

ANNUAL REPORT

2020-21

College of Agriculture
NAU, Waghai



COLLEGE OF AGRICULTURE

The Institute

College of Agriculture, Waghai is one of the constituent colleges of Navsari Agricultural University established under the Tribal Sub-Plan funded by the Government of Gujarat with the vision of creating a top class institution of learning dedicated to excellence in agricultural sciences, industrial technology, and allied fields, research and development, and extension and training for global competitiveness and cooperation. Students were admitted to the four-year B.Sc. (Hons.)



Agriculture degree programme for the first time in July 2012-13, when the College of Agriculture first opened its doors. College of Agriculture, Waghai has graduated 251 students since its commencement. This college is accredited by National Agricultural Education Accreditation Board of ICAR during 2018. The recommendations of the Fifth Dean's committee reports have already been adopted at the college.

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

College also conducts Student Ready and RAWE programme for the final year students. The RAWE Programme covers a wide range of topics and it offers a direction to the students to develop their competence, capacity and ability to acquire an expertise. The college publishes "*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 of agricultural sectors are also the priority areas of this college.

Faculty information

Sr. No.	Name of the Post	Sanctioned posts	Filled posts	Composition of filled posts							
				Educational qualification				Domicile state		Gender	
				Master		Doctoral		Gujarat	Out states	Male	Female
				Gujarat	Out states	Gujarat	Out states				
1.	Principal	01	00	-	-	-	-	-	-	-	-
2.	Professors	03	03	-	-	03	-	02	01	03	-
3.	Associate Professors	08	04	-	-	04	-	02	02	04	-
4.	Assistant Professors	16	15	07	-	08	-	09	06	13	02
Total		28	22	07	-	15	-	13	09	20	02

List of Departments

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

Academic Programmes offered

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

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

Semesters	Number of Courses	Total Credit (Theory +Practical)
First	11	14+08=22
Second	11	17+09=26
Third	10	15+09=24
Fourth	12	15+10=25
Fifth	11	14+10=24
Sixth	11	14+11=25
Seventh	01	0+20=20
Eight	01	0+20=20
Total		89+97=186

Students Information

Summary of Students Admitted during AY 2020-21

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

Summary of Students Enrolled during AY 2020-21

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

Summary of passed out students during AY 2020-21

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

Student's Fellowship during AY 2020-21

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

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

Sr.	Category	Minimum requirement of Marks (%) (PCB)	Cut of Marks (%)
1	General	40	58.83
2	ST	35	42.48
3	SC	35	48.07
4	OBC/SEBC	40	54.03

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

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


Details of students qualified in ICAR JRF examination


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

Placement Cell

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

Activities of students and faculty members at the College





Organized constitution Day on 26.11.2020

through virtual mode



Celebrated the National Voters Day on 25.01.2021



Celebrated the Republic Day at College of Agriculture, Waghai on 26.01.2021



Organized International Women's Day at College of Agriculture, Waghai on 08.03.2021

NSS activities during AY 2020-21

Sr.	Activity	Date/ period	No of Volunteers
1.	Constitution Day	26.11.2020	100
2.	National Voters Day	25.01.2021	35
3.	Republic Day Celebration	26.01.2021	45
4.	International Women's Day Celebration	08.03.2021	100

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

Sr.	Name of the projects	Budget Head	Funding agency	Name of department
1.	Establishment of Center of Excellence on Mushroom Research at Dang District	14053	RKVY	Plant Pathology
2.	Establishment of Bio-Agent	18182	NHM	Plant Pathology

	Production Unit for Organic Dang			
3.	Quality Planting Material Production in Horticultural Crops (TSP)	2115/01	Education division ICAR	Horticulture
4.	Agricultural Waste Management through vermicompost (TSP)	2116/01	Education division ICAR	Agronomy

Educational/Infrastructural Facilities

Education infrastructure like Buildings, classrooms, laboratories, and equipment are crucial elements of learning environments in college. There is strong evidence that high-quality infrastructure facilitates better instruction, improves student outcomes, and reduces dropout rates, among other benefits.

Digital Classrooms: Each lecture hall is equipped with comfortable sitting for all students. It is decorated with podium and the modern facilities for presentations.

Library: The College Library serves various purposes like serving the academic needs of students and faculties, acting as a center for collection of books, journals related to a various branches of education.

Departmental Laboratory: Practical activities have great significance in the teaching learning process and help to develop important skills, and a broad understanding of scientific concepts. With this objective in our mind we have various departmental laboratories in our college. Departmental laboratories are richly equipped with all the equipment's necessary for performing the practical.

Computer Laboratory: College has computer laboratory with high speed internet facility to enable students for global competitiveness.

Language Laboratory: Language lab is equipped with computers having internet connectivity to cater to audiovisual learning with a view to enhance communicative skills. It is enabled with Orell Talk software for language learning.

Seminar hall: The Colleges has seminar hall with capacity of 140 seats, well equipped with latest facilities. It is useful to the students of the college to give their presentations and organize other activities.

Auditorium: The college building consists of ultra-modern auditorium with all necessary AV aids with capacity of 450.

Sports Facilities: College has necessary facilities for both indoor and outdoor games including separate Gymnasium for physical development of boys and girls.

Hostel for Girls & Boys: College of Agriculture, Waghai to providing excellent hostel facilities separately for boys & girls within the campus with all modern amenities. The hostel also has a recreation room fitted television and indoor and outdoor sports facilities. The hostel kitchen provides excellent and hygienic food.

Experiential Learning Unit

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



Students involved in various activities for production of vermicompost

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



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

Research publications

Sr. No.	Publications details	NAAS rating
01	Damasia D. M. , Patel Z.P. and Bambharoliya R.P. (2020). Effect of abiotic factors on seasonal incidence of tea mosquito bug, <i>Helopeltis antonii</i> Signoret of cashew in South Gujarat, Journal of Entomology and Zoology Studies, 8(5):695-698.	5.53
02	Bhinsara, D.B., Verma, P.D., Pastagia, J.J. and Parmar Hitesh (2021). Study on knowledge of owners of milch animals about animal breeding in tribal area of south Gujarat. Int.J.Curr.Microbiol.App.Sci.,10(3):1-5. doi: http://doi.org/ 10. 20546/ ijcmas.2021.1003.xx	5.38
03	Damasia D. M. , Patel Z.P. and Makwana A.I. (2020). Studies on the Biology of Tea Mosquito Bug, <i>Helopeltis antonii</i> Signoret (Hemiptera: Miridae) on Cashew, Int.J.Curr.Microbiol.App.Sci (2020) Special Issue-11: 2381-2388.	5.38
04	H. P. Dholariya , V. J. Zinzala, J. V. Patel and V. M. Patel (2020). Zinc nutrition in finger millet (<i>Eleusine coracana</i> (L.) Gaertn.) for better nutritional security. International Journal of Current Microbiology and Applied Sciences, Special issue-11: 1082-86	5.38
05	Bambharolia R. P. , Khunt M. D., Deshmukh A. J. , Prajapati V. P. and Vavdiya P. A. (2020). Isolation, screening and characterization of endophytic bacteria from root of finger millet (<i>Eleusine coracana</i> (L.)) for different plant growth promotion (PGP) activities: An in-vitro study. Journal of Pharmacognosy and Phytochemistry. 9(5): 539-545.	5.21
06	Damasia D.M. , Pastagia J.J. and Kachela H.R. (2020). First report of the occurrence of fall army worm, <i>Spodoptera frugiperda</i> (J E Smith) on finger millet (<i>Eleusine coracana</i> Gaertn) in Gujarat, India. Indian Journal of Plant	5.07

	Protection 48(4): 368-371	
07	Prajapati,V.P., R.F. Chaudhary, A. J. Deshmukh, R.P. Bambharolia , N.K. Gajre (2020). Management of blast (<i>Pyricularia grisea</i>) of finger millet with fungicides and biocontrol agents. Plant Disease Research, 2020; 35(1): 36-41.	4.76
08	Prajapati V. P., Chaudhary R. F., Deshmukh A. J., Bambharolia R. P. and Gajre N. K. (2020). Management of blast (<i>Pyricularia grisea</i>) of finger millet with fungicides and biocontrol agents. Pl. Dis. Res. 35 (1): 36-41.	4.58
09	Deshmukh, A.J. ; R. S. Jaiman , R. P. Bambharolia and Vijay A. Patil. (2020) Seed Biopriming– A Review. International Journal of Economic Plants 2020, 7(1):038-043.	4.37
10	Deshmukh, A.J. ; A. N. Sabalpara and R. P. Bambharolia (2020) Efficacy of Fungicidal Seed Treatments on Seed Borne Diseases of Green Gram. International Journal of Economic Plants 2020,7(3):138-143.	4.37
11	Damasia D. M. , and Patel Z. P. (2020). Bio-efficacy of Insecticides and Botanical against Tea Mosquito Bug, <i>Helopeltis antonii</i> Signoret Infesting Cashew, Ind. J. Pure App. Biosci. 8(4), 370-374	4.21
12	Rakesh Kumar Jaiman, S.K. Acharya, N. P. Pathan, A. J. Deshmukh , H. A. Desai, P. K. Patel and A. U. Amin. (2020). In Situ Effect Of Seed Bio-priming Techniques on Seedling Of Vegetable Crops. International Journal of Biotech Trends and Technology. 2020; 10(4): 6-16 (Peer reviewed scopus indexed journal)	-
13	Rakesh Kumar Jaiman, S.K. Acharya, N. P. Pathan, A. J. Deshmukh , H. A. Desai, P. K. Patel and A. U. Amin. (2020). In vitro effect of seed bio-priming techniques on seed germination and seedling vigour of few vegetable crops. Journal of Applied and Natural Science.2020, 12(4):702 - 709. (UGC scopus indexed journal)	-
14	Attar Sanjay and Kumar Navneet Management of Banda (<i>Dendrophthoe Falcata</i>) A Phanerogamic Plant Parasite of Mango And Sapota JPDS Vol - 13(2):85-88.2021	-
15	Vimal B. Patel , R.D. Morena (2020). Use of Appropriate Loss Function in Rainfall Prediction using Deep Learning. International Journal of Engineering and Advanced Technology 2020 ; Vol. 9, Issue 6: 2249-8958.	-

	(Impact Factor 5.97)	
16	Vimal B. Patel , R.D. Morena (2020). Trend Analysis and Prediction of Rainfall using Genetic Algorithm. SHODH SANCHAR BULLETIN 2020; Vol. 10, Issue 14: 2229-3620.	-

HRD Programmes

Participation of Scientists in Conference/ Seminars/ Symposia/ Workshops/Trainings (2020-21)

Particulars	Participants
Seminar/Symposia/Conference	11
Winter/Summer Schools	00
Workshop/Short term training	03
Total	14

Staff attended Seminar/Symposia/Conference during the year 2020-21

Sr. No.	Names	Details of seminar/ conference/ Symposium	Place	Date/ Period	Durati on
1	Dr. P. A. Vavdiya	International conference on "Global approaches in natural resource management for climate smart agriculture (GNRSA-2020) during pandemic era of COVID-19	Agricultural Technology Development Society at Meerut, UP	26-28 February, 2021.	3 days
2	H. P. Dholariya	International conference on "Global approaches in Natural Resource Management for Climate Smart Agriculture during pandemic Era Covid-19"	Shobhit Deemed University, Modipuram, UP, India	26-28, February, 2021.	3 days
3	Dr. D. M. Damasia	International Web Conference on Perspective on Agricultural and Applied Sciences in Covid-19 Scenario organized by	Agricultural & Environmental Technology Development Society (AETDS), U.S. Nagar, Uttarakhand, India	4th -6th October, 2020	3 days
4	Dr. D. M. Damasia	International conference on Global Approaches in Natural Resource Management for Climate smart Agriculture during Pandemic Era of Covid-19	Agricultural Technology Development Society, Modipuram, Meerut, UP,	26th -28th February, 2021.	3 days
5	Dr. V. M. Patel	National webinar on "Sustainable Agriculture	Dept. of Agronomy,	4-8 January,	5 days

		through Natural Resource Management”	CoA, NAU, Bharuch	2021	
6	Dr. D. M. Damasia	National symposium on Plant Health Management	Dept. of Plant Pathology and Entomology, College of Agriculture, NAU, Bharuch	2nd - 4th November, 2020.	3 days
7	Mr. V. B. Patel	International Conference on Science, Technology and Innovation	Indian Academicians and Researchers Association (Online)	27th December 2020.	01 days
8	Mr. R. P. Bambharolia	International conference "Global Approaches in Natural Resource Management for Climate Smart Agriculture" (GNRSA- 2020) during Pandemic Era of COVID-19”	Shobhit Deemed University, Modipuram, Meerut, UP, India.	26 th - 28 th February	03 days
9	Navneet Kumar	4th international Conference Global Approaches in Natural Resource Management for Climate Smart Agriculture (GNRSA-19)	Shobhit Deemed University Modipuram, Meerut, U.P.	26 th - 28 th February	03 days
10	Vinay M. Patel	National webinar on “Sustainable Agriculture through Natural Resource Management”	Dept. of Agronomy, CoA, NAU, Bharuch	4-8 January, 2021	05 days
11	Mr. R. P. Bambharolia	Presented Oral paper entitled “Isolation, screening and characterization of endophytic bacteria from root of Finger millet (Eleusine coracana (L.)) for different plant growth promotion (PGP) activities: an In-vitro” in National symposium on “Plant Health Management”	Dept. of Agronomy, CoA, NAU, Bharuch	4-8 January, 2021	05 days

List of faculties participated in Summer/winter/short course during the year 2020-21

Sr. No.	Name	Summer/winter school details	Date/Period	Place	Duration
-Nil-					

Participation in workshop/short term training during the year 2020-21

Sr. No.	Names	Details of workshop/short term training	Place	Date/ Period	Duration
01	Dr. D. M. Damasia	“DIGICULT- Spreading Digital Culture to the Library Professional, Readers and Researchers”	NAU, Navsari	8th to 12th June, 2020	5 days
02	Dr. D. M. Damasia	Introduction to Plant Biosecurity and Plant Quarantine.	National Institute of Plant Health Management, Hyderabad	4th -8th January, 2021.	5 days
03	Dr A. J. Deshmukh	Training or Exposure visit to IIHR Bangalore to observe and learn the setup of mechanized mushroom spawn production unit.	IIHR, Bangalore	March 14 to 17, 2021	3 days

List of TV/ Radio talks

Sr. No.	Name of faculty	Topic/title	Date	Radio/ TV talk
-Nil-				

Ongoing Educational/research/ Extension projects:

Sr. No.	Name of the projects	Funding agency	Location
1	Establishment of Center of Excellence on Mushroom Research at Dang District	RKVY	Waghai
2	Establishment of Bio-Agent Production Unit for Organic Dang	NHM	Waghai
3	Quality Planting Material Production in Horticultural Crops	Educational division ICAR - TSP	Waghai
4	Agricultural Waste Management through vermicompost	Educational division ICAR - TSP	Waghai
5	Bio-composting of rice and finger millet straw by potent cellulolytic isolates (As PI)	Departmental trial	HMRS Farm, Rajendrapur
6	Response of finger millet (<i>Eleusine coracana</i> (L.) Gaertn.) genotypes to osmotic stress and salinity stress at seedling stage. (As PI)	Departmental trial	HMRS Farm, Rajendrapur
7	Survey of natural enemies of <i>Helicoverpa armigera</i> (Hubner) in gram (As PI)	Departmental trial	Biocontrol lab, College of Agriculture, Waghai
8	Survey of natural enemies of <i>Spodoptera frugiperda</i> (J. E. Smith) in maize (As PI)	Departmental trial	Biocontrol lab, College of Agriculture, Waghai
9	Seasonal incidence with different dates of sowing on incidence of insect pests of finger millet (As PI)	AICRP trial	HMRS farm, Rajendrapur
10	Evaluation of little millet (<i>Panicum miliare</i>) initial advanced varieties to shoot fly (LIAVT) (As PI)	AICRP trial	HMRS farm, Rajendrapur
11	Evaluation of finger millet initial varieties against insect pests (FMIVT) (As PI)	AICRP trial	HMRS farm, Rajendrapur
12	Evaluation of finger millet advanced varieties against insect pests (FMAVT) (As PI)	AICRP trial	HMRS farm, Rajendrapur
13	Perception of UG students towards educational environment of College of Agriculture, Waghai (As	Departmental trial	College of Agriculture,

	PI)		Waghai
14	Evaluation of locally available substrates and their combinations for the cultivation of oyster mushroom in the Dangs. (As PI)	Departmental Trial	CoA, Waghai
15	Evaluation of different chopped stalk and grain spawns for the cultivation of oyster mushroom in the Dangs. (As PI)	Departmental Trial	CoA, Waghai
16	Evaluation of locally available substrates and their combinations for the cultivation of milky mushroom in the Dangs. (As PI)	Departmental Trial	CoA, Waghai
17	Nutritional Analysis of cultivated and naturally available edible mushrooms from the Dang district of south Gujarat. (As PI)	Departmental Trial	CoA, Waghai
18	Studies on production potential of different Pleurotus spp. (Oyster Mushroom)	Departmental Trial	CoA, Waghai
19	Impact of different level of Calcium Carbonate (CaCo ₃) on Growth and yield of Oyster Mushroom (Pleurotus Spp.) (As PI)	Departmental Trial	CoA, Waghai