

ANNUAL REPORT

2018-19



Muhammad Nawaz Shareef
University of Agriculture
Multan



*In the name of **ALLAH**,
the most **Beneficent**, the most **Merciful***



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VICE CHANCELLOR'S MESSAGE

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Dear Readers

I feel elated to presenting you the Annual Report 2018-19 of MNS University of Agriculture, Multan. The report encompasses yet another year of performance and achievements of the University on the journey to carry out its core objective of human development, R&D through resource mobilization, academia-industry linkages, promoting entrepreneurship, developing collaborative activities with national and international organizations, outreaching farming community and contributing towards collective growth of agro-based development of the country.

The 2018-19 remained yet another year of transformation and positive development for UAM. We are steadily but enthusiastically implementing our strategies according to our "Vision 2030" and looking to the future with a great deal of excitement and optimism. Our focus in the year ahead will be on achieving our set goals for service and delivery through building on our strengths and harnessing the opportunities.

The most decorated event during the fiscal year 2018-19 was the 1st Convocation of the University held on 15th February, 2019. Another achievement was the 5th position of UAM all over Pakistan and 361st globally as World's Most Sustainable University in UI GreenMetric World University Rankings. The University successfully organized the Mango Festival 2018 in Multan and Islamabad, Consultative Meeting on Mango Mission 2030, Mango growers training in an innovative practice of Small Tree System to establish Ultrahigh Density orchards, First Mango Blossom Festival, 2nd Sino-Pak Cotton Conference, Cotton Mission 2025, International Conference on High Quality Fodder and Forage Production in Climate Shift Paradigm, Climate Smart Agriculture, 1st Aus-Pak Conference on Pulses for Food Security, The Contours of National Unity and numerous others. Science for Farmers remained integral to every scientific conference. Further, the projects like Kitchen Gardening, Rooftop Farming, Hydroponics, Model Villages, Tree Plantation campaigns have grown to become an integral part of the university's continuous efforts of community services.

University continued to institute new degree programs, like institution of Poultry Science, Fisheries & Aquaculture and Agro-Industrial Engineering Technology, at undergraduate level, Biotechnology, Plant Pathology, Seed Science and Technology, Agricultural and Resource Economics and Computer Science at postgraduate level. Research and development culture at the campus improved significantly, new infrastructure was added, faculty was able to publish research papers and won new grants from PARB and HEC under various schemes like TDF, NRPU, SIOP etc. The hybrids developed in wheat by the university funded by DFID were demonstrated to the stakeholders.

Besides academic and research-based activities, the University actively engaged its students in various co-curricular, extra-curricular and sports activities to provide ample ground for students to display their talent, abilities, leadership skills, and professionalism.

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I must reiterate that it has truly been a humbling experience and unparalleled privilege to lead this dynamic and emerging institution with a potential of becoming a world-class agriculture university. I look forward to building on our traditions and significant improvements of the past year and to continuing to support our dedicated faculty, devoted administrative staff, and talented students to achieve their full potential in the years to come.

Prof. Dr. Asif Ali
Vice Chancellor

MNS-University of Agriculture, Multan, started its academic activities in 2012. However, the real kick-start of the University as an emerging educational institute was in the year 2016, and since then, it is progressing by leaps and bounds. This annual report documents another year of the University's journey and highlights its continuous growth and improvement in all expanses.

The report starts with an overview of the University, highlighting quick facts regarding institutional mission, vision, goals, greater agenda and core values. The first chapter covers the Academic Activities describing the degree programs offered and some details of faculties and departments besides key achievements. The chapter also presents a brief profile of Graduate Resource Center, which has been established to enhance the quality of graduate training to young researchers to cope with challenges of the agriculture sector in the country and around the world.

The Research and Development activities including research projects, publications, workshops, seminars, conferences, research linkages and business incubation activities are presented in the second chapter. This year faculty submitted 126 different research projects to various national and international funding agencies including HEC, PARB, PSF, BISP, Royal Society UK etc. and funding was awarded to 24 projects. The University organized 08 national and international conferences, 37 national and international seminars and 23 trainings/workshops with 61 other outreach, recreational and capacity building activities. This chapter also covers information related to Business Incubation Center established at the varsity to translate research findings of scholars into new products and technologies and provide entrepreneurs with an array of targeted resources and services.

Chapter three deals with Quality Assurance and important steps towards ensuring quality of education and research at the University. The Quality Enhancement Cell (QEC) of the varsity is mandated to ensure quality teaching and research through continuous assessment for better outcomes. This chapter outlines the details about the initiation of new postgraduate degree programs, annual technical review of TTS faculty, plagiarism checking, capacity building of faculty and students and impact of quality assurance at the campus.

The fourth chapter encompasses Faculty Development through trainings/workshops attended by the faculty to hone their teaching, research, and leadership skills. This chapter also includes the information regarding the travel grants. Till the end of the academic year 2018-19, the total number of faculty reached to 100, out of which 70 possess doctorate degrees.

Chapter five elaborates quick facts about discipline-wise and gender-wise students enrollment(), and teacher-student ratio etc. The student enrollment as of June, 2019 was 2,449. The maximum enrollment of 1,122 students was observed in B.Sc. (Hons.) Agriculture program. Furthermore, 257 students were enrolled in M.Sc. (Hons.) programs of agriculture, and 24 scholars were pursuing doctorate degrees. Chapter six 'Universities Building Economies' contains information about linkages developed by the University with local and foreign institutions/organizations, collaborative events organized like Cotton Seminar, Science for Farmers, Mango Festival, and detail regarding funded short courses to impart skills development education.

The detail of activities carried out by Career Development Center and Placement Bureau for reaching out to potential employers and increasing employment opportunities for graduating students is also part of this chapter.

Strengthening of Physical Infrastructure plays a vital role in the development of any educational institute. On the other hand, Strengthening of Technological Infrastructure is also essential as it brings new opportunities and advanced means for improving access and quality of higher education. Chapter seven exhibits the information regarding the construction projects undertaken at the University, the next chapter provides detail of ICT infrastructure and automation services including research equipment, digital library, PERN services, video conferencing, wireless LAN, biometric attendance system, Office 365 and online admission portal.

Chapter nine is about “University Building Communities” that reveals information about the farming and scientific community service-oriented activities, which the varsity considers as its obligation. The University has an active policy of public service and vigorously engages the community in all its academic and non-academic activities. Some major events/activities during this year include community awareness seminars of SIOP Projects, awareness seminar for farmers on pink-bollworm and whitefly, course on social and religious tolerance, awareness about polio and breast cancer, kitchen gardening, clean and green Pakistan campaigns, awareness seminar about consumer rights, kick-off event: harbingers of change, celebration of international women's day, seminar on inclusive society, first ever Dalit's Mela and mango blossom festival, plant centric meal competitions, Conference on "The Contours of National Unity", seminar on traffic awareness and road safety, cultural shows to express and promote diversity and pluralism, Aman Mushaira, tree plantation campaign, kitchen gardening project, outreach activities of plant for life society, walk regarding world water day, and farmer's conventions. Various awareness seminars on different social issues especially on corruption were also organized by the University during the reporting year. Moreover, international conferences on innovations in cotton breeding and biotechnology, soil health in a changing climate, climate smart agriculture, wheat and pulses for food security, and high quality fodder and forage production were also held.

Besides education, Sports and co-curricular activities are helpful in developing strong personalities and instilling various traits in students. The sports events organized / participated by the University during the year 2018-19 are elaborated in Chapter ten. Whereas, Chapter eleven 'Universities Building Leadership' features various activities carried out by different student societies and clubs, established to inculcate a sense of leadership in students, under the umbrella of Directorate of Students Affairs. The Chapter 12 provides Financial Information about development and non-development budget and expenses made by the University, while Chapter thirteen gives a glimpse of the University Governance.

Chapter fourteen tells about Office of Resource Generation and Development, its initiatives and future plans. The next chapter 'External Linkages' specifies the MoUs/agreements signed between MNS-UAM and national/foreign institutions/organizations for promoting R&D activities through external collaboration. During the 2018-19, the University signed 12 MoUs with international institutions, while the 11 agreements were executed with private and public-sector partners from Pakistan. The report concludes with Chapter sixteen that provides detail of medical / health facilities for employees and students of the University.

MULTAN THE CITY OF SAINTS

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Multan has remained a center of learning, culture and civilization from ancient times. It is one of the oldest living cities in the world. A Chinese traveler, Hiuen Tsang, visited this city in 641 A.D. and mentioned its name as 'Mu-lo-san-pu-lu', a translation of 'Mulasthan-Pura'. The famous Iranian scholar, Al-Beruni came to this city with his master, Sultan Mahmud Ghaznavi, in 1015 A.D., and referred to it as 'Mulatana'. Other historians namely Masudi (915 A.D.) and Ibn-e-Batuta (1334 A.D.) also wrote about the city in their travelogues. For centuries, Multan has served as a trade hub between South and Central Asia. The city now stands as a combination of old and new Pakistan culture and has developed into a commercial and industrial center.

Multan is also known as "Mandina-tu-Aulya", the city of saints. Several tombs and "Khanqahs" (hospices) of sufi scholars and saints have become the architectural landmark of this city. Some eminent saints buried here are Hazrat Bahauddin Zakariya, Shah Rukn-e-Alam, Shamsuddin Sabzwari (also known as Shah Shams), Shah Yousaf Gardez and Musa Pak Shaheed. Their shrines are beautifully decorated and ornamented with blue tiles, mosaic work and delightful Kashi Gari and Naqashi work, for which Multan is famous. The tomb of Shah Rukn-e-Alam is on the list of UNESCO World Heritage Site.

The city is located at 740 ft. above sea level and spread over an area of 3,721 square kilometers. Positioned almost in the center of Pakistan, Multan is at an approximate distance of 950 km from Karachi, 630 km from Islamabad and 356 km from Lahore. The river Chenab is flowing in the west of Multan at a distance of six kilometers. The City is well connected with other parts of the country via excellent road and rail network and an International Airport. The vast plain of Multan is dissected by numerous canals and water channels, which make its soil ideal for agriculture, cultivation of crops and growing fruits and vegetables. The major crops of Multan include wheat, cotton, sugarcane, rice, maize, sunflower, fodder crops etc., minor crops involve rapeseed and mustard, pulses i.e. chickpea, lentil, mung bean and mush bean etc., whereas mango, citrus, guava, date-palm, pomegranate, falsa, jujube, banana, strawberry and grapes are among popular fruits grown in the area.



Multan is called the city of Mangoes for a reason, as its stiflingly hot climate provides the fruit a perfect environment to ripe into juiciest, thickest and the most aromatic mangoes in the world. Some popular varieties of Multani mangoes are 'Anwar Ratole', 'Langra', 'Dusehri' and 'Chaunsa'. Each of them is different in taste, size and quality of pulp. Multani Sohan Halwa, made of sugar, desi ghee and wheat flour and garnished with nuts and pistachios, is a special dessert, that every visitor to Multan takes with him as a compulsory item. Beautiful blue tiles, blue pottery, Multani Khussa (shoes), embroidered clothes for men and women and camel skin wares and camel bone jewelry are some other designated products of Multan.



The reminiscence of old Multan city around the fort with its six gates give a glimpse to the visitors of its past glory. The new city has all hustle and bustle of a modern habitat, with wider roads, overhead bridges, glass showcased shops of electronics, furniture and clothes, busy markets, desi and fast food restaurants etc. All facilities like hospitals, schools, colleges, universities, banks, parks and other public utilities are available in the city. Majority of Multani people speak Saraiki language, but Punjabi and Urdu are also widely spoken.



MNS UNIVERSITY OF AGRICULTURE MULTAN

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MNS University of Agriculture, Multan (MNSUAM) is an HEC recognized higher education institution that started its academic activities in 2012. Since then, the University has made rapid progress in terms of expansion of its academic programs, students enrolment, physical infrastructure, campus network, and hiring of highly qualified and experienced academic and administrative staff. As a matter of fact, MNSUAM is one of the fastest growing academic institutions of Pakistan, which is evident in the reports and comments made by officials from HEC, NAEAC, Agriculture Department, Govt. of the Punjab other local and foreign experts, representative of private organizations, farmers, and community who have visited the varsity in recent time.

The main campus of the University is located at Agriculture Complex, Old Shujabad Road, Multan, neighboring several different wings and formations of Punjab Agriculture Department located within a radius of 2-3 kilometers. These include Mango Research Institute, Central Cotton Research Institute, Cotton Research Station, Agricultural Mechanization Research Institute, Soil and Water Testing Laboratory, Directorate of Water Management, Agricultural Extension Wing, Pest Warning and Quality Control of Pesticides, Fisheries Department, Federal Seed Certification and Registration Department. Since all departments have a common agenda of facilitating the farmers, that is why all offices and the University have been combined under the ambit of "Agriculture Complex".



After successfully getting possession of the 180 acres of allotted land at Multan, the construction work of University buildings including Academic Block, Administration Block, Girls and Boys hostels, Faculty and Staff residences etc., has been completed. For carrying out agricultural research activities, the University has established agricultural farms at the main campus as well as at Jalalpur Pirwala comprising 500 acres.

Over the years, the University has introduced several degree programs to provide multidisciplinary education to the students with innovative approaches. Besides bachelor's level degree programs in Agriculture, Agribusiness, Computer Science and Information Technology; the University also offers F.Sc. Pre-Agriculture, M.Sc. (Hons.) and Ph.D in various disciplines of Agricultural Sciences. The University has also started B.Sc. (Hons.) Human Nutrition and Dietetics, B.Sc. (Hons.) Poultry Science, B.Sc. (Hons.) Fisheries and Aquaculture, B.Sc. Agro-Industrial Engineering Technology. Moreover, six new MS/M.Sc./PhD programs were initiated this year after getting NOC from HEC.

The University has strengthened its teaching resources by hiring qualified faculty through BPS, TTS and IPFP appointments through a transparent and rigorous process of recruitment. The administrative offices have also been manned with qualified and experienced staff members to provide necessary support to the University for carrying out its functions. The Office of Research, Innovation and Commercialization (ORIC) is working for capacity building of the faculty for enhancing research activities. The Quality Enhancement Cell (QEC) is mandated to ensure quality teaching and research through continuous assessment for better outcomes. The Directorate of Students Affairs provide all necessary support to students with respect to their admission, selection of subjects, registration, financial support and personality development etc., whereas the Career Development Center helps them find suitable jobs after completion of their degrees.

The University regularly conducts national and international events including conferences, seminars, workshops and festivals. Some activities have now become the trademark of this University such as Sino-Pak International Cotton Conference, Spring Festival, Kisan Mela, Fish Mela, Annual Cotton Seminar and Mango Festival. The University also got the privilege of becoming first ever institution of Pakistan to organize an International Mango exhibition in a foreign country i.e. Uzbekistan. The University organized 2nd Sino-Pak Cotton Conference, Cotton Mission 2025, International Conference on High Quality Fodder and Forage Production in Climate Shift Paradigm, Climate Smart Agriculture, 1st Aus-Pak Conferences on Pulses and Wheat for Food Security, The Contours of National Unity and numerous others. With a vision to highlight a positive image of our country onto the canvas of the world and lure international markets for bilateral trade, investment and business, MNSUAM is actively playing its part to explore new horizons for economic betterment of Pakistan.





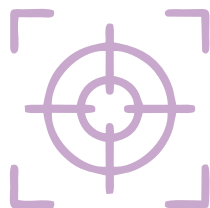
Vision

To develop a world class university in agricultural and allied sciences by providing effective systems and leadership for professional learning, research, entrepreneurship and community service.



Mission

To provide food security and build knowledge based economy through intellectual and social transformation.



Goals

1. Building infrastructure and environment conducive for professional learning.
2. Instituting critical thinking, skills and professional attitude through internationally competitive programs and using advanced pedagogical techniques.
3. Providing enabling and cooperative environment for collaborative R&D, entrepreneurial ecosystem and social mobilization through competition, innovation and business development.
4. Promoting a culture of creativity, openness and responsibility where effective University-Industry-Community linkages are established and nurtured.
5. Establishing strategic collaborations with reputable national and international institutions to align capacity building, research and outreach with local and global paradigms.
6. Developing a diversified rural economy that is dynamic, technologically advanced and globally competitive to support farming system and agro-industry.

Greater Agenda





Focused in direction and execution

Delivering programs that address the diverse needs of farming community, agro-industries and the economy of country.



Accountability

Ensuring that the performance of all the employees is measured against the achievements of the strategic goals set by MNS-UAM



Comprehensive

Providing learning opportunities for inter and cross disciplinary areas encompassing the whole science of agriculture from basic and engineering sciences to growing crop plants and rearing livestock and from rural sociology to agricultural business & marketing



Professionalism

Building and maintaining a highly skilled, diverse and motivated workforce.



Excellence in learning (ecology)

Promoting learning, research and creative activity that fuels discovery process, advance knowledge, and enlightened service that guild citizenship



Result oriented

Measuring performance and making management decisions that direct resources to priority areas.



Success through collaboration

Working cooperatively with the stakeholders, domestically and internationally, on strategic issues of national and global importance.



Entrepreneurship and outreach

Promoting agri-entrepreneurship and incubating new agri-businesses for social transformation.

In order to ensure production of trained human resource and to meet a wide array of needs of scientists, experts and extension workers in rapidly growing agriculture sector, allied trades and industries, the University offers integrated teaching and research programs in agriculture and allied sciences. Since its establishment, the University's contribution, in conformity with its concept, scope, and canvas of academic activities has magnified many-folds.

1.1. Faculties and Departments

Faculty of Agriculture and Environmental Sciences

- Institute of Plant Breeding and Biotechnology
 - Biotechnology
 - Plant Breeding and Genetics
 - Seed Science and Technology
- Institute of Plant Protection
 - Entomology
 - Plant Pathology
 - Weed Science
- Department of Agronomy
- Department of Food Science and Technology
- Department of Horticulture
- Department of Soil and Environmental Sciences

Faculty of Agricultural and Bio-Systems Engineering and Technology

- Department of Agricultural Engineering

Faculty of Social Sciences and Humanities

- Department of Agribusiness and Applied Economics
- Department of Computer Science
- Department of Continuing Education

Faculty of Sciences

Faculty of Food and Home Sciences

Faculty of Veterinary and Animal Sciences

1.2. Degree Programs Offered

1.2.1. Undergraduate

The undergraduate programs offered by the University with duration and requisite qualification are given below:

Name of Degree	Credit hours and duration	Academic qualification	Minimum requirement
B.Sc. (Hons.) Agriculture	140 credit hours for duration of 8 semesters	Intermediate science (pre-medical/ pre-engineering)/ Pre-Agriculture	Minimum 50% of total marks
BBA-Agribusiness	132 credit hours for duration of 8 semesters	Intermediate science (pre-medical/ pre-engineering)	
BS Computer Science	133 credit hours for duration of 8 semesters	Intermediate science (pre-engineering), ICS, A-level with mathematics	
BS Information Technology	135 credit hours for duration of 8 semesters	Intermediate science (pre-engineering), ICS, A-level with mathematics	
B.Sc. Agro-Industrial Engineering Technology	138 credit hours for duration of 8 semesters	Intermediate Science F.Sc. (Pre-Engineering / Pre-Agriculture / Three years Diploma of Associate Engineering (DAE), A-Level. Entry test taken by MNSUAM, UET, UAF, HEC and NTC	
B.Sc. (Hons.) Poultry Science	135 credit hours for duration of 8 semesters	Intermediate science (Pre-medical)	
B.Sc. (Hons.) Fisheries and Aquaculture	136 credit hours for duration of 8 semesters	Intermediate science (Pre-medical)	
B.Sc. (Hons.) Human Nutrition and Dietetics	141 credit hours for duration of 8 semesters	Intermediate science (Pre-medical), A-Level	Minimum 60% of total marks

1.2.2. Postgraduate

Degree/ Discipline	Program	Duration (Semester)		Admission Criteria	Eligibility
		Minimum	Maximum		
M.Sc. (Hons.) Agronomy, Agri. Economics, Biotechnology, Entomology, Food Science and Technology, Horticulture, Plant Breeding and Genetics, Plant Pathology, Soil Science	Regular	4	6	Screening test (50%), B.Sc. (Hons.) Agri. with major in relevant field of study from any HEC recognized university/DAIs (Deficiency course will be given where necessary) For Agricultural Economics 1. A minimum CGPA of 2.5 on a scale of 4.0 in fields of B.Sc. (Hons.) Agricultural Economics, B.Sc. (Hons.) Agriculture and Resource Economics OR BBA Agribusiness.	(a) CGPA = 2.5/4.0 0 (b) At least 2 nd Division (c) Entry Test
M.Sc. (Hons.) Seed Science and Technology	Regular	4	6	Screening test (50%), with major in Agronomy, Biotechnology, Entomology, Food Science and Technology, Horticulture, Plant Breeding and Genetics, Seed Science and Technology, Soil Science Plant Pathology from HEC recognized university / DAIs. (Deficiency course will be given where necessary)	(a) CGPA = 2.5/4. 00 (b) At least 2 nd Division (c) Entry test

M.Sc. (Hons.) Climate Change	Regular	4	6	<p>Screening test (50%) Sixteen years of education in following disciplines: Agricultural Sciences (All majors)/ B.Sc. (Hons.) Soil and Environmental sciences/ Agri. Engineering/Environmental Engineering/Environmental Sciences/Agri. Economics/ Food science & Technology/Dairy Technology/Dairy Science and Technology/DVM /Animal Husbandry/Poultry Sciences/Fisheries/Agribusiness from HEC recognized university/ DAIs. (Deficiency course may be given to students on the recommendation of supervisory committee where necessary).</p>	<p>(a) CGPA = 2.5/4.0 0 (b) At least 2nd Division (45% Marks) (c) Entry test</p>
MS Computer Science	Regular	4	6	<p>1. BS (CS) 4 year degree program (Minimum 130 credit hour), or Computer Science conversion course 2 year degree program referred to as "MCS" or MSc Computer science). 2. Candidates having Computer Engineering/ Bachelor of Science in Software Engineering/ Bachelor of Science in Information Technology/ Bachelor of Engineering (Computer and Information System)/ B.Sc. Computer System Engineering (16 year education)</p>	<p>(a) CGPA = 2.5/4.00 (b) First division where GPA system not implemented. (c) Entry Test.</p>

				and MIT from a recognized institution are also eligible but have to qualify deficiency course(s) before entering in the MSCS. Deficiency courses will be decided by departmental committee	
MS (Management) Specialization in Agribusiness Note: Program shall be offered Subject to NOC from HEC.	Regular	4	6	<p>a. BBA (Agribusiness)/B.Sc. (Hons.) Agri. (Agriculture Economics/Agriculture and Resource Economics, Marketing and Agribusiness Major) (four years degree programs)</p> <p>b. MBA (Agri. Business) (two years degree program)</p> <p>c. M.Sc. (Economics) (with deficiency courses of one semester as decided by BoS)</p> <p>d. B.Sc. (Hons.) Agri. (all other majors)/ B.Sc. (Hons.) A.H./DVM/B.Sc. (Hons.) Food Sciences/ B.Sc. (Hons.) Agri. Engineering/B.Sc. (Hons.) (with deficiency courses of one semester to be decided by Board of Studies of the</p>	<p>(a) CGPA = 2.5/4.00</p> <p>(b) At least 2nd Division</p> <p>(c) Entry Test</p>

PhD (Agronomy, Biotechnology, Entomology, Food Science and Technology, Horticulture, Plant Breeding and Genetics, Plant Pathology, Seed Science and Technology, Soil Science)	Regular	6	10	Subject Based Entry Test (70%), M.Sc. (Hons.)/M.Phil. in relevant subject from HEC DAIs, Deficiency courses	(a) CGPA not less than 3.00/4.00 (b) At least 1 st division
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1.2.3. Intermediate

Program	Duration	Minimum Entrance Qualification
F.Sc. Pre -Agriculture	2 years	Matric in Science with Minimum 50% marks

1.3. Directorate of Graduate Studies

1.3.1. Mission

The mission of Directorate of Graduate Studies is to streamline admission and research process of postgraduate students and provide all possible guidelines regarding course work, GS-10, synopsis and thesis preparation and submission. Moreover, to facilitate the students timely collection, approval and processing of their documents.

1.3.2. Vision

To enhance the quality of research, to automate the system of admission of postgraduate students and minimize the document's processing time through the use of available technology.

1.3.3. Functions

- To process the approval of new/revised postgraduate courses through Graduate Study Research Board (GSRB)/Board of Advanced Studies and Research (BASR).
- Processing of applications for admission to M.Sc., M. Phil./MS/M.Sc. (Hons.) and Ph.D. programs.
- Collection of course work and enrolment forms (GS/10) of postgraduate students in each semester.

- Scrutiny of the synopsis and thesis, course work and supervisory committees of M.A., M.Sc., M.Phil./MS/M.Sc. (Hons.) and Ph.D. students and arranging their approval by GSRB/BASR.
- Scrutiny of the thesis of postgraduate students to ensure their proper format as laid down by GSRB.
- Preparation of agenda and conduct of meetings of GSRB/BASR.
- Execution of the policies and decisions of GSRB/ BASR.

1.4. Graduate Resource Center

MNS-University of Agriculture Multan launched a novel initiative in the form of a Graduate Resource Center (GRC) during October 2017 after discussion and approval of Executive Committee of the University. The GRC is an interdisciplinary program to break the barriers between the graduate students of different subjects of agricultural and allied sciences for their scientific and professional skills developments. The GRC performs activities under the umbrella of Directorate of Graduate Studies and emphasizes on four major sections:

- a) Postgraduate research skills development
- b) Scientific/community seminars
- c) Leadership and interpersonal skills development
- d) Annual graduate research day with a slogan to "make your research visible"

1.4.1. Aims

The program aims to enhance the quality of graduate training to make young researchers as effective intellectuals and growing leaders to cope with challenges of the agriculture market in the country and around the world.

1.4.2. Functions

- Graduate Resource Center activities are held on every Wednesday at 9:40 a.m. in seminar Hall of the University.
- Membership and participation of all PhD scholars at MNSUAM is compulsory, while all interested master or undergraduate students can participate voluntarily.
- All faculty members and scientists from South Punjab Agriculture Forum can contribute and participate voluntarily.



1.4.3. Activities of Graduate Resource Center

Activity	Title and Resource Person	Date
Seminar	Use of Hi-Tech. Machines for Research Purpose Dr. Abid Hussain, Assistant Professor, SES, MNSUAM	26.06.2019
Seminar	ISO Accreditation Standards for Testing Laboratories, Understanding & Implementation Mr. M. Amir Bakhtawar, Lecturer, Seed Science, MNSUAM	18.06.2019
Seminar	Targeted DNA Mutation Dr. Zulqarnain Haider, Assistant Professor, Institute of Plant Breeding & Biotechnology, MNSUAM	12.06.2019
Seminar	The Month of Ramadan and its Social Impacts Mr. Rasheed Ahmad, Lecturer Islamic Studies, MNSUAM	29.05.2019
Seminar	DNA Mutations Prof. Dr. Asif Ali Vice Chancellor, MNSUAM	23.05.2019
Seminar	Beware of the Dengue Dr. Unser Naeem Ullah, Assistant Professor Entomology, MNSUAM	22.05.2019
Seminar	Waste Heat Generation Dr. Umair Sultan, Assistant Professor, Department Agriculture Engineering MNSUAM	15.05.2019
Panel Discussion	Improving Scientific Writing Skills Prof. Dr. Asif Ali Vice Chancellor, MNSUAM	10.05.2019
Seminar	IPM Model for Cotton Production in Pakistan Dr. Arshad Shakeel, Subject Expert Entomology, MNSUAM	08.05.2019
Panel Discussion	Developing Meaningful Research Titles Prof. Dr. Asif Ali Vice Chancellor, MNSUAM	07.05.2019
Research Day	2nd Annual Graduate Research Day-2019	25.04.2019
Workshop	Effective Presentations, Poster and Oral Talks Prof. Dr. Hammad Nadeem, Chairman IPBB and Director QEC MNSUAM	17.04.2019
Workshop	Developing a Research Poster Dr. Ghulam Haider, Assistant Professor Agronomy	10.04.2019
Seminar	Blended Learning - An Introduction to Moodle Dr. Aysha Hakeem, Assistant Professor, Computer Science MNSUAM	03.04.2019
Workshop	How to Access HEC DIGITAL LIBRARY Mr. Muhammad Kashif, Assistant Librarian MNSUAM	20.03.2019

Seminar	1) Teachers Burn Out Dr. Arshad Shakeel, Subject Expert Entomology MNSUAM 2) Introduction to Garrison Public Library Multan Mr. Fahad Ashfaq, Librarian Garrison Public Library Multan	13.03.2019
Workshop	Entrepreneurship as a Viable Career Option Mr. Mehtab Ali Raza, Youth Counselor for Entrepreneurship	06.03.2019
Seminar	Cotton Genetic Improvement and Resource Development using Advanced Tools of Crop Biotechnology Dr. Muhammad Mahmood Ahmed, Assistant Professor, Institute of Plant Breeding & Biotechnology, MNSUAM	20.02.2019
Workshop	What is Plagiarism, How Can We Avoid Plagiarism, HEC Policy, and Consequences Prof. Dr. Hammad Nadeem, Director QEC MNSUAM	13.02.2019
Meeting/Discussion	Graduates Meeting for the Preparation of Up-coming Graduate Research Day Dr. Ghulam Haider	30.01.2019
Seminar	انسان کے طبیعی خواص Mr. Rasheed Ahmad, Lecturer Islamic Studies, MNSUAM	23.01.2019
Workshop	Workshop on Writing a Successful Grant Proposal Prof. Dr. Zulfiqar Ali, Director ORIC MNSUAM Dr. Ghulam Haider, Assistant Prof. Agronomy	16.01.2019
Seminar	An Update on Successful Visit of China Prof. Dr. Zulfiqar is Director ORIC at MNSUAM	09.01.2019
Workshop	Workshop on Microsoft Imagine Cup-2019 Instructor, Mr. Shaikh Rizwan, is Microsoft Education Program Manager	02.01.2019
Invited Lecture	Biological and Genetic Characterization of NP viruses of Armyworm of Pakistan Dr. Ghulam Ali, Ph.D. in Entomology, Wageningen University, Netherlands, Campus Director, Air University Multan Campus	26.12.2019
International Seminar	Water Secure Pakistan: Role of Technology and Research <ol style="list-style-type: none"> 1) Dr. Tahmina Rashid, Associate Professor, University of Canberra Australia 2) Dr. Aftab Ahmad, Director Murray-Darling Basin Authority, Australia 3) Dr. Tariq Rana, Director Water Resource Planning, Australia 	21.12.2018

Seminar	Introduction to Invasive Alien Species Dr. Unser Naeem Ullah, Assistant Professor Entomology, MNSUAM	19.12.2018
Seminar	Business Incubation System, Learning from US Campuses Dr. Mirza Abdul Qayyum, Assistant Prof. Entomology MNSUAM	12.12.2018
Seminar	How to Stay Positive in Challenging Working Environment Dr. Arshad Shakeel, Subject Expert Entomology MNSUAM	05.12.2018
Seminar	Awareness About Consumer Right and How to Approach Consumer Court Mr. Usman Khan, Advocate High Court, Multan	14.11.2018
Seminar	Apple Seeds Producing Mangoes: A Myth, Reality or Notion Dr. Muhammad Faraz Bilal, Chief Executive Officer of the Institute, 'The Physio'	07.11.2018
Seminar	12 Days in China: A Learning Experience and Research Collaborations Prof. Dr. Shafqat Saeed, DEAN, Faculty of Agriculture and Environmental Sciences, MNSUAM	31.10.2018
Seminar	End Polio Now Mr. Salman Mubarak (CEO, Mian Fazal Rehman Hospital)	24.10.2018
Seminar	Mineral Uptake in Rice, specifically micro-nutrient and heavy metals Dr. Khurram Bashir, Research scientist in Plant Genomics Research Team at Riken Center for Sustainable Resource Science, RIKEN YOKOHAMA, JAPAN.	11.10.2018
Seminar	Potential of hybrid wheat Prof. Dr. Zulfiqar Ali, Director ORIC, MNSUAM	11.10.2018
Seminar	How to be Positive under Tough Environment Dr. Arshad Shakeel, Subject Expert, Entomology, MNSUAM	26.09.2018
Seminar	Philosophy of Imam Hussain Martyr in Islam Mr. Rasheed Ahmad, Lecturer, Islamic Studies, MNSUAM	19.09.2018
Seminar	Research Progress during IPFP Dr. Haroon Maqsood, Assistant Professor, Institute of Plant Breeding & Biotechnology, MNSUAM	12.09.2018
National training workshop	Climate Modeling, Projections Generations and Data Analysis Mr. Burhan Ahmed and Syed Ahsan Ali, Pakistan Meteorological Department-Islamabad	05.09.2018

Seminar	Promoting Social Entrepreneurship Mr. Ajmal Hashmi, Project Manager Mitti Connection, Ottawa Canada	03.09.2018
Seminar	Stress Management at Work Place Ms. Misbah Sagheer (Psychologist)	15.08.2018
Seminar	How to Improve Enrollment and Examination Process Prof. Dr. Shafqat Nawaz, Controller of Examination, MNSUAM	15.08.2018
Interactive session	Green Metric University Ranking Dr. Muqarrab Ali, Assistant Professor Agronomy, MNSUAM	08.08.2018
Weed Eradication Week-2018	Ecological Impacts of Weeds Various speakers	07.08.2018
Seminar	Importance and Management of Weeds of Cotton Mr. Muhammad Iqbal, Assistant Agronomist, Cotton Research Institute, Multan	01.08.2018
Seminar	Role of Weeds in Pest Management Dr. M. Ishtiaq, Assistant Professor, Entomology, MNSUAM	01.08.2018
Seminar	The Earth: An Introduction Dr. Unsar Naeem Ullah, Assistant Professor, Entomology MNSUAM	18.07.2018
Seminar	Role of Maritime Technology Dr. Salman Nazir, Associate Professor, University College of Southeast Norway (HSN)	12.07.2018
Seminar	Phenotypic Plasticity of Pink bollworm Mr. Umar Iqbal, Lecturer Institute of Plant Breeding & Biotechnology, MNSUAM	11.07.2018
Seminar	CRISPR/Cas9 Dr. Zulqarnain Khan, Assistant Professor, Institute of Plant Breeding & Biotechnology, MNSUAM	04.07.2018

1.4.4. Annual Graduate Research Day 2019

The Graduate Resource Center (GRC) celebrated 2nd annual "Graduate Research Day" at MNSUAM. The theme of this activity was to generate the sense of competition for quality research work, data interpretation and polishing presentation skills among postgraduate scholars of the university. Three types of competitions were held to mark the day.

- 1) Poster Presentation
- 2) Oral Talks
- 3) Research Activity Photo

Specific training workshops on developing posters and delivering talks were organized for the preparations of 2nd annual Graduate Research Day-2019 where a deliberate discussion was done among postgraduate scholars, trainers and faculty. Moreover, a full-fledged training was also conducted to teach them how to build and present a research poster.

Prof. Dr. Asif Ali, Vice Chancellor applauded the untiring efforts of GRC and acknowledged the positive contribution of GRC in capacity building of the University scholars. He urged the students to get them involved in GRC activities as much as they can so that at the end of the day they have all necessary skills to meet the demands of a challenging professional life.

Dr. Ghulam Haider, Focal Person, GRC informed the participants about the initiatives, ongoing activities and future plans of the GRC to hone the skills of postgraduate students.

Evaluation teams comprised of a combination of senior professors, industrial stakeholders and young faculty members, duly notified by the Registrar Office evaluated the oral and poster presentations of postgraduate students.

The first team evaluated oral talks by PhD Scholars, where students were given 12 minutes for presentation and discussion. In the parallel session, three teams evaluated 75 posters where each student was given a 5-minute time slot to present his/her poster in front of the audience. In the next category 'Make your research visible with best research photo' three ballot papers were distributed to each participant/visitor to vote for the first, second and third best research photo.

Following students secured top three positions in different categories and were given certificates and souvenirs.

Best Poster Presentation

Name	Affiliation	Position
Uzman Khalil	PhD Scholar Horticulture	1 st
Shafa Nayab	M.Sc. Student Horticulture	2 nd
Ali Amar	PhD Scholar Plant Breeding and Genetics	3 rd

Best Oral Talk

Name	Affiliation	Position
Uzman Khalil	PhD Scholar Horticulture	1 st
Tania Tanveer	PhD Scholar Plant Breeding and Genetics	2 nd
Sabah Merrium	PhD Scholar Plant Breeding and Genetics	2 nd
Muhammad Arslan Khalid	PhD Scholar Plant Breeding and Genetics	3 rd

Best Research Photo

Name	Affiliation	Position
Muhammad Siddique	PhD Scholar Entomology	1 st
Assad Salim	PhD Scholar Entomology	2 nd
Muhammad Javaid	PhD Scholar Entomology	3 rd

1.5. Undergraduate Academic Calender (2018-19)

A	Enrollment Winter Semester 2018	Oct 4-8, 2018
1.	Commencement of Classes	09-10-2018
2.	Mid-Term Examination	07-12-2018
3.	Final Term Examination	05-02-2019
4.	Result Declaration	As per rule i.e. within 8-10 days of exams
Total Duration		19 Weeks
B	Enrollment Spring Semester 2019	13-15 Feb 2019
	Enrollment with single late fee	18-20 Feb 2019
	Enrollment with double late fee	21-24 Feb 2019
1.	Commencement of Classes	15-02-2019
2.	Mid-Term Examination	12-04-2019
3.	Final Term Examination	13-06-2019
4.	Result Declaration	As per rule i.e. within 8-10 days of exams
Total Duration		19 Weeks
C	Enrollment Summer Session 2019	June 19-21, 2019
1.	Commencement of Classes	21-06-2019
2.	Mid-Term Examination	19-07-2019
3.	Final Term Examination	19-08-2019
4.	Result Declaration	As per rule i.e. within 8-10 days of exams
Total Duration		9 Weeks

1.6. Postgraduate Academic Calender (2018-19)

A	Enrollment Winter Semester 2018	20 - 23 August, 2018
1.	Commencement of Classes	20-08-2018
2.	Mid-Term Examination	15-10-2018
3.	Final Term Examination	17-12-2018
4.	Result Declaration	24-12-2018
Total Duration		18 Weeks

B	Enrollment Spring Semester 2019	26 – 27 Dec 2018
1.	Commencement of Classes	26-12-2018
2.	Mid-Term Examination	19-02-2019
3.	Final Term Examination	23-04-2019
4.	Result Declaration	30-04-2019
Total Duration		18 Weeks
C	Enrollment Summer Semester 2019	02-06 May, 2019
1.	Commencement of Classes	02-05-2019
2.	Mid-Term Examination	30-05-2019
3.	Final Term Examination	28-06-2019
4.	Result Declaration	05-07-2019
Total Duration		09 Weeks

1.7. Academic Achievements

- All postgraduate programs have attained NOC from HEC.
- A new postgraduate degree program of M.Sc. (Hons.) Climate Change has been launched by the Department of Soil and Environmental Sciences.
- Department of Food Science and Technology has also announced admission to a new degree program “Human Nutrition and Dietetics”. This four years degree program is a Joint venture between MNS-UAM and Nishtar Medical University, Multan and is designed to produce the experts of nutrition and dietetics.
- Another new postgraduate degree program of M.Sc. (Hons.) Postharvest Management Technology has been approved by the syndicate of the university under the umbrella of Institute of Plant Protection, and application has been submitted to HEC for NOC to start this degree program.
- The numbers of faculty members in FA&ES has been increased to 69 (52 PhD and 17 Non PhD) and most of them are HEC approved supervisors.
- Institute of Plant Breeding & Genetics, Department of Agronomy, Department of Food Science & Technology, Department of Soil & Environmental Sciences have organized several workshops, seminars and national and international conferences on various topics.
- Department of Food Sciences & Technology arranged competition on Food Product Development, Plant Centric Meal, Posters and Cooking.
- Department of Agronomy has designed a new elective undergraduate course “Spate Irrigated Agriculture” that will be offered in upcoming winter semester 2019-20.
- Department of Agribusiness and Applied Economics started M.Sc. (Hons.) Agricultural Economics after getting NOC from HEC.

- This Department of Agri. Business and Applied Economics has also revised the Scheme of Studies of B.Sc. (Hons.) Agricultural and Resource Economics. After approval from the Board of Studies and Faculty Boards, the Department has sent the dossier to HEC for NOC regarding MS (Management) with specialization in Agribusiness.
- Department of Computer Science has successfully launched an MS Computer Science program this year.
- Department of Computer Science has successfully revised scheme of studies for BS Computer Science and BS Information Technology, and MS Computer Science from the Board of Study, Faculty Board, and Academic Council during the academic year 2018-19
- Department of Computer Science has accredited BS Computer Science programs from the National Computing Education Accreditation Council (NCEAC) and BS Information Technology program application has submitted for the accreditation.

1.8. Honors and Awards

- Prof. Dr. Ishtiaq Ahmad Rajwana, Pro-Vice Chancellor, MNS-UAM was appointed as Chairman, National Agriculture Education Accreditation Council (NAEAC) by Chairman, HEC for a period of four years.
- Mr. Muhammad Arif, Lecturer, Soil and Environmental Sciences, Mr. Furqan Ahmad, and Mr. Babar Farid, Lecturers, Institute of Plant Breeding and Biotechnology won PhD scholarship and have joined different universities in china to pursue doctoral Programmes.
- Mr. Ubaida Yousaf and Mr. Usama Rehman (students of Department of Soil and Environmental Sciences) won Erasmus Mundus Scholarship 2018.
- Several faculty members of the University were included in the Directory of Productive Scientists of Pakistan published by PCST.

1.9. Good Practices Implemented

- Class monitoring
- Curriculum revision regarding course objectives, contents and learning resources
- Outcome based learning
- Online/Hybrid courses on Google Classroom and Moodle
- Discussion and visual aids for Teaching (Videos, Presentations and hands on activities)
- Module based teaching system
- Maintenance of course files

- Lecture shortage
- Strengthening of teaching labs and field infrastructure
- Use of class management software
- Engagement of undergraduate students in research activities by attaching them with postgraduate students
- Constitution of Research and Vigilance Committee
- Career counseling sessions for students
- International seminars/conferences/workshops
- Hands-on Training of faculty and students
- Compulsory internship of BSc (Hons.) 8th Semester students at private sector companies, organizations and farms

1.10. Study Tours

Study tours are integral tool to broaden student exposure and provide them a chance to practically experience the field application of the theoretical knowledge. Students of Food Science Department visited various industries (SFA Industry, Nestle, Mitchell's, Kims, Peek Freans, Shezan, Dawn Bread, Pearl Continental, Bhurban) covering dairy, beverage, cereal and baking, confectionary, and food service sectors from 25-4-2019 to 29-4-2019. The objective was to provide students a chance to visualize and observe practically what they have studied. Likewise, students of Agronomy Department visited Ayub Agriculture Research Institute, Faisalabad, University of Agriculture, Faisalabad, Soil Salinity Research Institute, Pindi Bhattian, Soil and Water conservation Research institute, Chakwal, Pakistan Meteorological Department, Islamabad, ZTBL Research farm, Islamabad, Arid Agriculture University, Rawalpindi, National Agricultural Research center, Islamabad (NARC). Moreover, all other teaching departments also arranged study tours for their students.



ANNUAL REPORT 2018-19



CHAPTER-2

RESEARCH AND DEVELOPMENT

**ANNUAL
REPORT
2018-19**

Office of Research Innovation and Commercialization (ORIC) came into existence in 2015 to promote and enhance research culture at MNS-UAM by providing support services in all prospects of research and to develop research linkages between industry and academia. The ORIC is the core Office of the University which is responsible for promoting research activities and creates opportunities for faculty for research and development.

In the year 2018-19, projects of worth more than 9 million rupees were completed and 15 new projects were initiated (Rs. 36.18 M worth) for the proliferation of scientific culture at the campus with technological methods and innovative research. The ORIC believes in reciprocal understanding which is indispensable for coordination and research between academia and industry. During the report period, 21 new MoUs have been signed and ORIC will take a lead for their implementation with the said partners. The ORIC organizes trainings for capacity building of the faculty and encourages research based new innovative ideas and funds these ideas through competitive grants. The office keeps the faculty updated about new national and international funding opportunities and assists them in preparation and submission of research projects. Moreover, ORIC facilitates the principal investigators in smooth running of their projects in the University and serves as an effective liaison between the principal investigator and the funding agency.

During the year under report, ORIC has facilitated the faculty for submission of 126 different research projects to various national and international funding agencies including HEC, PARB, PSF, BISP, Royal Society UK etc. ORIC has also facilitated the faculty in successful completion of 15 research and 3 skill development projects and execution of 28 on-going research projects. Due to provision of ideal research facilities and working environment by ORIC, the faculty was able to publish more than 150 research articles in well reputed national and international peer reviewed journals. Similarly, ORIC has organized 08 national and international conferences, 37 national and international seminars and 23 trainings/workshops to train the faculty as well as students with 61 other outreach, recreational and capacity building activities. Likewise, ORIC has facilitated the achievement of 11 travel grants to present research achievements at international conferences in different countries across the globe for enhancement of learning. The ORIC also developed 09 international and 12 national linkages for research and development.

2.1. RESEARCH PROJECTS COMPLETED

Following research projects were completed in MNS-UAM during this year.

Sr. No.	Project Title	Principal Investigator/Focal Person	Amount (Million PKR)	Duration (Months)	Funding Agency
1	Impact of Non -farm Work on Farm Household Food Security: Case of Punjab, Pakistan	Dr. Umar Ijaz Ahmed	0.397	10	HEC-SRGP
2	Environment Friendly Management of Potato Virus Y (PVY)	Dr. Nadeem Ahmed	0.484	12	HEC-SRGP
3	Impediment Effect of Chemical Agents (Additives) on Gluten Development in Cookie Dough	Dr. Shabbir Ahmad	0.455	09	HEC-SRGP
4	Evaluation of Biochar as a Resource Carrier for Climate Smart Agriculture	Dr. Ghulam Haider	0.445	09	HEC-SRGP
5	Potential of Halotolerant PGPR in Combination with Compost for Improving Maize Productivity under Saline Conditions	Dr. Hafiz Tanvir Ahmad	0.495	09	HEC-SRGP
6	Effect of organic and inorganic fertilizers on yield and nutritional properties of dates	Prof. Dr. Ishtiaq A. Rajwana	0.400	12	HEC-SRGP
7	Identification of Alternate Hosts of Cotton leaf curl disease in Multan Region	Dr. Hassan Riaz	0.500	12	HEC-SRGP
8	Efficacy of plant growth regulators in relation to yield and quality of chili under saline environment	Dr. Hafiz Nazar Farid	0.480	12	HEC-SRGP
9	Tree Plantation Through Seed in Southern Punjab - A Community Interactive Approach	Dr. Muqarrab Ali	0.350	03	HEC-SIOP

10	Successful Crop Production under Prevailing Water Shortage	Mr. Mudaasir Aziz	0.450	03	HEC-SIOP
11	Capacity Building of Rural Masses for Safe Consumption of Vegetables for Prevention of Diseases	Dr. Muhammad Shahbaz	0.400	03	HEC-SIOP
12	Community Awareness Regarding Insect Repellent Plants	Dr. Gulzar Akhtar	0.740	03	HEC-SIOP
14	Soil Fertility Management Alternate Strip Inter-Crops in Spate Irrigated Areas of Dera Ghazi Khan Pakistan	Dr. Khuram Mubeen	0.556	12	Spate Irrigation
15	Improvement In breeding and seed production of fodder crops	Prof. Dr. Zulfiquar Ali	9.472	36	GoP

Following skill development projects were completed in MNS-UAM during this year.

Sr. No.	Project Title	Principal Investigator/Focal Person	Amount (Million PKR)	Duration (Months)	Funding Agency
1	Skills for Services 2018	Prof. Dr. Shafqat Saeed	18.900	12	PSDF
2	Punjab Skills Development Program 2018	Prof. Dr. Shafqat Saeed	2.890	06	PSDF
3	Prime Minister Youth Skills Development Program Phase-IV, Batch-II	Prof. Dr. Shafqat Saeed	22.900	06	NAVTTTC

2.2. NEWLY LAUNCHED PROJECTS

Following research projects were launched during the reported year 2018-2019:

Sr. No.	Project Title	Principal Investigator	Funding Agency	Amount (Million PKR)	Project Initiation date
1	Development and Indigenization of Floppy Sprinkler System for Future Irrigation	Dr. Sarfraz Hashim	HEC-TDF	6.658	26.09.2018

2	Investigations on crop nutrition, commercial potential and market constraints in Guar Bean industry	Dr. Muqarab Ali	HEC-SRGP	2.202	6.6.2018	36
3	Water conservation and improvement in soil fertility through tillage and strip cropping of legumes in spath irrigated area of Pakistan	Dr. Khuram Mubeen	HEC-SRGP	1.900	12.6.2018	36
4	Development of Nutritious Energy Dense Emergency Relief Food Products for Disastrous Areas of Pakistan with Special Reference To Protein Energy Malnutrition (PEM)	Dr. Ambreen Naz	HEC-NRPU	2.510	02.07.2018	24
5	Improving Chickpea Production on Sandy Soils by Using Biochar Produced from Cotton Sticks at Different Temperatures	Dr. Tanveer UI Haq	HEC-NRPU	2.620	14.01.2019	36
6	Ensuring Food Security through Fish Farming; An Alternate Policy Option	Dr. Nasir Nadeem	HEC-NRPU	0.937	23.10.2018	12
7	Subsistence Farmer's Production Diversity and Market Access: Impact on Rural Woman and Children's Dietary Diversity	Dr. Umar Ijaz Ahmad	HEC-NRPU	0.868	23.10.2018	12
8	Exploring the Nutritional and Functional Properties of Mango Seed Oil in Bakery Products	Dr. Muhammad Shahbaz	HEC-NRPU	2.300	11.11.2018	36
9	Vegetable Grafting Against Soil Borne Diseases, Salinity And Drought	Dr. Hafiz Nazar Faried	HEC-NRPU	3.480	13.02.2019	36
10	Development of Production and Formulation Technologies for Eco-Friendly Entomopathogenic Fungus for Managing Fruit Fly	Dr. Mirza Abdul Qayyum	HEC-NRPU	4.950	13.02.2019	36

11	Genetic Variability and Molecular Characterization of RNA viruses infecting cucurbits in Punjab, Pakistan	Prof. Dr. Ashfaq Ahmad	HEC-NRPU	8.870	01.06.2019	36
12	Prevalence and Associated Risk Factors of Avian Coccidiosis in Ostrich, Quail and Pigeons of District Multan	Dr. Kashif Hussain	HEC-SRGP	0.480	11.07.2018	8
13	Pilot-scale Constructed Wetland for Domestic and Industrial Wastewater Treatment and its Reuse for Agriculture	Dr. Shah Rukh	HEC-SRGP	0.490	27.12.2018	9
14	Molecular Characterization of Gut Micro Biota Between Ischemic Heart Disease Patients and Healthy Volunteers in Pakistan	Dr. Hafiz Muhammad Ishaq	HEC-SRGP	0.480	27.12.2018	8
15	Quantitative Quality Assessment of <i>Labeo rohita</i> from Selected Areas of Multan	Dr. Naheed Bano	HEC-SRGP	0.470	27.12.2018	9
16	Automation Solution for Controlled Surface Irrigation System	Dr. M. Abid	HEC-SRGP	0.400	05.03.2019	9
17	CRISPR/Cas Based Multiplexed Genome Editing to Suppress Cotton Leaf Curl Virus in Plants	Dr. Zulqurnanin Khan	HEC-SRGP	0.137	30.05.2018	09
18	Development of Innovative Process and Technology for the Preparation of Jujube (<i>Ziziphus jujube</i>)	Dr. Ambreen Naz	PARB	9.400	22.05.2019	36
19	Tree plantation through seed in Southern Punjab- A community interactive approach	Dr. Muqrrab Ali	HEC-SIOP	0.35	15.07.2018	0.350
20	Successful crop production under prevailing water shortage	Mr. Mudaasir Aziz	HEC-SIOP	0.45	01.10.2018	0.450

21	Capacity Building of rural masses for safe consumption of vegetables for prevention of diseases	Dr. Muhammad Shahbaz	HEC-SIOP	0.4	01.09.2018	0.400
22	Capacity Building of community regarding urban agriculture in roof top farming in Multan district	Mr. Arqam Iqbal	HEC-SIOP	0.99	1/6/2018	0.990
23	Community awareness regarding insect repellent plants	Dr. Gulzar Akhtar	HEC-SIOP	0.74	1/6/2018	0.740
24	Community awareness about recycling of house garbage into value added products by integration with local manufacturer	Dr. Shakeel Ahmad	HEC-SIOP	0.580	08.08.2018	04

2.3. ON GOING RESEARCH PROJECTS

The below listed projects are on-going in MNS-University of Agriculture, Multan:

Sr. No.	Project Title	Principal Investigator	Funding Agency	Amount (Million PKR)	Project Initiation date	Duration (Months)
1	Vegetable nursery production and supply system for kitchen gardening	Prof. Dr. Asif Ali	AIP	3.001	1.11.2017	24
2	Hybrid Wheat for Food Security	Prof. Dr. Asif Ali	DFID	12.6	9.1.2015	60
3	Increasing productivity and profitability of pulse production in cereal based cropping system in Pakistan	Prof. Dr. Zulfiqar Ali	ACIAR	42.000	11.1.2016	60
4	Improving Groundwater Management to Enhance Agriculture and Farming Livelihoods in Pakistan	Prof Dr Irfan Baig	ACIAR	4.400	01.07.2016	48

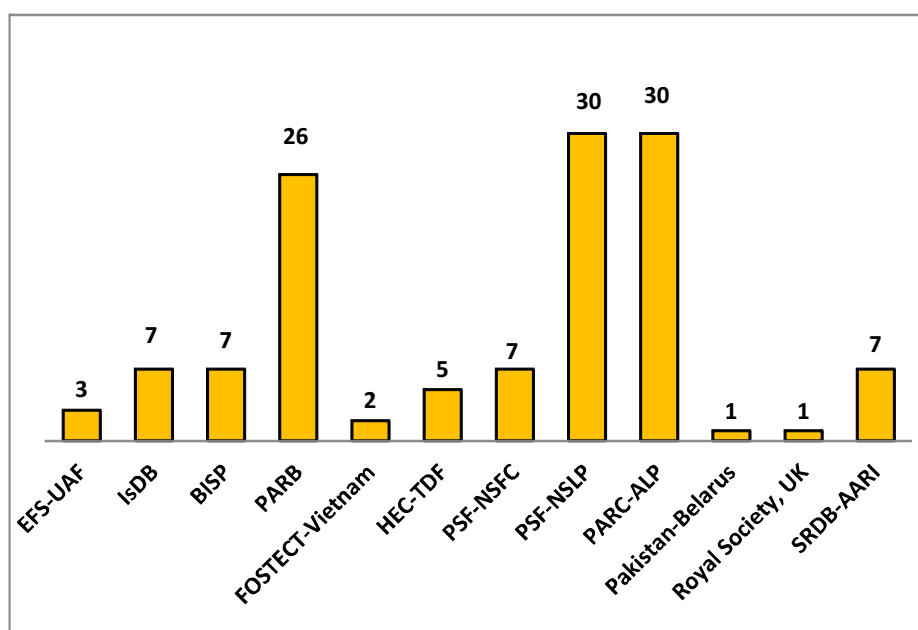
5	Development of drought and heat tolerant wheat germplasm by dynamic assembly of leaf surface structural traits to self-irrigate with fog water	Prof. Dr. Zulfiqar Ali	USP-CAS/PARB	7.500	3.6.2017	36
6	Improving fruit quality and reducing postharvest losses in Strawberry fruit	Prof. Dr. Ishtiaq A. Rajwana	USP-CAS/PARB	7.500	16.1.2017	36
7	Climate resilient and bio fortified maize germplasm evaluation and dissemination by MNSUA Maize program	Babar Farid	CIMMYT	0.338	4.1.2016	12
8	Carbon fertilizers for reducing greenhouse gas emissions and improving food security	Dr. Ghulam Haider	DAAD	12.596	01.01.2018	24
9	Current Status, Genetic Variability and Molecular Characterization of Major Viruses Infecting Onion and Garlic Crops in Punjab, Pakistan	Prof. Dr. Ashfaq	IFS	12000 USD	11.01.2018	36
10	Various Supply Chain Issues and Commercial Potential of Some Minor Fruits	Prof. Dr. Ishtiaq A. Rajwana	HEC-NRPU	7.800	06.08.2017	36
11	Development of Endophytic Bacteria-Mycorrhizal Fungi Consortium to Mitigate the Drought Stress in Chickpea	Mr. Usman Jamshaid	HEC-NRPU	3.270	26.04.2017	36

12	Fruit and Shoot Borers of Mango, <i>Mangifera indica</i> L.; A Potential Quarantine Pest and Threat to Mango Industry	Prof. Dr. Shafqat Saeed	HEC-NRPU	3.435	26.01.2018	36
13	Water Conservation And Improvement in Soil Fertility through Tillage and Strip Cropping of Legumes in Spate Irrigated Area of Pakistan	Dr. Khurram Mubeen	HEC-NRPU	1.900	12.06.2018.	36
14	Investigations on Crop Productivity, Commercial Potential and Market Constrains of Guar Bean Industry	Dr. Muqarrab Ali	HEC-NRPU	2.200	02.06.2018	36
15	Introduction and Promotion of One Pass Conservation Tillage Machinery for Cotton-Wheat Cropping System	Dr. Alamgir Akhtar Khan	HEC-TDF	12.290	06.12.2017	36
16	Collection and Characterization of Phalsa (<i>Grewia Subinaequalis</i> D. C.) Landraces having High Sugar and Carotene Contents	Dr. Kashif Razzaq	ALP	2.980	06.05.2018	36
17	Management of Whitefly by Integrated Strategies and Development of Resistant Cotton Germplasm through Genetic Engineering	Dr. Shafqat Saeed	PARB	7.690	22.12.2017	36
18	A Comprehensive Integrated Scientific Approach for the Development of Sustainable Management Strategies of Pink Bollworm (<i>Pectinophora gossypiella</i>)	Dr. Shafqat Saeed	PARB	6.400	22.12.2017	36

19	Improving Yield, Drought and Salinity Tolerance in Wheat through GA-Sensitive Dwarfing Gene System	Prof. Dr. Zulfiqar Ali	PARB	47.189	27.02.2018	60
20	Breeding Soybean for Adaptation and High Yield in Current Scenario of Climate Change in Punjab	Prof. Dr. Hammad Nadeem Tahir	PARB	34.460	29.05.2018	60
21	Commissioned Research for the Development of Cotton Seed	Prof. Dr. Zulfiqar Ali	GOP	90.935	01.07.2016	60
22	Scope of Different Remediation Techniques in Degradation of Atrazine and Pendimethalin to Control Soil and Water Pollution	Dr. Abid Hussain	HEC-SRGP	0.494	23.02.2018	09
23	Probing the Pathogens Associated with Cotton Wilt Disease and their Integrated Management	Dr. Muhammad Arslan Khan	HEC-SRGP	0.470	03.07.2018	09
24	Optimization of Callus Induction and Somatic Embryogenesis Response in Cotton	Dr. Ummara Waheed	HEC-SRGP	0.470	16.03.2018	09
25	Development of Locally Fabricated Composer to Prepare Growth Medium for Strawberry Production under Vertical Farming System (VFS)	Dr. Shakeel Ahmad	HEC-SRGP	0.485	06.04.2018	11
26	Screening of Proso Millet Genotypes Against Salt Stress	Dr. Shahid Iqbal	HEC-SRGP	0.489	23.02.2018	09

27	Community awareness about recycling of house garbage into value added products by integration with local manufacturer	Dr. Shakeel Ahmad	HEC-SIOP	0.580	08.08.2018	04
28	Capacity Building of community regarding urban agriculture in rooftop farming in Multan district	Mr. Arqam Iqbal	HEC-SIOP	0.990	06.01.2018	04

2.4. SUBMITTED PROJECTS TO VARIOUS FUNDING AGENCIES



2.5. PUBLICATIONS

Sr. No.	Title	Authors	Year	Journal	Vol.	Pages
1	Acaricidal and insecticidal effects of essential oils against ecto parasites of veterinary importance	Abbas A, RZ Abbas, S Masood, Z Iqbal, MK Khan, MK Saleemi, MA Raza, MS Mahmood, JA Khan and ZD Sin	2018	Bol. Cari. Plant Med Aro.	17	441-452

2	Amelioration in growth and physiological efficiency of sunflower (<i>Helianthus annuus</i> L.) under drought by Potassium Application	Raza MAS., MF Saleem, IH Khan, MB Hussain and GM Shah.	2018	Comm. Soil Sci. Plant Anal.	49	2291-2300
3	Arabic named entity recognition based on B-LSTM Neural Network	Ali MNA, G Tan and A Hussain	2018	Future Internet	10	123-135
4	Assessing the impact of climate variability on maize using simulation modeling under semi-arid environment of Punjab, Pakistan	Ahmed I, M Habib ur Rahman, A Ahmad, S Ahmed and J Judge	2018	Envir. Sci. Poll. Res.	25	28413-28430
5	Competitiveness in agricultural trade of Pakistan with United Arab Emirates	Javed I, G Mustafa, M Ashfaq, R Yasmeen, A Ghafoor, M Yasin, AA Jaffari and MA Imran	2018	Pak. J. Agri. Sci.	55	703-711
6	Compost enriched with ZnO and Zn-solubilizing bacteria improves yield and Zn-fortification in flooded rice	Zeb, H, A Hussain, M Naveed, A Ditta, S Ahmad, M Jamshaid, H Ahmad, M Hussain, R Aziz and M Haider	2018	Italian J. Agro.	13	310-316
7	Correlation for economic traits in upland cotton	Khalid MA, TA Malik, N Fatima, A Shakeel, I Karim, M Arfan, S Merrium and P Khanum	2018	Acta Sci. Agric.	2	59-62
8	Dry matter, lint mass and fiber properties of cotton in response to nitrogen application and planting	Afzal MN, M Tariq, M Ahmad, K Mubeen, MA Khan, MU Afzal and S Ahmad	2018	Pak. J. Agri. Res.	32	229-240
9	Effect of electron beam irradiation on chemically synthesized nanoflake-like CdS electrodes for photoelectrochemical applications	Shinde SK, DY Kim, DS Lee, GS Ghodake, AN Kadam, AV Fulari, M Nawaz, A Shahzad, MC Rath and VJ Fulari	2018	Collo. Surf. Bioint.	16 4	255-261

10	Effect of exogenous nitric oxide on sulfur and nitrate assimilation pathway enzymes in maize	Majeed S, F Nawaz, M Naeem and MY Ashraf	2018	Acta Physio. Plant.	40	206
11	Effect of rock phosphate based compost and biofertilizer on uptake of nutrients, nutrient use efficiency and yield of cotton	Arif M, W Ahmed, T Ul-Haq, U Jamshaid, M Imran and S Ahmad	2018	Soil Environ.	37	129-135
12	Effects of nickel toxicity on morphological and physiological aspects of osmoregulation in <i>Typha domingensis</i> (Typhaceae) populations	Akhtar N, M Hameed, A Hamid, F Nawaz, KS Ahmad, J Deng, A Mehmood, C Segovia-Salcedo and Shahna	2018	Limnology	19	185-197
13	Enumerating the effects of climate change on water resources using GCM scenarios at the Xin'anjiang Watershed, China	Zaman M, MN Anjum, M Usman, I Ahmad, M Saifullah, S Yuan and L Shiyin	2018	Water (MDPI)	10(10)	1296
14	Evaluation and analysis of temperature for historical (1996–2015) and projected (2030–2060) climates in Pakistan using SimCLIM climate model: Ensemble application	Asad Amin, Wajid Nasim, Shah Fahad, Shaukat Ali, Shakeel Ahmad, Atta Rasool, M. Habib ur Rehman	2018	Atmos. Res.	213	422-436
15	Feature representation based on effect of word frequency for Arabic document classification	Yousif A. Alhaj, WU Wickramaarachchi and A Hussain	2018	ICTCE 2018 Proceeding	535	397-401
16	First report of a cucumber mosaic virus (CMV) subgroup II isolate infecting pea in Pakistan	Ahsan M and M Ashfaq	2018	J. Plant Path.	100	597
17	First report of Iris yellow spot virus infecting garlic in Pakistan	Ahsan M and M Ashfaq	2018	Plant Disease	102	2047

18	Fitness parameters of <i>Plutella xylostella</i> (L.) (Lepidoptera; Plutellidae) at four constant temperatures by using age-stage, two-sex life tables	Saeed, S., Jaleel, W., Naqqash, M.N., Saeed, Q., Zaka, M.S., Sarwar, M.Z., Ishtiaq, M., Qayyum	2018	Saudi J. Biolog. Sci.	In Press	
19	Food quality attributes of <i>Triticum aestivum</i> L. as influenced by schedules of organic and inorganic	Aziz M, MT Abbas, A Ali and RA Hameed	2018	ARPN J. Agric. Biol. Sci.	13	98-105
20	Formulation and evaluation of Allicin and Cur cumin gel improves normal and diabetic ulcers in rabbit	Khan, IA, AH Lodhi, SH Munawar, A Manzoor and MA Raza	2018	Livestock Sci.	37	1602-1607
21	Fortification of durum wheat semolina with detoxified matri (<i>Lathyrus sativus</i>) flour to improve the	Ahmad N, S Ur-Rehman, MA Shabbir, MA Shehzad and TH Roberts	2018	J. Fd. Sci Tech.	55	211-212
22	Future risk assessment by estimating historical heat wave trends with projected heat accumulation using SimCLIM climate model in Pakistan	Nasima W, A Amin, S Fahade, M Awais, N Khan, M Mubeen, A Wahid and M Habib ur Rahman	2018	Atmos. Res.	205	118-133
23	Germination Ecology of Two Australian Populations of African turnip weed (<i>Sisymbrium thellungii</i>)	Mahajan G, A Matloob, M Walsh and BS Chauhan	2018	Weed Sci.	66	752-757
24	Heavy metal accumulation imparts structural differences in fragrant Rosa species irrigated with marginal quality water	Ahsan M, Younis A, MJ Jaskani, A Tufail, A Riaz, T Schwinghamer, U Tariq and F Nawaz	2018	Ecotox. Environ. Safety	159	240-248
25	Heterostructural TiO ₂ /Ti ₃ C ₂ T _x (MXene) for photo catalytic degradation of antiepileptic drug car amaze	Shahzad A, K Rasool, M Nawaz, W Miran, J Jang, M Moztahida, K Mahmoud and DS Lee	2018	Chem. Engi. J.	349	748-755

26	Impact of agricultural research on economic development in Punjab, Pakistan.	Javed MI, A Ali, N Nadeem, A Gulzar and S Kamran	2018	J. Appl. Environ. Biol. Sci.	8	103-108
27	Impact of pesticide quality control program in Southern Punjab (Pakistan).	Akhtar MN, AA Rahi, K Mubeen, S Munir, N Sarwar and H Muhammad	2018	Pak. J. Sci. Ind. Res.	61	52-55
28	Improving drought tolerance in maize by foliar application of boron: Water status, antioxidative defense and photosynthetic capacity	Naeem M, MS Naeem, R Ahmad, R Ahmad, MY Ashraf, MZ Ihsan, F Nawaz, HR Athar, M Ashraf and HT Abbas and M Abdullah	2018	Archives Agro. Soil Sci.	64	626-639
29	Intra Vitreous Bevacizumab versus Observation in acute central -serous chorioretin-opathy	Naseem Samra	2018	JUMDC	9	18-21
30	Investigating hydrological responses and adaptive operation of a hydropower station under a climate	Zaman M, S Yuan, J Liu, I Ahmad, M Sultan M, MU Qamar M.U, M Saifllah, M Adnan, MN Anjum and M Nawaz	2018	Pol. J. Environ. Stud.	27	2337-2348
31	Macro determinants of exports from Pakistan to United Arab Emirates (UAE): An empirical analysis	Javed I, I Nabi, M Yasin, and A Razzaq	2018	J. Agric. Res.	56	209-214
32	Management of Insect pests of Cotton; More towards the futuristic approach	Bokhari, SHM, U Naeem-Ullah, S Saeed, M Ishtiaq, M Ramzan and M Nauman	2018	Appl. Sci. Bus. Econ.	5	05-15
33	Molecular alteration analysis of human gut microbial composition in graves' disease patients	Ishaq HM, IS Mohammad, M Shahzad, C Ma, Z Naseem, MA Raza, M Naveed, X Wu, H Guo and P Shi	2018	Int. J. Biol. Sci.	14	1558-1570

34	Multi-model projections of future climate and climate change impacts uncertainty assessment for cotton	Rahman, M.H., A. Ahmad, X. Wang, A. Wajid, W. Nasim, M. Hussain, B. Ahmad, I. Ahmad, Z. Ali, W. Ishaque, M. Awais, V. Shelia, S. Ahmad, S. Fahd, M. Alam, H. Ullah, G. Hoogenboom	2018	Agri. Forest Meteor.	25 3- 25 4	94-113
35	Mutton export competitiveness of Pakistan	Javed IA, M Razaq, MA Yasin, H Imran, I Javed, A Nabi, Sardar and S Ahmad	2018	Pak. J. Agri. Res.	4	313-322
36	Nutritional status of different bio solids and their impact on various growth parameters of wheat (<i>Triticum aestivum</i> L)	Dad K, A Wahid, AA Khan, A Anwar, M Ali, N Sarwar, S Ali and Aqeel	2018	Saudi J. Biol. Sci.	--	--
37	Photo degradation of Microcystin-LR using graphene-TiO ₂ /sodium alginate aerogels	Nawaz M, M Moztahida, J Kim, A Shehzad, J Jang, W Miran and DS Lee	2018	Carbohydrate Polymers	19 9	109-118
38	Pollination biology of <i>Albizia lebbeck</i> (L.) Benth. (Fabaceae: Mimosoideae) with reference to insect floral visitors	Latif, A, SA Malik, S Saeed, SM Zaka, ZM Sarwar, M Ali, MF Azhar, M Javaid and M Ish	2018	Saudi J. Biol. Sci.	25	1291-1297
39	Potential impacts of climate change and adaptation strategies for sunflower in Pakistan.	Awais M, A Wajid, MU Bashir and M Habib-ur-Rahman,	2018	Environ. Sci. Pollut. Res.	25	13719-13730
40	Predicting and improving the recognition of emotions	Hakim A	2018	J. Appl. Comp. Info. Tech.	11	1-9
41	Productivity of oat (<i>Avena sativa</i> L.)-berseem (<i>Trifolium alexandrinum</i> L.) forage mixture in irrigated plain of Pakistan	Shoaib M, MN Khan, N Akhtar, M Ayub, MS Ashraf, A Ghaffar and S Ullah	2018	Pak. J. Agri. Sci.	55	303-312

42	Promoting organic production and consumption: A case of Punjab, Pakistan	Aslam M and MW Akhtar	2018	J. Arable Crops Market.	2	61-69
43	Radiation efficiency and nitrogen fertilizer impacts on sunflower crop in contrasting environments	Nasim W, A Ahmad, A Amin, M Habib-ur-Rahman, M Tariq, M Awais, M Saqib and K Jabra	2018	Environ Sci. Pollut. Res.	25	1822-1836
44	Resistance to commonly used insecticides and phosphine fumigant in red palmweevil, <i>Rhynchophorus ferrugineus</i> (Olivier) in Pakistan	Wakil W, M Yasin, MA Qayyum, MU Ghazanfar, Geoffrey O Bedford and YJ Kwon	2018	PlosOne	35	https://doi.org/10.1371/journal.pone.0192628
45	Rhizobial inoculation for improving growth physiology, nutrition and yield of maize under drought stress conditions	Hussain M.B, S Mahmood, N Ahmed and H Nawaz.	2018	Pak. J. Botany.	50	1681-1689
46	Robust kinematic skeleton of human 3D model in viewing straight limbs	Razzaq A, TA Moughal, MA Zia, S Qadri and SS Muhammad	2018	Pak. J. Sci.	70	342-348
47	The impact of climate warming and crop management on phenology of sunflower-based cropping systems in Punjab, Pakistan	Muhammad Tariq, Shakeel Ahmad, Shah Fahad, Ghulam Abbasa, M. Habib-ur-Rahman, Sajjad Hussaina Zartas	2018	Agri. Forest Meteor.	25 6- 25 7	270-282
48	Toxic effects of some insecticides, herbicides, and plant essential oils against <i>Tribolium confusum</i> Jacquelin du val (Insecta: Coleoptera: Tenebrionidae)	Zaka SM, N Iqbal, Q Saeed, A Akrem, M Batool, AA Khan and Adeel	2018	Saudi J. Biol. Sci.	56	DOI: 10.1016/j.sjbs.2018.05.012
49	Weed competition effects on maize fodder production sown under different seeding densities	Ikram NA, A Tanveer, MA Shehzad, T Abbas, and RM Ikram	2018	Pak. J. Weed Sci. Res.	24	105-117

50	Yield forecasting of Spring Maize using Remote Sensing and Crop Modeling in Faisalabad-Punjab Pakistan	Ahmed I, U Saeed, M Fahad, A Ullah, M Habib ur Rahman, and J Judge	2018	J. Ind. Soc. Remote Sens.	46	1701-1711
51	A comparative, in-vivo anti-diabetic study of persimmon peel powder in alloxan induced rabbits	Sindu M, U Farooq, A Shafi, K Akram, Z Hayat, M Riaz and SH Muhammad	2019	Asian J. Agri. Biol.	7	176-182
52	Anatomical changes in stem of scented Rosa spp. in response to heavy metal accumulation under waste water	Ahsan M, A Younis, MJ Jaskani, U Tariq, MR Shaheen, A Tufail, J Sherani and F Nawaz	2019	Int. J. Agri. Biol.	21	1159-1165
53	Anticoccidial effects of <i>Trachyspermum ammi</i> (Ajwain) in broiler chickens	Abbas A, Rz Abbas , MK Khan, MA Raza, MS Mahmood, MK Saleemi, T Hussain, JA Khan and ZUD Sindhu	2019	Pak. Vet. J.	39	301-304
54	Antimicrobial and antidiabetic potential of synbiotic fermented milk: A functional dairy product	Shafi A, HN Raja, U Farooq, K Akram, Z Hayat and A Naz	2019	Int. J. Dairy Tech.	2	15-22
55	Assessing climate change impacts on pearl millet under arid and semi-arid environments using CSM-CERE	Ullah A, I Ahmad, T Khaliq, U Saeed, M Habib-ur-Rahman, J Hussain and Shafqat	2019	Environ. Sci. Pollut. Res.	26	6745-6757
56	Assessment of resistant varieties of maize against <i>Tribolium castaneum</i> (Herbst) (Coleoptera: Tenebrionidae) in laboratory conditions	Nawaz K, M Shahid, F Ahmad, M Sagheer, MA Saleem, U Naeem-Ullah, and M Sadique	2019	J. Sci. Agri.	3	6-8
57	Boosting Arabic named-entity recognition with multi-attention layer	Abdo Ali MN, G Tan and Aamir	2019	IEEE Access	7	46575-46582
58	Challenges and prospects for weed management in Pakistan: A review	Matloob A, ME Safdar, T Abbas, F Aslam, A Khaliq, A Tanveer, A Rehman and AR Chadhar	2019	Crop Protec.	<i>In press</i>	doi.org/10.1016/j.cropro.2019.01.030

59	Chemical control of polyphagous pests on their auxiliary hosts can minimize insecticide resistance: A case study of <i>Spodoptera exigua</i> Hübner (Lepidoptera: Noctuidae) in cotton agroecosystem	Saeed Q, F Ahmad, N Iqbal and SM Zaka	2019	Ecotox. Environ. Safe.	17 1	721-727
60	Clinical profiles of Dengue fever patients, during an outbreak	Saba S, AR Khan, U Naeem-Ullah and SHM Bokhari	2019	J. Arthropod -Borne Dis.	13	126-134
61	CRISPR/dCas9-mediated inhibition of replication of begomoviruses	Khan, Z, SH Khan, A Ahmad, S Aslam, MS Mubarak and S Khan	2019	Int. J. Agri. Biol.	4	711-718
62	Current status and future possibilities of molecular genetics techniques in <i>Brassica napus</i>	Afzal M, SS Alghamdi, M Habib ur Rahman, A Ahmad, T Farooq and A Mukhtar	2019	Biotech. Letters	40	479-492
63	Developing a selection criterion using correlation and path coefficient analysis in sunflower (<i>Helianthus annuus</i> L.)	Riaz, A, MHN Tahir, M Rizwan, S Fiaz, S Chachar, K Razzaq, B Riaz and H Sadia	2019	Helia	10	doi.org/10.1515/helia-2017-0031
64	Development of high yielding types of <i>Brassica napus</i> L. under salinity stress.	Kanwal S, MHN Tahir, HA Sadaqat and B Sadia	2019	Pak. J. Bot.	5	1185-1190
65	Diversity of pollinators and their role in the pollination biology of chickpea, <i>Cicer arietinum</i> L. (Fabaceae)	Latif A, SA Malik, S Saeed, N Iqbal, Q Saeed, KA Khan and C Ting	2019	J. Asia-Pacific Ento.	22	597-601
66	Effect of rGO loading on Fe ₃ O ₄ : A visible light assisted catalyst material for carbamazepine degradation	Moztahida M, J Jang, M Nawaz, SR Lim and DS Lee	2019	Sci. Total Environ.	66 7	741-750
67	Effects of dietary supplementation of linseed oil (Omega-3) on quality parameters of Neil Ravi bull	Ahmad S, S Ali, A Abbas, RZ Abbas, MZ Muhammad and AR NaheedBan	2019	Livestock Sci.	22 4	57-59

68	Effects of dietary supplementation of linseed oil (Omega-3) on quality parameters of Nili Ravi bull spermatozoa	Ahmad S, S Ali, A Abbas, RZ Abbas, MA Raza, N Bano, MU Shafi and SN Badar	2019	Livestock Sci.	22 4	57-59
69	Evaluation of resistance and morphological parameters of different sunflower cultivars against charcoal	Zeshan MA, S Ali, N Ahmed, M Yousaf, A ur-Rehman Khan and M Usman G	2019	Plant Protec.	3	DOI: 10.33804/ pp.003.01 .0109
70	Exfoliation of Titanium Aluminum Carbide (211 MAX Phase) to form Nano fibers and two-dimensional nano	Shahzad A, M Nawaz, M Moztahida, K Tahir, J Kim, Y Lim, B Kim, J Jang and DS Lee	2019	ACS appl. Materials Interf.	21	19156-19166
71	High arsenic contamination and presence of other trace metals in drinking water of Kushtia district, Bangladesh	Sajjad Hussain, Muhammad Habib-Ur-Rahman, Tasawar Khanam, Abbas Sheer, Zhang Kebin, and Yang Jianjun	2019	J. Environ. Mangt.	24 2	199-209
72	Hypolipidemic effects of synbiotic yoghurt in rabbits	Farkhandah Sarfraz, Umar Farooq, Afshan Shafi, Kashif Akram, Zafar Hayat	2019	Int. J. Dairy Tech.	70	1-10
73	Impact of drying methods on composition and functional properties of date powder procured from different	Raza N, MU Arshad, FM Anjum, F Saeed, AA Maan and H Bader	2019	Food Sci. Nutri.	7	2345-2352
74	Impact of okra yellow vein mosaic virus on the physiology of okra crop and its management	Zeshan MA, Y Iftikhar, S Ali, M Yousaf, N Ahmed and MU Ghani	2019	Asian J Agri. Biol.	4	424-428
75	Influence of zinc and iron on yield and quality of sugarcane planted under various trench spacing	Ghaffar A, NA Ehsanullah, and SH Khan	2019	Pak. J. Agri. Sci.	48	25-33
76	Margin and determinants of Mandrin (Kinnow) export from Pakistan	Javed I, S Nazir, A Bakhsh, M Yasin, H Javed and K Fatima	2019	Pak. J. Agri. Res.	32	205-211

77	Measuring rice farmers' risk perceptions and attitude: Evidence from Pakistan	Rizwan M, Q Ping, A Saboor, UI Ahmed, D Zhang, Z Deyi and Li Teng	2019	Human Ecolog. Risk Assesnt. Int. J.	In press	doi.org/10.1080/10807039.2019.1602753
78	Mesorhizobium ciceri-CR-39 inoculation to wheat for drought tolerance at critical growth stages	Hussain M.B, ZA Zahir, I Mehboob, S Mahmood, N Ahmed, T UI-Haq, I Ahmad and M Imran.	2019	Pak. J. Botany	51	65-72
79	Mitigation of salinity stress in wheat (<i>Triticum aestivum</i> L.) seedlings through physiological seed enhancements	Saddiq MS, S Iqbal, I Afzal, AM Ibrahim, MA Bakhtavar, MB Hafeez and MM Maqbool	2019	J. Plant Nutri.	42	1192-1204
80	Moringa leaf and sorghum water extracts and salicylic acid to alleviate impacts of heat stress	Afzal I, MW Akram, S Rashid, H Ur Rehman, SA Basra	2019	South African J. Bot.	In press	doi.org/10.1016/j.sajb.2019.04.009
81	Book Review (New Directions in Productivity Measurement and Efficiency Analysis. Counting the Environmental and Natural Resources, edited by Tihomir Ancev, M. A. Samad Azad and Francesc Hernandez-Sancho. Published by Edward Elgar Publishing Limited, Cheltenham, UK, 2017, pp. 297, ISBN: 978-1-78643-241-4.)	Baig IA	2019	Aus. J. Agri. Reso. Econ.	63	387-388
82	Physiochemical characterization and utilization of melon (<i>Cucumis melo</i>) seed oil as a functional food ingredient	Shafi A, U Farooq, K Akram	2019	Pak. J. Agric. Sci.	56	123-130

83	Physiochemical characterization and utilization of melon (<i>Cucumis melo</i>) seed oil as a functional food	Shafi A, U Farooq and K Akram	2019	Pak. J. Agri. Sci.	56	123-130
84	Quantitative ethno pharmacological profiling of medicinal shrubs used by indigenous communities of Rawalakot, District Poonch, Azad Jammu and Kashmir, Pakistan	Hussain S, A Hamid, KS Ahmad, A Mehmood, F Nawaz and H Ahmed	2019	Revista Brasileira de Farmacologia	<i>In Press</i>	doi.org/10.1016/j.bjpp.2019.06.008
85	Reduced grapheme oxide-loaded-magnetite: A Fenton-like heterogeneous catalyst for photo catalytic	Moztahida M, M Nawaz, J Kim, A Shehzad, S Kim, J Jang and DS Lee	2019	Chem. Engi. J.	370	855-865
86	Resistance in <i>Tribolium castaneum</i> (Hbst.) against phosphine and deltamethrin	Shahid, M., Farooq Ahmad, Mansoor-ul-Hasan, Muhammad Sagheer, Muhammad Asad Saleem, Unsar Naeem-Ulla	2019	J. Scient. Agric.	3	46-50
87	Root vacuolar Na ⁺ sequestration but not exclusion from uptake correlates with barley salt tolerance	Wu, H, L. Shabala, M Zhou, M, N Su, Q Wu, T. Ul-Haq and S. Shabala	2019	The Plant J.	99	00-00
88	Selenite uptake through roots improves the tolerance to cell disruptors and fungal infection in <i>Cano</i>	Javed HMR, R Qamar, SI Zamir, A Rehman, F Nawaz, MM Faheem, M Ali, A Rehman, A Farooq, and Zaki	2019	Pak. J. Agric. Sci.	56	329-337
89	Silicon improves rice nutrition and productivity under salinity	Ahmed N, MB Hussain, M Murtaza, MA Ali, S Mahmood, MA Qazi, I Ahmad and Z Haider	2019	Pak. J. Bot.	51	837-843
90	Soil drenching of paclobutrazol: An efficient way to improve quinoa performance under salinity	Waqas M, C Yanning, H Iqbal, M Shareef, HU Rehman, S Iqbal, M Sajid	2019	Physiol. Plantarum	165	219-231

91	Structural Adjustment and Vertical Inequality in Rawalpindi District	Saima Asad, Abdul Saboor, Irfan Ahmad Baig	2019	Online	--	--
92	The impact of nepotism on employment status in public sector institutions: An evidence from fresh graduates of Pakistan	Yasin M, N Tahir, M Aslam, A Bakhsh, S Ullah, MA Imran and MT Khaliq	2019	J. Econo. Impact	1	8-12
93	The impact of socio-economic characteristics of school teachers on their job performance	Ashraf N, M Yasin, G Farid, S Ahmad and MT Khaliq	2019	J. Econo. Impact	1	59-63
94	Ti ₃ C ₂ T _x MXene core-shell spheres for ultrahigh removal of mercuric ions	Shahzad A, M Nawaz, M Moztahida, J Jang, K Tahir, J Kim, Y Lim, VS Vassiliadis, SH Woo and DS Lee	2019	Chem. Engi. J.	36 8	400-408
95	Water saving techniques and water use efficiency through cultural operations in cotton	Yonas MW, K Mubeen and U Niaz	2019	Acta Sci. Agri.	3	137-142
96	Yield potential and salt tolerance of quinoa on salt?degraded soils of Pakistan	Iqbal, S, SM Basra, I Afzal, A Wahid, MS Saddiq, MB Hafeez and SE Jacobsen	2019	J. Agron. Crop Sci.	20 5	13-21
97	Role of morphological traits and biochemical contents in imparting resistance against cucumber mosa	Mozamil M, MA Khan, M Ashfaq and AI Maila	2019	Philipp. Agri. Sci.,	10 2	75-81
98	Quality reforms and change in technical efficiency: An evidence from banking sector in Pakistan	Baig IA, M Ashfaq and S Akram	2019	J. Quality Tech. Mngt.	4	1-8

2.6. SEMINARS

Sr. No.	Title	Organizing Department	Date
International			
1	Current and Future prospects of Whitefly & Cotton Leaf curl disease in Pakistan and China	ORIC	14-19.08.2018
2	Mechanisms of Allelopathic Stress and Oxidative Damage in Plants	Agronomy/ Entomology	05.04.2019
National			
3	Role of Maritime Technology - Dr. Salman Nazir (Norway)	ORIC	11.07.2018
4	Advances on Pedagogical Strategies - Dr. Salman Nazir (Norway)	ORIC	12.07.2018
5	Tools for winning National and International Funding - Dr. Salman (Norway)	ORIC	16.07.2018
6	High Quality Research with limited resources	ORIC	17.07.2018
7	Innovation in Strawberry production & marketing	Horticulture	29.08.2018
8	Promotion of Entrepreneurship among students	ORIC	03.09.2018
9	Dialogue on inter religious Harmony and role of Peace, Ethics and character Building in Student Life	DSA	24-28.09.2018
10	Biochar use in changing Climate	Agronomy	05.10.2018
11	Fight Hunger our National Responsibility	FS&T	16.10.2018
12	Character Building, Basic Element of a Better Society / Oath taking Ceremony	CBS	25-10-2018
13	How Iqbal uplift his Readers	Sr. Tutor	13.11.2018
14	Career Development	CDC	14.11.2018
15	Awareness about Consumer Rights & how to approach Consumer Courts	Agribusiness & Applied Economics	14.11.2018
16	Cultivating the Next Generation of Pakistani Youth Leaders	DSA	19-20.11.2018

17	Safe consumption of Vegetables for the prevention of diseases	Dr. M. Shahbaz (PI-SIOP)	19.11.2018
18	International HIV AIDS Day	CBS	03.12.2018
19	Medicinal Plant	FS&T	05.12.2018
20	Role of plant genetic resources in varietal development and seed system	IPBB	06.12.2018
21	United against Corruption for a Prosperous Pakistan & National Voters Day	CBS/Sr. Tutor	07.12.2018
22	Healthy women "Making Smart Nutrition Choices for a healthy Pakistan	Ms. Saima Rasheed	18.12.2018
23	Water secure Pakistan: Role of technology and Research	MNS-UAM	21.12.2018
24	Management of pests of public health importance (rats, cockroaches, bed bugs etc.)	Horticulture	07.01.2019
25	Herbinger of Change	Sr. Tutor	10.01.2019
26	Mind Games	Sr. Tutor	21.02.2019
27	Inclusive Society	SAP	14.03.2019
28	Peaceful coexistence at university and mitigation of violent extremism	DSA	18.03.2019
29	Hate speech and violent extremism	DSA	19.03.2019
30	Interfaith harmony and peaceful coexistence	DSA	25.03.2019
31	Collective Action for Knowledge Economy with Technology (CAKE-TECH)	ORIC/Vet. Sciences	29.03.2019
32	Rural Transformation in Pakistan	Agribusiness & Applied Economics	29.03.2019
33	App Development as a Cottage Industry in Pakistan (Resource Person-Mr. Pervez Akhter, CEO, Infinal Technologies USA)	CS	03.04.2019

34	Voluntary Pension Scheme	Dy. Tr.	18.04.2019
35	Malpractices in nutrition and nutrition camp	FST	29.04.2019
36	Community awareness about recycling of household garbage into value added products by integration with local manufacturer	(Pls SIOP-033) MNS-UAM	02.05.2019
37	Bio-Char Production, Characterization and Advance Applications	Agri. Engineering	19.06.2019

2.7. CONFERENCES

Sr. No.	Title	Organizing Department	Date
1	Climate Smart Agriculture -The Way of Farming for 21st Century	Agronomy	8-9.10.2018
2	2nd International conference on Food Quality safety and Security 2018, Colombo Sri Lanka	FST	25-26.10.2018
3	Sino-Pak International Conference on Innovations in Cotton Breeding and Biotechnology	IPBB	26-27.11.2018
4	1st International Conference on Soil and Crops Health in changing climate	SES	28-29.11.2018
5	1st AUS-PAK International Conference on Wheat for Food Security	IPBB	24-25.03.2019
6	International Conference on Quality Fodder and Production in Climate Shift Paradigm	IPBB	26.03.2019
7	1st AUS-PAK International Conference on Pulses for food Security	IPBB	27.03.2019
8	Contours of National Unity	Dean FSSH	08.04.2019

2.8. OTHER OUTREACH/RECREATIONAL/CAPACITY BUILDING ACTIVITIES

Sr. No.	Title	Organizing Department	Date
1	Education Expo	Senior Tutor	10.07.2018
2	Independence Day	Senior Tutor	10.07.2018
3	Peace Week	Senior Tutor	10.07.2018
4	Chess Event	Sports Office	11.07.2018
5	Mango Festival-2018	Horticulture	14-16.07.2018

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6	Stone laying ceremony of Library	Deputy Librarian	16.07.2018
7	Silver Jubilee National Hike for Rover Scouts -2018/A Centenary Events of International Rover Scout at Pakistan Boy Scouts National Headquarters, Islamabad	RSU	28.07-04.08.2018
8	Tree Plantation	Estate Department	13.08.2018
9	Launching Ceremony of new degree program BSc Agro - Industrial Engineering	Agri. Engineering	17-18.09.2018
10	Inauguration of the Greenhouse facility C -Block and visit of Honorable Agri. Minister	MNS-UAM	24.09.2018
11	International Peace Week, 2018	Principal Officer, Students Affairs	24-28.09.2018
12	The News Education Expo Multan	Senior Tutor	07.10.2018
13	Plant Centric Meal Competition	FST	16.10.2018
14	Farmer day demonstration of cotton stalk puller & shredder and cotton stalk base cutter, shredder & blower for mechanical control of pink boll worm	Agronomy	12.11.2018
15	Discussion on Genomics and Proteomics	IPBB	13.11.2018
16	Entrepreneurship Competition / Business Gala	ORIC/BIEC	26-27.11.2018
17	Farmer Convention	FSS&H	04.12.2018
18	Plant Centric Meal Competition	FST	04.12.2018
19	Young Entrepreneurship - SUMMIT IUB	ORIC/BIEC	12-13.12.2018
20	International Student Convention & Expo - Islamabad	ORIC/BIEC	12-13.12.2018
21	Hum Tumhein Bhoolay Nahein	MNS-UAM	16.12.2018
22	Blood Donation & Screening Camp	CBS	19-20.12.2018
23	Farmer Field Day titled Successful Crop Production under prevailing water shortage	Agronomy	31.12.2018
24	Social Action Plan "Aman ki Ma'mar"	Sr. Tutor	12.01.2019
25	Mango Mission 2030	Horticulture	15.01.2019
26	Participation in Horticulture-Expo 2019, Lahore	BIEC/ORIC	21-22.01.2019
27	Participation in 6th All Punjab Snow Hike for Rover Scouts / Leaders at Murree Galliyat	RSU	25-28.01.2019
28	Kashmir Solidarity Day	DSA/Senior Tutor	05.02.2019
29	1st Convocation	MNS-UAM	15.02.2019
30	Naat Shareef Muqabla	Naat Club, MNS-UAM	27.02.2019

31	1st Dalit Mela-2019	MNS-UAM	03.03.2019
32	DICE-AFS, 2019 Pre-Launching Ceremony	ORIC/BIEC	04.03.2019
33	Campaign for Peaceful Co-existence	SAP	07.03.2019
34	Mango Blossom Festival	Agri. Volunteer/ Dramatic Club/ Music Club/ Media Club	07- 15.03.2019
35	Empowering Women for a Peaceful & Tolerant Society	SAP	08.03.2019
36	Diversity Tour to Worship Places	SAP	15.03.2019
37	Colors of Diversity	SAP	18.03.2019
38	Panel discussion on peaceful coexistence at university and mitigation of violent extremism	DSA	20.03.2019
39	Panel discussion on hate speech and violent extremism at BZU	DSA	21.03.2019
40	Flower Show at Qila Qasim, Multan	Pls SIOP/District Govt/Cantt. Board	22- 24.03.2019
41	Dramatic activity	DSA	23.03.2019
42	Music For Peace	DSA	23.03.2019
43	Pakistan Resolution Day-2019	MNS-UAM	23.03.2019
44	Peace Walk	SAP	23- 26.03.2019
45	Idea Competition (Ideafest-2019)	BIEC/ORIC	25- 27.03.2019
46	Importance of peace and social harmony	DSA	26.03.2019
47	Plant Centric Meal Competition: Pulses Value Addition	FST	27.03.2019
49	Panel discussion on interfaith harmony and peaceful coexistence	DSA	27.03.2019
50	Panel discussion on importance of peace and social harmony	DSA	28.03.2019
51	Science for Farmers and Cotton Mela	Agribusiness & Applied Economics	28.03.2019
52	Adbi Bethak	MNS-UAM	28.03.2019
53	Science for Farmers and Cotton Mela 2019	IPBB/Entomology	4.2019
54	Flower Show at Qila Qasim, Multan	Pls SIOP/District Govt/Cantt. Board	28.03- 04.04.2019
55	Traffic Awareness & How to get your Driving License	RSU	02.04.2019
56	Police Mobile Unit for Learner/Renewal license	RSU	02.04.2019
57	Badminton Event-2019	Sports Office	10.04.2019

58	TOPSUN bazar Float activation campaign at B Block	In-charge Blood Donation Society/Sr. Tutor	18.04.2019
59	Aman Mushayira	MNS-UAM	23.04.2019
60	4th Annual Book Fair-2019	Dy. Librarian	24.04.2019
61	Competition "2nd Annual Graduate Research Day-2019"	MNS-UAM	25.04.2019

2.9. RESEARCH LINKAGES

i. International

Sr. No.	MoU	Country	Date
1	Group of Cotton Genetics Improvements (GCGI), Huazhong Agricultural University, Wuhan, China	China	04.10.2018
2	School of Environmental Sciences, and Engineering, Shandong University China	China	29.11.2018
3	Tonglu County People's Government China	China	12.12.2018
4	Okinawa Institute of Science and Technology School Corporation Japan	Japan	04.02.2019
5	College of Agriculture and Biotechnology, Zhejiang University, Hangzhou	China	14.03.2019
6	University of Canberra, Canada	Canada	04.04.2019
7	INTA Argentina	Argentina	03.05.2019
8	School of Vehicle and Mobility, Tsinghua University Beijing	China	29.05.2019
9	National Research Centre, Egypt	Egypt	2019

ii. National

Sr. No.	Name of Organization	Date
10	MNS-UET, Multan	03-07-2018
11	Telenor Pakistan Limited	09.11.2018
12	Nestle Pakistan	18.12.2018
13	Lodhran Pilot Project, Lodhran	06.02.2019
14	Nishter Medical University, Multan	26.02.2019
15	Rafique Research and Educational Society, Lodhran	17.04.2019
16	Colony Textile Mills, Multan	17.04.2019
17	Multan Cage Fish Farming	17.04.2019

18	Prime Green Farms, Lahore	14.05.2019
19	Conimpex Hatchery and Breeding Farm, Multan	2019
20	Multan Chamber of Commerce and Industries, Multan	2019
21	Mumtaz Feed Mills (Pvt.), Multan	2019

2.10. INCULCATING THE CULTURE OF RESEARCH AND CONSULTANCY

The MNS-UAM is striving hard to inculcate the culture of research and consultancy. Keeping in view the need of the local community especially the farmers and industrialists, this University has taken the following revolutionary steps:

1. All faculty members of the University are encouraged to take part in need based research and consultancy.
2. Students are motivated for research and consultancy in the form of paid work.
3. Liaisons are being established among the researchers and extension workers to work for common target like establishment of South Punjab Agriculture Forum.
4. For the benefits of local community, this University intends to provide funds from its own resources to the researchers to carry out problem-oriented research.

2.10.1. BUSINESS INCUBATION AND ENTREPRENEURSHIP CENTRE (BIEC)

Business Incubation and Entrepreneurship Centre (BIEC) under the umbrella of Office of Research, innovation and Commercialization (ORIC) MNS-University of Agriculture, Multan (MNSUAM) is aimed to initiate the business culture among the youth including students and career professionals of South Punjab. The overall focus of this initiative is to mobilize the new generation towards economic development through business and social enterprise. The BIEC provides excellent counseling to the students. The BIEC initiate the ground-breaking thoughts of students into valuable business activity. The aim of BIEC at MNSUAM is to promote the culture of entrepreneurship.

List of Activities

Sr. No.	Event Title	Activity Type	Date	Venue	Nature of MNS-UAM Involvement
1.	Seminar on Social Entrepreneurship (Mitti Connection)	Seminar	03.09.2018	MNS-UAM	Organizer
2.	DICE-AFS	Competition	2-4.10.2018	UAF	Participants
3.	Entrepreneurial Competition (The Business Gala)	Competition	26-27.11.2018	MNS-UAM	Organizer
4.	Youth Entrepreneur Summit 2018	Competition	12-13.12.2018	IUB	Participants
5.	International Student Convention & Expo	Competitions & Workshops	12-13.12.2018	Islamabad	Participants
6.	Pakistan Horticulture Expo	Expo	21-22.01.2019	Lahore	Participant
7.	Biz-Hub	Competition	25.01.2019	University of Education, Multan.	Participant
8.	Entrepreneurship as a viable career option	Workshop	30.01.2019	MNS-UAM	Organizer
9.	Idea fest 2019	Competition	25-27.03.2019	MNS-UAM	Organizer
10.	Punjab Agri-Expo 2019	Expo	22-23.06.2019	Lahore	Participant

a) Seminar on Social Entrepreneurship (Mitti Connection)

Mitti Connection is a non-profitable and social impact purposes organization only. This organization does not allow volunteer to get involved in any political, religious, or international conflicts discussions. Volunteer have to follow the rules and laws of the land and respect the culture and the religions of the host country.

b) DICE UAF

DICE Foundation is a US based non-profit, tax-exempt organization registered in Michigan, USA. The organization is run by expatriate volunteers from US, UK, Canada and by thought leaders within Pakistan, who are fully committed to bringing prosperity to their motherland through innovation,

entrepreneurship and local product development.

In the year 2018, DICE organized a Business Competition on Agriculture and Food Security that was hosted by University of Agriculture Faisalabad. The participation of the MNS-University of Agriculture Multan was highly appreciated and Varsity got 4th Position in this National Event.

Highlights of Event:

- 48 Universities participated in the event.
- 138 Business themes were presented.
- MNSUAM displayed 11 business themes.
- MNSUAM project "Automated Switch Multiplexer" got 4th position out of 138 business themes.

c) The Business Gala

MNS-University of Agriculture Multan hosted the competition from 26-27th November, 2018. The competition aimed to trigger off the students in business planning and execution for the emergence and growth of various industrial sectors. The event showcased the business and entrepreneurial ideas of students from various institutions of South Punjab.

Highlights of Event:

- Eight Universities of South Punjab Region participated in this event.
- The winner of the Entrepreneurial Competition 2018 was MNS-UAM's student for her innovative product "Fresh Dri".

d) Young Entrepreneur Summit

MNS-University of Agriculture Multan participated in the Young Entrepreneurial Summit 2018, hosted by The Islamia University of Bahawalpur and University of Central Punjab on 12-13 December, 2018.

Highlights of Event:

- 10 Universities participated in the event.
- 38 Business Ideas were presented.
- Project of MNS-UAM entitled "Fresh Dri" got 3rd Position in Young Entrepreneur Summit 2018.
- Two investors were interested to promote more suitable innovative ideas' at the end of the event.

e) International Student Convention & Expo

The students of MNS-University of agriculture Multan participated in the International Student Convention & Expo, 2018. It was held on 12-13 December, 2018 at Pak China Friendship centre Islamabad. The purpose of participation was to display University stall for showcasing the progressive work of MNSUAM student in this international event. Moreover, the students also attended different workshops and seminars held at the same venue.

Highlights of Event:

- 40 National and international Universities participated.
- 54 Business Plans were presented
- Investors and Business Community was engaged in the evaluation process.
- MNSUAM's project Fresh Dri ranked at 2nd Position among all the plans presented by different Universities.

f) Pakistan Horti Expo 2019

The Students of MNS-University of Agriculture, Multan participated in Pakistan Horti-expo Lahore. It was held on 21st and 22nd of January at International Expo Centre Lahore. The activity was organized by Punjab Agriculture Department.

Highlights of Events:

- MNS-UAM students showcased their 4 Projects including Fresh Dri, Hydroponics, Kitchen Gardening, and Health Care Watch.
- More than 100 participants including Exporters, Local Business Community, Govt. Departments, and Universities displayed their products.

g) BiZ-HUB

The Students of MNS-University of Agriculture, Multan participated in BiZ-HUB Competition which was held on 25th January 2019. The competition was organized by University of Education Multan Campus.

Highlights of Events:

- 20 Universities participated in the competition.
- 100 Business plans were presented.
- MNS-UAM Project named "Hydroponics for Home" got 2nd Position in this mega business contest.

h) Entrepreneurship as a Viable Career Option

MNS-University of Agriculture, Multan organized 1st Session of workshop, titled as “Entrepreneurship as a Viable career option” with the collaboration of SMEDA on 6th March, 2019. The motive of this initiative was to cope up the student's abilities in the subject of entrepreneurs. Current job market situation and growth of a job holder with comparison of entrepreneurs was critically analyzed. Business startups were emphasized.

i) Idea-fest 2019

The Idea Fest 2019 was organized by MNS-UAM from March 26-27 with the goal to engage the students in business planning and execution for the advent and growth of various industrial sectors. The event showcased the business and entrepreneurial ideas of students from various institutions of South Punjab. In this mega festivity, around 20 institutes participated.

j) Punjab Agri-Expo 2019

The Students of MNS-University of Agriculture, Multan participated in Punjab Agri-Expo Lahore. It was held on 22nd and 23rd of January at International Expo Centre Lahore. The Expo was organized by Punjab Agriculture Department.

Highlights of Events:

- MNS-UAM students showcased 4 Projects including Honey Bee-keeping, Fresh Dri, Hydroponics, and Kitchen Gardening.
- 100 plus Exporter, Farmers, local Departments and Universities participated in the event.
- Fresh honey and hydroponically grown vegetables were sold to the customers and good relations with customer were developed through exchange of contacts.
- Effective campaigns were run by MNS-UAM students about kitchen gardening through their product awareness to the visitors.

These activities are currently performed by Business incubation and Entrepreneurship Centre with the support of Office of Research, Innovation and Commercialization. The team of BIEC is also taking some steps toward incubating the student's entrepreneurs for commercializing their projects.

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CHAPTER-3

QUALITY ASSURANCE

3.1. Quality Enhancement Cell

The MNS University Agriculture Multan established Quality Enhancement Cell (QEC) in March 2016 for quality assurance in teaching and other academic activities to meet international standards of higher education. The main focus of QEC is the implementation of quality assurance policies of HEC and monitoring the degree programs being offered by the University, to promote outcome based learning. This helps in developing a mindset among the faculty and students for the promotion of academic excellence.

3.2. Functions of QEC

The QEC at MNS-University of Agriculture performs the following functions:

- 1) Capacity building of faculty, through seminars and trainings, for the preparation of Self-Assessment Reports (SARs) of the academic programs by various departments.
 - 2) Preparation of SARs by Program Teams and evaluation by Assessment Teams.
 - 3) Conduct the meetings of Departmental Technical Review Committees for annual review of TTS faculty.
 - 4) Accreditation of undergraduate programs from respective Accreditation Councils.
- During the year 2018-19, the detailed of various activities of QEC is as follows:

3.3. Course and Teacher Evaluation Proforma

With the objective of improving the course contents and teaching for a conducive class room environment, feedback of students is collected in the form of HEC Course and Teacher Evaluation Proforma at the end of every semester. Following is the detailed of number of courses for which this information was collected.

Sr. No	Semester	Number of Courses	
		Undergraduate	Postgraduate
1	Winter 2018-19	273	70
2	Spring 2019	200	90

3.4. NOC to initiate postgraduate degree programs

University is expanding and offering new MS, M.Sc. (Hons.) and Ph.D. degree programs after getting NOCs from the HEC for launching new postgraduate degree programs. During the year 2018-19, NOCs were obtained from HEC for the following postgraduate degree programs.

- M.Sc. (Hons.) and Ph.D. in Plant Pathology

- M.Sc. (Hons.) and Ph.D. in Seed Science and Technology
- M.Sc. (Hons.) and Ph.D. in Biotechnology
- M.Sc. (Hons.) in Climate Change
- M.Sc. (Hons.) Agricultural Economics
- MS Computer Science

During the report period one application was submitted to the HEC for NOC to initiate following degree program

- MS (Management) Specialization in Agribusiness

3.5. Departmental Technical Review Committee (DTRC) for Annual Review of TTS Faculty

To create spirit of competition and target based assessment, the MNS-UAM promotes hiring young faculty as an Assistant Professor on TTS. Second meeting of Departmental Technical Review Committee was held during the year under report for the annual review of 24 TTS faculty as per following detail:

Department	TTS Faculty Member/s
Agribusiness and Applied Economics	1
Agri-Engineering	1
Agri-Extension	1
Agronomy	5
Computer Science and Information Technology	2
Entomology	1
Food Science and Technology	2
Horticulture	5
Institute of Plant Breeding and Biotechnology	1
Plant Pathology	2
Soil and Environmental Sciences	3
Total	24

3.6. Plagiarism/Similarity Index Checking For Postgraduate Synopses/Theses

For maintaining and assuring the quality, similarity index/plagiarism checking of postgraduate research synopses and theses is mandatory at MNS-UAM and only those documents are accepted which have similarity index within permissible limits as defined by HEC. The QEC provides services for checking similarity index of synopses/theses and papers/articles submitted for travel grant to different funding agencies.

Synopses	Theses	Papers/Articles
184	42	23

3.7. Trainings/Workshops Organized

The QEC conducted following capacity building trainings/seminars for the faculty to assure quality in the academic programs at the University.

1. Seminar on "Blended and Hybrid Courses"
2. Workshop on "Preparation of Self-Assessment Reports (SARs)"
3. Seminar on "What is plagiarism, How we can avoid plagiarism, HEC Policy, and Consequences"
4. Workshop on "Outcome Based Education"
5. Moodle Driving Hands-on-Training

3.8. Impact of Quality Assurance

The QEC is responsible to prepare the assessment reports at the end of the each semester and to achieve this target, the QEC got filled the evaluation forms by relevant students/employer/faculty/alumni, to prepare all reports including course evaluation, teachers evaluation, faculty survey, survey of graduate students and employer survey. The results of these assessment reports have increased the quality of education, students' satisfaction and improved the performance of the faculty members. Overall, the impact of Quality Assurance is as under:

- 1 The steps taken in terms of Quality Assurance by the QEC have created awareness among the students and teachers related to competitiveness at national and international level.
2. The steps taken towards standardization have created seriousness both at teaching and research level.
4. The process of assessing strengths, weaknesses and potential of the different programs introduced is taking route at the institutional level.
5. Efforts regarding the observance of minimum criteria for admissions and research have resulted positive outcomes at departmental level.
6. An analytical and comparative tendency to learn from the top institutions (HEIs) within and outside the country has been started and will yield positive results.
7. Efforts to score high place in the University rankings within and outside the country have been undertaken.
8. Putting the different processes in proper order has been prioritized at University level.
9. Monitoring and Evaluation has become an integral component of each ongoing project.

3.9. Impact towards the Higher Education

- Institutionalization of quality assurance
- Information systems for HEC (Ranking, Faculty Evaluation etc.)
- Internationalization (Linkages, Ph.D. scholarships, Post-docs, Student Exchange, Conferences, Professional advanced Trainings, Plagiarism Checking etc.)
- Awareness and capacity building of faculty members through various professional development programs

3.10. Impact towards Institutional Administration

- Institutionalization of quality assurance mechanisms
- Development of teaching and learning framework
- Promotion of outcome based teaching (classroom management, teaching methodology, peer reviews etc.)
- Management of academic staff (area of interest, expertise, workload and other responsibilities/duties assigned from time to time)
- Administrative and financial management of research projects.
- Participation/membership of external stakeholders in Board of Studies, Academic Council, Selection Board, Syndicate etc.
- Formulating Standard Operating Procedures (SOPs) for policy implementation, e.g. Faculty Evaluation, Turnitin, Purchase and Procurement etc.

3.11. Teaching Practices

- Preparation of course files
- Defining expected learning outcomes, scheme of study, division and completion of credit hours
- Information on student progress
- Assessment of learning both formative and summative through the entire semester and program
- Teaching strategies, methodologies, micro teaching etc.
- Hybrid/Blended Course using Google Classroom and Moodle



CHAPTER-4

FACULTY DEVELOPMENT

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The University has a policy for capacity building of its all employees with special emphasis on faculty development. The University organizes number of seminars and workshops in collaboration with QEC/ORIC for the professional development of young faculty. Moreover, the faculty members also participate in a number of trainings funded and organized by other organizations/agencies. These training programs focus on teaching and research methodologies and awareness on prevailing university rules and regulations.

4.1. Objectives

- Promote human resource development as an integral part of the MNS-UAM strategic plan.
- Foster an environment of organizational and individual lifelong learning.
- Design, develop, and implement programs and trainings/workshops that provide new knowledge, new skills, innovative thinking, and motivation, thereby contributing to significant improvements in the University's services and processes.
- Promulgate workplace harmony, effectiveness, and job satisfaction by providing programs that encourage appreciation of and sensitivity toward all persons.

4.2. FACULTY AND STAFF TRAININGS/WORKSHOPS ORGANIZED

Sr. No.	Title	Organizing Department	Date
1	International training workshop tools for winning National and International Funding	ORIC	16.07.2018
2	International training workshop on High Quality Research with Limited Resources	ORIC	16.07.2018
3	Basic Statistics With R	Agribusiness & Applied Economics	6-8.08.2018
4	Question Paper Setting and Classroom Management	ORIC	11.08.2018
5	Gardening and Packaging	Star Farm / MNSUAM	17.08.2018
6	Gardening and Packaging	Star Farm / MNSUAM	21.08.2018
7	Gardening and Packaging	Star Farm / MNSUAM	24.08.2018
8	Critical Thinking and Scientific Writing	ORIC	04.09.2018

9	National Workshop on climate Modeling, Projections Generation and Data Analysis	Agronomy	5-6.09.2018
10	Successful Crop Production under Prevailing Water Shortage	Agronomy	13-09-2018
11	Basics of Database using MS Access	CS/IT	11-13.09.2018
12	Social and Religious Tolerance	Sr. Tutor	27-28.09.2018
13	Conflict Management & Effective Communication	Allahdin Group of Companies/ORIC	08-09.12.2018
14	Faculty Development on Start-ups and How to Manage Business Incubation Centers by Improving Industry, Academia and Society Linkage	ORIC	19.12.2018
15	Indigenous On-campus Training	Ms. Tahira Gul	18-19.12.2018
16	Social and Religious Tolerance	Senior Tutor	09.01.2019
17	ToT on "Mango High Density Plantation"	MNS-UAM & MRI	6-10.02.2019
18	Integrated Weed Management for Sustainable Wheat Production	Agronomy	26.02.2019
19	Improvement of chickpea productivity and profitability at Farm level in Thal through effective control of pod borer and gram blight (AZRI-Bhakkar)	IPBB	14.03.2019
20	Thermo Fisher Scientific Technical Personnel "NGS Training"	ORIC/IPBB	08-09.04.2019
21	ERP Automation Project (MS Dynamics 365 ERP Solution)	System Admin	16.04.2019
22	Moodle Driving Hands-on Training	QEC	17 & 24.04/01.05.2019
23	Two day training of Presiding Officer and sr. Assistant Presiding Officer-GE 2018	UNDP Pakistan	10.07.2018

4.3. TRAVEL GRANTS INFORMATION

Sr. No.	Name	Purpose	Date
1	Dr. Shah Rukh	Geochemistry-Assistant Researcher-Conduct soil and water analysis offered by Xian Botanical garden of Shaanxi Province, Institute of Botany of Shaanxi Province under 2nd batch of Talented Young Scientist Program (TYSP)	2018 to 2019.
2	Mr. Azher Khan	Chinese Language Course at HBIBE, China	01.03.2019 to 30.01.2020
3	Rana Muhammad Naeem	Chinese Language Course at HBIBE, China	01.03.2019 to 30.01.2020
4	Engr. Shahzad Ahmad	Chinese Government Scholarships -University Program and Presidential PhD Fellowships of Southern University of Sciences and Technology.	01.03.2019 to 30.01.2020
5	Prof. Dr. Irfan Ahmad Baig	2nd International Halal Tourism Congress organized by Kastamonu University, Turkey	03-10.04.2019
6	Mr. Abdul Manan	"International Conference on Nuclear and Cytoplasmic Molecular Machines at Work", UAE	08-10.04.2019
7	Dr. Muhammad Asif Raza	3rd International Conference on Agriculture, Food, Veterinary and Pharmacy Science (ICAFOP) to be held at Trabzon, Turkey	15-19.04.2019
8	Dr. Muhammad Asif Raza	"Capacity Building for Educational Administrators" at Korea by Korea International Cooperation Agency (KOICA)	23.05.2019 to 05.06.2019
9	Dr. Ishtiaq Ahmad Rajwana	33rd Lotus Exposition and International Symposium on Lotus at Macao, China	03-06.06.2019.
10	Dr. Wazir Ahmed	Advanced Training Course of Capacity Building of Mine Hazard Management for Sustainable Development" announced by Korea International Cooperation Agency (KOICA)	16-29.06.2019
11	Mr. Manan Aslam	Strategic Leadership and Change Management	21.10.2019 to 01.11.2019.

4.4. CHINESE LANGUAGE COURSE AT MNS-UAM

Three month short course on Chinese Language imparted necessary skill and proficiency that will help seek better opportunities for job as an instructor or spokesperson, bilateral trade. Mr. Muhan Tai from Hebei Institute of International Business and Economics, China was the instructor for this course. He added that we are taking further steps to improve the standard of teaching Chinese language at the University so that the students may not feel any difficulty. It would enable the people of both countries to come closer through language learning and cultural exchange. Moreover, the establishment of Confucius Institute (CI) at MNS-UAM will provide a broader platform to further cement the ties of friendship and mutual cooperation in trade and energy. It would enable the people of both countries to come closer through language learning and cultural exchange. Centre will not only provide an opportunity to learn Chinese language but also create awareness about various aspects of Chinese life like culture, food, music and other interesting facts of Chinese civilization. The Confucius Institutes will provide services like: Chinese language teaching; training Chinese language instructors and Chinese language teaching resources; conducting the HSK examination (Chinese Language Proficiency Tests) and tests for the Certification of the Chinese Language Teachers; providing information and consultative services concerning Chinese education, culture, and so on; conducting language and cultural exchange activities between China and other countries.

4.5. WORKSHOP ON BASIC STATISTICS WIT R SOFTWARE

Department of Agribusiness and Applied Economics of MNS-UAM organized a three day workshop on "Basic Statistics with R" from August 9-12, 2019. The objective of this training was to impart practical training regarding the use of this statistical tool for data analyses and interpretation. The training was focused on basics of R Software and hands on approach to perform descriptive analysis of qualitative and quantitate data, carry out regression, correlation, ANOVA and other inferential statistics tests for different types of data. Dr. Sammi Ullah (Assistant Professor) and Ms. Samra Naseem (Lecturer) gave comprehensive presentations about introduction of this program, principles, data entry, using program functions, and sample R sessions for data analyses. The training was attended by large number of postgraduate students and faculty members.



4.6. WORKSHOP ON QUESTION PAPER SETTING AND CLASS ROOM MANAGEMENT

Office of Research, Innovation and Commercialization of MNS-UAM organized a one day training workshop on "Question Paper Setting and Class Room Management" on August 11, 2018. Professor Dr. Syed Sadaqat Mehdi was the resource person for this workshop. Dr. Mehdi has vast teaching experience and has served at various teaching and administrative posts. Besides serving as Professor of Plant Breeding and Genetics at University of Agriculture, Faisalabad, he has also served as Registrar and then Rector of Virtual University of Pakistan. Presently, he is acting as Project Director of SCIL University. He said that aim of sessions was to become a better paper setter and class manager. Student's assessment and evaluation forms a very important component of the outcome based learning process. Fair, accurate and effective evaluation of students' knowledge and skills is an element that needs to be imparted and implemented by a teacher to maintain high quality of education. He asserted the need of clarity, reliability, validity, authenticity and fairness while setting a good question paper. Question paper should assess the outcomes of learning and motivate the students to make learning more effective, he further added. He also familiarized the participants about the Bloom's Taxonomy and knowledge based, emotion based and action based learning processes. He pointed out that class management is all about practice of productively engaging students. However, not all management strategies are effective for every teacher and for all circumstances. He talked about reasons of disruptive behavior and ways to overcome these. He also stressed on issues related to impartiality of a teacher towards all students in the examination and assessment of their knowledge. The session was well-attended by the faculty members from MNS-UAM, MNS-UET, BZU and The Woman University, Multan. Pre- and post-workshop questionnaires were also got filled from the workshop participants to assess the effective learning and success of this activity.

4.7. TRAINING WORKSHOP ON CRITICAL THINKING AND SCIENTIFIC WRITING

Dr. Martin Wiehle, the Scientific Coordinator, International Center for Development and Decent Work, Germany delivered a comprehensive presentation during a one-day training workshop on 'Critical Thinking and Scientific Writing' organized by MNS-UAM in collaboration with ICDD Germany on September 4, 2019. Prof. Dr. Asif Ali, Vice Chancellor, MNS-UAM was the Chief Guest, while experts from Nishtar Medical University, Multan, Women University Multan, MNS-University of Engineering and Technology, Multan and Cotton Research Institute, Multan participated in the training workshop. The main objective of the workshop was to train the researchers how to make their research purposeful. This workshop aimed to enhance scientific writing skills of the participants from different disciplines. Dr. Martin said that the agricultural research should be aimed at solving the real life problems of farmers and growers and should be published for their awareness and benefit. Talking to the participants, he discussed approaches and tools for ensuring that message comes across and make your scientific writing inspiring for you and your audience.

4.8. TRAINING WORKSHOP ON BASICS OF DATABASE USING MS ACES

The Department of Computer Science, MNSUAM conducted a three-day training workshop from September 13-15, 2019 on 'Basics of Database using MS Access' in coordination with Gravity Inc. The workshop aimed at inculcating in students and faculty members the skills of database application development, table design, form design and report design. The workshop was attended by the students from MNS-UAM and BZU, Multan. The resource persons of the workshop, Mr. Israr Hussain and Ms. Javeria Jabeen of MNS-UAM, conducted various sessions and gave detailed lectures and presentations regarding development of database application, designing tables and forms and generating reports. The Vice Chancellor, MNS-UAM, Prof. Dr. Asif Ali said that better use of technology and software is the need of the hour. Such workshops would give knowledge of modernized technology along with updated software and applications and their practical usage.

4.9. TRAINING WORKSHOP ON CLIMATE DATA ANALYSIS

Department of Agronomy, and ORIC, MNS-UAM successfully organized a National training workshop in collaboration with Pakistan Meteorological Department (PMD)-Islamabad, entitled "Climate Modeling, Projections Generations and Data Analysis" on September 5 and 6, 2018. The purpose of training workshop was the capacity building of faculty, postgraduate students, researchers and extension workers from South Punjab Agriculture Forum. About 35 scholars, academicians and research scientists participated in the training. Mr. Burhan Ahmad and Syed Ahsan Ali from PMD were the resource persons of this training workshop; while, Dr. Habib ur Rehman from MNS-UAM was the focal person. It was part of the University's regular activities of professional development and capacity building of the staff and students. Dr. Asif Ali emphasized on educating students and scientists on modeling climate system dynamics and global change in which MNS-UAM can play a key role by following its mandate of providing effective systems and leadership for professional learning, research, entrepreneurship and community service. He also highlighted significance of climatic studies for an agrarian economy like Pakistan, where issues related to climate change and their ramifications are highly sensitive and challenging for achieving stability in economy. The scholars spoke about climate change scenarios of cotton-wheat zone in Punjab using a statistical downscaling method, and global-regional climate models and their inter-comparisons. Participants gained sufficient experience on use of grid analysis and display system (GrADS), GrADS Programming, preparation of weather synoptic charts, working with web based analysis tools for climate change projections, training on netCDF modules/files for climate change data generation and analysis during the event that was kind of training workshop for going through the climate data-set analysis. Resource persons from PMD, Burhan Ahmad and Syed Ahsan Ali highlighted their expert knowledge on simulations of South Asian summer monsoon and diagnostic studies of weather extremes. They also gave overview of on-going PMD research projects in modeling climate system dynamics at Research & Development Division, PMD.

4.10. FACULTY MEMBERS PROCEEDED ABROAD TO PURSUE HIGHER STUDIES

Three faculty members of MNS-UAM proceeded to China for higher studies. Mr. Muhammad Arif, Lecturer, Department of Soil and Environmental Sciences is pursuing his doctorate degree in Soil Science from University of Science and Technology of China, Hefei. Mr. Furqan Ahmad, Lecturer, Institute of Plant Breeding and Biotechnology is doing his Ph.D in Crop Genetics and Breeding from Zhejiang University, Hangzhou. Mr. Babar Farid, Lecturer, Institute of Plant Breeding and Biotechnology will complete his doctoral degree from Huazhong Agricultural University Wuhan, China. Before their departure to China, a grand farewell dinner was organized in the honor of these faculty members, wherein their dedicated services and contribution towards MNS-UAM success was rightfully acknowledged and greatly appreciated.

4.11. INTERNATIONAL WORKSHOP ON ADVANCED TOOLS FOR DROUGHT MONITORING AND ADAPTATIONS

An international workshop on “Advanced Tools for Drought Monitoring and Adaptations” was organized by the Department of Agronomy on October 10, 2018. There were two international resource persons; Dr. Nasrin Salehnia and Mr. Sohrab Kolsoumi from Ferdowsi University of Mashhad, Iran. Dr. Habib ur Rehman from Department of Agronomy was the focal person. Prof. Dr. Zulfiqar Ali, Director ORIC, in his opening remarks highlighted the significance of advanced tools for drought monitoring and their application in agriculture. He focused on the adaptation for drought conditions as our country is already facing water scarce conditions and there are serious threats of water scarcity in decades to come. The training workshop was about current and future drought conditions in Pakistan and different advanced tools (WD, MDM, and KBDI) for drought monitoring and adaptation. There were 45 participants from different universities across Pakistan and South Punjab Agriculture Forum. Agrimetsoft Products like Drought Monitor and Prediction Tools, Rain-based Drought Indices, Unidata's Network Common Data Form, Statistical Downscaling of General Circulation Models were taught to the participants.

4.12. BAYER SAFE USE AMBASSADOR WORKSHOP

A one-day training workshop on safe use of pesticides was organized at the University. The purpose of this workshop was to sensitize researchers and students on the safe use of agrochemicals. Also, the aim was to enable the students to transfer knowledge about pesticide usage to the farmers and help them to protect themselves and the environment. While addressing to the participants, the country development head of Bayer Pakistan, Mr. Athar Hussain Abbasi said that Bayer spends 10% of its income on research and development of environmental friendly pesticides. Further, Bayer is very concerned about application of insecticides besides its efficacy and effect on non-target fauna and also to persons who are engaged in application of pesticides. Therefore, we continuously conduct workshops and training programs to educate agriculture students and farmers about taking precautionary measure while using pesticides.

4.13. WORKSHOP TO ENHANCE STATISTICAL SKILLS

Department of Agribusiness and Applied Economics of MNS-UAM organized a four day workshop to enhance statistical skills. The objective of this training workshop was to impart practical training regarding the use of this statistical tool for data analyses and interpretation. The training focused on basics of R Software and hands on approach to perform descriptive analysis of qualitative and quantitative data, carry out regression, correlation, ANOVA and other inferential statistics tests for different types of data. . Participants were trained about introduction of this program, principles, data entry, using program functions, and sample R sessions for data analyses. Important topics like test of hypothesis for population mean, F and T distribution, basics of research design, ANOVA, some basic design layout with principal to solve the various problems related to agriculture, factorial experiments, beyond ANOVA test, post hoc tests, Treatment structure, contrasts, orthogonal contrasts and polynomials for quantitative treatment factors, Split & split block experiment were taught. Dr. Hamamd Nadeem Tahir, Dr. Abdul Ghaffar, Dr. Sammi Ullah and Ms. Samra Naseem gave comprehensive presentations on these topics. The training was attended by large number of postgraduate students and faculty members.

4.14. WORKSHOP ON WRITING SUCCESSFUL PROPOSALS

Under the umbrella of GRC, Dr. Ghulam Haider, Assistant Professor, Department of Agronomy delivered a lecture on basics (science and arts of writing and wining of proposals) research proposals. Dr. Haider, differentiated the types of grant proposals, fellowships and specific research proposals. All points starting from writing to proposal evaluation and result by the funding agency were discussed. He elaborated the elements of good proposal, tips to write effective proposals, example of research proposal outline, and key points for winning competitive grants. Prof. Dr. Zulfiqar Ali added a critical analysis of various aspects for proposal writing and their success rate.

4.15. MNS-UAM Faculty Member Participated in HEC Training

Dr. Muhammad Amir Bakhtavar participated and successfully completed two weeks training on “Academic Writing for Publication” from April 1-12, 2019. The training was organized by Learning Innovation Division, HEC Islamabad in collaboration with Regional English Language office of US Embassy. Resource Person from USA trained the participants about different aspects of academic writing including developing research questions, research proposal, writing a research article, review article, book review, abstract and conclusion. Participants were also trained about different techniques of using online sources for writing and publication and finding suitable venue for publishing research article. Moreover, various brainstorming activities, mind mapping techniques, making outline and reverse outlines of the draft were performed during this training.

4.16. Blended Learning - An Introduction to Moodle

Over the past decade, there has been an increased focus on the need of student's engagement in terms of creativity, success, and retention rates. In response to these issues many educational institutions have adopted a blended (hybrid) approach to courses and programs by combining face-to-face and online opportunities for learning. In this regard, Dr. Ayesha Hakim (Ph.D. CS, NZ), who has recently joined MNSUAM as Assistant Professor of Computer Science, delivered a seminar on “Blended Learning - An Introduction to Moodle”, to explore the blended learning in the light of student-centered teaching approach. She discussed about an urgent need of an interactive learning management system in MNSUAM, followed by an introduction to Moodle as a single robust, secure and integrated system to create personalized learning environments. The seminar was a step towards launching of Outcome Based Education (OBE) System at MNSUAM and will be followed by a 3 weeks training workshop “Moodle Driving Hands-on Training”, aiming at training faculty members for successful implementation of blended learning environment throughout the university. The resource person for this training is Dr. Ayesha Hakim and is being organized by Quality Enhancement Cell of the varsity.



ANNUAL REPORT 2018-19



CHAPTER-5

ACCESS

**ANNUAL
REPORT
2018-19**

5.1. Basic Enrollment during Year 2018-19

Program Offered	Male	Female	Total
F.Sc. (Pre Agriculture)	89	0	89
B.Sc. (Hons.) Agriculture	1016	196	1212
B.Sc. (Hons.) Poultry Sciences	44	2	46
B.Sc. (Hons.) Fisheries & Aquaculture	14	13	27
B.Sc.(Hons.) AIET	36	4	40
BS CS	261	32	293
BS IT	214	34	248
BBA Agribusiness	179	34	213
M.Sc. (Hons.) Agriculture	197	60	257
Ph.D. Agriculture	21	3	24
Grand Total	2071	378	2449

5.2. Data of M.Sc. (Hons.) and Ph.D Student Enrollment

5.2.1. M.Sc.(Hons.)/ MS Admissions during Winter Semester 2018-19

Sr. No.	M.Sc. (Hons.)/ MS	Total number of eligible applicants			Total number of admitted students		
		Male	Female	Total	Male	Female	Total
1.	Agronomy	32	04	36	30	03	33
2.	Agri. Economics	5	2	7	4	1	5
3.	Biotechnology	2	12	14	1	12	13
4.	Computer Science	35	6	41	24	5	29
5.	Entomology	20	4	24	18	4	22

6.	Food Science and Technology	19	7	26	16	5	21
7.	Horticulture	24	7	31	21	06	27
8.	PBG	15	11	26	13	10	23
9.	Plant Pathology	10	2	12	8	2	10
10.	Soil Science	13	4	17	8	3	11
11.	Seed Science and Technology	17	1	18	16	1	17
Grand total		192	60	252	159	52	211

5.2.2. Ph.D Admissions during Winter Semester 2018-19

Sr. No.	Ph.D.	Total number of eligible applicants			Total number of admitted students		
		Male	Female	Total	Male	Female	Total
1.	Agronomy	06	--	06	06	--	06
2.	Entomology	04	02	06	04	02	06
3.	Food Science and Technology	01	--	01	01	--	01
4.	Horticulture	02	--	02	02	--	02
5.	PBG	01	--	01	--	--	--
6.	Plant Pathology	--	01	01	--	01	01
Grand total		14	03	17	13	03	16

5.2.3. M.Sc. (Hons.)/ MS Admissions during Spring Semester 2019

Sr. No.	M.Sc. (Hons.)	Male students admitted	Female admitted	Students	Total
1.	Agronomy	01	00		01
2.	Biotechnology	01	05		06
3.	Plant Pathology	01	00		01
4.	Soil Science	02	00		02
5.	Food Science and Technology	04	02		06
Grand Total					16

5.2.4. Ph.D Admissions during Spring semester 2019

Sr. No.	Ph.D.	Male students admitted	Female admitted	Students	Total
1.	Agronomy	01	00		01
2.	Plant Pathology	02	00		02
Grand Total					03

5.3. Number of Students Passed Out

Degree Program	Male Students	Female Students	Total
B.Sc. (Hons.) Agri.	122	35	157
BSCS	32	5	37
BSIT	29	5	34
BBA	24	6	30

6.1. University-Industry Linkage

MNS-UAM is taking a qualitative leap forward by developing strong linkages with agro-based industries through general support, collaborative need based research and new business incubators. The purpose of the collaboration with various local and foreign organizations and industries is to ensure the training of our faculty members and young scholars in interdisciplinary research methods. MNS-UAM is actively looking forward for foreign collaborations and funding for its faculty development program and research projects. MNS-UAM has a regular liaison with various industries and corporates sector since its establishment in 2012.

6.2. Farmer Advisory Services

MNS-UAM in pursuit of its moral obligation and national commitment to serve farming community has launched farmer advisory services that comprise of daily crop and weather specific tips and information. Farmer advisory services are ensuring demand driven and need based agro-technology transfer to farmers with different farming backgrounds. Developing a sound linkage between academia-industry and farming community to have a demand-driven agenda for research University's top priority. By accelerating the diffusive process of innovative agro-technology, the gap between potential and actual yield can be abridged and our farmer advisory service is one such step towards this great milestone, he added further.

6.3. South Punjab Agricultural Forum

This forum comprises of stake holders from public and private sector including Pakistan Central Cotton Committee, Central Cotton Research Institute, Cotton Research Institute, Agricultural Mechanization Research Institute, Mango Research Institute, Soil and Water Testing Laboratory, Directorate of Water Management, Agricultural Extension Wing, Pest Warning and Quality Control of Pesticides, Federal Seed Certification and Registration Department, Floriculture, Pakistan Crop Protection Association etc. The agenda is to establish a platform for research and coordination mechanism development among MNS-UAM, public sector sister research organizations, and private sector to strengthen overall agriculture sector. The South Punjab Agriculture Forum has now been established where all the agriculture-related departments are working in collaboration to boost the agro-based economy of the country.

6.4. Nestle Pakistan Delegation Visited MNS-UAM

A delegation from Nestle Pakistan visited MNS-UAM on May 9, 2019 and met with the Vice Chancellor, Prof. Dr. Asif Ali and academic staff of the varsity. The delegation comprised of Dr. Manu Schärer, Dr. Zeeshan, Dr. Naseer Ahmad, Mr Mehboob Elahi, Mr. Allah Bakhsh, Mr. Saiullah and Mr. Qaisar Mehmood. The purpose of this visit was to develop research and collaborative ventures between Nestle and MNS-UAM.

Talking on the occasion, Prof. Dr. Asif Ali informed the delegation that South Punjab has become the heart of agricultural activities in Pakistan, and the MNS-UAM is striving hard to facilitate the farming community of this region regarding innovations and technology transfer. The Vice Chancellor also briefed the delegation about the University's pivotal role in development of Agriculture sector in this dynamic region. Prof. Dr. Asif Ali briefed the guests about vision and mission of MNS-UAM and on-going academic and developmental activities. The MNS-UAM is striving hard to provide community services through effective outreach programs across Southern Punjab, he added further. He stated that within a short span of time the University has earned excellent repute at national and International levels. Prof. Dr. Zulfiqar Ali, Director ORIC briefed the visitors about breeding work initiated for hybrid wheat and durum wheat. Afterwards, the delegation flanked by Dr. Abdul Ghaffar visited MNS-UAM Experimental Farms where they witnessed ongoing research work on bio-fortification of vegetables, ultra high density plantation of mango, solar drying unit for fruits and veggies, vegetable nursery supply system and climate resilient crops for diversification. The two parties agreed to extend collaboration especially in the area of organic farming and certification systems of organic fruits and vegetables in Pakistan.

6.5. Fish Stocking Released at MNSUAM Experimental Farm

A ceremony to inaugurate release of fish stocking at Experimental Farm of Main Campus of MNSUAM was held on April 18, 2019. The Vice Chancellor, Prof. Dr. Asif Ali flanked by Ms. Irum Khan (Assistant Director Fisheries, Multan) and Dr. Naheed Bano (Assistant Professor, MNSUAM) inaugurated the event by releasing fish seed in the pond. This earthen fish pond has been built to promote fish farming in the region. Fish stocking of common carp, grass carp, and rohu was released to compare productivity owing to their diverse feeding pattern. The Vice Chancellor said that fish meat contains high quality proteins which are beneficial for human health. Most of our population is suffering from protein deficiency and the possible solution to this problem is alternate sources of protein, such as fish. He also shared encouraging results of fish farming in saline water of Jalalpur Pirwala. He said that the purpose of fish stocking at Jalalpur Pirwala farms was to promote entrepreneurship regarding fish farming among the people of this area. Moreover, the University has also launched a bachelor degree program of B.Sc. (Hons.) Fisheries and Aquaculture to promote aquaculture in the country. Prof. Dr. Asif Ali also appreciated Punjab Fisheries Department that is working in collaboration with the University for development of people of Multan via effective technology transfer and outreach. Ms. Irum added that nursery unit at Multan is supplying high quality fish seed to farmers.

6.6. Collective Action for Knowledge Economy using Technology (CAKE-Tech)

A seminar on collective action for Knowledge Economy using Technology (CAKE-Tech) with the theme of community empowerment for sustainable development for knowledge economy was organized on March 29, 2019 by the Department of Animal Sciences, MNS-UAM. Professor Dr. Muhammad Nawaz (former Vice Chancellor, UVAS) was invited as Resource Person to deliver a talk on the topic.

Dr. Muhammad Nawaz in his opening remarks particularized; no poverty, zero hunger, good health and well-being, quality education and partnership as the most important UN` s sustainable development goals for Pakistan.He shared his views about the relevance and importance of afore-mentioned goals and provided pictorial evidences to strengthen his views and emphasized the importance of development of modern skills in children to confront future challenges. The need for hygiene awareness and provision of clean surroundings was highlighted and necessary actions for the same were shared. An interactive session with the audience was also conducted by Dr. Muhammad Nawaz in which audience pool was held and consents were shared between the speaker and the participants regarding the contents delivered in the seminar.

At the end of the seminar, Dr. Muhammad Nawaz appreciated the discipline of the students and encouraged their active participation in the subject matter. The honourable speaker also added that educational institutes and varsities can play a pivotal role in educating the youth and mollifying their attitudes towards life and its social and religious aspects in positive manners. Followed by the seminar, The MNS-UAM Vice Chancellor, Prof. Dr. Asif Ali said that the University is producing graduates that are not only professional but also good human beings with high moral and ethical standards. We are trying our best to hone the leadership skills of our graduates. He also advocated the need and benefits of arranging these seminars as to provide opportunity to students to learn from seasoned professionals in the field. Today's deliberations will create a shared understanding amongst participants about national challenges and identification of appropriate interventions and technologies for addressing the same. Professor Dr. Irfan Ahmad Baig, Dean, Faculty of Social Sciences and Humanities concluded the session with votes of thanks and an honorary shield was also presented to the honorable guest by the Vice Chancellor, MNS-UM.

6.7. Seminar on Rural Transformation in Pakistan

A seminar on "Rural Transformation in Pakistan" was arranged on March 29, 2019 by the Department of Agribusiness and Applied Economics, MNS-UAM. Prof. Dr. Usman Mustafa, currently working as Chief, Project Evaluation and Training Division and Project Director at Pakistan Institute of Development Economics was invited as the Resource Person for this seminar. Dr. Usman Mustafa with his more than 33 years of meritorious experience and versatile educational background inspired the participants with facts and ground realities in terms of rural transformation in Pakistan. Dr. Usman Mustafa praised the potential of Pakistan in terms of agriculture and human resource. He elaborated the constraints that restrict smooth transformation process and also provided case studies from his previous work for better understanding of the audience. He further pointed out much neglected yet sensitive issue of land use change in Pakistan which included the transformation of highly productive lands into nonproductive urban lands. Finally, Dr. Usman Mustafa provided facts about farm size composition and trends in Pakistan. He insisted on the goat/sheep rearing by the small farm owners and provided recommendations on how to pave the way for smooth rural transformation that may yield positive benefits for the rural community. At the end, the questionans wers sessions provided the participants and the Resource Person to share informal views and knowledge as well. The session ended with the vote of thanks from Prof. Dr. Irfan Ahmad Baig, Dean, Faculty of Social Sciences and Humanities, MNS-UAM.

The guest speaker was awarded with honorary shield by Prof. Dr. Asif Ali Vice Chancellor, MNS-UAM. The Vice Chancellor appreciated the contents of the seminar and acknowledged the facts about rural transformation.

6.8. Ideas Fest 2019

Developing market for human resource by promoting entrepreneurship and business incubation are the other prime initiatives under taken by the University. The Idea Fest 2019 goals were to engage the students in business planning and execution for the advent and growth of various industrial sectors. The event showcased the business and entrepreneurial ideas of students from various institutions of South Punjab. The event covered product and services based business plans as well a plant based food products and related businesses. Another objective was to inculcate the culture of entrepreneurship and value addition among students' and disseminate innovative business ideas. Around 20 institutes participated in this mega event. The jury comprised of four judges from academia, industry and govt. officials rated the relevant ideas on the bases of industry norms. The business ideas pertaining value addition of wheat, fodders and pulses, trends in health, technology, agriculture, fashion, education, personalized services, social entrepreneurship were appreciated by jury. The position holding students from these institutes are as under:

1. 1st Position was won by Mr. Aqib Javed (BZU) and Mr. Seemab Shafqat (MNSUAM) and their teams.
2. 2nd Position was grabbed by Mr. Hammad Ali Bhatti (MNSUAM) and Ms. Noor (CTTS) and their teams, respectively.
3. Mr. Bilal Zahid (MNSUAM) & Mr. Ammar Haider and their teams respectively shared 3rd Position.
4. Winner of the Day Award goes to Mr. Mauz Ghazanfar (BZU) and Mr. Zaryab Khalid (NCBA&E) and their teams, respectively.

6.9. Chamber of Industry and Commerce Delegation visited MNSUAM

A delegation comprising of members of Chamber of Industry and Commerce, Multan accompanied by First Secretary of Canadian High Commission, Mr. Red Cooper visited MNSUAM on March 25, 2019. The delegation met with Vice Chancellor Prof. Dr. Asif Ali and other officials of the varsity to discuss future action plans and ways to incorporate innovation in research and commercialization of agriculture. Prof. Dr. Asif Ali briefed the visitors about the ongoing research and developmental activities and academia-industry linkages being established. President Chamber of Industry and Commerce, Mr. Muhammad Sarfraz discussed the issues and opportunities in this regard and way forward. Mr. Arshad Jamil (From New Jersey, USA) urged the need of collaborative projects and need to upgrade industry-academia linkages. Mr. Red Cooper visited research farms, fish ponds, hydroponic unit, greenhouse, weather station, high density mango plantation, vegetable nursery unit and newly constructed building of University's main campus. He admired the pace and quality of ongoing developmental work at MNSUAM. Afterwards, visitors planted fruit trees at campus.

6.10. Training Workshop on Ultra-High Density Plantation of Mango Orchards

Mango is the second major fruit commodity grown in Pakistan having significant contribution towards national economy. Recently decline in mango export volumes has been experienced from Pakistan to various high-end international markets including Japan, UK and Netherlands etc. The prevalence of different fruit skin blemishes is one of the key reasons for inferior quality and low market demand for Pakistani mangoes. One of the obvious reasons for the prevalence of such skin blemishes is the large tree height. More than 90% mango plantations in Pakistan are based upon 40 sq. ft and height usually goes above 50 ft. Such a height causes difficulties in on-tree practices e.g. canopy management/pruning, pesticide sprays, bagging etc. Resultantly, various insect pests, disease inoculums, dead wood etc harbor on the trees which causes different blemishes over the fruit skin. Moreover, the harvest operation also becomes very difficult over the tall trees; and the fruit faces sap contamination due to pedicel breakage in traditional harvest practice. The new mango orchards in most of mango producing countries are being planted under medium, high and ultra-high plantations. However, in Pakistan, the traditional planting geometry is being practiced. As the land-resources are decreasing in Pakistan due to urbanizing and hereditary land-fragmentation; there is need to explore and establish high efficiency plantation systems which could cater the maximum productivity with limited resources. Keeping in view the global sustainable development goals and national strategic development pillars of Pakistan, this training was focused to create awareness in the mango industry and develop technical capacity for high density plantation of mango orchards. The training was jointly organized by MNS-UAM, Mango Research Institute (MRI) and Pakistan Mango Growers Association from February 6-10, 2019. The resource person for the training was Dr. Steven A. Oosthuysen, General Manager from HortResearch, South Africa. 128 participants mainly the mango growers from Punjab and Sindh; processors, traders, researchers, scientists and service providers were also present.

This training programme included the in-house lectures and in-field practical activities for high density plantation of mango orchards. The participants were briefed and trained about various concepts of mango tree growth and development, tree spacing and canopy management, mango disorders, diseases, pests and innovative control strategies. In addition, following activities were also carried out including visit to Agro-Food Processing Facility, Industrial Estate, Multan, Mango Nursery, MRI, Multan, Mango High Density (10ft × 10ft) Block, MRI, Multan, MNS-UAM Research Farm (C-Block) including Hydroponic Unit, Hi-Tech Green House, Nursery Tunnel and Quarantine Lab, plantation of Ultra High-Density Block at MNS-UAM and participation in seminar entitled 'Science for Farmers- Mango Ultra High-Density Plantation (UHDP) in which over 200 persons participated in this mango industry-oriented seminar.

It was agreed that UHDP or small tree system technology is applicable to small- and large-scale growers. Overall, the technology can provide following commercial benefits like significant increase in mango orchard productivity up to 40 tons per hectare, efficient utilization of inputs e.g. pesticides, nutrients and water, ease and increased efficiency of farm management practices e.g. spray application, pruning, bagging, harvesting, effective pest and disease control, increase in export surplus, improvement of fruit quality, market competence and value etc.

6.11. STAKEHOLDER'S DIALOGUE TO EVOLVE COTTON PRODUCTION STRATEGY 2019

Participants of a stakeholders' meeting to boost cotton production in 2019 agreed to develop a comprehensive strategy for supplying quality seed to the farmers besides taking legal action against companies providing substandard seed.

The meeting was held at MNS University of Agriculture Multan (MNS-UAM) with the Vice Chancellor Prof Dr Asif Ali in the chair. Director General Federal Seed Certification and Registration Mr. Masood Qureshi, Director Cotton Research Station Dr. Sagheer Ahmad, Chairman PCRB Mr. Sohail Mahmood, Dr. Zahid Mahmood and other experts attended the meeting. Speaking on this occasion, Prof. Dr Asif Ali suggested that all the seed companies should be licensed and efforts should be made to bring them at par with international standards. He added that the license of companies failing to fulfil the required criteria should be cancelled and a legal action should be taken against them while keeping in view importance of cotton crop for national economy.

The participants of the meeting agreed on a suggestion regarding bringing public and private sectors together on one platform for boosting cotton crop. Some participants of the meeting suggested that the minimum support price of cotton should be fixed at Rs. 4,000. Other issues like plant breeder and farmers' rights were also discussed on this occasion.

6.12. Clean Cotton Meeting

A consultative meeting of cotton stakeholders was held at MNS-UAM. The meeting was chaired by Ms. Benish Fatima, Additional Secretary (Task Force), Agriculture Department, Government of the Punjab. The participants included representatives from PCGA, APTMA, NGOs working with farmers for cleaner cotton production, provincial agriculture department, PCSI and cotton farmers. The participants of the meeting were apprised about issues regarding lower cotton prices and measures for supporting cotton farmers accordingly. It was informed that farmers, ginners and textile industry simultaneously face challenges related to cotton marketing. Farmers are faced with the problem of lower prices, while ginners raise concern about mixing of inert material in cotton, low ginning outturn, poor quality lint and varietal admixture. Similarly, textile mills also face problems like yellow pigment cotton, poor yarn quality, low fiber strength, high moisture and inert contents in the bale. Therefore, there is a need to devise a comprehensive strategy to resolve issues of each stakeholder. The following recommendations were agreed upon by the house:

- Strict implementation of the Cotton Control Ordinance, 1966.
- Cotton price be determined proportionately with its quality.
- More consideration to be given to local farmers as the industry cannot survive on imported cotton.
- Industry should be willing to pay more for cleaner cotton.
- Incentive be paid to the farmers for sangli and moisture free cotton.
- Federal Government must immediately interfere for intervention price when prices are down.
- Awareness campaign must be launched for production of clean cotton.

6.13. Seminar on Strawberry Production and Marketing

A one-day seminar on "Innovations in Strawberry Production and Marketing" was organized by Department of Horticulture, MNS-UAM under PARB-CAS funded Strawberry Project No. 957 "Improving Fruit Quality and Reducing Postharvest Losses in Strawberry" at Mango Research Institute, Multan on 29th August, 2018. Prof. Dr. Aman Ullah Malik, Director, Institute of Horticultural Sciences, University of Agriculture, Faisalabad was the chief guest of the seminar. The stakeholders viz. farmers, traders, academia researchers, government officials from Punjab province and Khyber-Pakhtunkhwa participated in the event. This event provided a valuable opportunity for awareness, branding and networking in strawberry nursery and fruit production, supply and value chains. Moreover, the aim of this seminar was not only to highlight the issues of strawberry industry in the country but also to provide information regarding recent trends of strawberry nursery raising, fruit production, marketing and value addition.

6.14. MNS-UAM is Collaborating with ACIAR to Uplift Economy

ACIAR has launched a research project on pulses entitled "Increasing the production and profitability of pulses in cereal based cropping systems in Pakistan". It has been decided that MNS-UAM will be engaged in joint research and development program with ACIAR in this project as a key organization. Collaborative research efforts will be undertaken to boost the production potential of pulses like chickpea, lentil and groundnut in existing cropping systems through participatory approach to increase productivity of pulses and livelihood of small-scale farmers. Moreover, the MNS-UAM is also engaged in joint research and development programs in Pakistan for turning the salt affected and water-logged soils into productive ones. This project has been launched in Punjab, Sindh and Baluchistan provinces and carried out in collaboration with various universities and research institutions of these provinces.

6.15. Cotton Seminar, Kissan Mela and Mango festival

In Cotton Seminar and Kissan Mela, causes of declining productivity of cotton crop and challenges faced by contemporary agriculture are discussed by key agricultural experts and farmers queries are addressed and considered in research and policy formulation. The annual mango festival organized by MNS-UAM is also helping to promote mangoes export, enhance market share and develop vital linkages with importers and retailers to attain volume and bulk quantity orders. Mango growers, officials from mango pulp industry, packaging, supply and value chain are the important stakeholders of this event. Stalls of promising mango farms, mango based industries, research institutes and agro-based industries are key component of this festival to disseminate knowledge about mango production and its marketing.

6.16. Mango Festival 2018

The Mango Festival 2018 brought the academia, researchers, Govt. officials and mango stakeholders under one roof for well-being of mango industry of the country that determines the success of the event. However, this festival can become more effective with the involvement of Govt. of Pakistan. It is suggested to highlight the event at international level and invite international fruit trade companies to the festival from next year onwards. It will help boost the export of Pakistani mangoes to the international markets, thereby resulting in high value earnings.

Organizers

Muhammad Nawaz Shareef University of Agriculture, Multan
Bahauddin Zakariya University, Multan
Mango Research Institute, Multan
District Administration, Multan

Collaboration

Mango Industry
South Punjab Agriculture Forum
Mango Research and Development Board
Department of Agriculture Extension, Multan

Venue

Shahjahan Banquet Hall, Eid Gah Chowk, Multan

Sponsors

Pakistan Crop Protection Association
USAID fund Agri. Marketing Development (AMD) Project
(PARB), Lahore
Volka Foods International, Multan
Suncrop Group, Multan
Fatima Fertilizer Company

Mango Growers

01. Dilan Agri Farm
02. Chenab Mango Farm
03. SK Fruit Farm
04. Fraz Fruit Farms
05. Muhammad Farms
06. Joiya Fruit Farm
07. Muzzafar Nagar Farm
08. Muhammad Ali Fruit Farm
09. Kamlana Farms
10. Bukhari Fruit Farms
11. Faiz Mango Fruit Farm
12. Alkarim Mango Fruit Farm
13. Jamali Fruit Farm
14. Malik Muhammad Saleem Kahor Manogo Farms
15. Samza Fruit Farms
16. Brig. Rtd. Ishaq Ahmad Farms
17. Sial Fruit Farms
18. Bucha Mango Farms
19. Kashan Enterprises
20. Natural Production Export
21. Roshan Packages Ltd.
22. Lutfabad Farms & HWT Facility Pakistan
23. (EMFP) Govt of Punjab
24. Jam Mango Farm (EMFP) Govt. of Punjab
25. Malik Fruit Farm (EMFP) Govt. of Punjab
26. Sajjad Fruit Farm (EMFP) Govt. of Punjab

Commercial Partners

01. SFA Industries Pvt Ltd
02. TCS Pvt Ltd.
03. Pak Suzuki Motor company
04. Shaikh Khajoo Bhai & Company (Packing)
05. Omore Ice Cream, Engro Foods
06. Cream (taxi Service)
07. USAid (AMD Project)

Chemical Companies

01. Swat Agri Chemicals
02. Syngenta Pakistan Ltd.
03. FMC United Pakistan
04. Agro Food Processing Fascilites Multan
05. Suncrop Pesticides
06. Fatima Fertilizer Company
07. Jaffer Agro Services
08. FFC Ltd.

Government Organizations

01. MNSUAM (Cultural Products Iqra Azeem)
02. BZU (Horticulture Department)
03. Mango Research Institute
04. MNSUAM (Horticulture Department)

6.16. Diverse short courses for skill development

MNS-UAM is determined to impart practical oriented skills development courses at grass-route level. Department of Continuing Education has conducted over thirty short courses in Agriculture, Food Science, Languages and Computer Science & IT in a very short duration of four years and 511 students have been certified under the umbrella of Department of Continuing Education. About 186 students have been trained and certified with the funded collaboration of Punjab Skill Development Fund (PSDF). The students in this scheme got free education, uniform, bag, stationary material and everything free and they were also provided a monthly stipend of Rs.1500/-. Furthermore, 171 students have been trained with the funded collaboration of National Vocational and Technical Training Commission (NAVTTTC) under the Prime Minister Youth Skills Development Program Phase-III, Batch-II, Phase-IV, Batch-I and Phase-IV, Batch-II. The students under this scheme got free education with uniform and Rs. 3000/- monthly stipend.

Free Short Courses

PSDF funded Courses

Sr. No.	Title of short course	Duration
1	Elementary Food Preservation	03 months
2	Citrus Processing	03 months
3	Farm Manager	01 year
4	Tunnel Farming	06 months
5	Citrus Production	03 months
6	Post-Harvest Handling & Export Management of Mango	03 months
7	Computer Applications	03 months
8	Farm Mechanization	03 months
9	Drip Irrigation Unit Operator	03 months
10	Animal Disease Management	03 months
11	Dairy Technician	06 months
12	Fruit Processing, Preservation & Packaging	06 months

NAVTTTC funded Courses

Sr. No.	Title of short course	Duration
1	Agriculture Farm Manager	06 months
2	Tunnel Farming	06 months
3	Fruit Processing, Preservation & Packaging	06 months
4	Cotton Ginning Plant Operator	06 months
5	Livestock Manager	06 months
6	Chinese Language	06 months

**Paid Short Courses
COURSES OFFERED UPTILL NOW**

Sr. No.	Title of short course	Duration	Fee (Rs.)
1	Computer Applications in Office	1 ½ months	2000/-
2	Computer Applications in IT	1½ months	2000/-
3	Fruits and Vegetable Preservation	Two weeks	500/-
4	Weeds and their Control	One week	200/-
5	Insecticides and their Application	Two weeks	500/-
6	Mali Course	One month	500/-
7	Balance Use of Fertilizers for Sustainable Agriculture	Two weeks	500/-
8	Livestock Feeding Course	Two weeks	500/-
9	Home Baking	Two weeks	1500/-
10	Spoken English & Communication	02 months	2500/-
11	Basics of Chinese Language & Culture	02 months	2500/-
12	Pest Management	Two weeks	500/-
13	Home Baking	Two weeks	1500/-
14	Weeds & Their Control	One Week	250/-
15	Saline Sodic Soil Problems & Management	Two weeks	500/-
16	CCNA	Two months	6000/-
17	MS Office & Internet	1 ½ months	2000/-
18	Climate Change Effects on Agriculture & Mitigation Strategies	Two weeks	500/-
19	Basics of Chinese Language and Culture	Two months	2500/-
20	Computer Applications in Office & IT	1 ½ months	2000/-

6.17. Career Development Center/Placement Bureau

Career Development Center/Placement Bureau was established with the aim to provide guidance/counseling to the students of MNS University of Agriculture, Multan for career improvement and placement after the completion of their professional degrees. There are three members of CDC/PB i.e., Dr. M. Ishtiaq, Assistant Professor, Entomology (Focal Person) and Mr. Usman Jamshaid, Lecturer, Soil and Environmental Sciences (Member) are engaged with CDC/PB activities in addition to other duties. Detail of each activity performed during the year 2018-2019 is as follows:

6.17.1. Students Counseling and Information Sources

Students are being provided services through personal contacts and online resources through email at cdc@mnsuam.edu.pk and facebook page: "Career Development Center, MNS University of Agriculture, Multan" at <https://www.facebook.com/MNSUAM.CDC>. More than 1200 people are connected through social media which included students, faculty members and employers. It has a great effect in disseminating information among the students which include scholarship information adds, Job posts, motivational posts, information regarding seminars, trainings, important events to be held in MNS-UAM. Students are provided guidance for the following:

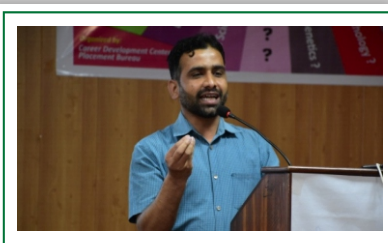
1. Major selection /career goals
2. Searching of jobs
3. Interviewing
4. Writing of resumes
5. Online applying to various posts at NTS, PPSC, FPSC etc.
6. Scholarships advice: Searching Foreign scholarships and applying
7. Required Contact information of any company or institute for applying
8. Information regarding Govt. Departments according to their subject

6.17.2. Major Selection Seminar

Major selection is an important decision for students of B.Sc. (Hons) Agriculture after completing 4 semesters of general Agriculture study. It determines their future career planning. Most of the agriculture graduates need guidance in this regard. To solve this problem, a seminar was organized for the students of 4th semester B.Sc. (Hons.) Agriculture for the selection of major subject in which all the chairpersons/representatives of the departments offering major subject delivered comprehensive presentations on multimedia for student's guidance. This year ten major subjects were offered. This event was organized on April, 29th 2019 in Seminar Hall of MNSUAM, Chaired by Prof. Dr. Shafqat Saeed, Dean Faculty of Agriculture and Environmental Sciences, MNS-UAM.

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Dr. M. Ishtiaq (Focal Person, CDC/PB) delivered a comprehensive talk regarding different activities of CDC/PB and importance of major selection seminar. Heads/Representatives of teaching departments like Agricultural and Resource Economics, Agronomy, Biotechnology, Entomology, Food Science and Technology, Horticulture, Plant Breeding and Genetics, Plant Pathology, Seed Science and Technology, and Soil and Environmental Sciences addressed to the students and delivered comprehensive presentations regarding strengths of their respective department, scope and job opportunities for future to attract students. A large number of students attended and appreciated efforts of CDC/PB for organizing an informative session.



6.18. Alumni Data Collection and Maintaining of Alumni Association

Alumni play an important role in future academia-industry linkages. They could help to achieve goals of the University. They could help in better way than others. Keeping in view the importance of Alumni, group of alumni students has been maintained by CDC/PB using social media Whatsapp, Gmail and Facebook. Bio-data forms all graduates of all degree programs who passed out were received This year bio-data of all passing out students of B.Sc. (Hons.) Agriculture, BS Computer Science and BS Information Technology session 2015-2019 were collected. Database of the alumni students has been established with contact numbers and postal addresses. WhatsApp group of each session has been maintained for dissemination of information to the alumni graduates. Alumni students were invited to annual dinners arranged by each department to strengthen relationships as well.

6.19. Placement of Graduates of MNS-UAM

Graduates of MNS University of Agriculture Multan are being placed in different organizations through following activities.

6.19.1. Internships

6.19.1.1. Internships Placement for final year students for 8th Semester of B.Sc. (Hons.) Agriculture

Students of professional degree programs require real life experiences through market exposure and this is only possible through internships in professional organizations. In order to equip the students with professional experiences internships plays a vital role. This year internships for final year students of B.Sc. (Hons.) Agriculture were arranged at private sector professional organizations through an internship committee. Dr. M. Ishtiaq, Focal Person of CDC/PB was incharge of committee. One faculty member was nominated by Chairman of each department as focal person of respective department for internship placements. The main objective of the committee was to find out internships in well reputed private organization, institutes, private progressive farms and second option was to find out paid internships. Different organizations were contacted for internship offers. Many of the students were offered paid internships by Syngenta Pvt Ltd, Bayer Crop Science Pvt. Ltd., FMC Pvt. Ltd., Biotrack Pvt. Ltd., KanzoAg (Evyol Group), Engro Pesticides, Neelum Seeds Jahanian, Pepsico, Fauji Fresh n Fareeze, Allah Din Group of companies, Yaqub Group of companies, Fatima Fertilizer Pvt Ltd., Askari Bank, NRSP Microfinance Bank etc. Around 75% students were placed at private farms, Agro based Industry, Banks majority of them were offered paid internships.

6.19.1.1. On Campus Placement of Internees through Written Test and Interviews

a. Walk In Interviews for Paid Internship at Biotrack Pvt. Ltd.

Biotrack Pvt Ltd. offered paid internships to final semester students of B.Sc. (Hons.) Agriculture. On campus walk in interview were advertised for internships and circulated through alumni groups, respective departments and notice board of MNSUAM by CDC / Placement Office and applications were received through email. Mr. Fida Hussain Gadi, CEO Biotrack Pvt. Ltd. himself conducted interviews of students at meeting room of ORIC MNSUAM. Out of 15 students who appeared in interview, 5 students were offered paid internship. Three students were placed at Peerowal Agriculture Farm of Biotrack Pvt. Ltd. and two students at sales department.



b. On Campus Walk In Interviews for Internship Offer at Dharala Farm

Mr. Jahanzeb Dharala on the request of CDC visited MNSUAM on 23.01.2019 and conducted interviews of students of final semester of B.Sc. (Hons.) Agriculture Entomology and Plant Pathology. He interviewed different candidates and selected three students for placement at Dharala Mango Farm situated at Tatay Pur Multan. Free accommodation and meal of two times a day was offered to internees at the farm.



c. Written Test and Interviews Conducted by Fauji Fresh n Freeze for Paid Internship

Fauji Fresh n Freeze Pakistan, supply chain wing offered paid internships to Agriculture Graduates of MNSUAM. Open advertisement of internship offer was circulated through alumni groups and notice board of MNSUAM by CDC/Placement Office and applications were received through email. In response, 30 applications were received from students of 8th semester. Representatives of supply chain wing of Fauji Fresh n Fareeze along with staff visited MNSUAM and conducted written test followed by interviews of qualified candidates. Eighteen students were short listed for interviews after written test. Later on, interviews were conducted by FFnF Pvt. Ltd. and 6 students were short listed for further interviews at Sahiwal office. Two students of Horticulture Mr. Zeeshan and Umair Saeed Manais were offered paid internship at FFnF.



d. Written Test and Interviews Conducted by Pepsico Pvt. Ltd. for Paid Internship

i. Orientation Session:

PEPSICO Pakistan offered paid internships to Agriculture Graduates of MNSUAM. In response to an open advertisement fifty applications were received from students and fresh agriculture graduates. A team of four officials of PEPSICO Pvt Ltd. visited MNSUAM. They met Prof. Dr. Asif Ali in his office and participated together in introductory session. Prof. Dr. Asif Ali, welcomed all the participants which included PEPSICO team and students/graduates in seminar hall of MNSUAM. He briefed about different activities in which students and faculty are participating. Mr. Shabbir Hussain, HR gave presentation about PEPSICO Pakistan. He told about its different functions, units and business plans. He specifically elaborated internship offer and its objectives and appreciated cooperation of CDC/PB.

ii. Written Test

A written test for scrutiny of candidates was conducted in Seminar Hall. Fifty students/graduates appeared in the test. Thirty seven candidates qualified for the interview.

iii. Interviews

Pepsico Pvt Ltd team conducted interviews of thirty students. Ten internees from different departments of Faculty of Agriculture and Environmental Sciences were offered internship from in PEPSICO Pakistan in Agro unit.

e. Miscellaneous Internship placements at Different Farms / Organizations

- Four students were offered paid internship at Syngenta Pvt Ltd.
- Two students were offered paid internship, free meal and accommodation at Kasuri Farm of Ex. Foreign Minister Khurshid Kasuri at Kasur.
- Two students placed at Bayer Crop Science Pvt. Ltd. Multan on paid internship.
- Five students placed at NRSP Microfinance Bank Pvt. Ltd
- More than ten students have been offered internship at Evyol Group Pvt. Ltd.
- Four students placed at Fatima Fertilizer Pvt. Ltd on paid internship
- Two students were offered paid internship at Engro Fertilizers Pvt. Ltd
- Two students were offered paid internship at Hexon Group, Industrial Estate, Multnn
- Two students were offered paid internship at FMC Pvt. Ltd.

- Mr. Kashif Islam, owner of Arain Farm offered internship to four students of MNSUAM
- Four students of were placed at Tareen Agriculture Farm, Lodhran
- Two students were offered paid internship at Metro Cash & Carry Lahore
- Four students were offered internship Coca Cola Multan
- Eight students were placed at Punjab Food Authority
- One student was offered paid internship at Packages Ltd.
- One student was placed at Layyah Sugar Mill Pvt. Ltd.
- One student was placed at Muzaffar Garh Sugar Mill
- Two students were placed at International Food Limited Multan (Honey Foods)
- Two students were placed at Rupali Foods Pvt. Ltd.
- One student was placed at Dawn Bread and Beyond Lahore

f. Summer Internship

Undergraduate students were also encouraged to work during summer vacations. Career Development Center/ Placement Bureau issued letters to the students willing to serve in any organization of their own choice. This year almost 40 undergraduate students were placed at different organizations.

Better Cotton Initiative conducted interviews for the five positions of internees on 19th June, 2019 at ORIC meeting room MNSUAM. Twenty four candidates appeared before interview committee and two of them were finally selected for paid internship at BCI.



6.19.2. Job Placements

Career Development Center/Placement Bureau helped graduates to find out better job opportunities at different Companies / Organizations and Institutes etc. Initial survey indicated that majority of our graduates wanted to continue their studies. But for those, who wanted to start their career, following efforts were made for the placement of graduates during this year 2018-19. Different jobs and scholarship advertisements were posted using Alumni Network and notice board.

6.19.2.1. Placement of Graduates

The Placement Bureau helped the graduates to find out jobs at different Companies / Organizations and arranged their interviews through personal contacts, social media, mobile calls, SMS and emails. Agriculture graduates have been placed at different Agro-based companies / Organizations through personal contacts and arranged interviews.

a. Syngenta Pakistan Pvt. Ltd.

Syngenta Pakistan Pvt. Ltd. contacted Placement Office for assistance in their recruitment process for the posts of Sales Promotion Officers for fresh graduates from all Pakistan. Positions were advertised by CDC/PB and encouraged graduates to apply, almost 126 graduates from MNSUAM and other universities submitted their CV's for SPO:

Sr. No.	Name of University	No. of CV's
1	MNS University of Agriculture, Multan	53
2	University of Agriculture, Faisalabad	30
3	Bahhauddin Zakariya University, Multan	20
4	Islamia University, Bahawalpur	07
5	University of Sargodha	5
6	University of Agriculture, Peshawar	5
7	University of Agriculture, Tandojam	6
Total		126

b. Farm Integrated Apprenticeship Program at Fidak Farm Chak Naurang Shah Khanewal

i. Orientation Session

An orientation session was organized by CDC/PB for all the applicants on 7th May, 2019. Mr. Syed Ali Mohsin Shaheed Gardezi briefed the participants about the apprenticeship program in detail. He explained the key features of apprenticeship like land management skills and exposure to multiple aspects of cultivation of major crops, orchards and utilization of land to produce such as vegetables, fodder, etc. He informed that selected graduates will be allocated 15 acres of open land, 7 acres of young mango orchard for multi-cropping, 5 acres of citrus orchard, 2 acres of guava orchard and 30 acres of mango mature orchards. Management cost and logistics will be provided by Fidak Farm, while graduates will have a valid profit share from the income of produce of allocated area.

ii. Written Test

Written test for farm integrated apprenticeship offered at Fidak Farm Chak Naurang Shah, Khanewal was organized by CDC/PB. Twenty six graduates appeared in the written test. A committee of faculty members was constituted for evaluation of written test. Sixteen graduates were short listed for interviews.

iii. Interviews

Interview panel consisted of Prof. Dr. Asif Ali, Mr. Syed Hussain Jahanian Gardezi, Provincial Minister of Punjab for Management and Professional Development, Mr. Ali Mohsin Shaheed Gardezi, Prof. Dr. Shafqat Saeed, Dean, FAES, Dr. Abdul Ghafar, Director, Agriculture Farms MNSUAM, Dr. M. Amin, Assistant Professor, Horticulture. Interviews were conducted and two graduates were finally recommended with three in waiting list. Later on, two graduates joined their duties at Fidak Farm Chak Naurang Shah, Khanewal.

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Physical infrastructure plays a vital role to develop any educational institution of the world. There are many factors which affect quality of education and research but a conducive environment is the most important factor for consideration. A lot of efforts have been made to establish/strengthen the infrastructure to achieve the objective for provision of enabling environment to the students, faculty and administration of this university.

The detail of the projects undertaken to improve and strengthen infrastructure of MNS University of Agriculture, Multan are as under:

Project Title: Establishment of Muhammad Nawaz Shareef University of Agriculture, Multan Phase-II

One ADP Project of Rs. 1510.243 Million was approved and an amount of Rs. 1194.928 Million was released till June 30, 2019 from which Rs. 1191.718 million was consumed. More than 75% of the Project activities including physical infrastructure, procurement of lab equipment and furniture was completed. Whereas, remaining construction work and allied activities are in progress.

An amount of Rs. 1145.928 million was allocated for the construction of physical infrastructure i.e. Academic Block, Administration Block, Boys Hostel, Girls Hostel, Faculty Hostel, Residences, Boundary wall and Allied External Services. The MNS-University of Agriculture, Multan awarded the contract of all civil work modules and the construction work of the university buildings are in progress. An amount of Rs. 921.089 million was released during 2018-19 for the civil works and out of this Rs. 920.725 million has been consumed up till now. Construction of University Boundary Wall of 9645 Rft (running feet) and building of Administration Block has been completed. Academic Block, Boys Hostel, Girls Hostel, Faculty Hostel and Residences are at finishing stage. Water supply, sewerage, roads, and other external services have also been completed by 75%.

Under the project, an amount of Rs. 104.117 million was released for the procurement of Lab and ICT equipments from which Rs. 104.084 million was consumed and 730 equipments have been procured and used in the establishment of the fourteen labs at Campus.

An amount of Rs. 11.678 million was released for the procurement of furniture and fixture. The necessary furniture and fixture have been procured.

An amount of Rs. 49.286 million was provided under Farm Development and others component. The University leveled the 500 acres of barren land at Jalal Pur Pirwala and constructed 4816 meter long water course for irrigation purpose. The University has converted this barren land in to the research/experimental stations and it is very useful for research students and faculty members to perform research activities.

Project title: Construction of Central Library at MNS-University of Agriculture, Multan

Library is essential part of the University which is the main source of learning for students as well as faculty members. Library provides a learning environment for students to achieve their goals and keep in touch with books to build the nation. Student and professors use libraries to search their topics for papers, thesis, books, papers, journals, etc. Number of books available has increased over the years as under:

Sr. No.	Financial Year	Total Number of Books
1	2016-2017	2976
2	2017-2018	4436
3	2018-2019	5009

Honorable Minister (Care Taker) for Agriculture, Sardar Tanveer Ilyas Khan donated Rs. 20.00 Million during his kind visit to this University from his own pocket for the construction of Central Library (Ground Floor) having covered area of 10,450 ft². The construction work is in progress and an amount of Rs. 7.743 million was disbursed for the structure of building.

Project title: Provision of Fresh Irrigation Water And Other Basic Infrastructure Facilities at Jalal Pur Pirwala Farm of MNS-UAM

Another ADP Project of Rs. 170.00 million for fresh irrigation water and other basic Infrastructure facilities at JPPW Farm of MNS-UAM was included in ADP 2019-20. The project aimed at providing infrastructure which is missing at present, but is essentially required at the farm for research and experimentation for the graduate as well as postgraduate students and faculty members. The major objective of the project is to provide fresh water for irrigation to bring 250 acres of land under cultivation, which cannot be brought under cultivation as the canal water is too short to meet the requirement and groundwater is highly brackish.

Other components of this project include provision of sheds for farm machinery and implements, farm animals, farm produce and stores for the inputs. Establishment of training halls for capacity building of the farmers is also one of the project objectives. The project objectives are elaborated as below:-

- i) Installation of two turbine tube wells near bed of River Chenab for sweet/fresh water supply for irrigation along with underground conveyance system to meet canal irrigation water shortage during Kharif season and to meet demand of Rabi season.
- ii) Construction of sheds for prolonged life of agricultural machinery/implements and safety of farm animals.
- iii) Construction of stores/warehouses for bulk purchase of inputs and safe storage of the farm produce.
- iv) Construction of training halls for capacity building of the farmers and other stakeholders.

University Farms/Research Stations

The MNS University of Agriculture, Multan has University Research Farms at Chak 84-M, Jalalpur Pirwala and Mouza Rangeel Pur, Multan, the first comprises about 500 acres, and the later has 80 acres of land. These farms provide the students an opportunity to get practical training in various disciplines of agriculture. These farms also serve as demonstration centers for the students and farmers, provide basic infrastructure for conducting the research and also serve as Model Farms for the farming community. A summary of development works done at the Farms, especially at Jalalpur Pirwala (JPP) farm is being given below:

1. University Farm, Jalalpur Pirwala:

- After the bulldozer work on 500 acres land of University Farm Jalalpur Pirwala, and after laser leveling the major challenge was to cultivate this saline sodic soil with brackish underground water. However, challenge has been accepted and about 250 acres of land is now under cultivation.
- The canal system at Jalalpur Pirwala is non-perennial and canal water is available only for six months from mid-April to mid-October every year. To meet water requirements in winter and as per need in summer, two tractor operated water turbines have also been installed to fetch the groundwater.
- About 250 acres of land are now under cultivation, where various crops and tree plants are being planted. During Rabi season, major crops were wheat, barley, canola, quinoa and lucerne, whereas during Kharif season, major crops grown were cotton, millet and sorghum. Further, sesbania has also been sown for green manuring, to improve the organic matter contents of the soil.

- About 30,000 plants of various tree species like gum Arabic, lbeck, Indian lilac, Indian beech tree, moringa, pomegranate, guava, Jujube, fig etc. have been planted on roadside, alongside the water channels and in specific belts with higher level of salinity, which are growing up and have started giving a greener look to the premises.
- Fish farming has been started at the Farm and shrimp farming is also included in the plan during year 2019-20.
- Four residences have also been completed at University Farm Jalalpur Pirwala, one for Farm Manager and other three are for officials/visitors.
- Electricity has been provided at the Farm with installation of 200 kva transformer.

1. Research Farm, Multan:

In Mouza Rangeel Pur, Multan 180 acres of land was allotted to the University, out of which 80 acres are under University Farm; while, the rest is for campus and other constructions. In C-block, 45 acres land has been laser leveled and is under proper layout. During Rabi 2017-18, major crops were wheat, canola, chickpea and lentil etc., whereas during Kharif season, more than 30 acres were under cotton crop and rest was under summer fodders and other crops. High-Tech structures like hydroponic system, greenhouse/s, containment/quarantine facility and tunnels have been constructed in C-block area. Ultra high density mango plantation, and Kitchen gardening nursery supply systems have also been established.

During the year 2018-19, an income target of Rs.12.00 m was set which was 300% higher than the target of the previous year i.e. 2017-18, however both the farms with efficient use of their sources generated an income of Rs.12.30 m and amount was deposited in University account.



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STRENGTHENING TECHNOLOGICAL INFRASTRUCTURE

8.1. PERN SERVICES:

PERN (Pakistan Educational Research Network) has been implemented by HEC. It is a nationwide educational intranet connecting premiere. The University is connected to PERN Services providing resources of research and knowledge sharing. University has upgraded PERN services for better and fast resources.

Internet bandwidth has been enhanced from 20 mbps to 45 mbps. Services were upgraded from radio link to fiber optic link.

Up gradation of PERN Services includes:

- International Bandwidth
- Intranet Bandwidth
- Licensed Software
- Video Conferencing SLA
- MS Office365

University is enjoying PERN services, salient features of the service are internet bandwidth of 45mbps over fiber optic link, with backup link over wireless p2p. Apart from internet services, we are availing services of licensed Microsoft Software which includes, MS Windows 10 Pro, MS Office 365 & MS Office 2016 Pro for the staff and students.

8.2. VIDEO CONFERENCE SYSTEM UPGRADE:

Previously, Aver EVC300 video conferencing system was being used for national and international online meetings. Currently, HEC installed state of the art Huawei TE50 Video conference and public address system facility at the newly constructed academic block of the Varsity.

8.3. OFFICIAL WEBSITE UPGRADE:

Website and hosting services were upgraded which improved functionality, security and stability. Overall restructuring of the contents was done, making easy for the users to access their required information. Restructured website content improved search engine optimization and enhance user experience.

8.4. ONLINE ADMISSIONS SYSTEM:

Online admission system for the postgraduate degree programs were successfully developed, making it simple and easy for the applicants.

8.5. BIOMETRIC ATTENDANCE SYSTEM:

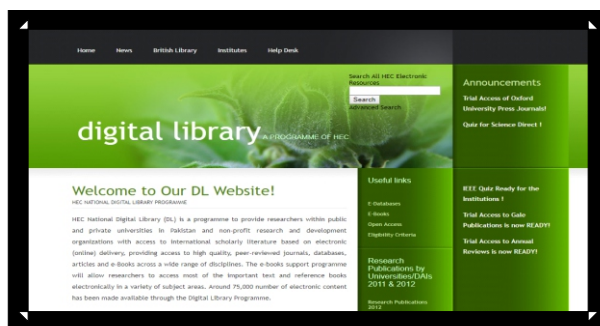
All main buildings of the campus are installed with facial recognition biometric devices to log attendance and ensure punctuality.

8.6. MULTIMEDIA PROJECTORS:

Eighteen new Multimedia Projectors have been added for facilitate the students and faculty with modern learning methodology. Now there are 36 multimedia projectors all in the University.

8.7. DIGITAL LIBRARY:

Services of digital Library are available for students and faculty of the MNSUAM with access to thousands of books and research papers. Koha Software was installed for the MNSUAM library digital books and online issuance.



8.8. IP SECURITY CCTV SYSTEM:

Security Camera is also a necessary tool in campus safety. It also monitors entrance and exists. In this regard, CCTV cameras have been installed at different places at the campus, girl's hostels, Day Care Center, and boundary walls of the varsity. Security officer monitor activities and technical support is provided by IT Department. These installations are helping to maintain a better Video surveillance system comprising: 32 Cameras with backup for 19 days and 20 Cameras with backup for 17 days. Operations and maintenance of the IP CCTV camera are governed by Directorate of IT. Moreover, extended technical support was given by the Directorate of IT at the 1st Convocation of University.

8.9. Networking Upgrade:

Wireless LAN infrastructure was upgraded with Huawei AP6050DN Access Points. In consistence with the most recent 802.11ac Wave 2 norms, it gives secure gigabit internet and intranet access to students and faculty of MNSUAM. Local Area Network services were extended to the newly constructed Admin block. Its complete installation was done by the interneers and IT support staff with record time. Survey and planning for the new academic block has also been completed.

8.10. MICROSOFT OFFICE 365:

Microsoft Office 365 Services are now available for faculty as well as students of MNS-UAM. Microsoft Office 365 is a cloud-based service that is designed to help meet organization's needs for robust security, reliability, and user productivity.

8.11. ACTIVE DIRECTORY:

MS Server 2012 R2 Active Directory Services has been installed on server. Office desktop users were registered over the active directory to secure the user's data.

Details of Active Directory are as under;

- All computers are attached with domain
- Group policy
- Speed limitation
- Bandwidth Control

9.1. MNS-UAM Applauded for Guiding Farmers to Improve Per Acre Yield

The Executive Director of Higher Education Commission, Islamabad, Dr. Muhammad Arshad Ali applauded MNSUAM for playing pivotal role in the promotion of agriculture in this dynamic region of South Punjab and providing technical guidance to the farmers for improving per acre yield. The officer visited the University to review academic progress and research facilities in quest of quality of education. The Vice-Chancellor, Prof. Dr. Asif Ali gave detailed briefing to the Executive Director HEC and informed that the University has made rapid growth as currently 2,200 students are getting education while MPhil and PhD degree programs have also been started. He said that construction of the University boundary wall, girls and boys hostels, admin block, academic block, staff colony and guesthouses are under way and all University offices would soon be shifted to new blocks. He further said that the Punjab government had provided 500 acres of barren land in Jalalpur Pirwala to University, which has now been developed into an experimental farm. Dr. Muhammad Arshad Ali also visited the University campus, research labs, hydroponic unit, vegetable nursery tunnel and observed the development work. At this occasion, Dr. Muhammad Arshad Ali expressed his satisfaction over the progress of MNS-UAM as a modern agriculture R&D institution and said that the HEC had extended cooperation for the uplift and welfare of the institution in the past and would continue to support the varsity in future as well.

9.2. Community Awareness Seminars of SIOP Project

MNS-UAM in pursuit of effective community service has launched SIOP Project entitled "Tree Planation through Seed". In this regard, community awareness seminars were organized at Khawaja Fareed Govt. College, Rahim Yar Khan, Govt. Model Girls higher Secondary School, Govt. Pilot Higher Secondary School, Rahim Yar Khan, Govt. Degree College, Multan, Govt. Boys College, Muzzafargarh, Sardar Kauray Khan Public Higher Secondary School. The central idea was to disseminate need of healthy life style, clean and green environment, and create affection for plants. Under the awareness campaign, the participants were given nursery plants for plantation at their homes. Dr. Muqarrab Ali (Assistant Professor, Agronomy) demonstrated the planting methods and management aspects of tree plants derived through seed. He said that tree plantation campaign is indispensable to combat climate change. Talking on the occasion, Dr. Shakeel Ahmad, Dr. Gulzar Akhtar, and Mr. Arqam Iqbal emphasized on the significance of trees. Trees contribute to the environment by providing oxygen, improving air quality, climate amelioration, conserving water, preserving soil, and supporting the wildlife, they added further.

9.3. AWARENESS SEMINAR FOR FARMERS ON PINK-BOLLWORM AND WHITEFLY

The Department of Entomology organized an awareness seminar for farmers on systematic eradication of pink-bollworm and whitefly on October 18, 2018. The seminar was presided over by Prof. Dr. Asif Ali, Vice Chancellor, MNS-UAM, while a large number of farmers attended the event. The main objective of the seminar was to educate the farmers on advancement in agricultural research in a language well understood by them. The Vice Chancellor said that research in agriculture has been going on for many years, but farmers are unable to understand the language of research.

The University is converting the research into simple language so that farmers could easily comprehend new technology and be able to use it. Dr. Muhammad Arshad Shakeel, Subject Expert gave detailed presentation about PB ropes to prevent attack of pink-bollworm, and whitefly management on cotton. He informed that this technology ceases the need of insecticides for pink-bollworm control. He also answered to questions raised by farmers about issues related to cotton insect pest management. Dr. Abdul Ghaffar, Chairman Department of Agronomy presented recommendations of the International Conference on Climate Smart Agriculture so they can better adapt to changing climatic scenarios. At the end of the seminar, farmers planted trees at MNS-UAM research farms and saw practical demonstration of PB Ropes method. Prof. Dr. Shafqat Saeed, Chairperson Department of Entomology expressed gratitude to the farmers and students for participating in the seminar.

9.4. SOCIAL AND RELIGIOUS TOLERANCE CLASSES AT MNS-UAM

A course on 'Social and Religious Tolerance' has been included in the curriculum of B.Sc. (Hons.) Agriculture at MNS-UAM. The purpose of this course is to inculcate social and religious tolerance in students enabling them to play their roles in founding a peaceful and positive society. Talking to the participants of the awareness seminar for this year's course, Dr. Nasir Nadeem, Director Graduate Studies said that besides professional courses, we are also teaching peace and harmony to promote critical thinking, dialogue and debate among university students. We are fortunate that our religion Islam is a religion of reforms and focuses more on human rights instead of saying prayers, fasting and performing Hajj only. In fact, a Muslim has an obligation to help his fellow Muslims in trouble and keep aside all prejudices. Mr. Rasheed Ahmad, Lecturer Islamic Studies briefed the audience about the contents of the course and said that we need to eradicate intolerance and inter-faith tension to rise as a peaceful and united nation. Pakistan is land of diversity in various dimensions of culture, languages, civilizations, and we should celebrate this diversity. This course is based on practical work and will teach students different ways to stop hatred and disseminate love in the society.

Mr. MashAllah, Member of SAHE Foundation also addressed and informed the participants about social action project in the course. He further told that renowned scholar will give lectures at the varsity every week on Wednesday. Dr. Hammad Ahmad Malik, Sociologist, from BZU, Multan gave a detailed lecture on violence and non-violence in historical and modern perspectives. He shed light on increasing behavior of violence and intolerance in Pakistani societies and suggested ways to overcome the issues. He further stated that the youth can learn to cope with such problem by studying this course. The seminar was attended by a large number of students as well as faculty members.

9.5. WORLD POLIO DAY

The Office of the Senior Tutor, MNS-UAM, Rotaract Club, BZU and Rotary Club, Multan Cantt jointly organized a ceremony to mark 'World Polio Day' on October 24, 2018. The event was presided over by Prof. Dr. Ishtiaq Ahmad Rajwana, Pro Vice Chancellor, MNS-UAM, while Mr. Salman Mubarak, CEO Fazlur-Rehman Hospital was the Chief Guest.

The aim of celebrating the day was to raise awareness among youth regarding anti-polio campaign so that they may educate people to keep away from this dangerous disease. The Pro Vice Chancellor, in his address to the participants, said that Polio is a critical disease for current and future generations and it needs to be rooted out. He urged upon the youth to play an active role in eliminating this crippling disease and asked them to take part in all activities like awareness creation and vaccination. Mr. Salman Mubarak elaborated that Pakistan is one of those countries which is still threatened by Polio. We need to work together with utmost dedication to prevent our coming generations from disability. He disclosed that his hospital is organizing awareness seminars at different places to contribute to the creation of a healthy society. He declared that his hospital would continue to hold such activities in future.

9.6. KITCHEN GARDENING AND CLEAN & GREEN PAKISTAN CAMPAIGNS

The MNS-University of Agriculture, Multan organized a two-day seminar on Kitchen Gardening under Clean and Green Pakistan movement at Aspire Group of Colleges, Multan. In this regard, upon special instructions of Prof. Dr. Asif Ali, Vice Chancellor, the seedlings of vegetables raised at the University were made available for public at different locations as well as at University, so that people may start growing vegetables at their homes. While talking to the participants, the teachers of MNS-UAM Dr. Muqarrab Ali and Ms. Afshan Shafi highlighted the hazardous effects of vegetables planted in dirty water and stressed upon the importance of promoting kitchen gardening for availability of balanced diet. Moreover, tree plantation campaign was also initiated under the Prime Minister's initiative of Clean and Green Pakistan. Students were urged to take part in the tree plantation to make them aware of importance of trees for clean and healthy environment.

9.7. SEMINAR ON AWARENESS OF BREAST CANCER

A seminar on awareness of breast cancer was held at MNS-UAM on October 25, 2018 with reference to 'Pink Day', sponsored by Shaukat Khanum Memorial Cancer Hospital. Dr. Nimra of the said hospital spoke and educated the female audience on the topic. She discussed different aspects of breast cancer including an elaborate dialogue on its causes, symptoms, treatment options, self-examination and preventive measures. She dismantled all myths and overcame taboos concerning breast cancer and gave students the entire spectrum of the topic on basis of factual accuracy. She urged that female should not only get their regular medical checkups but also should be aware of how to diagnose a disease. She further said that women above 40 years of age should have mammography test once a year to avoid problems. She encouraged the participants to pass on this important and valuable information to their female peers and family members. Brochures on understanding breast cancer were also distributed amongst the audience.

9.8. SEMINAR ON ANTI-CORRUPTION AND OATH TAKING CEREMONY

The Office of the Senior Tutor and Character Building Society of MNS-UAM jointly organized an awareness seminar on Anti-Corruption and Oath Taking Ceremony. The Seminar was presided over by the Vice Chancellor, Prof. Dr. Asif Ali, whereas Director General National Accountability Bureau, Multan Mr. Atiq-ur-Rehman was the Chief Guest.

The Office of the Senior Tutor and Character Building Society of MNS-UAM jointly organized an awareness seminar on Anti-Corruption and Oath Taking Ceremony. The Seminar was presided over by the Vice Chancellor, Prof. Dr. Asif Ali, whereas Director General National Accountability Bureau, Multan Mr. Atiq-ur-Rehman was the Chief Guest. The Seminar started with recitation of few verses from Holy Quran by Hafiz Muzammil, while Mr. Tahir Tauqeer recited Naat-e-Rasool-e-Maqbool. Prof. Dr. Asif Ali, while talking to the participants said that MNS-UAM holds a distinction in organizing events wherein students are encouraged to take part in positive activities. He further elaborated that the purpose of holding such seminars was to create awareness among youth regarding adverse effects of corruption and how to bring a positive change in the society. Addressing the seminar, Mr. Atiq-ur-Rehman said that he was thankful to the University management for inviting to such a prestigious event. He said that it is our national duty to eradicate the cancer of corruption from our country and we should all work together for this righteous cause. NAB is not against people but the corrupt ones and it is dedicatedly working to make Pakistan a corruption free and peaceful country. Prof. Dr. Shafqat Saeed, Dean FA&ES also addressed to the participants and urged them to work honestly and avoid corruption. He also expressed gratitude to the honorable guests, faculty members and students present at the seminar. At the end of the seminar, DG NAB Multan took oath from members of the Character Building Society.

9.9. CLEAN & GREEN PAKISTAN CAMPAIGN AT MNS-UAM

Under the umbrella of Clean and Green Pakistan, students of MNS-UAM launched a cleanliness campaign at the Campus and vicinity on October 30, 2018. The purpose was to create awareness and affection for a clean and healthy environment in society. To mark the event, an awareness walk was also organized in which large number of students and faculty members participated. Students and faculty carried out massive campaign to clean the roads and streets. Prof. Dr. Asif Ali urged the need of a cleaner environment and practical steps to be undertaken in this regard.

9.10. AUTOMATIC WEATHER STATION INSTALLATION AT MNS-UAM

An Automatic Weather Station (AWS) system has been installed at the varsity by the Office of Research Innovation and Commercialization (ORIC) for weather forecasting. The system was put into use to measure real-time temperature, humidity, air pressure, wind direction and speed, visibility, fog, smog and solar radiation etc. It is one of the most advanced systems that provides accurate weather forecasting after every five minutes and gives details of changes in weather parameters. Apart from providing precise and authentic weather updates to agricultural-research institutions, the AWS will facilitate the farmers with timely forecast of rainfall and weather-related information to help them plan their sowing and other management practices. The system will work under the supervision of Prof. Dr. Zulfiqar Ali, Director ORIC and Dr. Habib-ur-Rehman, Lecturer Agronomy.

9.11. FARMERS TRAINING ON HOW TO PRODUCE MORE WITH LESS WATER

A training workshop on "Successful crop production under prevailing water shortage" was organized by Department of Agronomy on November 13, 2018. This training workshop was part of outreach activity of HEC funded project under Social Integration Outreach Program SIOP-087-18/R&D/2015. Participants were from South Punjab Agriculture Forum, students, faculty members and farming community along with other stake holders. Prof. Dr. Asif Ali, Vice Chancellor, MNS-UAM emphasized that Pakistan is facing acute water shortage. To cope with water shortage, efficient measures should be undertaken in this context. University is striving for sorting out various ways to cope with water deficit. We are determined to disseminate outcomes of our research to farming community. He thanked all the stake holders for becoming part of this training. Mr. Mudassir Aziz, Lecturer Department of Agronomy, MNS-UAM, introduced the participants of workshop with different project activities. He discussed water shortage scenario and strategies for successful crop production. Dr. Hafiz Muhammad Nasrullah, Agronomist, Agronomic Research Station, Khanewal, highlighted the significance of ridge plantation of wheat for water saving in agriculture. He told that there is 35-50% water saving with 5-15 % yield increase with ridge method of sowing. Lodging can be decreased up to 80-90%. Dr. Ahmed Naeem Shehzad, Assistant Professor, Department of Agronomy, Bahauddin Zakariya University, Multan presented Status and perspective of potash use in Pakistan in context of climate change. He urged that potassium fertilization is essential for improving water relations in plant. There are other benefits of potassium fertilization including increase in nitrogen use efficiency, resistance of crop from lodging and improving quality of produce. He told that foliar application of potash is effective in mitigating harmful effects of water deficit in different crops. He shared research findings with different participants of workshop and insisted use of potassium in different crops for balanced fertilizer use. Dr. Fahim Nawaz, Assistant Professor, Department of Agronomy, MNS-UAM postulated the wheat production guidelines for maximum yield under water deficit conditions. He told that under water deficit, that particular variety of wheat should be selected that can produce more yield with less water. He told that timely sowing of wheat ensures healthy crop stand. Method of sowing of wheat plays an important role in moisture availability to crop. Plantation of wheat on beds is very useful technique for saving water. Multiple benefits can be achieved through bed plantation of wheat including improving in fertilizer use efficiency and lodging of crop is reduced. Prof. Dr. Shafqat Saeed, concluded the technical session of training workshop. He thanked all the resource persons for sharing useful information with participants of workshop. He also thanked participants of training workshops. Afterwards, practical field demonstration of augmented furrow method of wheat sowing was done. Dr. Hafiz Muhammad Nasrullah demonstrated farmers about this innovative method of sowing of wheat for water saving.

9.12. CONSTITUTION OF A PEACEFUL SOCIETY AND TEACHINGS OF ALLAMA IQBAL: SPECIAL LECTURE BY SAHIBZADA SULTAN AHMAD ALI

Under the umbrella of Social and Religious Tolerance course, a lecture on "Constitution of a Peaceful Society and Teachings of Allama Iqbal" was held on Nov. 14, 2018. The keynote speaker was Sahibzada Sultan Ahmad Ali, Chairman, Muslim Institute.

Sahibzada Sultan Ahmad Ali is 10th descendant of renowned Sufi of Islamic-world Hazrat Sultan Bahoo (R.A). Prof. Dr. Asif Ali, VC, MNS-UAM welcomed the guests and urged the students for self-accountability. He advised students to go through the literary works of Allama Iqbal and reflect their learning in various day to day activities. Sahibzada Sultan stated that the vision of Allama Iqbal on sectarianism, ideological extremism and formation of new institutions was an example for the nation. According to Iqbal, an ideal society is one that is united, integrated, egalitarian, properly educated, morally emancipated, technically trained, peaceful, and socially democratic. Iqbal is of the firm view that an ideal society must also be a peaceful one as he truly believes that "Islam is essentially a religion of peace". He stressed a need to promote the vision and philosophy of Poet of East's to ensure lasting peace and weed out terrorism from the country. Iqbal always gave the message of unity, faith, peace and self-reliance for the prosperity of the society, he further added. Mr. Rasheed Ahmad, Lecturer, Islamic Studies, MNS-UAM said that Iqbal's teaching are beacon to maintain tolerance, peace and stability in the society. He said that youth should transform themselves into Iqbal's 'Mard-e-Momin' and strive for self-reliance.

9.13. AWARENESS SEMINAR ABOUT CONSUMER RIGHTS AND HOW TO APPROACH CONSUMER COURTS

An awareness seminar about consumer rights and how to approach consumer courts was organized by Department of Agribusiness and Applied Economics on November 14, 2018. Mr. Muhammad Usman Khan, Advocate at High Court Multan was the resource person. Mr. Usman Khan highlighted the importance of consumer rights and how the general public can avail their rights. He also explained the whole procedure of registering a complaint against businesses having defects/flaws in their products and services. He emphasized to keep original receipts and warrantee cards after each purchase. He informed the audience that we can also claim for the services such as internet, travel, insurance, medical, electrical, courier and telecom etc. He stated numerous benefits of complaint in the court as one can get justice for him/herself and other victims alike him/herself, get what he/she has paid for, get compensation for his/her losses, curbs unfair trade practices and making use of their rights etc. Then he described the relief that the court may grant such as removal of defect, replacement, repayment of price, compensation, discontinue of hazardous sale, forbidden of false advertisement and litigation costs etc. The speaker stated various important laws alike Pure Food Ordinance 1960, West Pakistan Slaughter Control Act 1963, The Cantonment Pure Food Act 1966, The Pakistan Hotels and Restaurant Act 1976, The Fish Inspection and Quality Control Act 1998, Pakistan Competition Act 2010, Price Control and Prevention of Profiteering and Hoarding Act 1977, Pakistan Standards and Quality Control Authority (PSQCA) Act 1996. He said that PSQCA has 26,764 standard specifications generally conforming to the WTO regime and told that the adoption of PSQCA standards is voluntary. Testing facilities and personnel are inadequate and standards are inconsistently applied in the country. A large number of students and faculty members attended this seminar

9.14. Discussion on Drug Addiction

MNS-UAM arranged anti-narcotic discussion with students wherein Dr. Fouzia Rafique, Project Leader and Consultant Hematologist, Regional Blood Centre, Multan shared her scholarly views.

She explained in detail about the drug addiction and its consequences on human body and ultimate impact on blood transfusion. The faculty and students participated in large number in the event. A question answer session was also held at the end of the program. The worthy Vice Chancellor of MNS-UAM appreciated the contribution of students and faculty for development of healthy and sound society. The Vice Chancellor also presented shield to Dr. Fouzia Rafique.

9.15. Highlighting the Role of Females towards Socio-Economic Development

Under the umbrella of Social and Religious Tolrance Course offered at MSN-UAM, Prof. Tania Saeed (Assistant Professor, Lahore University of Management Sciences) highlighted the role of women in socio-economic development of the society. She urged the need for active involvement of women in overall development process. Talking on the occasion, she said that no nation can prosper by excluding their women. Due emphasis should be given to "Right Based Approach" model. Structural issues pertaining to inequality should also be addressed. Empowerment enables women to make choices and the choice necessarily implies the possibility of alternatives. Gender inequality exists in our society regarding asset control, decision making and profit sharing. She talked about "Gender Development Index" that represents gender inequalities in achievement of three basic dimensions of human development namely health (measured by male and female life expectancy at birth), education (measured by male and female expected years of schooling for children and mean years for adults aged 25 years and older) and command over economic resources (measured by male and female estimated GNI per capita). Gender Gap Index value is 0.546 and Pakistan is ranked at 143 out of 144 countries, she laminated. She also discussed Gender Inequality Index and its various aspects with special reference to Pakistan and way forward. She also talked on "Development in the Context of Gender and Youth". Afterwards, a question-answer session was also held.

9.16. Democratic Values and Political Process

Dr. Muqarrab Akbar (Chairman, Department of Political Science, BZU) delivered a lecture on "Democratic Values and Political Process". He urged the need to be a responsible citizen of the country and be part of the dynamic democratic process. Every individual should cast his/her vote to support democracy. He covered various aspects of democratic values and overall process. He informed the students about various forms of government like Monarchy, Dictatorship, and Democracy. Very little chances are there for social welfare in monarchy and dictatorship, he said. Democracy believes in the government of the people for the people by the people. It's the decision of the common man that who will rule among the people. Political societies are true pillar of democratic system and party in opposition is also as crucial as the ruling party. He quoted the example of Turkey as a mature political system which resisted hypocritical attempt to weaken democracy in the country. Election process motivates the voter that his opinion/vote counts and matter to the entire nation. He also elaborated the representation and participation of the people in the whole process. His talk also covered setup of local government (grass root participation), democratic stability, national interest, role of opposition political parties and concept of shadow government and shadow cabinet.

9.17. KICK OF EVENT “HARBINGERS OF CHANGE”

The MNS-UAM and Accountability Lab – a local civil society organization, jointly launched the Harbingers of Change initiative on Jan. 10, 2018. Through the eight-month long initiative, the Accountability Lab trained the university youth on conflict resolution skills and equipped them with tools of story-telling, modern communications, and leadership that may help them evolve into responsible members of community with greater tolerance and congeniality for religious, ethnic and cultural differences in the society.

The current initiative was a follow up to the Youth Peace Incubator (YPI) that both University and the Lab initiated about two years ago and through which over 500 students of the Varsity were directly engaged into trainings, seminars, dialogues, internships, and discussion events. In the current phase, greater focus is being placed on building communications skills of the students, helping them improve their analytical abilities, and be better able to productively and creatively deal with and respond to negative societal phenomena and propagandas that exploit religious differences and societal chasms to create divisions and frustrations.

Both the MNS-UAM and Accountability Lab recognize the fact that future of Pakistan lies in the hands of its youth – the more capable, tolerant, skillful, and forbearing are the country's youth, the brighter will be its future. On the contrary, if the youth is left unattended, and compelled to deal with its social uncertainties on its own and without guidance, this might leave a room for the non-state actors and enemies of the state to exploit them.

The Harbinger of Change initiative was built on the premise that exposure to intellectual freedom, mentorship by the social leaders, and productive debates and discussions are at the heart of a tolerant society. All the academic institutions and civil society organizations need to do is to provide more and better opportunities of the same for our youth.

9.18. STAKEHOLDER'S DIALOGUE TO EVOLVE COTTON PRODUCTION STRATEGY 2019

Participants of a stakeholders' meeting to boost cotton production in 2019 agreed to develop a comprehensive strategy for supplying quality seed to the farmers besides taking legal action against companies providing substandard seed.

The meeting was held at MNS University of Agriculture Multan (MNS-UAM) with the Vice Chancellor Prof Dr Asif Ali in the chair. Director General Federal Seed Certification and Registration Mr. Masood Qureshi, Director Cotton Research Station Dr. Sagheer Ahmad, Chairman PCRFB Mr. Sohail Mahmood, Dr. Zahid Mahmood and other experts attended the meeting. Speaking on this occasion, Prof. Dr Asif Ali suggested that all the seed companies should be licensed and efforts should be made to bring them at par with international standards. He added that the license of companies failing to fulfil the required criteria should be cancelled and a legal action should be taken against them while keeping in view importance of cotton crop for national economy.

The participants of the meeting agreed on a suggestion regarding bringing public and private sectors together on one platform for boosting cotton crop. Some participants of the meeting suggested that the minimum support price of cotton should be fixed at Rs. 4,000. Other issues like plant breeder and farmers' rights were also discussed on this occasion.

9.19. First Dalit Mela Organized by MNSUAM

Dalit Mela was the first effort in the history of Pakistan with the joint venture of MNSUAM Dramatic club (MDC) and Professor Ali Arshad Mir Foundation to pay tribute to the dying tribes of the Dalit especially to the Gypsies. The idea was to pay attention to most deprived tribes and clans, who are millions in number but fewer on mainstream stage. The core purpose was to provide ample ground for such communities to display their talent, abilities and their professions, and their socio economic contributions in Pakistan. In this festival Mr. Musuood Tanvir Arshad (well-known scholar and columnist) read an article on the history of nomads and Dalits. Mr. Farooq (renowned scholar) explained the Dravidian culture and base of Dalit. Aks Natak Mandli and MDC paid tribute to great subcontinent writers (Munsi Prem Chand and Professor Ali Arshad Mir) by playing different plays like Kafan, Sa Sair Khioon and Ava Tva Baisurti andr. In this Dalit mela, a poetic session was also conducted under the presidency of living legend Baba Najmi. Different eminent poets took part in this Dalit Mushaira e.g. Sabir ali sabir, Tahora sira, Dr. Sarmad Frogh Arshad, Ashiq Anjum and Wassi Zaad. Puppet show (putli tamasha) was also played on the stage. Different nomadic stalls were also managed in this festival which depicted the traditions and professions of different nomadic tribes (Kalanders, Jogis, Suamaar, Auod etc.). The vice chancellor of MNSUAM (Prof. Dr. Asif Ali) said that the purpose of this Mela is just to spread the message of love all over the world for such deprived part of the community. Dalit musical event was also conducted in which Ayaz Gohar and Nadia Hashmi sang the sufi kalam in their magical voices. At the end of the event Prof. Dr. Asif Ali presented the souvenirs to the honorable guests.

9.20. INTERNATIONAL WOMEN'S DAY 2019

The International Women's Day was observed on 8th March, 2019 at MNSUAM to celebrate and acknowledge the role and achievements of women. The motive behind observing the day was to honor the women associated with MNSUAM and provide information to the people about women's rights and highlight their importance in the society. At this occasion, the female students of the University pasted sticky notes to pay tribute to popular women of Pakistan. The students also participated in awareness walk and seminar held in this connection. The participants at the events highlighted role of women in social and economic life of the country. Speaking to the participants of the seminar, Prof. Dr. Asif Ali, Vice Chancellor, said that Quaid-e-Azam, Mr. Muhammad Ali Jinnah always presented himself as a modern Muslim leader and had a clear point of view that women could not be confined to their households. He added that today we need to make a promise that we'll honor our women and give them respect they deserve. He acknowledged that women have special working capabilities and they have played a vital role in success story of this institution. Varsity is making all-out efforts to provide the modern facilities to the working women.

Ms. Sarwat Zahra and Sana Niaz from Chamber of Commerce, Multan further emphasized on women's role in the development of the country while working side-by-side men in every field and without any fear. Women empowerment is prerequisite to achieve sustainable development and prosperity in Pakistan, they added further. To mark the day, a cake cutting ceremony was also held.

9.21. Seminar on Inclusive Society

An awareness seminar on Inclusive Society was organized on March 14, 2019. Dr. Muhammad Usman Jamshaid (Senior Tutor) was the resource person. He said that a tolerant society based on the principles of interfaith harmony can ensure social inclusion by providing equal opportunities to all of its citizens irrespective of their religion, sect, cast and creed. An ideal society is one that is united, integrated, egalitarian, properly educated, morally emancipated, technically trained, peaceful, and socially democratic.

9.22. Outreach Activity to Promote Cluster Bean Cultivation

On March 13th, outreach activity of HEC NRLP Project number 10547, in the form of an awareness seminar was carried out at Arid Zone Research Institute, Bhakkar to disseminate the project background, activities and key findings. The seminar was attended by large number of growers, researchers, industrialists and other stakeholders. The objective was to highlight the significance of cluster bean as an important crop and chalk out agronomic and biological constraints in its large scale adoption and devise innovative crop management strategies. Dr. Tanvir ul Haq, Dr. Muqarrab Ali, Dr. Muhammad Amin and Dr. Sami Ullah delivered comprehensive talks abased on project research work followed by an interactive question-answer session.

9.23. Awareness Seminar Regarding World Water Day

Department of Agricultural Engineering, and Department of Soil and Environmental Sciences of MNSUAM jointly organized an awareness seminar regarding "World Water Day" on March 22, 2019. The main objective of this seminar was to create awareness regarding declining water resources and associated problems. Another objective was to sensitize the farming community and general public towards judicious use of water for sustainable water management. Mr. Agha Zaffarullah Durrani (Ex-Director General Government of Sindh) and Engr. Arshad Jamil (from New Jersey, USA) were distinguished guests of the event. Talking on the occasion, Prof Dr. Asif Ali (Vice Chancellor) shared his views about importance of fresh water resources for agriculture in Pakistan. He proposed innovative ideas for water conservation at domestic, industrial and farmer's fields. He further added that the climate change, shrinking and degradation of water underneath and on earth's surface is causing water crisis around the globe. Engr. Dr. Muhammad Shoab (Assistant Professor, Bahauddin Zakariya University, Multan) was the key speaker for the event. He introduced artificial intelligence techniques for water resources conservation in Pakistan.

Dr. Alamgir Akhtar khan (Chairman Department of Agricultural Engineering) emphasized on the use of high efficiency irrigation system rather than conventional irrigation practices to increase the water productivity of crops. Dr. Alamgir further informed the house that Department of Agricultural Engineering is in the process to introduced postgraduate degree program of Artificial Intelligence soon. Dr. Tanveer ul Haq (Chairman, Department of Soil and Environmental Sciences) said that farmers should irrigate their crop fields based on soil analysis and crop requirements. Engr. M. Mohsin khan (Lecturer, Agricultural Engineering) highlighted the current situation and future challenges pertaining water scarcity. Other faculty members, Dr. Sarfraz Hashim, Engr. Shezad Ahmed, Engr. Faruukh Ehsan and Engr. Kashif, Engr. Waqas and a large number of students also participated in the seminar. To mark the day, an awareness walk was arranged to spread the event theme, "Leaving no one behind".

9.24. Chamber of Industry and Commerce Delegation visited MNSUAM

A delegation comprising of members of Chamber of Industry and Commerce, Multan accompanied by First Secretary of Canadian High Commission, Mr. Red Cooper visited MNSUAM on March 25, 2019. The delegation met with Vice Chancellor Prof. Dr. Asif Ali and other officials of the varsity to discuss future action plans and ways to incorporate innovation in research and commercialization of agriculture. Prof. Dr. Asif Ali briefed the visitors about the ongoing research and developmental activities and academia-industry linkages being established. President Chamber of Industry and Commerce, Mr. Muhammad Sarfraz discussed the issues and opportunities in this regard and way forward. Mr. Arshad Jamil (From New Jersey, USA) urged the need of collaborative projects and need to upgrade industry-academia linkages. Mr. Red Cooper visited research farms, fish ponds, hydroponic unit, greenhouse, weather station, high density mango plantation, vegetable nursery unit and newly constructed building of University's main campus. He admired the pace and quality of ongoing developmental work at MNSUAM. Afterwards, visitors planted fruit trees at campus.

9.25. First Ever Mango Blossom Festival Organized by MNSUAM

Agriculture Volunteers (AV) in association with Engineer Arshad Jamil (USA), Pakistan Mango Growers Group (PMGG) and Multan Chamber of Commerce and Industry (MCCI) organized the first ever Multan Mango Blossom Festival at Lutfabad Mango Farms and Processing Unit of Major Tariq from March 22-31, 2019. The idea was public entertainment, especially for rural population and surrounding villages and to promote regional agri. Tourism. The festival featured family entertainment including music, singing, skits and much more. The Chief Guest of the inauguration ceremony was Barrister Waseem Khan Badozai (MPA, Punjab). The event was inaugurated at the Farm where students of the University and members of MCCI installed their stalls. A decorated track/trail for farm visit was arranged for visitors. Horse riding and swings were also there for visitors. The idea was floated by Engineer Arshad Jamil as an inspiration from Cherry Blossom Festival. Prof. Dr. Asif Ali (Vice Chancellor, MNSUAM), Major Tariq and Rana Asif actively transformed the idea in to reality in collaboration with Agriculture Volunteers and made it a success. The event was broadcasted through Rohi and Waseeb TV channels

9.26. 1st Aus-Pak International Conference on Wheat for Food Security

The 1st AUS-PAK International Conference on "Wheat for Food Security" held from March 24-25, 2019 aimed at bringing together scientists, research scholars and progressive farmers on single platform to share and enhance the knowledge to address the problems of wheat production through innovative technologies of breeding and biotechnology. Conference was held to promote interdisciplinary dialogues regarding the contemporary issues in wheat. This event provided the awareness about technological advances in wheat breeding to cope with the rising problems for wheat production. The aim of the event was to exchange ideas with leading experts from the field of wheat research on the current situation of international wheat breeding and to discuss further innovative approaches. This would be another important step in achieving food security for a growing world population, as only by working together and building networks internationally we will be able to meet the challenges of our time.

Prof. Richard Trethowan (The University of Sydney, Australia) talked about the potential of hybrid wheat in Australia and beyond. Dr. Harpinder Singh Randhawa (Research Scientist, Agriculture and Agri. Food, Canada) presented integrated approaches for wheat breeding to mitigate production risk. Dr Rebecca Thistlethwaite (The University of Sydney, Australia) emphasized on the need of accurate, high-throughput field-based phenotyping for heat tolerance in wheat. Prof. Dr. Harbans Singh Bariana (The University of Sydney, Australia) talk was about past, present and future of application of genomics in wheat to deliver triple rust resistant cultivars. Dr. Rizwana Maqbool (University of Agriculture, Faisalabad) gave an overview of marker assisted background selection as a method for plant breeding in changing climate. In addition several national researchers presented their research work pertaining advanced technological developments in wheat breeding, climate smart breeding - biotic stresses, climate smart wheat management, wheat improvement: breeding and enabling technologies, impact of climate change on adoption, economic and food quality.

9.27. International Conference on High Quality Fodder and Forage Production in Climate Shift Paradigm

International conference on "High Quality Fodder and Forage Production in Climate Shift Paradigm" was organized by Institute of Plant Breeding and Genetics of MNSUAM from March 26-27, 2019. The purpose of this conference was to highlight the role of quality fodders and forages in increasing meat and milk production in the country in the backdrop of climate change. Another objective was to extend research collaboration and get benefit from research already undertaken at America. A large number of national and international, scientists, extension workers, postgraduate students and famers participated in the two days training workshop. In his welcome address, Prof. Dr. Asif Ali, Vice Chancellor, MNS-UAM welcomed all the participants and highlighted the significance of this workshop. Dr. Jeffery A. Dahlberg discussed common mistakes and issues in sorghum use as an animal feed. Mr. Saleem Akhtar (Director, Fodder Research Institute, Sargodha) highlighted the contribution of agri. research system of Punjab towards the improvement of fodder sector in Pakistan. Dr. Daniel Putnam (UC, DAVIS) shared his research experiences about alfalfa production systems for higher yields in environments similar to Pakistan.

Dr Khaled Bali from UC Davis discussed strategies for effective irrigation management for high yielding alfalfa. Dr. Shaukat Ali Bhatti discussed increasing nutrient supply for livestock from the existing land resources. Mr. Fida Gadi, Biotrack highlighted the role of private sector and prospects of growing alfalfa as a better feed for livestock. Foreign and national researchers presented 25 talks under the themes of animal nutrition and fodder conservation, modern tools for crop improvement, crop management for sustainable production, fodder breeding for improving yield and quality. There was a very positive interaction and exchange of ideas. The international participants especially acknowledged the hospitality and professionalism of MNS-UAM.

9.28. 1st Aus-Pak International Conference on Pulses for Food Security

The Institute of Plant Breeding and Genetics, and Department of Agronomy of MNSUAM collectively organized an international Conference on Pulses for Food Security: Science for growers and Entrepreneurs on March 27, 2019. The stakeholders including academia and researchers together with chickpea progressive growers participated in this event. International scientists from Australia also participated in the event to share their experiences to solve the contemporary issues of pulses production through recent technological advances. In his welcome address, Prof. Dr. Asif Ali (VC, MNSUAM) welcomed the international delegates and participants of the conference. He praised ACIAR for successful interventions to enhance productivity and profitability of pulses in Pakistan through a mega project.

Dr. Ata ur Rehman, from Graham Centre for Agricultural Innovation, Charles Sturt University, Australia said that Current interventions by the ACIAR pulses project on increasing productivity and profitability of pulses in the cereal based cropping systems in Pakistan has luckily come at the right time when leguminous lentil, chickpea and ground nut have gained governmental support and are fast attaining prominence in connection with their health and nutrition status worldwide. Prof. Chris Blanchard Director, Functional Grains Centre, Charles Sturt University, Australia discussed challenges in Australian pulse production and research landscapes. Dr. Gavin Ramsay on behalf of ACIAR pulse project team urged the need to shift from research for development to development driven research. Current status and future prospects of pulse in Pakistan were discussed by Dr. Khalid Hussain (Director, Arid Zone Research Institute, Bhakkar). He also elaborated current federal and provincial level policies/programs affecting pulses production, promotion and trade in Pakistan. Ms. Saima Rani from Social Science Research Institute, NARC talked about constraints and opportunities for pulses (chickpea and lentil) in project area under the ACIAR pulses productivity project (CIM/2015/041). Dr. Rozina Gul from Agriculture University, Peshawar presented her research work regarding genotypic erraticism for yield determinants and pod borer resistance in chickpea. Dr. Gul Sanat Shah Khattak, Dr. Iqbal Saeed, Dr. Muhammad Ejaz also presented their research work regarding improvement black seeded mung bean, chickpea and lentil in Pakistan.

Dr. Muhammad Ashfaq briefed the participants about spatial distribution and antiserum production of urdbean leaf crinkle virus in Punjab, Pakistan. Protective management of chickpea seed against pulse beetle with different packaging materials and oil coatings was presented by Ms. Mahreen Hanif. Mr. Abdul Manan Khan presented genotypic x environment interaction and stability of promising genotype for grain yield of chickpea. Dr. Amar Matloob suggested critical period of weed-crop competition as a tool for judicious herbicide use in irrigated chickpea. Foreign and national researchers presented 20 talks under the themes of policy perspective and socio-economic impact of pulses, pulse crop improvement, value addition and marketability, and pulse productivity and profitability. At the end, a souvenir distribution ceremony was also held.

9.29. Plant Centric Meal Competition

As many as 50 teams of various educational institutions contested in a plant centric meal competition held under the auspices of MNSUAM on March 27, 2019. The theme of the competition was promotion of pulse-based foods and development of innovative food products and it was the part of ongoing international conference week. The activity was carried out to promote plant-based food products for a healthy life style, and encouraging people to refrain from the use of fast foods, especially among the youth. Provincial Minister for Forestry, Wildlife and Fisheries Muhammad Sibtain Khan inaugurated the competition. MNSUAM VC, Prof. Dr. Asif Ali said the competition was aimed at promoting healthy diet and sensitizing students about junk food health hazards. Different universities, colleges and cooking institutes erected a total of 90 stalls for the competition. Dr. Irfan Baig, Dr. Umer Farooq, Mrs. Sarwat Zahra, Mr. Mehtab Raza and others were present. First position was shared by BZU and MNSUAM students; second position was won by MNSUAM and COTHM College while third position was clinched by University of Education and Kissan Group teams.

9.30. Conference on "The Contours of National Unity"

The MNS-UAM in collaboration with the Centre for Global and Strategic Studies, Islamabad organized a conference on "The Contours of National Unity" on April 8, 2019 at Mehboob Ali Auditorium, Central Cotton Research Institute, Multan. The Conference had the participation of distinguished guest speakers and experts of the subject. The guest speakers who delivered speeches during the Conference included: Professor. Dr. Asif Ali (Vice Chancellor, MNS-UAM), Mr. Ahmed Yar Hiraj (Chairman, Prime Minister's Inspection Commission, Chief Guest), Lieutenant General Naeem Khalid Lodhi [HI(M), (Retd) – Former Federal Minister of Defence], Mr. Mohammad Ali Durrani (Former Federal Minister of Information, Government of Pakistan), Major General Khalid Amir Jaffery [HI(M), (Retd), President CGSS], Brigadier Akhtar Nawaz Janjua (Retd. – Senior Member Advisory Board, CGSS), Mr. Rasheed Ahmed (Lecturer, Islamic Studies, MNS-UAM) and Dr. Amir Furqan (Assistant Professor, Chaudhry Pervaiz Elahi Institute of Cardiology, Multan). The session commenced with the opening remarks by Prof. Dr. Asif Ali, who welcomed and thanked the worthy participants of the session. He added that being a breeder and geneticist, he believes in diversity and we should respect diversity that exists within our geographic borders.

Mr. Ahmed Yar Hiraj stated that national culture of any country is its people's asset and practice along with what they hold valued and what they defend. As far as Pakistan is concerned, it is no exception in this regard. It has a national culture united and cemented in the diversity of socio-political thoughts and cultural variations. People from all the major ethnic groups and provinces remain united amid the minor rifts over their rights and sharing the national wealth. We have to generate the feelings of patriotism and nationalism instead of regionalism and provincialism, within ourselves by motivating the youth and have to dedicate to the cause of national integration consciously.

Mr. Mohammad Ali Durrani stated that it is the duty of every individual to play his/her due part in nation building. The prevailing situation demands from the nation a sense of sacrifice and responsibility towards state and society unanimously. People from all walks of life should extend their cooperation to arrest the onslaught of alien ideologies and cultures.

Other panelists of the conference concluded that only one factor cannot keep the whole nation integrated so we have to consider multiple factors, which in combination can sustain the national integration. Over-reliance on any single aspect while ignoring the others would result in non-achievement of national integration. Today Pakistanis are more conscious of their territoriality and distinct geopolitical personality than ever before. The sources of pride and patriotism are internal, rooted in the territory that constitutes Pakistan. The more we look at our country through the lens of territory and domestic culture, the more coherent and integrated our identity becomes. This makes it more important to recognize the complex linkages among ethnicity, Islam and territorial identification to understand the interplay of social and political forces that influence the processes of nation building and identity formation. Approximately 250 people including representatives of public and private sector, academicians and students attended the conference.

9.31. Seminar on Traffic Awareness and Road Safety

MNS-UAM frequently holds lectures, seminars and walks in different areas for creating awareness among the community on various social issues prevalent in the society. In this regard, the Directorate of Student Affairs in collaboration with the City Traffic Police Multan organized a seminar on traffic rule's awareness on April 2, 2019. The seminar was largely attended by the students, faculty members of the University and traffic police officials. Mr. Shahid Miyo of the City Traffic Police spoke about traffic rules emphasizing on use of seat belts and cautioned the audience on the repercussions of using a mobile phone while driving. Since driving rules are rarely adhered to in our country, it is need of the hour to curb the violation of lanes and signals in order to avoid fatal accidents. He further advised not to use roads for public protests causing heavy traffic jams and risk of losing precious lives commuting in the ambulances. Ms. Asia said that wearing a helmet keeps us safe from injuries, and it's a law to wear a helmet while driving bikes. She highlighted the importance of wearing helmets while driving a motorbike. Prof. Dr. Asif Ali, Vice Chancellor said that as the main target of this seminar are the young audience, therefore, they are particularly requested to avoid use of mobile phone and not to over-speed while they are on the steering wheel. Some road safety video clips were also shown during the event, which were very informative. Mobile licensing unit was also there and student got the services of obtaining a learner license or license renewal with ease at their doorstep. At the end, 20 free helmets were also distributed among students following a question-answer session.

9.32. App Development as a Cottage Industry in Pakistan

The Department of Computer Science and ICT Club of MNS-UAM organized a seminar on "App Development as a Cottage Industry in Pakistan". Mr. Pervaiz Akhtar (CEO Infinal Technologies New Jersey, USA) conducted a technical session on April 3, 2019 in this regard. He taught students the value of technology integrated systems and how they can develop easy and facilitating applications on their own. The Session covered technical training on the concepts and programming methodologies needed to develop applications for android mobile devices. He informed that two apps named Mr. Accent and Mr. Accent Junior have already been published on Android. Mr. Accent Junior's first version is also published in Apple's Play Store. These Apps teach users how to speak English in a natural American and internationally accepted accent by offering exercises that may be done at home also and can help you pass IELTS, TOEFL, CSS and other exams. Apps are free for downloads. He urged the desire to help out Pakistani youngsters who may need experienced guidance as they move into the challenging world of IT and start building their careers.

9.33. International Seminar on Allelopathy

An international seminar on "Mechanisms of allelopathic stress and oxidative damage in plants" was held on April 12, 2019 at MRI seminar hall. The event was jointly organized by the Department of Agronomy and the Department of Entomology, MNS-UAM. Prof. Dr. Hamed M. El-Shora from the Department of Botany, Mansoura University Egypt was the Keynote Speaker. Professor Dr. Asif Ali Vice Chancellor MNS-UAM welcomed the keynote speaker for the international seminar and discussed about the importance of allelopathic research for weed control in Pakistan. While addressing a large number of audience comprising students, SPAF members and faculty members of MNS-UAM at the occasion, Prof. Hamed talked about the physiological adaptations in plants as a result of allelopathic stress. He added that use of allelopathy for weed control is now a success in Algeria and Egypt. Dr. Khuram Mubeen, Assistant Professor, Department of Agronomy informed the audience that recent allelopathic studies in the world are focusing on using allelopathy for improving the crop growth and productivity. There is a need for development of well adopted biological weed control through allelopathy, he added.

At the end of the interactive international seminar, Professor Dr. Shafqat Saeed, Dean, Faculty of Agriculture and Environmental Sciences thanked the guest speaker and urged the need of professional collaboration between MNS-UAM and Mansoura University Egypt. Prof. Dr. Asif Ali presented honorary shields and gifts to the guest speaker. At the end of the seminar, Prof. Hamed thanked the Vice Chancellor MNSUAM for great hospitality and warm welcome.

9.34. Training workshop on "Innovative Trends in Vegetable Nursery Production"

The MNS-UAM in collaboration with AIP, USAID organized a one-day training workshop on "Innovative trends in vegetable nursery production for promotion of kitchen gardening" on April 12, 2019 at the Committee Hall of Multan Chamber of Industry and Commerce.

The event focused on significance of kitchen gardening and its promotion through vegetable nursery, innovative trends in vegetable nursery production, vegetable nursery supply system, nutrient management in a kitchen garden and online marketing of vegetable nursery through website. The training workshop enabled the participants to understand the benefits of kitchen gardening and techniques of vegetable production through nursery at house hold level.

9.35. MNSUAM Students Rocked at the Cultural Show

The exquisite and stunning performances of MNSUAM students featuring multiple glimpses of Pakistani culture enthralled the audience on the “Culture Day” on April 25, 2019. Attired in vibrant costumes of their respective provinces, the young and talented students of the varsity mesmerized the gathering with their culture, food, clothes, and musical performances. The students dressed in Saraiki, Punjabi, Balochi, Sindhi and Pushtoon outfits presented different facets of Pakistani cultures. Various performances including Khattak dance, Luddi and Saraiki Jhoomer amused the audience. Prof. Dr. Asif Ali, Vice Chancellor inaugurated the event that was marked by traditional food and beverages stalls, live music performances and cultural dance performances. However, the traditional dance performances by groups of Balochi and Pashtun students remained the most enthralling events of the day. The venue was decorated in traditional village style with Hukka, Charkha and pitchers. Speaking on the occasion, the Vice Chancellor urged on promoting such events to keep Pakistan's core values and strong cultural heritage alive. Speaking on the occasion, he said that the event has given the students a chance to enjoy after spending a busy semester, studying. He appreciated the students' efforts to present their respective culture in the best possible way. He also praised the team work of the faculty for making the night a success. The organizers added that this festival was devoted to educate the youth about their heritage and motivate them to preserve and promote Pakistan's culture. They said they would continue to organize such cultural festivals to promote love, peace, tolerance and harmony. A large number of students and faculty members attended

9.36. Aman Mushaira 2019

The 3rd Annual "Aman Mushaira" was held on April 23, 2019 at MNSUAM, which was attended by renowned poets of the country like Mr. Mumtaz Athar, Baba Najmi and Saen Ashu Lal. The duties of stage secretary were performed by famous poet Mr. Mehbob Tabish. The Mushaira was multilingual and more than 15 poets including Mr. Saghir Tabasum, Mr. Sabir Ali Sabir, Mr. Khawar Waheed, Mr. Taj Soz, Mr. Mubashar Saeed, Mr. Ishrat Leghari, Ms. Sehar Sayal, Ms. Tahira Sara presented their poetry with an objective to promote peace and harmony in the society through this Aman Mushaira by eliminating linguistic and regional barriers. Main achievement of this Mushaira was the talent hunt of young poets (Mr. Ameer Hamza, Wassi Zad, Fahim Qaisar and Shabaz Jailani) from MNSUAM as they impressed everyone on the stage in the presence of distinguished national poets. On this occasion, the Vice Chancellor, Prof. Dr. Asif Ali said that such activities are necessary for promoting peace in the society. He further said that poets always leave imprints of an important message through their poetry that remains in people's memory for a long time. He applauded the untiring efforts of MNSUAM Literary Club and appreciated them for organizing such a successful event. the event.

9.37. Community Awareness about Recycling of Household Garbage

A community awareness seminar under the umbrella of HEC-MNSUAM joint project (SIOP-033) was held entitled "Community awareness about recycling of household garbage into value added products by integration with local manufacturer" on May 2, 2019. The objective of this seminar was to create awareness among the community for recycling of household wastes and promotion of kitchen gardening and tree plantation to make Pakistan Clean and Green. The Project Coordinator, Dr. Muhammad Shakeel laminated that due to lack of social awareness and proper disposal facilities, most of the garbage is dumped into our streets and roads which leads to pollution and health concerns. These wastes are then burnt that spread toxic gases and smoke over residential areas, causing detrimental effect on public health. He further discussed how recycling can protect our environment and precious primary resources to secure the future of the Earth. Dr Muhammad Shahbaz, Assistant Professor gave an insight to food waste as a source of energy and safe use of pesticide treated vegetables. He said, "Nothing in this world is waste, the leftover of one is treasure for another". Dr. Muqarrab Ali, Dr. Gulzar Akhtar and Mr. Nabeel Ahmad Ikram also spoke on tree plantation, kitchen gardening and insect repellent ornamentals. It was a family event and there were some musical performances as well. The residents of Mujahid Town, Ms. Sajida Faiz Bhutta, Ms. Riffat, Malik Faiz Bhutta, Mr. Asif Khan Malizai and Rana Nasir emphasized on the importance of recycling and appreciated the efforts of MNS-UAM in this regard and praised the team for organizing such a successful event for the community. Dr. Tanveer ul Haq, Chairman, Department of Soil and Environmental Sciences offered vote of thanks to the participants.

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SPORTS

Sports are much needed in the context of development of the leadership skills in the students. Sports activities are meant to provide quality fitness and conclusive environment that inspires participants to engage in competitive events on various levels, institutional and national. The main goal of sports activities is to provide plenty of opportunities to students to keep them healthy with desirable character and remarkable personality traits. The Office of Sports has been providing the sports facilities to the male and female students. The office has developed a system to encourage the students for participating in different sports activities. The sports activities are geared to provide wide participation in intramural activities (within the students), extramural activities (among various faculties of the university) and inter-tertiary or varsity sports activities in national sporting events. Teams for Cricket, Football, Volleyball, Table Tennis, Badminton, Hiking and athletics are actively participating in the supporting events in the country.

10.1. Student Training Camps

The Office of Sports has been collaborating with the experts of different games in order to provide the best training facilities to the students. Different training camps, as per following detail were held for coaching of students in different programs.

1. 1-week football team camp in campus.
2. 2-weeks badminton camp for HEC Intervarsity event.
3. 2-weeks camp in campus for HEC Intervarsity handball event.
4. 1-week camp and matches in Shafqat Complex for HEC Intervarsity Football.
5. 1-week camp for HEC Football final round.
6. 2 days Football training camp in campus.
7. 2 days Cricket training camp in MRI Cricket ground.
8. 5 days Table tennis camp for HEC event.
9. 1-week cricket camp and matches in MRI Cricket Ground for HEC event.
10. 4 days trials for Carnelian cricket league.
11. 2 weeks activities and matches in campus
12. 4 weeks camp for Australian football in District sports ground.
13. 2 weeks Punjab Games girl's handball training camp in Women University Multan.
14. AMAN ke Memaar sports training camp in campus (Cricket, Football and Badminton).



10.2. Sports Events

Following is the detail of various sports events in which students of MNS-UAM participated during the year 2018-19

- | | |
|--|----------------------------|
| 1. Floodlight Football Tournament at Bosan Road Multan | (3 rd position) |
| 2. HEC Intervarsity Badminton Male Faisalabad Dec.2018 | (Participated) |
| 3. HEC all Pakistan Intervarsity Hand Ball Male Faisalabad 2019 | (Participated) |
| 4. Winter Sports Gala 2019 in campus | (Conducted) |
| 5. HEC Intervarsity Football Male Lahore Zone 2019 | (Winner) |
| 6. HEC all Pakistan Intervarsity Football Male Lahore 2019 | (Participated) |
| 7. Football Training Camp 2019 in campus | (Conducted) |
| 8. Cricket Training Camp 2019 in campus | (Conducted) |
| 9. HEC Intervarsity Table Tennis Male BZU Zone 2018 | (Participated) |
| 10. HEC Intervarsity Cricket Male BZU Zone 2019 | (Participated) |
| 11. Carnelian Cricket League Trials 2018 at MCC Multan | (Participated) |
| 12. Aman ke Memar sports events in campus | (Conducted) |
| 13. National Australian Football 2019 at District Sports Ground Multan | (3 rd position) |
| 14. Carnelian Cricket League Cricket Matches 2019 at MCC Multan | (Participated) |
| 15. 1 week in Lahore for Punjab Games. | (Participated) |



UNIVERSITIES BUILDING LEADERSHIP

11.1. Faculty Leadership (Awards and representation in govt. policy making committees, memberships on various councils etc.)

- The MNS-UAM is the member of various governing bodies of Higher Education Commission i.e. the Vice Chancellors' Committee Meeting, MS leading to Ph.D Program, Curriculum Revision Committees, and Quality Assurance etc.
- University is also contributing to District Government Task Force for Anti-Adulteration, and Anti-Dengue Campaign.
- University is actively involved in policy making regarding mango fruit fly, mango post-harvest management, Punjab Cotton Control Act 1966, pink boll worm management, Cotton Mission 2025, monitoring and evaluation of field activities of Agriculture Extension Department etc.
- Faculty members served as inspection officer for subsidized farm machinery and laser land leveler provided by Govt. of Punjab.
- Pro-Vice Chancellor of MNSUAM is currently serving as the Chairman of National Agricultural Education Accreditation Council of HEC.

11.2. Directorate of Student Affairs

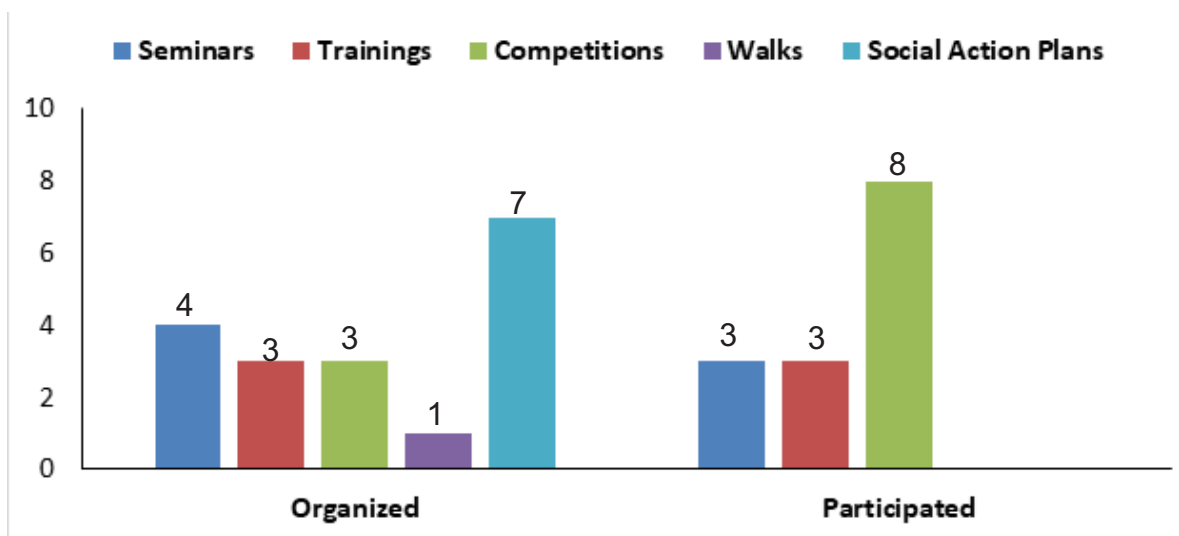
The Directorate of Students Affairs has the mandate to facilitate and maintain the services including admissions, welfare, sports, health care, guidance, scholarships, and financial aid.

Directorate of Student Affairs has its mission to offer a variety of services, programs and activities to support and encourage the intellectual, personal, social and cultural development of students. The Directorate has provided all necessary arrangements starting from first admission inquiry to the last day at the Campus. Directorate is also involved to check political or unlawful activities of the students. The Directorate also conveys the student's problems to higher administration to facilitate the students. The Directorate not only concentrates on curricular and co-curricular, but also profoundly concerned with the career building and financial assistance of the students.

The Directorate provides students different opportunities to take part in sports/games. It also provides them different platforms for the development of their literary and artistic potentialities. The purpose of all such activities is to provide students conducive environment during their academic years in the University. This office functions as a friend and guide for students and is proving a bridge between administration and students to address their genuine problems.

Following Societies/clubs of the students have been established at MNS-UAM.

1. Qirat and Naat Club
2. Debating Club
3. Literary Club
4. Art and Dramatic Club
5. Media Club
6. ICT Club
7. Blood Donation Society
8. Character Building Society
9. Plant for Life Society
10. MosiGala Beats
11. Agriculture Volunteer Society
12. Young Students Peace Society
13. Women Empowerment Club



Seminar, Trainings, Competitions, Walks and Social Action Plans conducted and participated by MNS-UAM Students

11.2.1. National/International Days:

- Kashmir Solidarity Day (5-02-2018)
- International Day on Drug Abuse (26-6-2018)
- Pakistan Independence Day Celebrations (14-8-2018)
- National Defense Day (6-9-2018)
- World Mental Health Day (10-10-2018)
- Pink Day (25-10-2018)
- World Polio Day (24-10-2018)
- Iqbal Day (9-11-2018)

- Mehfil-e-Naat at 12 Rabi ul awal (21-11-2018)
- World AIDS Day (3-12-2018)
- Seminar: National Voters Day (6-12-2018)
- International Human rights Day (10-12-2018)
- Black Day in the Memory of APS Martyr (17-12-2018)
- Jashan-e-Jinnah (27-12-2018)

11.2.2. Peace promoting activities/ Social Action Plans:

- Dramatic Day on Counter Hate Speech (19-1-2018)
- Dialogue on Peace Through Poetry (22-1-2018)
- Peace through Art and Culture (23-1-2018)
- Peace through Music (24-1-2018)
- Aman Mushaira (25-01-2018)
- Peace Theater (23-02-2018)
- Aman Mushaira (6-07-2019)
- Inter-Faith Harmony and Peace promoting Visit at Mandir and Church (28-09-2018)
- Peace Mushaira in Saraki organized by Literary Club (29-9-2018)
- Peace Walk, Peace Seminars, Peace Paper Art, Peace Pottery, Peace Wall, Peace Blog, Peace Poetry organized by Peace Society formed under Peace Incubation training

11.2.3. Competitions Organized:

- Intra University Bilingual Declamation Competition (18-04-2018)
- War Song Competition at National Defense Day (6-09-2018)
- Peace Dramatic competition was organized by Dramatic Club of MNS-UAM (21-09-2018)
- Intervarsity Debate Competition (28-9-2018)

11.2.4. Folk and Cultural Events:

- Cultural Night at Spring Festival (24-02-2018)
- Cultural Program at Mango Festival (14-16 July, 2018)
- Students Cultural Performance at Farmer Convention (4-12-18)
- Dramatic Club organized cultural night at International Conference on “Plant Based Foods: Current Scenario and Future Perspectives

11.2.5. Social Drives and Volunteer Work:

- Blood Test and Sugar Test camp (12-03-2018).
- Students of MNS-UAM conducted Admission Guidance Desk (Aug-Sept 2018).

- Blood Screening Camp for 1st semester (Oct 2018).
- Blood Donation Camp organized by Blood Donation Society.
- Tree Plantation “One child, one Tree” campaign under the direction of Deputy Commissioner, Multan.

11.2.6. Trainings, Workshops, Seminar organized

- Rover scouts unit MNS-UAM organized CADRE Rescue Training Course in collaboration with Rescue 1122 in (12-4-2018)
- Anti-corruption Seminar and Fix the Damage by Career Building Society (04-05-2018)
- Seminar on Volunteerism and Positive Pakistan by Iqrar ul Hsassan (7-09-2018)
- Seminar: Character Building; Basic Elements of Better Society (25-10-2018)
- Seminar: How Iqbal Uplift his leader by Khurram Illahi (13-11-2018)
- Stress Management through Art and Music (23-11-2018)
- Seminar: United Against Corruption (6-12-2018)
- Anti-Drug Awareness Seminar (21-12-2018)
- Students training on Peace Incubation under Youth Peace Incubator Program offered by Accountability Lab, Islamabad (16-10-2018)
- Seminar on "Drug Abuse, Scenario in Pakistan" in collaboration with Anti Narcotic Force, Multan (4-12-2018)
- Curriculum development on Social and Religious Tolerance in Collaboration with Society for the Advancement of Education (SAHE), Lahore

11.2.7. Participations

- Participated in Aslam Parvez Art Festival Shakir Ali Museum (14 -01-2018)
- Students of MNS-UAM displayed stall at Agriculture Exhibition at Duniya Kissan Dost Mela at BZU, (March 2018)
- Students of MNS-UAM displayed stall at Agriculture Exhibition at Nawa e Waqat Kissan Mela at Qilla Qasim Bagh (4-4-2018)
- Participated in Kissan Dost Mela, Dunya News (31-3 2018)
- Participated in Kissan Dost Mela Nawa e Waqat News (08-4 2018)
- Rover scouts unit MNS-UAM participated in National Integration Dessert Hike (3-1-2018)
- Participated at ZESTIVAL BZU (4-6 December 2018)
- Students of MNS-UAM participated in Business Idea Competition DICE UAF 2018 (11-11-2018)
- The News Education Expo (10-07-2018).
- Students of MNS-UAM displayed stall at Education Expo organized by The News Media Group (10-7-2018)
- Participated at 6th Lyallpur Art and Literary Festival UAF (11-12-2018)

11.2.8. Distinctions:

- Students of MNS-UAM secured 1st position in Technology and Agriculture Innovation competition 2018.
- Students of MNS-UAM secured 1st position in regional level at Microsoft Imagine cup 2018.
- Students of MNS-UAM secured 2nd position in web designing in 6th Lyallpur art and literary Festival UAF 2018.
- Dramatic Club of MNS-UAM secured 1st position in Dramatics (Mime Category) in web designing in 6th Lyallpur art and literary Festival UAF 201.
- Music Society of MNS-UAM secured 2nd position in Singing (Western Music) in 6th Lyallpur art and literary Festival UAF 2018.
- Best Performance Award received by Dramatic Club MNS-UAM from Multan Theater November 2018.
- Rover scouts unit MNS-UAM participated in 5th All Punjab Snow Fall Hike for Rover Scouts/Leaders Feb 2018.
- Rover scouts unit MNS-UAM secured 3rd position in First Aid at Ghora Galli in 35th All Punjab Rover Scout Moot.
- Students of Debating Club, MNS-UAM secured 3rd position in Debating Competition, BZU Zestival, 4-6 December 2018.
- Students of Music Club, MNS-UAM secured 2nd position in Singing Competition, BZU Zestival 4-6 December 2018.
- Students of ICT Club, MNS-UAM secured 1st position in Web Development, BZU Zestival 4-6 December 2018.
- MNS-UAM Sports Society secured 2nd and 3rd positions in Chess Competition, BZU Zestival 4-6 December 2018.

11.3. ROVER SCOUTS UNIT, MNSUAM

Scouting in MNS-UAM was started on December 02, 2016 under the kind supervision of Prof. Dr. Asif Ali, Vice Chancellor MNSUAM, who took oath as a Patron in Chief/ Chief Scout of Rover Scouts Unit, MNS-UAM. It is just only one movement or society of MNS-UAM in which the Vice Chancellor is also a member. Dr. Umar Ijaz Ahmed (Assistant Professor, Department of Agribusiness and Applied Economics) is playing role as President of Rover Scouts Unit MNSUAM. The Mission of Scouting is to contribute to the education of young people, through a value system based on the Scout Promise and Law, to help build a better world where people are self-fulfilled as individuals and play a constructive role in society. Scouting is a movement that aims to support young people in their physical, mental and spiritual development, that they may play constructive roles in society, with a strong focus on the outdoors and survival skills.

It is one of several worldwide youth organizations. Scouting is a great way to get your child involved. Through scouting organizations, children make friends, develop skills and become involved in their community. There is no doubt that parents value what Scouting does for their children. Parents say Scouting gives their children more confidence, responsibility, a broader set of friends, a chance to pursue things they might not get to do otherwise, adventure and an extended family. The Rover Scouts Unit, MNS-UAM will be a dynamic, self-reliant, educational organization providing value based, challenging and attractive program through efficient leaders and effective organizational management, making a significant contribution to the society and the country.

The Rover Scouts Unit work in supervision of an Advisory Council based on the following members;

- Senior Rover Mate (SRM), Dy. Senior Rover Mate (DSRM)
- Unit Secretary
- Counselor
- Quarter Master
- Sports Secretary
- Press Secretary

11.3.1. Participation of Scouts in Events

1. 6th All Punjab Snow Hike, 2019
2. CADRE Training Course (Rescue 1122)
3. Silver Jubilee National Hike for Scouts-2018
4. Traffic Awareness Seminar
5. 5th All Punjab Snow Fall Hike 2018, Murree Galliyat
6. 4th All Punjab Snow Fall Hike 2017, Murree Galliyat
7. Flood Relief Mock Exercise, Regional Scouts Office, Multan
8. Hike to Fort Munro in collaboration with Regional Scouts Office, Multan
9. 35th All Punjab Rover Moot 2017, Scouts Nasheman Ghora Ghali Murree
10. National Integration Desert Hike, Derawar Fort, Cholistan Bahawalpur 2018

11.3.2. Distinctions of Scouts

Scouts also won some competitions during 36th All Punjab Rover Moot 2018 as follows:

- Camp Inspection: 1st position
- First Aid Competition: 3rd position

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- Camp Fire: 2nd position
- Estimation 2nd position
- Outdoor Tent Pitching 3rd position Special Certificate

Three Scouts from Unit also get Rambler Badge during National Integration Desert Hike 2018 held at Cholistan, Bahawalpur. During that those scouts passed a night in self-made hut with locally available trees and bushes and also cooked food without use of utensils.

Rovers from RSU MNSUAM also provide their services in organizing and managing all the major events at Varsity.



Chapter-12

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FINANCE

FINANCIAL YEAR AT A GLANCE

(Amount in Million PKR)

Particulars	Approved Budget 2018-19	Revised Budget 2018-19	Actual 2018-19
RECEIPTS			
Opening Balance	17.528	35.171	35.171
Govt. Receipts	229.084	168.452	168.452
University's Own Source (Self-Generated Income)	164.867	146.986	151.566
Donation	20.000	20.000	20.000
Total Receipts	431.479	370.609	375.189
EXPENDITURES			
Salary Expenditures	235.326	194.156	189.015
Non Salary Expenditures	259.325	171.895	170.884
Total Expenditures	494.651	366.051	359.899
Surplus/Deficit	(63.172)	4.559	15.290

Million PKR

Development Budget	461.775	146.501	146.501
Recurring Budget	494.651	366.051	359.899
Self-Generated Income	164.867	146.986	151.566

In PKR

Trend of Per Student Spending (Salary Expenses Basis)	94,055	82,269	80,091
Trend of Per Student Spending (Non-Salary Expenses Basis)	103,647	72,836	72,408

UNIVERSITY GOVERNANCE

The Muhammad Nawaz Shareef University of Agriculture, Multan was announced by the Chief Minister, Punjab on 28-01-2012. The University was established under the Act 2013 of the Punjab Assembly with the objective to impart professional education in agriculture sciences and allied disciplines by catering the need of population, nationally and regionally. The Act XXII 2013 authorized the University to establish different authorities to supervise the matters of the University for its smooth functioning, which are working in their domains as per following detail.

13.1. Syndicate Meetings

The syndicate is the executive body of the University and takes effective measures to raise standard of teaching, research, technological development, publication and other academic pursuits. As of June 30, 2019, a total of 23 meetings of Syndicate have been held, out of which 4 meetings held in 2018-19 are given below:

Sr. No.	Syndicate	Date
1.	20 th Syndicate Meeting	21.07.2018
2.	21 st Syndicate Meeting	01.12.2018
3.	22 nd Syndicate Meeting	03.05.2019
4.	23 rd Syndicate Meeting	29.06.2019

13.2. Academic Council Meetings

The Academic Council is the highest academic body of the University and lays down proper standards of instruction, research, publication and examination, regulates and promotes the academic life of the University. Detail of meetings of the Academic Council held during the year 2018-19 is tabulated below:

Sr. No.	Academic Council	Date
1.	5 th Academic Council Meeting	20.03.2019

13.3. Finance and Planning Committee Meetings

The Finance and Planning Committee prepares the annual statement of accounts and proposes annual budget estimates and makes recommendations to the syndicate, reviews periodically the financial position of the university, advises the syndicate on all matters related to finance, investment and accounts of the university. Detail of meeting of F&PC during the current year is as follows:

Sr. No.	F&PC	Date
1.	5 th Meeting of F&PC	30.03.2019
2.	6 th Meeting of F&PC	14.06.2019

13.4. Board of Advanced Studies and Research

The Board of Advanced Studies and Research advises on all matters connected to the promotion of advanced studies and research publications in the university. Two meetings of the Board were held during 2018-19:

Sr. No.	BAS&R	Date
1.	5 th meeting of Board of Advanced Studies and Research	15.01.2019
1.	6 th meeting of Board of Advanced Studies and Research	04.05.2019

13.5. Selection Board

The Selection Board considers the applications and recommends to the Syndicate the names of suitable candidates for appointment against teaching and other posts and suggests suitable salary for the selected candidates, considers all the cases for selection of officers and recommends the names of suitable candidates for such selection to the Syndicate. The details of meetings is as follows:

Sr. No.	Selection Board	Date
1.	7 th Meeting of Selection Board	15.09.2018
2.	8 th Meeting of Selection Board	27-28 October, 2018

OFFICE OF THE RESOURCE GENERATION/DEVELOPMENT

Sustainability of higher education institutions is possible only by employing various modern methods and using non-conventional techniques for resource generation and commercialization by involving the local community, staff, political leadership and foreign funding agencies.

The MNS University of Agriculture in a co-ordination with the UC Davis and JICA on different doable proposals regarding modern lab development, date palm production/quality and mango production/quality.

- T The MNS University of Agriculture, Multan Financial Aid Office, P&D Office and ORIC of the University vigorously pursuing the funding agencies with the plan proposals in order to develop a state of the art agriculture institution in the Southern Punjab.

14.1. Student Financial Aid Office

We believe students from all economic backgrounds should have the opportunity to attend the MNS University of Agriculture, Multan. Finances should not be a barrier to getting a world-class education. There are several options of financial aid for students and need to explore the many scholarship options available that help make paying for university affordable as possible.

Despite heavily subsidized fee structure, many deserving and bright students feel difficult to bear it. There is a need that society supplements government efforts to help and support under privileged and weaker section of the society. This will help making Pakistan a land of equal opportunities and education for all. In FY 2018-19, an amount of Rs. 14.357 million was distributed by Financial Aid Office of MNS-UAM among 429 Students of the University for Financial Assistance.

14.2. Scholarship Program

Scholarships are awarded to needy and meritorious students. Award is based on merit, financial need, or a combination of both. Scholarships can come from different sources and they may vary in the awarding criteria.

University is awarding 10% merit scholarships to graduate and undergraduate students on CGPA basis in addition to need-based scholarships. Tuition Fee has been reimbursed to 110 MS and PhD students under Prime Minister Fee Reimbursement Scheme (PMFRS) for the less developed areas. The overall scholarship data for undergraduate and postgraduate students of MNS-University of Agriculture, Multan in FY 2018-19 are as under:-

Sr. No..	Scholarship Category	No. of Awardees	Scholarship Amount (in MRs.)
1	HEC Need Based	246	19.290
2	University Merit Scholarships	379	3.979
3	Punjab Educational Endowment Fund	312	11.553
4	Bait-ul-Mal	13	0.910
5	Minority Scholarship	1	0.030
6	PM Fee Re-imburement (MS & PhD)	214	6.057
7	Neelum Seed Need Based	2	0.192
8	Ms. Asia Sultan Need Based	2	0.096
	Total	1169	42.107

14.3. Planning and Development Office

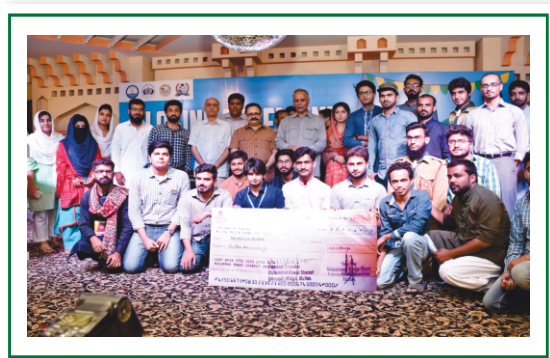
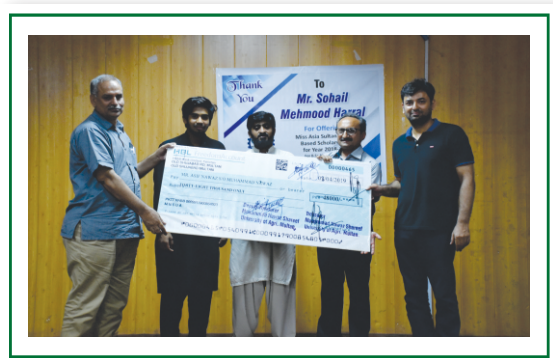
The P&D Office of MNS-University of Agriculture, Multan plays its role in the resource generation for the university development. During 2016-17, there was one project of worth Rs. 1510.243 million has revised under ADP of Agriculture Department, Govt. of the Punjab. One project of Rs. 2.73 million has approved by Higher Education Commission, Islamabad under the strengthening of labs and Libraries program of HEC.

The two projects have also been approved under ADP of Agriculture Department having share of MNS University of Agriculture, Multan. The detail is as under;

- i) Improvement in breeding and seed production system of fodder crops (Rs. 58.298 million with MNSUAM share Rs. 9.472 million)
- ii) Commissioned research for development of cotton seed (Rs. 320.363 million with MNSUAM share is Rs. 80.330 million).

Another ADP Project of Rs. 170.00 million for Provision of Fresh Irrigation Water and Other Basic Infrastructure Facilities at Jalalpur Pir Wala Farm of MNS-UAM has been included in ADP 2019-20 and hopefully got approved during July 2019.

One project proposal of Rs. 1200.00 million has also been submitted to Higher Education Commission (HEC), Islamabad for further approval of competent forum.



DIRECTORATE OF EXTERNAL LINKAGES

The changing role of the universities mandated a greater connectivity and strong linkages with the local, national, regional and international communities. Therefore, under the initiative of HEC, the Directorate of External Linkages was established in the MNS University of Agriculture, Multan in 2016.

MNS-UAM seeks to garner expertise from a wide variety of sources from within/outside the country in order to boost its academic and research activities. This in turn helps create deeper impact on the world of Agriculture, science and technology. For the purpose, the University collaborates with leading international universities, professional/ research organizations, commercial ventures, talented professionals and scholars to pursue its academic and research goals. Our faculty, researchers and students are constantly adding value to MNS-UAM by remaining actively engaged with professional groups and individuals in the research, review of academic papers, organization of conferences and seminars. MNS-UAM has so far developed linkages with 29 international and 32 national sister organizations.

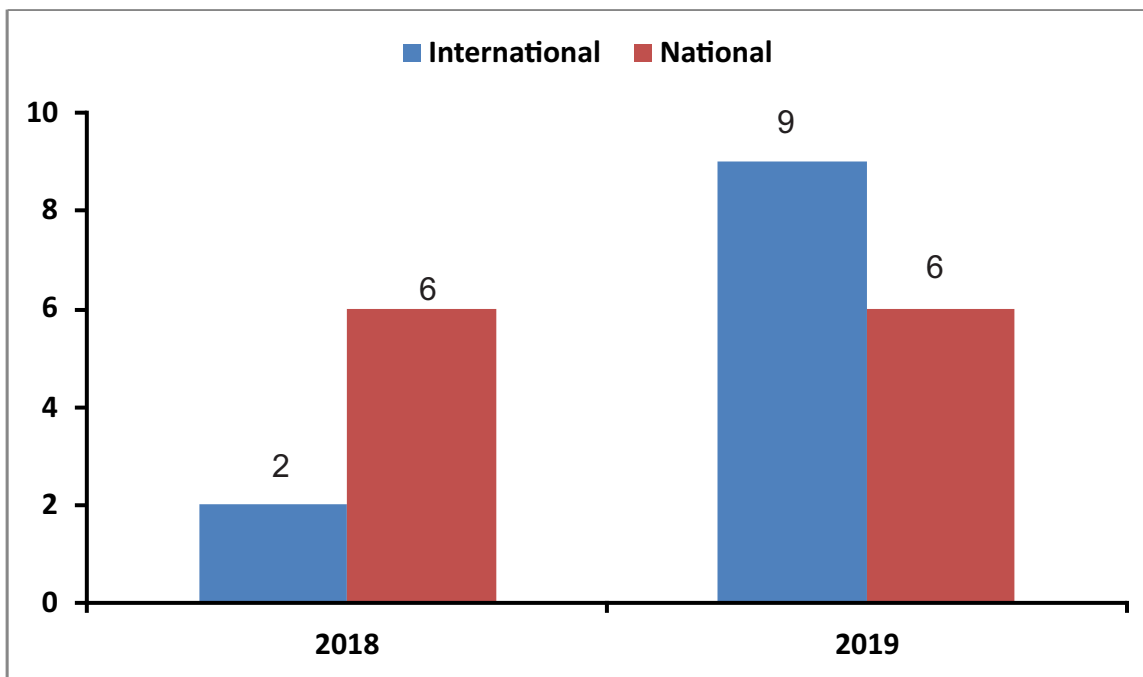
This office also has the responsibility to attract international students, facilitate placement of university students and faculty in high ranking universities, facilitate interaction between faculty and industry and exert a pull for financing of training, research and development activities of the university by national and international donors, alumni, civil society and agro-based industries. Directorate of External Linkages aim to facilitate the faculty/ departments/ directorates/ institutes for promoting R&D activities through external collaborations, attract and facilitate placement of international students in MNS-UAM. Developing reciprocal understanding between the International Organizations for resource and environment conservation is the mandate of Directorate for resource mobilization and to link with public policy stake holders for seeking directions and providing policy input.

15.1. VISION

- Directorate of External Linkages aim at developing strong liaison with high ranked universities and research institutes of the world.
- Joint Degree Programs with the conscious endeavors for internationalization.
- To take public, private and non-governmental organizations on board for achieving the main goals of education, research and development in various faculties in the university.

15.2. ACHIEVEMENTS

- During the fiscal year 2018-19, External Linkages has signed 12 MoUs with International organizations and 11 MoUs are signed with national private and public sector partners from Pakistan.



Summary of MoUs/MoCs/AoCs signed by MNS University of Agriculture with International and National organizations during 2018-19

15.3. INTERNATIONAL MOUs

International organizations		Country	Date of signing
1	University of California Davis	USA	27.04.2018
2	National Agricultural Technology Institute, Cordoba,	Argentina	27.04.2018
3	Alanya Alaadin Keykubat University Turkey, Mevlana Exchange Program	Turkey	02.07.2018
4	Group of Cotton Genetists Improvements (GCGI), Huazhong Agricultural University, Wuhan	China	04.10.2018
5	School of Environmental Science and Engineering, Shandong University	China	29.11.2018
6	Tonglu County Peoples' Government	China	12.12.2018
7	Okinawa Institute of Science and Technology School Corporation	Japan	04.02.2019
8	University of Canberra	Canada	04.04.2019

9	INTA Argentina	Argentina	03.05.2019
10	School of Vehicle and Mobility, Tsinghua University Beijing	China	29.05.2019
11	College of Agriculture and Biotechnology, Zhejiang University, Hangzhou	China	14.03.2019
12	National Research Centre Egypt	Egypt	16.05.2019

15.4. NATIONAL MOUs

1	Telenor Pakistan Limited	Pakistan	09.11.2018
2	Nestle Pakistan	Pakistan	18.12.2018
3	Lodhran Pilot Project, Lodhran	Pakistan	06.02.2019
4	Nishter Medical University	Pakistan	26.02.2019
5	Rafique Research and Educational Society, Lodhran	Pakistan	17.04.2019
6	Colony Textile Mills	Pakistan	17.04.2019
7	Multan Cage Fish Farming	Pakistan	17.04.2019
8	Prime Green Farms	Pakistan	14.05.2019
9	Conimpex Hatchery and Breeding Farm Multan	Pakistan	24.05.2019
10	Multan Chamber of Commerce and Industries Multan	Pakistan	24.05.2019
11	Mumtaz Feed Mills (Pvt) Multan	Pakistan	04.06.2019



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MEDICAL AND HEALTH FACILITIES

Currently following medical facilities are available:

- Arranging seminars and creating awareness about hot medical issues like Dengue.
- Emergency and routine check-up and medication to the students
- First aid to the students and employee of the University.

16.1. Nutrition Assessment Camp

A free nutritional assessment camp was organized by the Department of Food Science and Technology, MNSUAM on April 29, 2019 to evaluate current nutritional status of students, faculty members and administrative staff. The event, aimed at highlighting the importance of a healthy lifestyle and healthy dietary pattern, was inaugurated by Prof. Dr Zulfiqar Ali (Director, ORIC, MNSUAM). The camp included measurements of body composition, body mass index, visceral fat level, blood pressure, calcium and muscle strength. Based on the assessment of nutritional status, a dietary counseling session was conducted and appropriate dietary recommendations were formulated. The dietary counseling was carried out by well-trained nutritionists and dietitians of the department and the private sector.

16.2. MNS-UAM STUDENTS ARRANGED HYPERTENSION AWARENESS DESK

The students of 5th semester from the Department of Food Science and Technology arranged an awareness desk entitled “Hypertension-A silent Killer”. The students spread awareness among the visitors through brochures, banners and discussion. Their message about the hypertension was that it is one of the most important modifiable risk factor for coronary heart disease, stroke and heart failure. Often people take hypertension as a personal problem that needs to be dealt with on individual basis, but they are wrong. This is a public health issue, people need to have proper information and help from the nutritionist. The major risk factor of hypertension is unhealthy food, lack of exercise, high intake of table salt, spicy foods and smoking. A healthy lifestyle should be adopted in order to avoid hypertension including maintaining a healthy weight, eating a balanced diet, cutting back on salt and exercising regularly. Students also recorded the blood pressure of the visitors and suggested them the diet plan accordingly.

16.3. WORLD POLIO DAY

The Office of the Senior Tutor, MNS-UAM, Rotaract Club, BZU and Rotary Club, Multan Cantt jointly organized a ceremony to mark 'World Polio Day' on October 24, 2018. The event was presided over by Prof. Dr. Ishtiaq Ahmad Rajwana, Pro Vice Chancellor, MNS-UAM, while Mr. Salman Mubarak, CEO Fazl-ur-Rehman Hospital was the Chief Guest. The aim of celebrating the day was to raise awareness among youth regarding anti-polio campaign so that they may educate people to keep away from this dangerous disease.

The Pro Vice Chancellor, in his address to the participants, said that Polio is a critical disease for current and future generations and it needs to be rooted out. He urged upon the youth to play an active role in eliminating this crippling disease and asked them to take part in all activities like awareness creation and vaccination. Mr. Salman Mubarak elaborated that Pakistan is one of those countries which is still threatened by Polio. We need to work together with utmost dedication to prevent our coming generations from disability. He disclosed that his hospital is organizing awareness seminars at different places to contribute to the creation of a healthy society. He declared that his hospital would continue to hold such

16.4. AWARENESS SEMINAR ON THE EVE OF WORLD AIDS DAY

The Office of Research, Innovation and Commercialization (ORIC), Character Building Society, Pride of MNSUAM, and Rotract Club Multan jointly organized an awareness seminar on 'World AIDS Day' on December 3, 2018. The main objective for observing the day was to raise awareness amongst people about HIV/AIDS epidemic as well as promote tolerance, and acceptance for people living with HIV/AIDS. Prof. Dr. Asif Ali, Vice Chancellor was the Chief Guest of the event, while Mr. Salman Mubarak, Chartered President Rotract Club, Multan was the Guest Speaker. Prof. Dr. Asif Ali said that to prevent AIDS from spreading, we need to act upon teachings of Islam and highlight our moral values. He further stated that all sections of the society should work collectively to fight the menace and people should be sensitized about the disease, otherwise, it would become impossible to stop the spread of AIDS in the country. Moreover, people should not hate HIV positive persons, rather they must be encouraged to get medical treatment. He said that HIV infected persons should not be treated harshly, instead they should be taken care of so that they may not feel odd during their treatment. Mr. Salman Mubarak urged the participants to spread maximum awareness to minimize the AIDS positive cases. He said that said the HIV AIDS is rapidly increasing in the country and if precautionary measures were not taken immediately, this would result in a disaster for the nation. One fundamental reason for its increase is unawareness about the disease and its treatment. Even today, people going for HIV AIDS tests are considered as outcast and treated with malice. It is amazing to note that the disease is spreading more in underdeveloped countries than the developed ones. Another important thing to know is that the disease doesn't spread from sexual relations only, rather transfusion of affected blood and use of improperly sterilized surgical instruments are mostly reported ways of receiving the disease. There is a dire need to spread awareness among society in this regard. He also informed the students about preventive measures to avoid HIV. Mr. Naeem Toor emphasized on improper life style of youth and taking drugs, which ultimately become the root cause of getting infected by HIV AIDS. A documentary was also presented at the event, wherein a woman carrying HIV AIDS was shown being treated voluntarily.

BACK

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