purchase of Track shoot	0.37	
9.	R.O. Plant Repairing for sports complex	0.22	
10.	Canteen Steel Stair	0.05	
ASPEE College of Horticulture, NAU, Navsari			
11.	Badminton Racket (Silver Leedo)	0.08	
12.	Volley Ball (Spot Volley Nivia)	0.08	
13.	Basketball (Cosco Championship)	0.09	
14.	Table Tennis Ball (Stage White ball 40 plus 4 Star)	0.10	
15	Chess Board with chessmen board white and green colour	0.11	
15.	(VinexRollon code 514+ chessmen tournament code:501)		
16.	Badminton Racket (Yonex Carbones 8000)	0.15	

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17.	Badminton Shuttlecock (Yonex Mavis 350/500 White colour	0.08		
	Only)			
College of Agriculture, Bharuch				
18.	Basket Ball Court	8.00		
College o	f Forestry			
19.	Cricket Ball (Khanna Product, Famex Super Matches/Season)	0.09		
20.	Cricket Bat (SG Sunny Tonny English Willow)	0.10		
21.	Cricket Bat (SG King Cobra English Willow)	0.15		
22.	Cricket Wicket Keeper Gloves (SG)	0.01		
23.	Table Tennis Bat (GKI Kunfu)	0.03		
24.	Cricket Bat (SG Max Cover)	0.02		
25	Cricket Batting Gloves (SG batting gloves litevate) Right hand &	0.04		
20.	Left hand	0.01		
26	Cricket Wicket Keeper Inner Gloves (SG WK Inner Gloves	0.003		
20.	League)	0.005		
27.	Table Tennis Bat (Stage)	0.04		
College of Veterinary Science & A.H., NAU, Navsari				
	Knee cap, Anklet, Volini spray, Glucon -D, Band aid, D-fresh,			
28.	Iodex, Badminton gut, shuttlecock feather, Shuttlecock plastic,	0.16		
	Basket ball Nivia pro-touch			
	Total	14.30		

# Total number of smart classroom developed

Name of College	Number & Name of class	Smart facilities created		
	room			
N.M. College of	04 Nos. of UG Class Rooms	CCTV Camera, LCD Projector & PA		
Agriculture, Navsari		System		
College of Agriculture,	03 Nos. of UG Class Rooms	• LCD Projector with internet		
Bharuch		connection		
		• Interactive board		
		• Stage with podium		
		• Well setter benches		
College of Forestry, Navsari	03 Nos. of UG class rooms	LCD Projectors & White boards		
	02 Nos. of PG class rooms	LCD Projectors & White boards		
ASPEE College of	05 Nos. of UG class rooms	LCD Projectors & White boards		
Horticulture, Navsari	04 Nos. of PG class rooms	LCD Projectors & White boards		
AABMI, Navsari	04 Nos. of PG class rooms	Fully multimedia class rooms		
College of Veterinary	07 Nos. of UG/PG class	All class room equipped with Multimedia		
Science & A. H., Navsari	rooms	device and Internet facility		

### **Equipment purchased/replaced under Development Grants:**

	Name of Laboratory		Cost
Sr. No.	where Equipment	Name of equipments	(Ds. in lakhs)
	installed		(RS. III Iakiis)
ASPEE Colle	ege of Horticulture		
1.	Vivekanand hostel	Solar water heater	1.54
2.	girl's hostel	RO water	0.32
3.	Forestry hostel	Solar water heater	1.54
4.	Horti and Forestry hostels	Fire extinguisher -20	0.49
5.	Ansuya girls hostel	RO system	0.37
6.	UG girls hostel	Freeze double door	0.32
7.	Vivekanand hostel	RO	0.31
8.	PHT	Induction heater	0.10
9.	PHT	Induction Utensil	0.10
10.	RHRS, Fruit Science	RO Plant	0.60
11.	Soil Science and Chemistry lab	Air conditioner	0.62
12.	Vegetable Science	Potable laser leaf area meter	0.35
13.	Floriculture and Landscape Architecture	Digital vernier calliper	0.11
14.	Floriculture and Landscape Architecture	EC meter	0.11
15.	Floriculture and Landscape Architecture	pH meter	0.10
16.	Floriculture and Landscape Architecture	Thermo-hygro meter	0.30
17.	РНТ	RO System	0.51
18.	Forest Biology and Tree Improvement Lab	Insta electronic weighing scale	0.04
College of Fo	restry		
19.	Forest Products and Utilization Lab	SS water bath	0.80
20.	Forest Biology and Tree Improvement Lab	Precision weighing balance	0.31
21.	Forest Biology and Tree Improvement Lab	Digital calliper-2	0.59
22.	Silviculture and Agroforestry Lab	Nursery hand tools	0.10
23.	Natural Resource Management Lab	Binoculars for Students	0.10
24.	Natural Resource Management Lab	Stuart mini rocking shaker	0.99

25.	Basic Scence and Humanities Lab	Deep fridge	0.50
26.	Forest Products and Utilization	Gasoline chain saw	0.19
27.	Forest Biology and Tree Improvement Lab	Water cooler	0.38
28.	Forest Products and Utilization Lab	Sony Handicam	0.53
29.	Forest Biology and Tree Improvement Lab	Manual Fernier Calliper	0.05
30.	Forest Biology and Tree Improvement Lab	Air conditioner	0.45
31.	AABMI Administration Block	RICOH Make Digital Copier Machine (1)	0.99
ASPEE Agri	business Management Institu	te	
32.	SRC Cabin, AABMI	Keyboard (Musical Instrument)	0.13
33.	SRC Cabin, AABMI	Benjo (Musical Instrument)	0.30
34.	Admin block, AABMI	Multifunctional photocopier machine (1)	1.71
35.	Faculty Block, AABMI	Laser Printer (2)	0.22
36.	Examination room, AABMI	Air Conditioner (2)	0.98
College of Ag	griculture, Bharuch	•	
37.	Examination room	Central AC system for the examination hall	4.03
		Total	21.42

Number of Student Beneficiaries availing RAWE under Student READY in the University:

	Name of the University/ College/	No of Students of Beneficiaries along with Stipend given RAWE			
Sl. No.	Foculty				
	Faculty	No	Stipend paid		
		INU.	(Rs. in lakhs)		
1	N M College of Agriculture, Navsari	102	18.36		
2	College of Agriculture, Bharuch	51	9.18		
3	ASPEE College of Horticulture, Navsari	63	11.34		
4	College of Forestry, Navsari	01	0.18		
5	College of Veterinary Science & A. H.	0.00	0.00		
	Total	217	39.06		

**RAWE – Rural Agricultural Work Experience** 

## Number of Student Beneficiaries availing National Talent Scholarship (NTS) in the University:

		]	No of Studen	Grand Total			
	Name of the		G NTS	Р	G NTS	Granu	Iotai
Sr. No.	University/ College/ Faculty	No.	Stipend paid (Rs. in lakhs)	No.	Stipend paid (Rs. in lakhs)	No.	Stipend paid (Rs. in lakhs)
1	N M College of Agriculture, Navsari	37	6.30	36	8.25	73	14.55
2	College of Agriculture, Bharuch	3	0.48	0	0	3	0.48
3	ASPEE College of Horticulture, Navsari	14	2.40	18	3.84	31	6.24
4	College of Forestry, Navsari	11	2.22	3	0.54	14	2.76
5	ASPEE Agribusiness Management Institute, Navsari	0	0	8	2.73	8	2.73
6	College of Veterinary Science & A. H. , Navsari	15	2.76	9	2.40	24	5.16
	Total	79	14.16	74	17.76	153	31.92

Status of Experiential Learning (EL) Module established in the University: Rs. in Lakhs

% Share of income distributed to students (Rs in lakhs)		I	I			I		0.81
Revolving Fund Generated (Rs in lakhs)		68.91	ı			I		0.27
Revenue earned (Rs in lakhs)		I	T			I		1.07
Product being developed under EL		Bio-fertilizer, Azotobacter, Rhizobium, PSB, KSB	Banana plant lets			1		Gerbera -cut flower, Rose -cut flower, Bouquet medium, Annual flowering Plants in small plastic pot, Annual flowering Plants in bag, Annual flowering Plants in big plastic pot, Graffed Adenium, Annuals seedlings in tray, Grafts of Brinjal, Fenugreek immature greens etc.
No. of Students trained under EL		22	22			I		29
Grant Received (Rs in lakhs)		50.00	65.00			7.50	sari	00.09
Name of the EL Modules	f Agriculture, Navsari	Bio fertilizer production	Plant tissue culture unit	culture, Bharuch	Enriched	vermicompost production	e of Horticulture, Nave	Protected Cultivation of Hi- Valued Horticultural Crops
Year of establishment	N M College o	2006-17	2007-08	College of Agri		2017-18	<b>ASPEE College</b>	2008-09

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2011-12	Commercial Production of Horticultural Crops	60.10	29	Mango, Pineapple, Cherry, Citrus, White jamun, Passion fruit plants, Vegetable seedlings Brinjal (jambli), Brinjal (Gulabi), Tomato, Cauliflower, Moringa, Pointed gourd cuttings <i>etc</i> .	1.27	0.32	0.95
2006-07	Post Harvest handling and value addition in Horticultural crops	138.00	29	Nectars, Squashes, Jam, Ketchup, Pulp, Candy, Pickle, Chutney, Drink, Juice etc. From different fruits and vegetables and Tutti Fruity and Aonla Appetizer	1.49	0.37	1.12
College of Fore	estry, Navsari			-	-	-	
2013-14	Commercial Apiculture	70.00	29	Honey Production	1.85	0.46	1.39
2015-16	Development of Quality Planting Material in Forestry	72.50	29	Quality planting production of Forest trees	4.18	0.07	0.22
College of Vete	rrinary Science & A. H	L, Navsari					
2013-14	Broiler and Layer Production	40.00	16	Broiler Birds (Chicken)	Nil	No	Nil
2014-15	Goat production Unit	65.00	Construc	tion of Goat house is comp	leted and act	ivity will be in	tiated soon

### **Curriculum Development & Delivery:**

Sr. No.	Title of Practical/ Instructional Manuals developed
N M College	of Agriculture, Navsari
1.	Ag. Engg. 2.1 - Introductory Soil and water conservation Engineering
2.	Ag. Met.1.1- Introductory Agro meteorology and Climate Change
3.	Horticulture 2.2 - Production Technology for Fruits and plantation Crops
4.	Ag. Stat. 2.2 - Statistical Methods
5.	Ag. Agro. 2.2 - Fundamentals of Agronomy
6.	Ag. Chem. 2.2 - Manures, fertilizers and Soil fertility management
7.	Ag. Chem.1.1 - Fundamentals of Soil Science
8.	GPB. 2.2 - Fundamentals of genetics
9.	GPB 1.1 – Introductory biology
10.	Ag. Chem. 2.1- Agricultural chemistry
11.	Pl. Patho. 1.1-Fundmental of plant pathology
12.	Pl. Patho. 2.2-Introductory plant nematology
ASPEE Colle	ge of Horticulture, Navsari
13.	VSC 506-Systematics of Vegetable crops
14.	BSC 2.5-Principles of Plant Breeding
15.	PPT 3.3-Nematode pests of horticultural crops and their management
16.	HWE 7.3.2-Propagation and production of fruit plants
17.	SSC 1.2-Economics and Marketing
18.	NRMH 2.4-Agro-meteorology and Climate change
19.	BSC 1.3-Inroductory Microbiology
20.	P.H.T 6.3 - Processing of Horticultural Crops
21.	FLA 506-Value Addition in Flowers
22.	PPT 3.2 - Fundamentals of Entomology
23.	PPT 6.8-Apiculture, Sericulture and Lac culture
College of Fo	restry, Navsari
24.	FPU 5.6- Wood Science and Technology
25.	SAF 5.9 - Principles of Silviculture
26.	FPU 4.3 - Medicinal plants and Ethnobotany
27.	SAF 4.7 - Forest Inventory and Yield Prediction
College of Ve	terinary Science & A. H., Navsari
28	Biostatistics & Computer Application
20.	(Unit I – VCI 2016)
29.	Principles of Animal & Population Genetics (Unit II-VCI 2016)
30	Principles of Animal Breeding
50.	(Unit III –VCI 2016)
31.	Veterinary Anatomy Paper - I
32.	Veterinary Anatomy Paper - I
33.	VGO 411-Veterinary Gynaecology

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34.	VGO 421-Veterinary Obstetrics
35.	VGO 511-Veterinary Andrology and Reproductive techniques
36.	LPM practical manual paper-II (Unit: 5 to 8)
37.	Unit-1: Veterinary Bacteriology: (Unit-1)
38.	Veterinary Mycology & microbial biotechnology: (Unit-2 & 3)
30	Veterinary Immunology and Serology, general and Systematic Veterinary: Virology:
59.	(Unit-4 & 5)
40.	UNIT-1: General Pharmacology
41.	UNIT-2 & 3: ANS and CNS Pharmacology
42.	UNIT-4 & 5: Veterinary Chemotherapy and Toxicology
43.	Veterinary Physiology-I (Unit-I & II)
44.	Veterinary Physiology-II (Unit-III & IV)
45.	Unit 1 (General Veterinary Parasitology)
46.	Unit 2 (Trematodes and Cestodes of Veterinary importance)
47.	Unit 3 (Nematodes of Veterinary importance)
Total	47 Practical manuals

Details of Financial Progress of Development Grant : (Rs. in lakh)

SN	Components	Total			
SI	Components	Allocation	Expenditure		
А	CAPITAL				
1.	Works (New Civil Works)	0.00	0.00		
1.1	Construction of Girls Hostel	0.00	0.00		
1.2	Construction of Boys Hostel	0.00	0.00		
1.3	Construction of International Hostel	0.00	0.00		
1.4	Construction of Sports Facilities	0.00	0.00		
1.5	Construction of Educational Museum	0.00	0.00		
1.6	Construction of Examination Hall	0.00	0.00		
1.7	Construction of Auditorium	0.00	0.00		
2.	Jubilee Grant/Renovation of Old Historical Infrastructure	0.00	0.00		
3.	Minor Works : Repair/ Refurbishing/ Renovation and				
	Modernization of Educational Structures; viz. Hostels/	306.34	306.34		
	Laboratories/ Libraries/ Class Rooms/ Green Initiatives				
4.	Equipments				
4.1	Equipment for Central Instrumentation Facilities/ Laboratories /	0.00	0.00		
	Sports Facilities excluding Computers and its Peripherals.	0.00	0.00		
4.2	Minor Equipment for Nodal Cell	0.00	0.00		
5.	Information Technology/ e-Resources/ Web Portal Including	0.00 0.00			
	Ekikrit Krishishiksha Takniki Ayam (EKTA)	0.00 0.00			
6.	Furniture and Fixtures Related to Hostels, Laboratories, Exam				
	Halls and Class Rooms.	0.00 0.00			
	Total A (Capital)	306.34	306.34		

B	REVENUE			
7	Research and Operational Expenses	0.00	0.00	
7.1	Repair and Maintenance of Equipments: Upgradation / Repair /	0.00	0.00	
	AMC of equipments	0.00	0.00	
7.2	Curriculum Development and Delivery: Contingency grants for			
	UG/PG Practical and Preparation of Quality Instructional/	36.00	36.00	
	Manuals.			
7.3	Strengthening of UG/PG Teaching: Participation of Faculty /			
	Ph.D students in Seminars, Conferences, Trainings including /	37.00	37.00	
	Educational Tour within the country only. In no case funding	57.00		
	for foreign travel will be allowed.			
7.4	Student and Faculty Amenities: Tutorials for SC/ST students;			
	Students Counseling, Placement Cell; Health Facilities;	37.00	27.00	
	Personality Development; Recreation Facilities including Agri-	57.00	57.00	
	Unifest & Agri-Sports.			
7.5	Best Teacher Award; Guest and Adjunct Faculty	4.91	4.91	
7.6	Support to Nodal Cell: Facilitating and Co-ordinating Activities	5 10	5 10	
	of Agricultural Education Division	5.10	5.10	
7.7	Support to DEAN: Strengthening of Facilities Required for	50.00	50.00	
	Improving Higher Agricultural	50.00	50.00	
7.8	Education including Examination Cell	51.00	51.00	
	Total B (Revenue)	221.01	221.01	
	Total A + B (Capital + Revenue)	527.35	527.35	

Ten Most Significant Achievements/Impacts out of the ICAR Development Grant provided to the University during the period under report :

- Strengthening of Hostel facilities: ICAR has sanctioned repair/ refurbishing/ renovation and modernization of Hostels. It has strengthened existing facilities and provided better residential facilities for increasing number of admitted girls in various degree programmes at NAU, Navsari. Further, student amenities such as solar water heater, RO for clean drinking water, purchase of new furniture and renovation of hostels facilitated accommodation of students despite enhancing intake over last five years.
- 2. Strengthening of laboratories: Financial aid of ICAR has helped in renovating various laboratories of different constituent Colleges. Besides, purchase of large number of instruments/equipments for various laboratories helped in modernization of laboratories and replacement of older instruments. Moreover, financial aid of ICAR also provided opportunity to replace old furniture in laboratories and classrooms. Minor repair/ renovation and furnishing also strengthened faculty amenities.
- 3. **Strengthening of Library:** With the help of ICAR financial aid, 259 printed books, 241 e-Resources (e-Books), 01 journal were purchased. Further, 1686 thesis, 529 rare books, 518 NAU

publications, 264 question paper set and other important documents has been Digitalized and Uploaded in *Krishikosh*.

- 4. **Strengthening of IT facilities:** Financial aid of ICAR has enabled IT facilities modernization, as important equipments for strengthening and safety of IT server room were purchased. These facilities helped in swift and 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 reporting. For safety of hostels particularly girls hostels and important areas of the University were equipped with CCTV.
- 5. Success of students: During the year 2017, 134 post graduate students of NAU Navsari qualified National Eligibility Test conducted by ASRB, ICAR. Out of 134 students, 67 students of Agriculture, 54 of Horticulture and 6 of Veterinary Science, 5 of Forestry and 2 of Agribusiness faculty successfully qualified NET.
- 6. Achievements of faculties/students: During the year 2017, a total of 16 faculties of NAU Navsari earned best teacher, young scientist, best oral, best poster, best research paper and best article. Two students were awarded first prize in HR contest & third in finance contest at National level competitions and one student was awarded first prize in debate competition at state level.
- 7. **Placement of students:** A total of 209 students of UG/PG got placed including 3 in Central Govt., 33 in State Govt., 4 in PDF/ Foreign and 131 in Pvt./Others. Nearly 38 PG students opted for higher studies at various CAUs/SAUs.
- 8. **Participation in seminar, symposium, conference & capacity building of faculties:** During the period under report a total 126 faculties attended & presented research papers in seminars, symposiums and conferences including participation in capacity building trainings using the financial support from ICAR development grant.
- 9. **Curriculum & development and delivery:** A total of 47 various practical / instruction manual prepared for improvement of higher education during the course the period under report in six constituent colleges of NAU, Navsari.
- 10. Academic Achievements: Out of 42 thesis awarded in the reported year a total of 71 research publications brought out including 48 in < 5 rating, 22 in 5 to 7.5 rating and 1 in > 7.5 rating.

### List of Top Five Priority Areas Related to Higher Agriculture Education Improvement that University Wishes ICAR to Support:

- I. Innovative staff projects
- II. Setting up of Incubation Cell for Start-up
- III. Green Initiative
- IV. Modernization of diagnostic facilities
- V. Student/Faculty Exchange program

Photographs of the Activities Depicting Impact Mentioned during the period under Report:



False ceiling of Class rooms





Benches for Examination Hall – I



Water Cooler



Stage for Examination Hall - II



Educational Tour of UG Students B.V.Sc. Final Year

# **20. Executive Engineer**

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:**

## 41<sup>st</sup>, 42<sup>nd</sup> and 43<sup>rd</sup> meeting was held on 29.07.2017, 21.12.2017 and 08.02.2018, respectively.

S.No.	Designation	Status
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:

#### 5<sup>th</sup> meeting was held on 20.03.2018.

S.No.	Designation	Status
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: Meeting was held on 16.03.2018.

S.No.	Designation	Status
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	Executive Engineer, NAU, Navsari	Member Secretary

## Works Initiated during 2017-18

Sr.	Name of Scheme	Location	Expenditure
No.			(Rs in Lacks.)
1	Construction of minor operation theatre for small	Navsari	14.22
	animal of polyclinic complex for veterinary college at		
	NAU, Navsari		
2	Construction Of Compound Wall At Nau Bardoli Farm	Bardoli	5.00
3	Construction of Proposed Res t room for S.S.K Training hall at NAU, Navsari	Navsari	11.63
4	Construction of Research Laboratory & Farm produce godown at NAU, Waghai	Waghai	56.75
5	Recarpeting/Repairing/extension of campas Roads at varios places at NAU Navsari	Navsari	29.67
6	Repairing and renovation of "E-1" type qtrs at NAU, Navsari	Navsari	1.38
7	Providing And Fixing CRC Cupboard For Boy's And Girl's hostel at N.A.U., Bharuch	Bharuch	4.49
8	Repairing and renovation of V.I.P. Guest house at NAU, Navsari	Navsari	9.01
9	Repairing and Renovation of E -2 type Qtrs."E -1" / 2 at NAU Navsari	Navsari	1.28
10	Repairing And Renovation of Main Gate Near Abm College AT N.A.U., Navsari	Navsari	13.68
11	Providing Galvanium Sheet Roofing Shed For Seminar Hall N.M.C.A. at NAU Navsari	Navsari	0.60
12	Providing External Drainage Line for Fisheries Girls Hostel at NAU Navsari	Navsari	3.08
13	Construct ion Of Shed For Staff Quarters at NAU, Navsari	Navsari	1.73
14	Construction Of Seed Processing Plant Cum Store Under Seed Hub Scheme Of I.C.A.R. at NAU Vyara	Vyara	27.81
15	Construction Of Seed Processing Plant Cum Store Under Seed Hub Scheme Of I.C.A.R. at NAU Navsari	Navsari	27.31
16	Electric Work Of Old Guest House At NAU, Navsari	Navsari	6.95

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17	El ectrification to veterinary UG Boy's hostel extension of 1 <sup>st</sup> floor & 2 <sup>nd</sup> floor on existing hostel at NAU., Navsari	Navsari	5.63
18	Electrification Of Seed Processing Plant Cum Seed Store Under Seed Hub Scheme Of ICAR at NAU, Vyara	Vyara	2.11
19	Electrification Of Seed Processing Plant Cum Seed Sto re Under Seed Hub Scheme Of ICAR at NAU, Navsari	Navsari	2.11
20	Repairing and renovation of old hostel at diploma school at NAU Navsari	Navsari	11.75
21	Construction of Compound Wall at NAU Bharuch	Bharuch	13.92
22	P &F chain link fencing at NAU Navsari.	Navsari	4.88
23	Providing And Fixing Galvanium Sheet Roofing At Class Four Quarter Diploma School Dandi Road at NAU Navsari	Navsari	2.62
24	Repairing of 'B'- type Quarters at N.A.U., Navsari	Navsari	14.09
25	Extension of compound wall for Girl's hostel (ICAR) at NAU, Navsari	Navsari	13.09
26	Construction of shed above farm office at farm no -3 at NAU, Navsari	Navsari	3.29
27	Construction of M. S. Gate for balkridagan at NAU Navsari	Navsari	0.26
28	Repairing & Renovation of Old guesthouse at NAU Navsari (Phase:-1)	Navsari	14.09

Sr.	Name of Scheme	Location	Expenditure
No.			(Rs in Lacks.)
1	Boys Hostel	Waghai	388.40
2	College of Agriculture	Waghai	643.20
3	Repairing and renovation of Polytechnic in Animal Husbandry	Navsari	55.46
4	Construction of Compound wall of NARP farm	Bharuch	40.88
5	Boys Hostel for fisheries faculty	Navsari	164.64
6	Boys Hostel for Veterinary faculty	Navsari	172.85
7	Girls Hostel for Veterinary faculty	Navsari	171.74
8	Goat shed for ELU	Navsari	13.63
9	Boys Hostel for Polytechnic in Horticulture	Paria	211.08
10	D Type Quarters	Paria	36.78
11	Girls Hostel for Polytechnic in Horticulture	Paria	122.93
12	Godown for MCRS	Surat	16.01
13	Resource Center for Organic farm	Navsari	17.87
14	Entrance Road for ASABI	Surat	24.01
		Total	2079.48

# **21. 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 farmers welfare, Government of Gujarat. At present, Navsari Agricultural University has in total 154 development charges schemes, including 34 of education, 17 of Extension Education and 103 of Research.

Abstract of Schemes with Sanctioned Posts (2017-18)									
	Normal Schemes			TASP Schemes			Total		
	With			With			With		
Activity	Post	Without	Total	Post	Without	Total	Post	Without	Grand
	(No. of	Post	Total	(No. of	Post	10141	(No. of	Post	Total
	Posts)			Posts)			Posts)		
Education	13	16	29	5	0	5	18	16	34
Education	(203)	10	(203)	(62)	0	(62)	(265)	10	(265)
Extension	4	0	13	4	0	4	8	0	17
Education	(20)	9	20	(167)	0	(167)	(187)	9	(187)
Dagaarah	44	17	61	12	0	21	56	26	82
Kesearch	(136)	1 /	(136)	(35)	9	(35)	(171)	20	(171)
ICAD. State share	16	5	21	0	0	0	16	5	21
ICAR: State share	(96)	5	(96)	(0)	0	(0)	96	5	(96)
Crond Total	77	17	124	21	0	30	98	56	154
Grand Total	(455)	4/	(455)	(264)	9	(264)	719	50	(719)

#### **Development Charges Schemes (Plan):**

Note: Figures in parenthesis indicates the no. of posts.

Planning and Development committee Meetings held during FY 2018-19						
1	14th Planning and Development committee Meeting06/05/2017					
2	5 <sup>th</sup> Planning and Development committee Meeting	25/09/2017				

Total Budget for the Year 2017-18 (Rs. In Lakhs)						
	_					Revised
			Non			Budget
Head	Pay	Recurring	Recurring	Const.	Total	2017-18
Education	1889.00	735.71	111.58	221.00	2957.29	3057.29
Extension Education	127.38	114.42	11.40	0.00	253.20	258.13
Research	691.48	602.37	63.55	60.00	141740	1896.46
ICAR State Share	223.00	0.00	0.00	0.00	223.00	223.00
Normal Total	2930.86	1452.50	186.53	281.00	4850.89	5434.88
Education	577.95	105.81	48.05	1076.00	1807.81	1609.46
Extension Education	1160.09	134.47	26.59	150.00	1471.15	1657.15
Research	233.60	160.54	3.95	0.00	398.15	398.09
Strengthening of						
Research in Vet. Sci.						
& Animal Husbandry	7.64	16.12	0.00	0.00	23.76	21.82
TASP Total	1979.28	416.94	78.59	1226.00	3700.81	3686.52
Grand Total (Normal + TASP)	4910.14	1869.44	265.12	1507.00	8551.70	9121.40

## Percent share of fund allocation towards major activities under Development Schemes for the Year 2017-18



NEW CONSTRUCTION WORK SANCTIONED FOR YEAR 2017-18					
Sr No.	Name of works	Sanctioned Grants			
Education					
1	Construction of P.G Girls hostel at NAU, Navsari.	221.00			
Research					
1	Construction of pesticide residue lab/food quality testing laboratory, Navsari.	60.00			
Extension Education					
1	Construction of Boys hostel at NAU, Dediyapada.	186.00			
	Grand Total	467.00			

#### **PUBLICATION FOR YEAR 2017-18**

#### **Research Paper Published**

- Mungalpara, K. U., Virja, C.V. and Thumar, V. M. (2017). Constraints Faced by the Banana Growers in Production and Marketing in Bharuch District in South Gujarat. *Trends in Biosciences*, 10(23): 4891-4892. ISSN 0974-8431.
- Lathiya, A. R. and Parmar, G. (2017). Social and Economic Empowerment of Rural Women by cooperative: Evidence from Dang district (Gujarat). *International Journal of Business and Administration Research Review*, 2(18): 8-11. ISSN: 2347-856X
- Thumar, V. M. and Singh, N. (2017). Impact of technological changes on Doubling the Farmers Income. *National conference*, PP: 116.
- Singh, N. and Thumar, V. M. (2017). Impact of climate change on farmer's income: Adaptation and mitigation strategies. *National conference on Technological changes and Innovations in Agriculture for Enhancing Farmers Income*, PP: 171.
- Singh, N., Sharma, P., Dixitand, A. K. and Thumar, V. M. (2017). Role of goat farming in doubling farmers income: A case study of South Gujarat region. *Silver Jubilee of Agricultural Economics Research Association*.
- Choudhary, K., Rathod, A. and Lathiya, A. R. (2017) An Economic analysis of Value addition and Collective Marketing of selected Agricultural Commodities in Dangs District of south Gujarat. *The Swedish International Development Cooperation Agency and Agricultural University Jodhpur, Rajasthan.*
- 5 Thumar, V. M. and Viraja, C. V. (2018). Fruits and Vegetables : An Important Export Basket of India. *National Seminar on Technologies and Sustainability of Protected Cultivation for Hi-Valued Vegetable Crops.*

#### **Books/Book Chapter Published**

• Patel, K. A., Thumar, V. M., Lathiya, A. R., Mungra K. S., Limbachiya, P. V. and Sabhaya, A. (2017-18). *Plan Schemes Appraisal*. University Publication No. (50) 2017-18

Varieties/ Hybrids developed by NAU during 2017-18



Rice: GR-15

Rice : GRH-2



Pigeonpea : GT-104



Mung bean : GM-7



Finger millet: GN-8



Sorghum: GFS-6



Sorghum: Phule Revati (Endorsement)



Tomato : GT-7



Malabar Neem:GNMD-1



Adenium: GAd-1



Adenium: GAd-2



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