

ANNUAL REPORT 2018



PIR MEHR ALI SHAH

ARID AGRICULTURE UNIVERSITY RAWALPINDI

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VICE CHANCELLOR'S MESSAGE

Being an Agricultural Institution, our main objective is to impart education and training to produce high quality Agricultural Scientists. Therefore, we are committed with the philosophy that we advance our farmer community by sharing positive and proven ideas and experiences. Along with Agricultural Sciences, the university offers degree programs



at all levels in basic and Natural Sciences, Social Sciences, Humanities, Management Sciences, Computer Sciences and Information Technology.

The University seeks to make a major contribution to the agricultural advancement across the country. Therefore, we are dedicated to the prosecution of research across all fields of study, believing in research culture with clear application and relevance.

With a dynamic and stimulating educational environment, our tradition is to accept challenges and to receive wisdom today, in order to achieve new things and new approaches for tomorrow. Embracing education in its widest context, we continually strive to remain at the forefront of knowledge.

We are committed to prepare our students to work, acquire skills and enhance their capabilities that equip them adequately to live in rapidly changing global environment.

PROF. DR. QAMAR-UZ-ZAMAN

EXECUTIVE SUMMARY

During the year 2018, Pir Mehr Ali Shah (PMAS) Arid Agriculture University Rawalpindi made significant efforts to improve academic as well as research activities along with financial resources. Various teaching departments were upgraded/ strengthened through the development of infrastructure, procurement of sophisticated scientific equipments and purchase of books etc. So far 344 Research Projects worth Rs. 568.173 millions were procured from various internal funding agencies such as HEC, PSF, PARC, PARB, UAF and University Own Resources.

Faculty members attended One Hundred & Thirty (130) National/International workshops/ seminars/ symposiums/ conferences to share/transfer knowledge in different scientific & Research fields within the country and internationally. The faculty members were encouraged to improve their qualifications and visit universities abroad to update their technical skills / knowledge and transfer technical awareness from international universities/institutes. During the year, faculty members of different teaching departments of the University obtained short term trainings, doctoral/post-doctoral fellowships and executed research work in Germany, Netherlands, China, USA, Singapore, Malaysia, Azerbaijan, Korea and Turkey.

The strength of the students is increasing day by day by virtue of the academic record and excellence of the university. At present more than twelve thousand students are quenching their thirst of education from this prestigious and globally ranked educational organization. Four hundred & two scholars (402) are busy in completing their Doctorates in various disciplines of Agriculture, Forestry ,Environment, Biological & Social Sciences at this university.

The linkage between faculty, Industry and farming community was further promoted/ strengthened to ensure the penetration and achievements of objectives of the university. Memorandum of Understandings (MoUs) with various national and International organizations were signed for academic and research sharing. The provision of better Research facilities encouraged the faculty to publish 368 Research Papers in National and International reputed & Impact factor journals.

ABOUT THE UNIVERSITY

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (PMAS-AAUR) was established in 1994 as University of Arid Agriculture by upgrading the Barani Agriculture College on the recommendation of Barani Commission Punjab. The mandate of the university is to produce high quality Agricultural Scientists and to form an organized scientific infrastructure for teaching and research for the development of dry land region of the country in general and Pothwar in particular; thus minimizing the income gap between the rich and poor.

Since its inception, PMAS-AAUR has experienced remarkable growth and is offering undergraduate as well as post graduate degree programs in variety of disciplines. The University includes a Faculty of Crop and Food Sciences, Faculty of Sciences, Faculty of Social Sciences, Faculty of Forestry, Range Management & Wildlife, Faculty of Veterinary & Animal Sciences, Faculty of Agricultural Engineering & Technology, University Institute of Management Sciences (UIMS), University Institute of Information Technology (UIIT), Institute of Food & Nutritional Sciences, Institute of Geo-Information & Earth Observations, University Institute of Biochemistry & Biotechnology and Institute of Soil Science. The University building contains an auditorium, multi-storied administrative and academic blocks, a state of the art library and a sports gymnasium.

Pursuit of excellence on the University campus is a function of competent and dedicated university faculty. PMAS-AAUR has, therefore, made constant efforts at staff development with the result that nearly 60% of the faculty possesses Ph.D. degrees, while the others have M.Sc. (Hons) and M.Phil degrees.

Furthermore, PMAS-AAUR is committed to delivering an outstanding student experience; as well as to enjoy a reputation for excellence in teaching and learning alongside research. Students actively participate in extracurricular and co-curricular life on campus which includes speech events, seminars and activities related to entrepreneurial skill development. Together with a research-informed curriculum, and extracurricular activities, PMAS-AAUR strives to provide a well-diversified environment to students so that they can effectively contribute towards development of the country.

ACADEMIC ACTIVITIES

FACULTIES/INSTITUTES

FACULTY OF CROP & FOOD SCIENCES
Department of Agronomy
Department of Horticulture
Department of Entomology
Department of Plant Pathology
Department of Plant Breeding & Genetics
Department of Agri. Extension
FACULTY OF SCIENCES
Department of Zoology/Biology
Department of Botany
Department of Biochemistry
Department of Mathematics/Statistics
FACULTY OF SOCIAL SCIENCES
Department of Sociology
Department of Anthropology
Department of Economics and Agricultural Economics
Division of Continuing Education, Home Economics and Women Development
Department of Humanities
FACULTY OF FORESTRY, RANGE MANAGEMENT & WILDLIFE
Department of Forestry & Range Management
Department of Environmental Sciences
Department of Wildlife Management
FACULTY OF VETERINARY & ANIMAL SCIENCES
Department of Veterinary Basic Sciences
Department of Pathobiology
Department of Clinical Studies
Department of Livestock Production and Management
Department of Poultry Sciences
FACULTY OF AGRICULTURAL ENGINEERING & TECHNOLOGY
UNIVERSITY INSTITUTE OF MANAGEMENT SCIENCES
UNIVERSITY INSTITUTE OF INFORMATION TECHNOLOGY
INSTITUTE OF FOOD & NUTRITIONAL SCIENCES
INSTITTUE OF SOIL SCIENCE
INSTITUTE OF GEO-INFORMATION & EARTH OBSERVATIONS
UNIVERSITY INSTITUTE OF BIOCHEMISTRY & BIOTECHNOLOGY

ACADEMIC PROGRAMS

UNDERGRADUATE PROGRAMS		
BSc (Hons) Agriculture	BS in Biochemistry	BS in Computer Science
BS in Economics	BS in Forestry	B.Ed
BBA (Bachelor of Business Administration)	BS in Information Technology	DVM (Doctor of Veterinary Medicine)
BSc (Hons) Agri. Engineering	B.Sc (Hons) Human Nutrition & Dietetics	BS (Microbiology)
BS Environmental Sciences	BS (Remote Sensing & GIS)	BS Commerce
	BS Software Engineering	
POST GRADUATE PROGRAMS (M.Sc)		
Biochemistry	M.Ed	MBA (1-1/2 Years)
Botany	Anthropology	MBA (3-1/2 Years)
Zoology	Criminology	MBA (Agri. Business) 1-1/2 Years
Biology	Sociology	MBA (Agri. Business) 3-1/2 Years
Statistics	Economics	MDM
Mathematics	Wildlife Management	MCS
Education	Environmental Sciences	MIT
M.SC (HONS)		
Soil Science	Agronomy	Food Technology
Entomology	Horticulture	Human Nutrition & Dietetics
Plant Pathology	Agri. Economics	Food Safety & Quality Mgt.
Plant Breeding & Genetics	Agri. Extension	Agri. Engineering
M.PHIL/MS		
Biochemistry	Statistics	Forestry & Range Mgt.
Biotechnology	Education	Wildlife Management
Botany	Anthropology	Environmental Sciences
Zoology	Sociology	Management Sciences
Biology	Economics	Computer Science
Veterinary Microbiology	Remote Sensing & GIS	Veterinary Pathology
Veterinary Parasitology	Veterinary Surgery	Livestock Management
Animal Nutrition	Animal Breeding & Genetics	Poultry Science
	Veterinary Medicine	
PHD		
Soil Science	Biotechnology	Environmental Sciences
Entomology	Botany	Management Sciences
Plant Pathology	Zoology	Computer Science
Plant Breeding & Genetics	Education	Food Technology
Agronomy	Sociology	Agri. Engineering
Horticulture	Economics	Remote Sensing & GIS
Agri. Economics	Forestry & Range Mgt.	Biochemistry
Poultry Science	Wildlife Management	Veterinary Microbiology
Veterinary Pathology	Veterinary Parasitology	Veterinary Medicine & Surgery
Livestock Management	Animal Breeding & Genetics	Animal Nutrition

ACADEMIC ACHIEVEMENTS

The university offers more than one Hundred degree programmes in various disciplines of Agriculture, Agricultural Engineering, Basic & Social Sciences, Veterinary, Forestry, Range Management, Wildlife, Business Administration, Computer Sciences & Information Technology and Education. Currently the enrollment of the University is 12374 which is increasing every year. This University has so far turned out 402 Ph.D., 21804 M.Phil, M.Sc. (Hons.)/ MS/ M.Sc. and, 11720 B.Sc. (Hons.)/ D.V.M/ BS/BBA/B.Ed.

PMAS-AAUR Secured 3rd Position in the Country by UI Green Metric World Universities Ranking 2018

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi has been ranked 3rd in all over the Pakistan, 98th in Asia and 302 among all 719 participating Universities of the world as per latest UI Green Metric World Universities ranking 2018. UI Green Metric University Sustainability Ranking is a world university ranking to assess and compare campus sustainability efforts. The criteria for the ranking of Universities includes campus setting and infrastructure, energy and climate change, waste, water, transportation and education. The Arid Varsity has been ranked as 302nd among the top 719 universities of the world with the total score of 5000 as per UI GreenMetric World Universities ranking.

The Times Higher Education Emerging Economies University Rankings 2018

PMAS-Arid Agriculture University Rawalpindi has made it to the Times Higher Education (THE) Emerging Economies University Rankings 2018 announced in May 2018. According to the official announcement by the Times Higher Education, the PMAS-AAUR is ranked overall 301-350 among the best research-led universities from the 42 emerging economy nations; standing among the 10 universities of Pakistan who made it to this coveted list.

The Times Higher Education Emerging Economies University Rankings 2018 includes institutions from 50 countries classified by the FTSE as "advanced emerging" (countries including Brazil, Greece, South Africa, Turkey), "secondary emerging" (countries including Chile, India, Pakistan, Qatar, Russian Federation) or "frontier" (countries including Argentina, Bangladesh, Croatia, Cyprus, Morocco, Serbia, Sri Lanka, Tunisia, Vietnam). The ranking used the same 13 performance indicators of the Times Higher Education World University Rankings, examining each university's strengths against all of its core missions - teaching, research, knowledge transfer and international outlook. Further this time the methodology has been carefully recalibrated to better reflect the characteristics and development priorities of universities in emerging economies.

HONOURS AND AWARDS

Awards of the Faculty

- *Dr. Shamim Akhter, Associate Professor/ Chairperson Department of Zoology/Biology have been awarded “Research Productivity Award” from Ministry of Science and Technology, Pakistan Council for Science and Technology, Islamabad.*
- *Nomination of Dr. Azeem Khalid, Associate Professor, Department of Environmental Sciences as Jury Member of the Kingdom of Saudi Arabia Award for Environmental Management in Islamic World, by Islamic Educational, Scientific and Cultural Organization (ISESCO), Rabat, Morocco and General Authority of Meteorology and Environmental Protection in the Kingdom of Saudi Arabia.*
- *Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Science selected as Vice President of World’s Poultry Science Association, Pakistan Branch.*
- *Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Science elected as Junior Vice President of Asian Pacific Federation of World’s Poultry Science Association at Thailand Bangkok.*
- *Dr. Munibullah, Lecturer, Department of Clinical Sciences has been awarded the status of ‘Active Member’ Pakistan Biological Safety Association in the year of 2017(Membership No. 531).*

INSTITUTIONAL LINKAGES

- ❖ Four Brothers Group of Companies Lahore
- ❖ Capital Development Authority Islamabad
- ❖ The Rawalpindi Chamber of Commerce & Industry
- ❖ State Life Insurance Corporation of Pakistan
- ❖ Agribusiness Support Fund
- ❖ Sustainable Used Specialist Group-Central Asia (SUSG-CASIA) Quetta
- ❖ DELL Pakistan
- ❖ Water and Power Development Authority (Wapda)
- ❖ Dairy and Rural Development Foundation
- ❖ CAB International (CABI) Central and West Asia, Rawalpindi
- ❖ Barani Agricultural Research Institute (BARI) Chakwal
- ❖ Indus Consortium Islamabad
- ❖ MKS (Magnus Kahl Seeds) Australia
- ❖ Rawalpindi Waste Management Company (RWMC)
- ❖ Lantix Technology (Private) Limited Pakistan
- ❖ M/S Tamshoon Gold- Pakistan

RESEARCH AND DEVELOPMENT

R&D – AN OVERVIEW

The University, being the prime institute for agricultural education and research has the obligation to provide trained manpower to all sectors of agriculture in Punjab Province. The Faculty and Researchers of this University have been conducting basic and applied research in the field of:



- New Technologies to Overcome Water Shortage
- Production of Biofuels
- Formulation of New Food Products
- Promotion of High Yielding & Drought Resistance Wheat and Canola Cultivars
- Recycling of Organic Wastes of Sustainable Crop Productivity
- Production of Pathogen Free Horticultural Plant Nurseries
- Soil and Water Contamination Studies
- Biotechnology

The university is focusing its efforts on need base research of arid agriculture in general and Pothwar region in particular. A number of research projects have been completed in the past and still many research projects are being run by the faculty. Conducting research is mandatory for all students of both graduate and undergraduate levels. The faculty and researchers at the University are availing different funding opportunities for their research projects. Some are listed below:

- Higher Education Commission of Pakistan
- Pakistan Science Foundation
- Pakistan Agricultural Research Council (PARC)
- Punjab Agriculture Research Board (PARB)
- Endowment Fund Secretariate, University of Agriculture, Faisalabad.
- International Foundation for Science

RESEARCH FOCUS

University faculty focused their research activities on the issues of farming community of Barani areas in general and Pothwar in particular. These included projects related to soil conservation, weed management, drought tolerance studies in wheat through genetic engineering and environmental related issues. The following Research projects were operational during 2018:

- *Inter-Comparison of CENTURY and DSSAT Model Simulations to Improve Soil Based Climate Change Resilience and Adaptability of Rainfed Crop Production Systems in Pakistan*
- *Comparison of Carbon Sequestration in Different Cropping System of the Punjab*
- *Optimization of Agro-management techniques for sinapis alba*
- *Modeling rainfed cereal-based cropping systems to climatic extremes*
- *Evaluation of rapeseed (canola) germplasm for erucic acid content based on presence and expression of genes*
- *Perspective study of using weeds nano material for the management of weeds, tolerance of drought and improvement of productivity in wheat*
- *Enhancing Biological Nitrogen Fixation, Soil Water Holding Capacity and Agronomic Benefits Through Biochar Application in Dryland Area*
- *Evaluation of biochar from different sources to control heavy metal toxicity to soil Microorganisms and Plants*
- *Improvement of Berry Quality and Post Harvest Performance of Grapes cv. Parlette and King's Ruby by Using Food Grade Chemicals*
- *Somatic Hybridization for Citrus Improvement: A Way Towards a Low Input Sustainable Citrus Culture in Pakistan*
- *Screening of wild grape biodiversity for drought tolerance and their rootstock-scion compatibility for sustainable grape production in Pakistan*
- *Identifying drought tolerant synthetic wheat lines and determining their genetic diversity through DNA makers.*
- *Improvement of Host Disease Resistance in Tomato Through Genetic Transformation*
- *Development of high yielding, more sugar content and increased stay green leaf sorghum lines*
- *Development of high yielding wheat breeding material with improved grain iron and zinc content for rain-fed areas of Pakistan*
- *Development of double haploid lines of chillies resistant to phytophthora root rot*
- *Monitoring and Characterization of Insecticide Resistance in Spotted Boll Worm, Earias Vitellina (Lepidoptera: Noctuidae) Against Different Insecticides*
- *Value Addition of Selected Stone Fruits by Osmotic Dehydration and Hot Air Drying*
- *Characterization of Nutraceutical Potential of Buckwheat and value Addition of Cereal Products*
- *Screening for the Selection of Exopolysaccharide-Producing Strains for Yoghurt Making*
- *Development of Nutraceutical Products From Indigenous Source*
- *Effectiveness of different processing techniques for the reduction of pesticide residues in vegetables at household level*
- *Improving agricultural extension in Pakistan through communication for development*
- *Production of Butanol and ethanol from agricultural and Municipal Wastes*
- *Establishment of Tissue Culture and Genetic Transformation Protocol for Local Varieties of Lentil (Lens Culinaris Medik)*
- *Screening of Cellulose Degrading Extremophilic Enzymes From Indigenous Fungi and Study of Site-Directed Mutagenesis Strategies to Enhance Their Activity*
- *Nutritional quality assessment and comparison of commonly consumed rainfed arid cereal varieties of Pakistan for their effective marketing and commercialization*

- *Expression Profiling of Regulatory Factors in Various Phenotypic Classes of Tuberculosis Patients*
- *Genetic Determinants of Coronary Heart Disease Risk in Central and General Obesity*
- *Biological Control of Rats and Mice in Agricultural Areas of Pothwar Barn Owl (Tyto Alba)*
- *Evaluation for Antifreeze Proteins Extracted From Various Sources for Cryopreservation of Buffalo Spermatozoa*
- *Buffer Optimized High Gradient Magnetic Separation Technology to Study the Biology of Livestock Parasites*
- *Mutational and expressional profile of microRNA in thyroid cancer*
- *Expression of pathogenesis - related (PR) proteins to acquire systemic resistance against fungal pathogens (Alternaria and Fusarium) of sesame*
- *Physio-morphic and biochemical characterization of wheat varieties in response to silver based nanoparticles against heat stress*
- *Green synthesis and evaluation of silver nanoparticles for anti-microbial and biochemical profiling in kinnow (citrus reticulata L.) to enhance fruit quality and productivity under biotic stress*
- *Nutritional assessment and phytochemical screening of some selected wild fruits from Balochistan, Pakistan*
- *Visual Ethnography of the Dying Culture of Northern Punjab Potohar*
- *Parental decisions on girls schooling levels within demographic framework of rural households in Pothohar Region, Punjab, Pakistan*
- *Drug trafficking in Pakistan: Indepth study of drug smugglers*
- *Ecologically-based Rodent Management in Croplands of Pothwar Plateau, Pakistan*
- *Are Anurans Impacted by Urbanization? Anuran Monitoring and Conservation in a Human dominated Landscape*
- *Biotreatment of Tannery Wastewater and Its Application for Biomass Production of Energy Crops*
- *Collaborative Research for Genetic Conservation and Improvement of Pakistani Goats jointly funded by USAID and HEC*
- *Preparation and Application of Multi-Epitopes DNA Vaccines Against Newcastle Disease*
- *Development of Breeding Objective for Improved Milk Protein Quality of Dairy Animals*
- *Ostrich farming in Pakistan: Novel and key nutritional solutions to accelerate profitability*
- *Detection and Molecular Characterization of Mastitis, Mammilitis and Reproductive Tract Disorders Causing Herpesviruses in Dairy Cattle*
- *Isolation and Identification of plant growth promoting N₂-fixing soil bacteria using macular techniques for improving legume cereal cropping system*
- *Surveillance and Characterization of Pathogens Infecting Loquat in Pakistan*
- *Molecular Cloning and Heterologous Expression of Endopolygalacturonase Gene in E.coli as a Promising Application for Food Industry*
- *Development of breed identification marker for Pakistani dairy cattle breeds*
- *Development of Genetic Evaluation Model for Dhanni Cattle as Potential Beef Cattle in Potohar Region of Punjab*
- *Promotion of safflower (Carthamus tinctorius) through participatory approach in Pothwar*
- *Adaptability and development of production technology of guar (Cyamopsis tetragonoloba (L.) Tauba) in rainfed Pothwar through simulation modeling*
- *Research for productivity enhancement of drought tolerant and shattering resistant cultivars of sesame in rainfed areas of Punjab Pakistan*

- *Improving Drought Tolerance and Quality of Fodder Maize Genotypes for Silage Using Growth Hormone and Selenium*
- *Validation of Rhizobium for Mass Production of Groundnut Biofertilizer*
- *Epidemiology, population biology and management of chilli anthracnose in Punjab, Pakistan*
- *Identification of Parasitoids and Ants Complex Associated with Psyllids on Trees and Management of Olive Psyllid in Pothwar and KPK*
- *Development of a Fourier Function Model for Selection of High Fertility Buffalo Bulls for AI*
- *Modeling approach for assessing the impact of climate change on growth and yield of wheat and groundnut and possible adaptation/management strategies under rainfed condition.*
- *Spatio-temporal dynamics of greenhouse gas emissions from soil under various forest types of Pakistan*

RESEARCH PROJECTS FUNDING

The PMAS-AAUR Faculty also undertook Research Projects in addition to teaching assignments. These projects were sponsored by different funding/donor agencies. The detail of Research Projects is given below:

S No	Name of Funding Agency	Completed	On Going	Total No of Projects	Amount (Rs. in M)
1	HIGHER EDUCATION COMMISSION	39	47	86	401.981
2	PAKISTAN SCIENCE FOUNDATION	23	5	28	56.417
3	PAKISTAN AGRICULTURE RESEARCH COUNCIL	10	8	18	54.734
4	PUNJAB AGRICULTURAL RESEARCH BOARD	1	1	2	10.747
5	ENDOWMENT FUND UAF	4	0	4	7.979
6	OTHER FUNDING AGENCIES (INTERNATIONAL FOUNDATION FOR SCIENCE/ WORLD WIDE FUND (WWF) ETC..)	4	3	7	8.138
7	UNIVERSITY FUNDED RESEARCH PROJECTS	176	23	199	28.177
	Total	257	87	344	568.173

PUBLICATIONS

The faculty published 368 Research Publications in National and International reputed journals in 2018. (Details are given at Annexure-I)

CONFERENCES, SEMINARS AND WORKSHOPS, ETC.

Holding of Seminars, Workshops and Conferences is regular feature of the university where experts from various fields are invited to share their experiences with faculty, students & researchers on current issues of international and national importance. Such an activity is important for research and academic development of an institution as it provides guidelines for policy development at national level. During 2018, different departments of the University organized Forty one (41) International and National Workshops/Seminars/Conferences. The university faculty



also participated and contributed research papers in Twenty (20) International and One Hundred and Ten (110) National Workshops/Seminars/Conferences (Details are given at Annexure-II).

RESEARCH JOURNALS

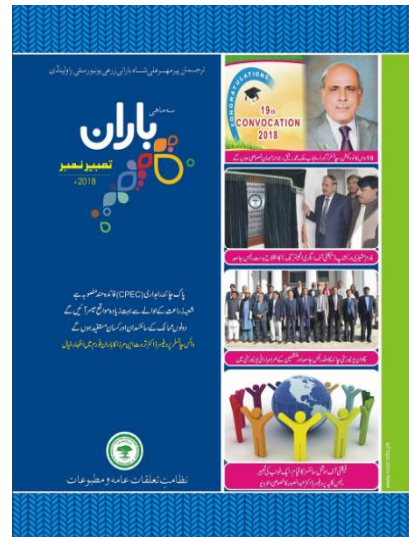
Journal of Arid Agriculture and Biotechnology (JAAB)

A new research journal “Journal of Arid Agriculture and Biotechnology” has been launched. The aim of the journal is to publish latest research achievements and promote integration and cooperation in agriculture and allied sciences.



Quarterly Baran Magazine

The University has started publishing a quarterly baran magazine under the experienced management. This initiative has been taken by the worthy Vice Chancellor for the dissemination of modern agriculture technology and information among the farming community. This magazine will also fill the gap among the policy makers, scientific community and end beneficiaries. The magazine has been distributed among the extension workers, policy makers, agricultural related authorities and progressive farmers in all over Pakistan on compliment basis. It is hope that this magazine will work as ambassador of the University with respect to the technology transfer programs.



Quarterly News Letter

In order to have a close contact with community and activities at university “Quarterly News Letter” is being published on quarterly basis. This is widely circulated among the students, faculty and all other sister organizations.



RESEARCH COLLABORATIONS

The University has initiated collaborative projects with the following R&D organizations for the purpose of research:

- Himalayan Wildlife Foundation (HWF), Islamabad
- Punjab Wildlife & Parks Department, Lahore
- Directorate of Wildlife & Fisheries, AJ&K, Muzaffarabad
- Sustainable Use Specialist Group, Central Asia, Quetta
- Human Rights & Minorities Affairs Department. Govt. of Punjab, Lahore
- Agribusiness Support Fund
- Dairy and Rural Development Foundation
- World Wide Fund
- Pakistan Bait-ul-Maal

- Rohicon Academy for Research & Professional Excellence, Islamabad

FOREIGN LINKAGES

The University has developed external linkages with the reputed R&D organization all over the world in order to strengthen his students and faculty. These are as follows:

- University of Florida USA
- International Center for Agriculture Research in the Dry Areas (ICARDA) Syria
- Institute of Agro Environmental and Forest Biology & National Research Council Italy
- Ohio State University USA
- Curtin University of Technology, Western Australia
- Nova Scotia Agriculture College, Canada
- Hebei Agriculture University (HAU) China
- The University of Bedfordshire U.K.
- Massey University New Zealand
- Northwest A&F University China
- Department of Environmental Engineering, Bioenergy Technical University of Denmark
- Management Committee of Baise National Agricultural Science and Technology Zone of Guangxi, P.R. China
- Biogas Institution of the Ministry of Agriculture (BIOMA) P.R. China
- Kyungpook National University
- Chinese Academy of Agricultural Mechanization Sciences (CAAMS)
- Engineering Research Center of Biological Control, Ministry of Education, College of Natural Resource and Environment, South China Agricultural University
- Selcuk University Turkey
- Kastamonu University Turkey
- University of Tuscia, Italy

OPERATIONS OF OFFICE OF RESEARCH, INNOVATION AND COMMERCIALIZATION (ORIC)

The Office of Research, Innovation & Commercialization (ORIC) a central staff office reporting to the Vice Chancellor, is charged with administrative responsibility for all University research and related activities involving extramural sponsorship. In fulfilling its duties, the Office of Research serves as both a center of advocacy for research and related activities, and facilitator of the research environment. The functional areas supported by Office of Research staff include information services, project and proposal development



assistance, and grants and contracts administration for pre-award and selected post-award tasks. All proposals submitted by University personnel must be transmitted to and reviewed by Office of Research Staff to assure adherence to internal and external policies and procedures. The Director of the Office serves as the designated University Officer for all related matters. The Office of Research, Innovation & Commercialization seeks to enhance the environment for all research and scholarships by:

- Supporting the university's strategic research directions and policies
- Increasing and diversifying external research funding
- Improving recruitment and retention of top faculty
- Improving integration of research and education at all levels of the university
- Improving translation of research into the public benefit
- Strengthening university-industry relationships
- Promoting entrepreneurship, technology-transfer and commercialization activities that energize and support the local and national economy
- Promoting and enhancing crosscutting and multi-disciplinary research initiatives

QUALITY ASSURANCE

QUALITY ENHANCEMENT CELL

Arid Varsity established Quality Enhancement Cell (QEC) in 2007 which aimed to assess, monitor and assure quality of educational program and research to converge towards international compatibility by using the following tools/practices:-



- Review quality standards in teaching, learning and research;
- Promote public confidence in academics and research outputs of the University;
- Develop quality assurance processes and methods of evaluation to affirm that the quality of provision and the standards of awards are being maintained
- Develop procedures for monitoring, evaluation, departmental review of different degree programs, students's and employer's feedback about quality of education etc.

VISION

“To develop the Pir Mehr Ali Shah Arid Agriculture University into a Centre of Excellence by providing an outstanding educational environment with emphasis on arid/rainfed agriculture and related professions”

MISSION

- To achieve excellence in teaching and research through continuous quality enhancement by monitoring and reviewing the progress
- To form a well-organized scientific infrastructure for teaching and high-tech research for the development of dry land regions of the country
- To produce graduates with adequate training for high professional achievements to enhance the scientific vision for the Barani areas

IMPACT OF QUALITY ASSURANCE

Quality assurance demands not only a standardized mechanism of checks and balances but it also requires an all-embracing training to understand the demands of upcoming challenge in the fields of education and research. The Quality Enhancement Cell has played a vital role in creating quality culture at the Arid Varsity. It has got implemented the quality criteria/standards designed by the Higher Education Commission of Pakistan for the quality enhancement/assurance for the HEIs. The QEC has automated feedback system for the evaluation of faculty and courses at the end of every semester.

Significant improvements in the curriculum and the quality of teaching and research have been made through Self-Assessment Program in place. The weaknesses are identified and corrective actions are taken at program and department level. Awareness about the quality in education and research has also been created among the faculty and staff through training sessions. A strict monitoring of synopsis and thesis defense and implementation of anti-plagiarism policy has improved the quality of post-graduate research significantly. Quality Enhancement Cell is striving hard to enhance the quality of education and research. After its establishment, the QEC has made efforts for the quality enhancement of this university. A summary of salient activities/reforms is as under:-

The Times Higher Education Emerging Economies University Rankings 2018

PMAS-Arid Agriculture University Rawalpindi among top10 universities of Pakistan

PMAS-Arid Agriculture University Rawalpindi has made it to the Times Higher Education (THE) Emerging Economies University Rankings 2018 announced in May 2018. According to the official announcement by the Times Higher Education, the PMAS-AAUR, is ranked overall 301-350 among the best research-led universities from the 42 emerging economy nations; standing among the 10 universities of Pakistan who made it to this coveted list.

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The ranking used the same 13 performance indicators of the Times Higher Education World University Rankings, examining each university's strengths against all of its core missions -

teaching, research, knowledge transfer and international outlook. Further this time the methodology has been carefully recalibrated to better reflect the characteristics and development priorities of universities in emerging economies.

Seminars organized by the QEC at PMAS-AAUR

Holding of seminars is a regular feature of University QEC where experts from various fields are invited to share their experiences/knowledge with faculty, students & researchers. The QEC with consent of the Vice Chancellor organized the following Seminars on Self-Assessment and Quality Assurance at the university campus, including the topics related to the field of education, academic integrity, plagiarism, self assessment program.

S #.	Description	Date
1	SEMINAR ON "TUNING UP REVIEW PROCESS OF MS/MPHIL/EQUIVALENT & PHD PROGRAM AT PMAS-AAUR"	06-02-2018
2	SEMINAR ON ACADEMIC INTEGRITY AND PLAGIARISM SEMINAR ON "ASSURING ACADEMIC INTEGRITY: USE OF TURNITIN FOR ACADEMIC TEXT"	08-05-2018
3	SEMINAR ON "SIGNIFICANCE OF INSTITUTIONAL PERFORMANCE EVALUATION IN QUALITY ASSURANCE IN HEI'S"	12-06-2018



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Seminars/Training attended by the QEC Officers at national level

The QEC officers attended following seminars held at national level.

Description	Date/Period	Venue
National level seminar on "Promoting Quality Culture in Higher Education Institutions" held at University of Wah	10.05.2018	University of Wah,
Training Workshop on Outcome Based Education & Development of Self-Assessment Report	29-03-2018	PMAS-AAUR



PMAS-AAUR, Hosts QAA-HEC MS/M.Phil/Equivalent & Ph.D Programs Review Visit

The Quality Enhancement Cell, PMAS-Arid Agriculture University, Rawalpindi organized the review visit of the Quality Assurance Agency (QAA) Higher Education Commission and the Committee of Experts from various universities of Pakistan on 09th of February, 2018. The purpose of the visit was to review the PMAS-AAUR MS/M.Phil/Equivalent & Ph.D Programs' compliance with the HEC's minimum criteria/guidelines set for these Programs.

The review committee was comprised of the experts and the HEC officials including Prof.Dr. Ahrar Khan, Agriculture University, Faisalabad, Prof. Dr. Farman Ullah, Agriculture University, Peshawar, Prof. Dr. Ghulam Ali Mallah, Shah Abdul Latif University, Khairpur, Prof. Dr. Mohammad Rafiq Baloch, Lahore Leads University, Lahore, Prof. Dr. Nazeer Ahmad, Balochistan University of Information Technology, Emerging & Management Sciences, Quetta, Prof. Dr. Razia Sultana, Shaheed Benazir Bhutto University for Women, Peshawar, Prof.Dr. Syed Muhammad Usman Ali, NED University of Engineering & Technology, Karachi, Sulaiman Ahmad, Quality Assurance Agency, Higher Education Commission, Pakistan., Muhammad Ali Baig, MS. Marryam Kamal and MS. Mehreen Baig Quality Assurance Agency, Higher Education Commission, Pakistan. From PMAS-AAUR, the Senior Management including the Deans /Directors of Faculty/Institutes, the Chairpersons, Senior faculty members, Director Advanced Studies, representatives from the Controller of examinations and Registrar office participated and contributed to the review meeting.



PMAS-AAUR CONDUCTS INSTITUTIONAL PERFORMANCE EVALUATION

The Quality Enhancement Cell, PMAS-Arid Agriculture University, Rawalpindi conducted an Institutional Performance Evaluation, as part of the self-review external quality assurance mechanism of Higher Education Commission, Pakistan. The self review was conducted at main university campus from 25-27 June, 2018. The review panel was consisted of one external evaluator and three internal evaluators.

Dr. Saeed-ul-Hassan Chishti, Director-QEC/Director IPD from International Islamic University, Islamabad facilitated the evaluation as external evaluator.

Internal Evaluators included Prof. Dr. Mazhar Qayyum, Director QEC, Prof. Dr. Abdul Saboor, Dean Faculty of Social Sciences and Dr. Muhammad Azam Khan, Director Advanced Studies, PMAS-AAUR.

The purpose of the three days activity was to review the overall PMAS-AAUR performance compliance with the HEC's given specific 11 standards/dimensions for institutional quality.



UNIVERSITY GREEN OFFICE

The University Syndicate in its 80th meeting held on 30.06.2018, approved to establish the University Green Office at PMAS-Arid Agriculture University Rawalpindi. The University Green Office has been established under the auspices of Directorate of Planning & Development to boost up the sustainability practices in the Campus. The Green Office of PMAS-AAUR is the platform for students and employees of the University where sustainable ideas are shaped, plans are put together and projects are launched, all with the objective to make the university more sustainable. This office raises awareness among students and staff about the sustainable achievements and ambitions of the PMAS-AAUR.

Major Objectives are as under:

- Reduce the consumption of natural resources in offices of University.
- Planning and partnerships to achieve environmental goals. Strategic Planning and proper implementation of the university's master plan in issues such as traffic management, energy and green buildings.
- Policy making for energy efficiency and use of clean and environmentally friendly technologies.
- Solid Waste Management with an emphasis on source sorting and reduction of waste production by declaring the campus "Zero solid waste campus".
- Monitoring the activities of the various units of the University in order to follow principles of Green Management..
- Aligning environmental activities in different areas in order to prevent parallel tasks.
- Taking incentive policies for the participants in the Green Management of the University.
- Promoting the principles of environmental education at the university level and society.
- Engagement and participation in environmental policy and planning in twin cities of Rawalpindi & Islamabad.
- Encouraging and support of environmental NGOs (NGO) and environmental organizations in the University.

ACTIVITIES OF UNIVERSITY GREEN OFFICE

1. Tree Plantation Campaigns

The environmental pollution and temperature is increasing every day due to highest deforestation rate in the country. Trees can serve as green shelter during extreme climate conditions thus making earth cooler for animal and human life. It provides cleaner air to breath. Plants to earth are like lungs to the human body. Tree plantation campaigns were launched by University Green Office in 2018 at PMAS-Arid Agriculture University Rawalpindi. In these Campaigns, Dean, directors, Faculty Members and Students were participated for the purpose of planting the tree.



2. Establishment of Green Office Nursery

A piece of land has been provided by the University in 2018 wherein, a Green Office Nursery was established under University Green Office in which almost 20,000 plants have been grown. These plants were distributed free of cost to the students and local community to strengthen the Prime Minister's Campaign "Plant for Pakistan."

 بیہرملی شاہ بارانی درمی یونیورسٹی راولپنڈی گرین آفس نرسری فہرست موجودہ پودا جات 			
نام پودہ	نمبر شمار	نام پودہ	نمبر شمار
اپل اپل	13	سفیدہ	1
جیک رنڈا	14	چیر پائن	2
ریشا	15	چنار	3
امرد	16	کچنار	4
جاس	17	سلو راوک	5
آگور (3 اقسام)	18	ارجن	6
کالی مرچ	19	املاس	7
ناشپاتی	20	پاپل	8
گلاب	21	شیشم	10
چنیل	22	سکیر	9
رات کی رانی	23	شکھ چین	11
سوها چننا	24	بیرس	12
دن کاراچہ	25		

3. Reduction of Single Use Plastic Bags

Single Use plastic Bags are considered one of the most serious contemporary environmental Pollution. Apart from degrading the local soil, air and water bodies, much of such plastic seems to be converging in our oceans. At the current rate of accumulation, plastic is expected to outweigh all the fish in the seas by 2050. What is more worrying is that up to ninety-five percent of study conducted in 2004 revealed that around 55 billion single-use plastic bags were manufactured and consumed in Pakistan each year with an annual growth rate of 15%. By this standard, each one of us consumes around four hundred plastic bags annually.

The most simple and convenient way to reduce environmental plastic is to switch over to reusable bags. In order to provide an impetus for this change, University Green Office has attempted to circulate a letter /Instructions for reducing such plastic bags for avoid spreading pollution

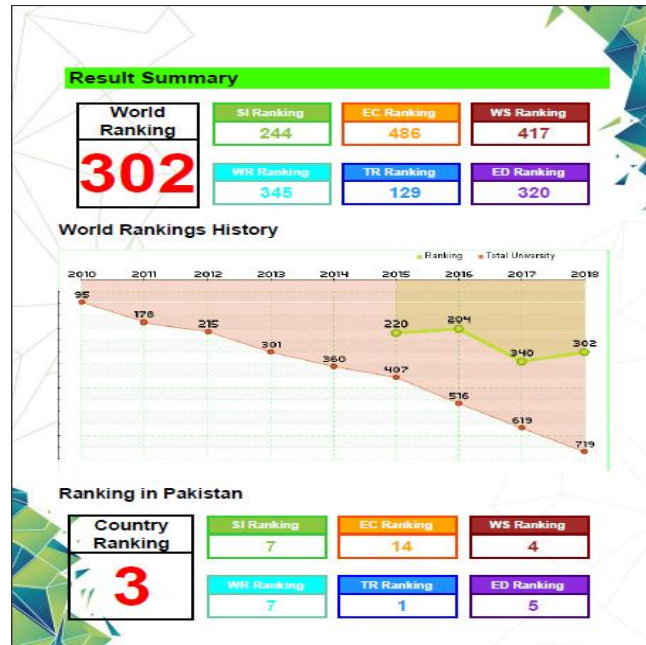
4. Participation in UI GreenMetrics World Universities Ranking

The UI GreenMetric World University Ranking is an initiative of University of Indonesia which is being launched in 2010. The aim of this ranking is to provide the result of online survey regarding the current condition and policies related to Green Campus and Sustainability in the Universities all over the world. It



is expected that by drawing the attention of university leaders and stake holders, more attention will be given to Education & Research, Infrastructure Development, Energy & Climate, Waste Management/Treatment, Water Conservation/Recycling and Green Transportation. It is believed that the ranking is useful to the university leaders in their efforts to put in place eco-friendly policies and manage behavioral change among the academic community at their respective institutions.

Thousands of universities around the world are invited to take part in the International Ranking. These universities include many which already have a presence in other World Universities Rankings, such as THES-QS, Webometrics, and Shanghai Jiao Tong ranking. Universities that wish to participate are asked to provide numeric data on a number of criteria that can give a picture of their commitment to the greening of their campus and putting in place environmentally friendly policies that support sustainability. The criteria include such baseline information as the size of the university, spatially and in terms of population, the campus location and the amount of green space; and also information on energy use, transport, water use and recycling and waste treatment. In addition, it will ask about efforts being made by the institution towards establishing green policies and management.



Pir Mehr Ali Shah Arid Agriculture University Rawalpindi has been ranked 3rd in all over the Pakistan, 98th in Asia and 302 among all 719 participating Universities of the world as per latest UI Green Metric World Universities ranking 2018. UI Green Metric University Sustainability Ranking is a world university ranking to assess and compare campus sustainability efforts. The criteria for the ranking of Universities includes campus setting and infrastructure, energy and climate change, waste, water, transportation and education. The Arid Varsity has been ranked as 302nd among the top 719 universities of the world with the total score of 5000 as per UI GreenMetric World Universities ranking 2018.

FACULTY DEVELOPMENT

Faculty Development is a continuous phenomenon in order to achieve academic excellence. Therefore, to improve academic programs, the addition of new faculty is a regular feature at the University. The management of the University has great coherence, liaison and coordination with faculty in enhancing quality educational & research opportunities. Resultantly, PMAS-AAUR is producing useful & trained human resource in specialized sectors of Agriculture, Sciences, Information Technology, Management Sciences and Allied Disciplines. The details of regular faculty members in different faculties are as under:-

Sr. #	Name of Faculty/Institute	Lecturer	Assistant Professor	Associate Professor	Professor	Total
1.	Faculty of Crop & Food Sciences	4	24	13	10	51
2.	Faculty of Sciences	4	14	5	3	26
3.	Faculty of Social Sciences	12	8	4	2	26
4.	Faculty of Forestry, Range Management & Wildlife	5	8	1	2	16
5.	Faculty of Veterinary & Animal Sciences	17	10	6	2	35
6.	Faculty of Agricultural Engineering & Technology	4	2	0	0	6
7.	University Institute of Information Technology	9	10	0	0	19
8.	University Institute of Management Sciences	8	5	2	0	15
9.	University Institute of Biochemistry & Biotechnology	1	5	2	0	8
10.	Institute of food and Nutritional Science	3	2	1	1	7
11.	Institute of Geo information and Earth Observation	2	2	0	1	5
12.	Institute of Soil Science	0	3	3	2	8
Total		69	93	37	23	222

The University has been encouraging and supporting its faculty and researchers to opt for different professional development training programmes both at national and international level. These programmes include short term trainings and other joint research and development activities with universities and institutions. The faculty and researchers have also been facilitated for presenting their research and publications at national and international fora. The faculty members were encouraged to improve their qualifications and visit universities abroad to update their technical knowledge and transfer technical know how back home from international universities/institutes. During the year, following faculty members/PhD students obtained doctoral/post-doctoral fellowships and short term trainings in abroad:

POST DOCTORATE

S. #	Name of Faculty Member	Department	Name of Country
1.	Dr. Muhammad Arif Zafar, Associate Professor	Clinical Studies	USA
2.	Dr. Zia-ur-Rehman, Assistant Professor	Botany	Republic of Korea
3.	Dr. Sajid Umar, Lecturer	Pathobiology	Turkey
4.	Dr. Muhammad Akram Khan, Lecturer	Pathobiology	China
5.	Dr. Safdar Hussain, Superintendent/ Lecturer	Economics	China

DOCTORATE

S. #	Name of Faculty Member	Department	Name of Country
1.	Ms. Sumaira Hassan, Lecturer	Veterinary Biomedical Sciences	Pakistan
2.	Ms. Sumera Saleem, Lecturer	Economics	China
3.	Mr. Muhammad Shoaib, Lecturer	Pathobiology	Azerbaijan
4.	Ms. Sidra Shahzad, Lecturer	UIMS	Malaysia

TRAINING COURSE/SHORT TERM TRAININGS

S. #	Name of Faculty Member	Department	Name of Course/Training	Name of Country
1.	Prof. Dr. Khalid Saifullah Khan	Institute of Soil Science	Short Term Research Visit	Germany
2.	Dr. Farida Faisal	UIMS	Short Course on Market Access for Food Security	Netherlands
3.	Prof. Dr. Ghulam Jilani	Institute of Soil Science	Chinese Academy of Sciences, President's International Fellowship Initiative for serving as Visiting Scientist	China
4.	Dr. Audil Rashid	Environmental Sciences	Short Research Visit	USA
5.	Dr. Saif ur Rehman	Pathobiology	Training Course for Application of Molecular Biological Technique in Animal Disease Surveillance and Diagnostics	China
6.	Dr. Riaz Hussain	Veterinary Biomedical Sciences	Training Course for Application of Molecular Biological Technique in Animal Disease Surveillance and Diagnostics	China
7.	Prof. Dr. Arfan Yousaf	Faculty of Veterinary & Animal Sciences	Short Course on Global One Health: Towards Human, Animal and Plant Health	Netherland
8.	Dr. Azeem Khalid	Environmental	Training Course "Agilent 5100 Techniques for Simultaneous ICP-OES"	Singapore

ACCESS

BASIC ENROLLMENT

There has been continuous increase in the student intake in various disciplines and the student enrollment increased from 8753 to 12374 in the last five years. The detail of which is given in below table:

S No	Name of Degree	2014	2015	2016	2017	2018
01	Undergraduates	4730	6009	6626	7786	8631
02	Post Graduates	3691	4073	4093	4236	3351
03	Doctoral	332	342	366	425	392
	Total	8753	10424	11085	12447	12374

GENDER-WISE DETAIL

SR. NO.	PROGRAM	MALE	FEMALE	TOTAL
1.	Bachelors	6140	2491	8631
2.	Masters	717	1503	2220
3.	M.Phil/MS (Hons)/MS	636	495	1131
4.	Ph.D	242	150	392
	TOTAL	7735	4639	12374

EMPLOYABILITY

In order to facilitate the graduates in job placement, Directorate of Financial Assistance & University Advancement consistently striving to develop linkages with the industry by providing the online recruiting tools either through its own resources and/or the private partners. A total of 18384 students have registered on Alumni Portal out of which 2782 students have been registered in the Year 2018 who are regularly informed about various opportunities/job openings through electronic email. Students of the Agriculture Department found jobs in different fields of government, semi-government and private sectors.

FACULTY-STUDENT RATIO

The faculty-student's ratio is Approximately 1: 30.

UNIVERSITY BUILDING ECONOMIES

UNIVERSITY-INDUSTRY LINKAGE

The University is in the process of developing linkage with the industrial / farming community. It has developed linkage with following organizations at National and International level:-

1. Barani Area Research Institute, Chakwal.
2. Fauji Fertilizer Company, Multan.
3. Alfalah Bank, Rawalpindi
4. Agency for Barani Area Development, Rawalpindi.
5. Pakistan Council for Scientific & Industrial Research, Lahore.
6. Ali Akbar Group of Pesticides.
7. Syngenta Pakistan Pvt. Ltd.
8. FMC Pvt. Ltd.
9. Nestle Milk Pack Pakistan.
10. Nuclear Institute for Biotechnology & Genetic Engineering Faislabad.
11. Arqam Foods.
12. Fuji Cereals.
13. Shezan Pak. Ltd. Hattar, Rawalpindi.
14. Vita Bread & Dawn Bread, Rawalpindi,
15. Haleeb, Pepsi Cola (Pvt) Ltd.

NEW INITIATIVES OF THE UNIVERSITY

PMAS-Arid Agriculture University Rawalpindi is striving hard to provide a diversified academic environment for Pothwar youth looking towards joining hands with modern world for exportable surplus. University administration is endeavouring to bring about a tangible change with a view to equip the graduates for self-employment thereby making a positive contribution in national development in addition to providing livelihood for themselves and the poor farming community of the region. The university has embarked upon new initiatives and projects tapping need oriented vision for the Pothwar.

Establishment of University Green Office

The University Syndicate in its 80th meeting held on 30.06.2018, approved to establish the University Green Office at PMAS-Arid Agriculture University Rawalpindi. The University Green Office has been established under the auspices of Directorate of Planning & Development to boost up the sustainability practices in the Campus. The Green Office of PMAS-AAUR is the platform for students and employees of the University where sustainable ideas are shaped, plans are put together and projects are launched, all with the objective to make the university more

sustainable. This office will also raise awareness among students and staff about the sustainable achievements and ambitions of the PMAS-AAUR.

Establishment of Green Office Nursery

A Plant Nursery under University Green Office has been established at the Main Campus of the University in October, 2018. Under this nursery, saplings will be provided to the students of the University and local community for planting more trees in order to make Pakistan Green.

State of the Art Integrated Waste Management Station

PMAS-Arid Agriculture University Rawalpindi has established a state of the art integrated Waste Management Station where modern treatment facility is based on the mechanical and biological treatment process of solid waste with proper segregation and recovery of the recyclables. This facility being not only the first one in the educational institutes but also in the country. The key



features of this recently developed station are to transform decomposable waste in to compost for organic agriculture and bio-gas which can provide safe and healthy food to the community. Additionally, this solid waste if handled properly would maintain the natural balance of essential elements and thereby promote more harvest from nature. PMAS-AAUR and Rawalpindi Waste Management Company (RWMC) also signed MoU with an aim to clean environment and obtain energy from solid waste/biomass on the lines of developed model at PMAS-AAUR.

Establishment of Clean Drinking Water Facility

With rapid growth in population in the country, the demand for clean drinking water has increased significantly. However due to burgeoning environmental population people are being confronted with many water borne diseases and the problem is increasing day by day. The present Government is determined to provide such basic common facilities to common people for better tomorrow and bright, healthy future. Keeping above in view, the university established the Clean Drinking Water Facility for the students and staff of the University.

Establishment of Community Center

The purpose for establishment of community center is to showcase the farm fresh university products for the consumption of university employees, students and public. This will also act as source of revenue for the university as well as learning for the students.

Rain Water Harvesting Model for Small Farmers

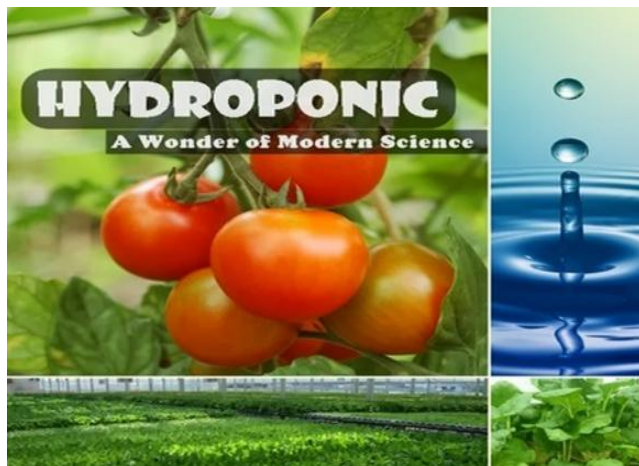
Taking advantage of the short spell of monsoon rains, the University has converted its research area into a model farm with provision for collecting summer rains into small reservoirs through which the water saved amounts to 45 acre-foot which is sufficient for irrigation of its entire farm spreading over 250 acres by using high efficiency irrigation system operated through solar energy. Similarly, for urban areas a rainwater harvesting model of



rooftops of university campus has also been developed and the water stored is enough to irrigate experimental plots on acreage at the campus. This effort presents an excellent model for kitchen gardening through rainwater harvesting in urban areas besides minimizing street flooding and resulting discomforts in civic life during rainy season.

Low Cost Indigenous Hydroponics System

PMAS-Arid Agriculture University is successfully operating a state-of-the-art hydroponic vegetable production facility on commercial basis where certified, spray and disease free vegetables, salads and herbs are being grown and marketed inland and off shore. To lessen the input costs and make adaptable by the small farmers, the university faculty is engaged in development of simplified and low cost



hydroponics technology. Objectives of this effort also include provision of inputs such as nursery,

nutrients and growing substrates by the University at minimum cost for popularization of the technology at masses level.

In addition to above, the University erected the twelve (12) Hydroponic Units (each on 02 Kanals) at various locations of District Punjab through ADP funded project titled “Testing Indigenous Hydroponic Greenhouses for Vegetable Growing at Various Locations in Punjab” amounting to Rs. 77.571 million.



PATENTS

The faculty of the University is doing exclusive research and succeeded in applying the patents for the outcomes of their research activities which are beneficial for the local farming community in order to expand the Agriculture and Livestock production in the Barani areas of the region.

S #	Product Name	Ingredients	Effects/Benefits
1.	A polyherbal composition for cooling, refrigerant, antioxidant and appetizer By Prof. Dr. Azra Khanum	Cichorium intybus, Foeniculum vulgare, Corchorus depressus, Citrullus lanatus, Cucumis melo and C. sativus	Cooling, diuretic and refrigerant tonic that can be used for treating jaundice, lack of appetite and burning sensation of palm and soles
2.	Six Transgenic Wheat varieties with Bacterial disease resistant genes By Prof. Dr. Kasusar Nawaz Shah	Six Wheat varieties viz. Chakwal-97, Inqulab-91, GA-2002, Aquab-2002, Tartara-2000 and Punjnanad-2000 with Xa21 gene (a gene produce inhibitor like protein that act as broad spectrum Anti-bacterial protein)	Although bacterial diseases are less destructive for wheat in Pakistan as compare to fungal diseases. But this product and procedure will help in production of Fungal disease resistant wheat in future (project under progress). Similarly, these transgenic wheat varieties can enhance yield up to 20% where bacterial diseases cause a significant loss in wheat yield.
3	Integrated solid waste management system By Prof. Dr. Rai Niaz Ahmad	Machine consists of outer cylinder, inner cylinder, pressure gage, boiler, food hopper, food outlet, water inlet, water outlet, solid waste feeder, digester, catalyst shower, moisture meter, drainage pipe, gas extraction pipe	Production of poultry feed, biogas and valueable compost for organic gardening.

4	Indegenour hydroponic system By Prof. Dr. Rai Niaz Ahmad	Unit consists of greenshed, cooling/heating system, drip irrigation, fertigation system, drainage and detectors for different controlled parameters	Production of quality vegetables likes tomatoes, cherry tomatoes, pepper, cucumber etc with pesticide residue free and high shelf life, several fold production and affordable to local farming community to produce out of season crops.
5	Water seed drill By Prof. Dr. Rai Niaz Ahmad	Main frame, water tank, water distribution pipes, water nozzles and control volve.	Provision of water to soil at the time of seed sowing in order to facilitate seed germination under moisture stress conditions.

INTERNSHIP AND PLACEMENT OFFICE

Vertical and horizontal expansion of academic programs, subsequent increased gross enrollment and tangible improvement in academic and research standards necessitated a dedicated entity in the form of University Placement Bureau (UPB, Estd. 2006) to facilitate the students/graduates in attainment of scholarships, internships and jobs. In 2009, Higher Education Commission of Pakistan also took this three pronged policy in hand and desired public and private universities to establish their resource and consultation centers for graduates' welfare and university advancement. Thus, UPB was renamed as Students Resource Centre (SRC) in 2009, to pave the linkage between the graduates, prospective employers and scholarship benefactor agencies. Prompt dissemination of information regarding jobs, scholarships, skill enhancement training facilities, workshops, seminars, events/activities at the campus etc. to the registered graduates through electronic mail; were the regular feature of Students Resource Centre.

The University has revamped this chapter and transformed in to Directorate of Financial Assistance & University Advancement in 2014. Directorate of Financial Assistance and University Advancement is a focal point for all types of internal and external scholarships availed by the students of University. The centre strives to ensure the transparency in award of scholarships right from collection of applications to disbursement of funds. Directorate of Financial Assistance and University Advancement also facilitates various entities offering scholarships independently in verification and performance appraisal of their scholars at University.

ACTIVITIES OF DIRECTORATE

Different scholarships offered by directorate are as follows:

S.No	Name of Scholarship	Scholarship Eligibility Criteria
1	PEEF (Punjab Educational Endowment Fund) Scholarship	Offered for undergraduate/postgraduate students having Punjab domicile
2	Vice Chancellor Talent Scholarship	Offered at subject/discipline level in each semester
3	Pakistan Bait-ul-Mal Scholarship	Offered for the deserving students of university
4	HEC Need Based Scholarship	Offered for all degree programs
5	Shahbaz Sharif Merit Scholarship	Offered for postgraduate students having any domicile
6	USAID Funded Merit & Need Based Scholarship Program	Offered for undergraduate/postgraduate agriculture/veterinary students
7	Directorate of Education Colleges, Gilgit-Baltistan Scholarship	Offered for students having domicile of Gilgit-Baltistan
8	Gurmani Foundation Scholarship	Offered for students of southern Punjab
9	Dr. Sadiq Foundation Scholarship	Offered for veterinary students
10	National Educational Scholarship for Talent (NEST)	Offered for needy students of remote areas
11	Diya Pakistan Scholarship	Offered for needy students
12	Pakistan Scottish Scholarship Scheme	Offered for only female students
13	Award of Scholarships for Students from Gwadar	Offered for the undergraduate students belongs to Gwadar
14	Bestway Foundation Scholarship	Offered for needy students

SUMMARY OF SCHOLARSHIPS:

A total of 2454 scholarships have been awarded to the university students processed in 2018.

Following are the details:

S.No.	Name of Scholarship	Scholarships Awarded
1.	PEEF (Punjab Educational Endowment Fund) Scholarship	880
2.	Vice Chancellor Talent Scholarship	659
3.	Pakistan Bait-ul-Mal Scholarship	377
4.	HEC Need Based Scholarship	276
5.	Shahbaz Sharif Merit Scholarship	120
6.	USAID Funded Merit & Need Based Scholarship Program	62
7.	Directorate of Education Colleges, Gilgit-Baltistan Scholarship	32
8.	Gurmani Foundation Scholarship	15
9.	Dr. Sadiq Foundation Scholarship	17
10.	National Educational Scholarship for Talent (NEST)	8
11.	Diya Pakistan Scholarship	3
12.	Pakistan Scottish Scholarship Scheme	2
13.	Award of Scholarships for Students from Gwadar	2
14.	Bestway Foundation Scholarship	1
	Total	2454

COMPARISON OF SCHOLARSHIPS FROM 2014-2018

Years	2014	2015	2016	2017	2018
Scholarships Awarded	967	1046	1279	2787	2454

PRIME MINISTER'S LAPTOP SCHEME:

Prime Minister's Laptop scheme has also been dealt by Directorate of Financial Assistance & University Advancement. A total of 2490 laptops have been distributed to the talented students of various disciplines/departments of PMAS-AAUR in year 2018 under Phase-IV & Phase-V of Prime Minister's (National) Laptop Scheme, who were selected on merit by the Higher Education Commission.

ALUMINI REGISTRATION:

This directorate also deals with Alumni Registration. A total 18384 students have done their registrations on web portal.

STRENGTHENING PHYSICAL INFRASTRUCTURE

DEVELOPMENT PROJECTS (LABORATORIES, LIBRARIES, ETC.)

Developmental projects play very important role in uplifting and growth of an institution. The University is continuously taking initiatives for improvement the current status through different development projects. Twenty three development projects have already been completed. Currently the University is implementing three such projects (Rs. 2387.431 million) while seven new proposals were also submitted to HEC and Punjab Government in next year. The University carried out various plans, formulated strategies & putting in strenuous efforts to enhance the financial resources from avenues outside PMAS-AAUR. Funds were also fetched from the Higher Education Commission of Pakistan and Government of the Punjab under different schemes for establishing/strengthening new departments at PMAS-AAUR. These efforts will create more research facilities for the students and the faculty members.

The funds amounting to Rs. 879.668 million have been fetched from Government of the Punjab for the project titled **“Establishment of Sub Campus of PMAS-Arid Agriculture University at Attock (Phase-II)”**. The construction activities at the site of Sub-Campus Attock are in progress.

Another project titled **“Establishment of National Center for Livestock Breeding, Genetics & Genomics (NCLBG&G) at PMAS-Arid Agriculture University, Rawalpindi”** amounting to Rs. 756.519 million has also been approved by the CDWP in its meeting held on 29th March 2018



Development Projects : i) COMPLETED

Name of the Project	Total Cost Rs. In Million
Development of Academic Facilities at UAAR	49.740
Establishment of Centre for Information Technology	27.961
Strengthening of Higher Education Facilities at UAAR	39.645
Establishment of Centralized Instrumentation Centre	37.108
Establishment of Department of Range Management & Forestry	35.972
Establishment of Fiber Optic Backbone & Campus Wide Local Area Network	25.300
Production of Pathogen Free Horticultural Plants	35.884
Construction of Hostel for Visiting Faculty	24.438
Construction of Hostel for Students	36.436
Strengthening of Department of Soil Science & SWC	33.580
Strengthening of Centre for Information Technology	34.346
Strengthening of Department of PBG	31.783
Strengthening of Sports Facilities at UAAR	38.885
Strengthening of Department of Entomology	34.783
Establishment of R&D Facility in Hydroponic	52.546
Strengthening of Department of Wildlife Management	36.141
Strengthening/ Up gradation of Library Facilities at PMAS-AAUR	41.021
Establishment of University Institute of Biochemistry & Biotechnology	358.619
Establishment of Faculty of Veterinary & Animal Sciences	468.620
Development On Farm Students Research Facilities	343.224
The Establishment of Pak-Korea Capacity Building Center for Agriculture & Livestock Technology at PMAS-AAUR	395.500
Establishment of Sub Campus of PMAS-Arid Agriculture University Rawalpindi at Attock	188.260
Testing Indigenous Hydroponic Greenhouses for Vegetable Growing at Various Locations in Punjab	77.571
Total (Rs. in Million)	2447.363

ii) ONGOING

Development Projects (On-Going)	Cost (million Rs.)
Strengthening of Agricultural Engineering & Women Development Programs at PMAS-AAUR	751.244
Establishment of Sub Campus of PMAS-Arid Agriculture University at Attock (Phase-II)	879.668
Establishment of National Center for Livestock Breeding, Genetics & Genomics (NCLBG&G) at PMAS-AAUR	756.519
Total (Rs. in Million)	2387.431

RESEARCH EQUIPMENT

Research being an integral part of projects is built in the PC-I while planning project proposals. The state of art equipment is up and running at project facilities. These include much high voltage equipment at University Research Laboratories.

The University has a unique facility having Central Research Laboratory in which postgraduate students and faculty are busy for the accomplishment of their research activities. This facility has several sophisticated research equipments being exclusively used for this purpose. The research projects being executed through this facility/laboratory have generated a lot of research findings in the area of Agriculture, Sciences and Forestry. The Laboratory has also produced a number of skilled and trained manpower in the shape of graduate students who by taking up various positions in Government and non-governmental organizations, could significantly contribute towards the over objective of national economy. The major equipments available in the Central Research Laboratory are as under:

Name of Equipment	Make/Model	Main Specification
Gas Chromatograph	GC-NU74 Agilent Technology Singapore	Includes Special Configuration LAN Rs-232 interfaces and 7683 interface, detector EPC Board 6tem ramps, 6 heated zones plus oven, 2 analog out
HPLC	SCL-10A, LC-10NT CTO-10AS, SPD-10A, SIL-10AD Shimadzu Japan	Binary pump with automatic variable piston stroke Delay volume 180-482ul <0.3% RSD setpoints from 0.001 to 5.0 ml/min in 0.001 ml/min 0-40MPa (0-400bar, 0-5880Psi)
DNA Sequencer	CEQ-800, Beckman Coulter Switzerland	CEQ Genetic Analysis System 100-240V, 5A, 50/60HZ A fully automated high throughput sequencing and fragment analysis system
Total Organic Carbon Analyzer	ASI-V, VCPH, TNM-1 SSM-5000A Shimadzu Japan	High temperature catalytic combustion from 680C ⁰ to 950C ⁰ Method is EPQA4151 Standard methods 5310B, dIN 38409113
Freeze Drier	CRYODOS-50 Telstar Spain	Air cooled Refrigerator 0.37KW (1/2 HP). CFC and H-CFC free refrigerant without vacuum pump ice condenser temperature approx. -55C ⁰
Ultra Centrifuge	Optima-100P. US Beckman Coulter Switzerland	CE Mark Speeds to 100,000 Rpm g. Forces to 802,400g vacuum-encased, frequency controlled direct drive (induction)
Flame Photometer	Jenway-PFP-7	
Deionizer	SG Hamburg	Microprocessor controlled purity monitor. Providing digital resistivity readings temperature to 25C
Precision Analytical Balance	(i) Jex 120 Japan (ii) BL-210S Sortorius Germany	(i) Capacity 120g readability 0.1 mg power (ii) Capacity 210g readability 0.1mg power 220VAC 50/60HZ
Aluminum Block Heater	UDK42/26 Italy	Digital Microprocessor Controlled Temperature Settings upto 450C ⁰ built in timer with capacity 42 digestion tubes. Tubes capacity 100 ml operated voltage 220VAC
Oven	(i) UE-600 Memmert Germany (ii) 100-800 Memmert Germany	Digital Microprocessor temperature range up to 300C ⁰ capacity -256 Ltr
Porometer	AP-4 IRMECO England	Portable, microprocessor controlled. For measurement of stomatal gas flow Measurement Range 0-40S-Cm-1(resistance) 0.2-30mmS-1 (Conductance)
IRGA/Plant Photosynthesis Analyzer	LCA-4 IRMECO England	Different measurements, non-dispersive infra-red gas analyzer Range 0.3000ppm frequency 80HZ Source Life 10,000 Hours
Confocal Microscope	TSI Sr. No. 291300105 Canada	Two laser (i) Red (635) (ii) Green (532), Two Micron-Optical, Resolution using one micron

STRENGTHENING TECHNOLOGICAL INFRASTRUCTURE

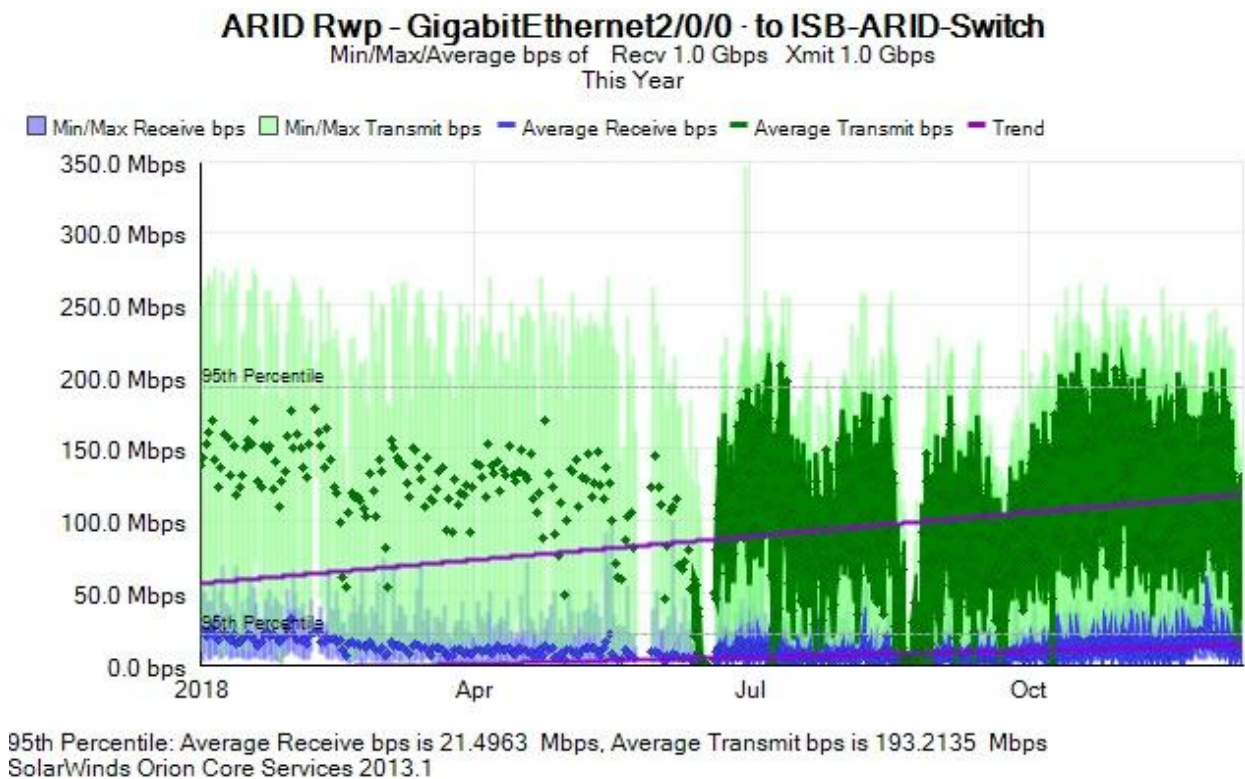
Digital Library

Digital Library 24/7 has easy access in our Network internet protocols (IPs), Usage data of digital library has managed by Pakistan Educational Research Network HEC.

Update on PERN

Pakistan Education and Research Network, we are connected with HEC PERN2 with bandwidth of 270MB, campus network (24/7 Access), server virtualization management, **load balancing**, **reliable**, **scalable**, **environmental protection**, **wireless network facility** (Boys and Girls hostels) and digital library throughout the university network.

Network Availability in PMAS-AAUR Graph



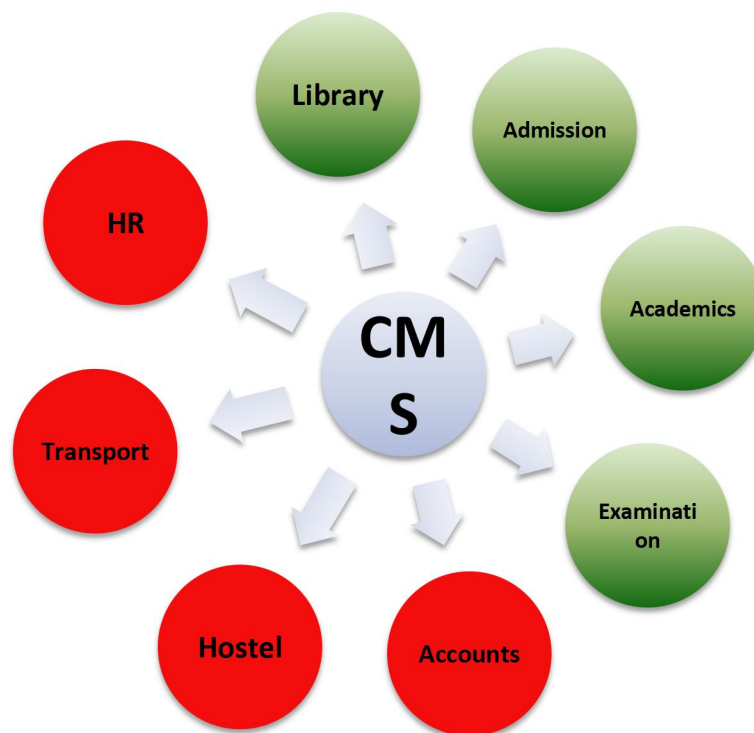
Video Conferencing System

Video conferencing equipments and software installed at conference room University Institute of Information Technology (UIIT). It's set up consist of HD video cam, premium audio system, recording facility, presentations equipments and sound proofed room with live IP address that is connected with 24/7 online support meeting capabilities and competent compelling team.

Campus Management Solution (CMS)

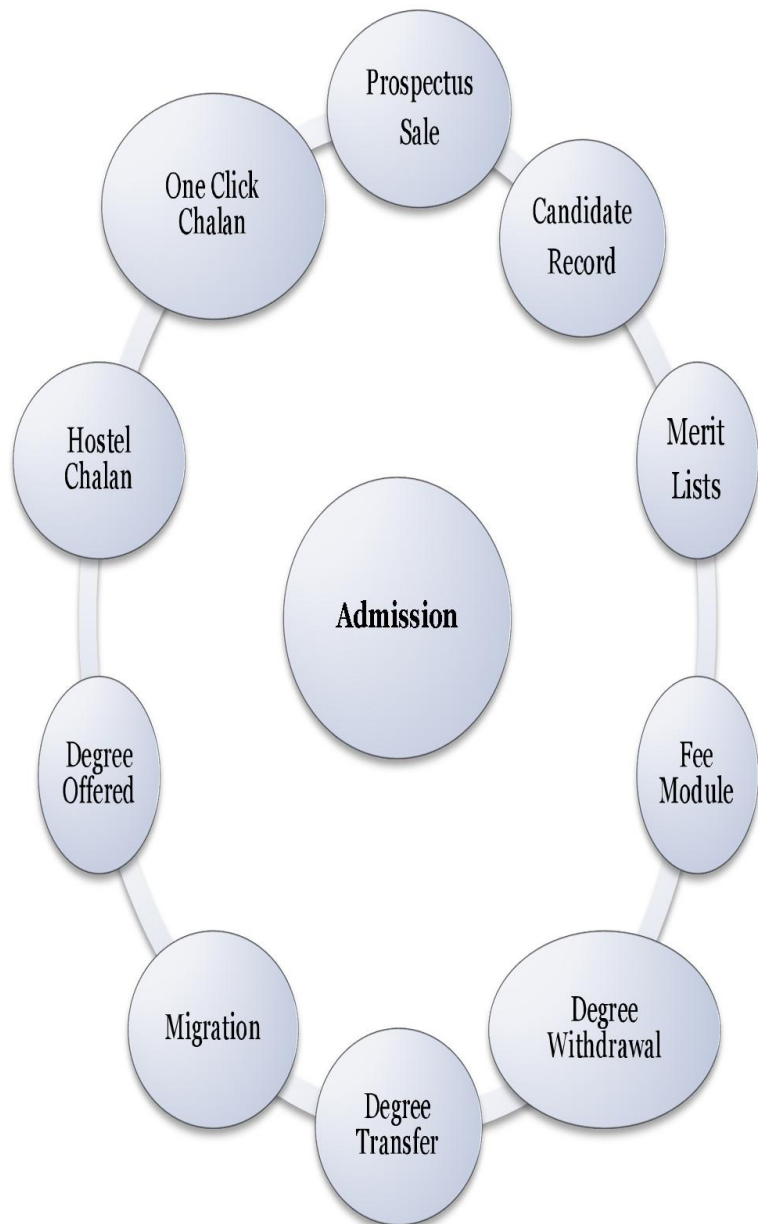
- Campus Management Solution is the most effective tool that has automated the management functionality of this university by streamlining some of the processes involved.
- It has reduced the manual handling of processes and thus helps in effective and accurate outcomes.
- CMS also helps in maintaining transparency in admissions and accounts processes and reduces administrative overhead by providing powerful services.
- It helps in effective decision making of authorities by generating reports from different aspects.

CMS-a glance



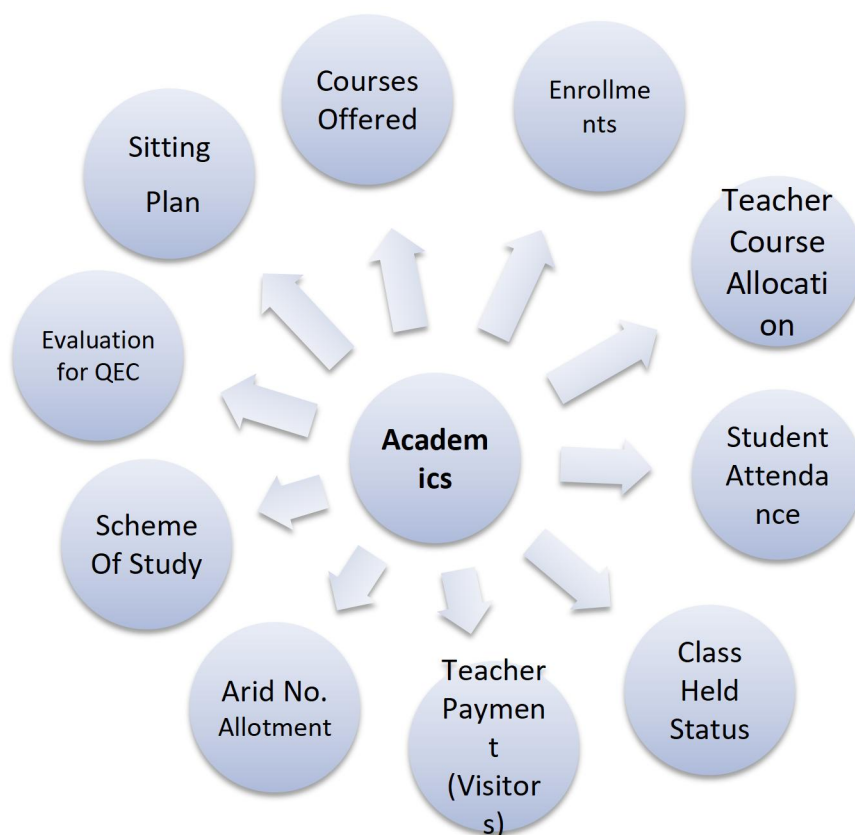
Admission-a glance

- Prospectus Sale Report
- Date wise Candidate entry report
- Tracking Of Merit(Waiting Merit List)
- Total vs Vacant Seats Information Report
- Fee Vouchers Generated through system
- Banks Uses Fee Module
- Fee Reports in different formats
- Bank Departments and Treasure Office Reconcile fee Data
- Different Fee Structures
- Fee Installments
- Quota System
- Admission Scroll



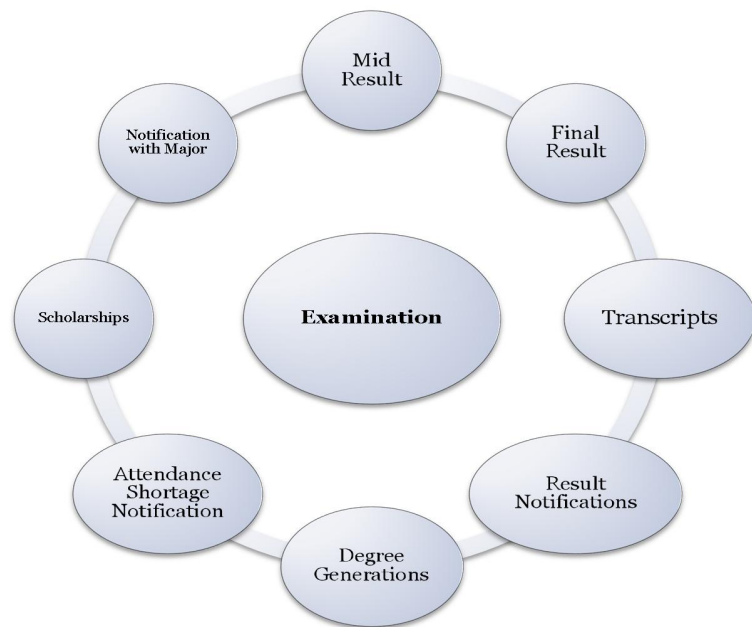
Academics-a glance

- Student's University Card
- GS-10/ Gs-12 Reports in different formats
- Attendance/Enrollment Status online at university network
- Teacher Evaluation Reports (Graphical)for QEC
- Section Assignments
- Students Attendance Sheets
- Attendance shortage Attendance Feeding status
- Student Profile

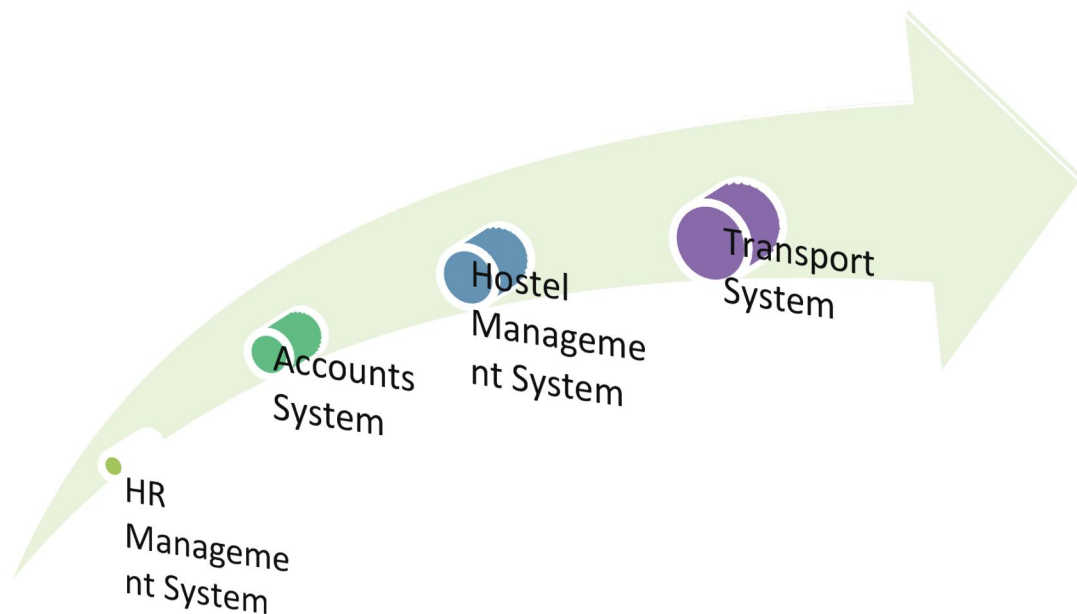


Examination-a glance

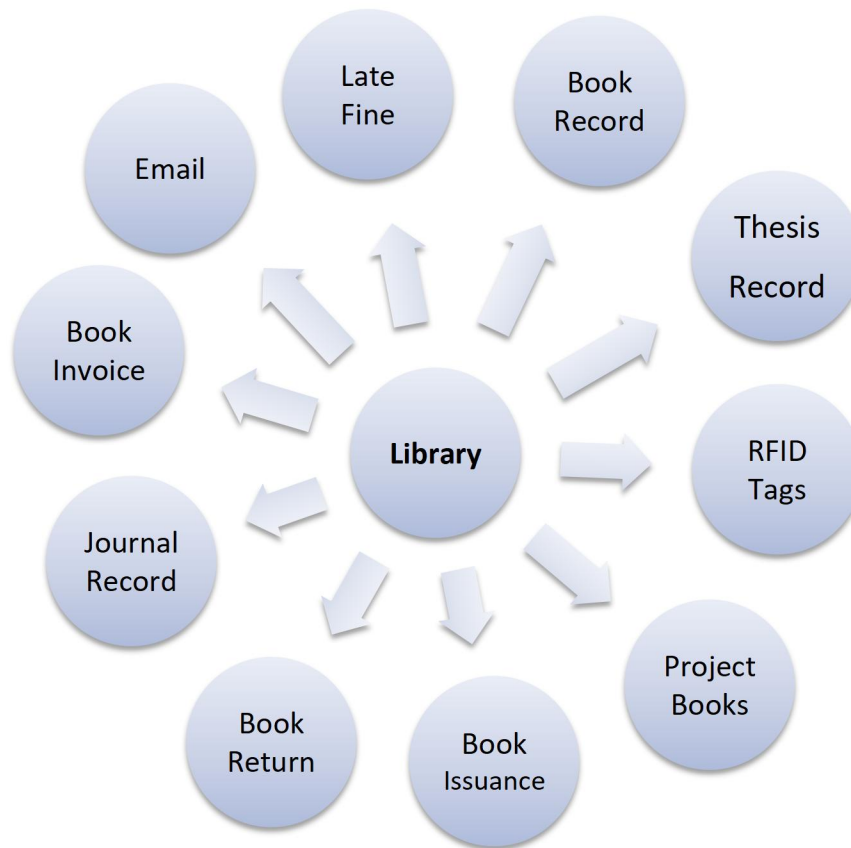
- Calculation of GPA, CGPA, Quality Points, Grades & All others Report Cards required to Controller Office and any other departments.
- Exam Attendance Sheet
- Award List
 - Mid Result
 - Final Result
- Transcripts
- Medal Lists
- Semester Result Notifications
- Final Result Notifications
- Provisional Certificate
- Intermediate Transcript with Picture
- Degrees Printing
- Graduate Directory



Future Enhancement



Library-a glance



Web Portal

The web portal consist of different modules, some are given below:

Scholarships: University offers different scholarship programs (e.g. HEC, USAID, PEEF, Shahbaz Sharif Merit scholarship, Nestetc.) for the deserving students. Web portal facilitates those students to apply online for these scholarship programs.

Alumni Junction: Graduates of different faculties can register through this forum for development of friendly and business relationships.

Alumni Job info Portal: The University has about number of registered members on its Alumni Association who are regularly informed about various job openings through electronic emails to the members.

Academics: In this section all faculties and respective departments which are related to university have all the information i.e. faculty's basic information, staff members, degree programs and their completed or ongoing research projects.

Admissions: The web portal provides all the information about latest admission programs which are offer by the university and it also facilitates the candidates to apply online. For this ease number of applicants throughout the Pakistan had applied through website during the last session. The website also uploads the list of eligible students (Merit lists). If student name is in the list, in turn they can enter CNIC in the form to download the fee challan.

Complaint Cell: Website has provided the platform in which different walk of personnel can send their queries related to university. The concerned department can then entertain those queries accordingly.

News & Events: Web portal has provided all information about the events which are held in university. This information is in the form of news, photos, videos and in print media. This section also contains the information about the latest jobs and tenders.

Visiting Faculty Job Portal: The Job portal is developed for Visiting Faculty members. All Visiting faculty members apply online in every semester. Portal create detailed Job Application with all of candidate Personal, Academics, and Experience record in pdf form.

Admin Panel: All the data in web portal is manage through admin panel (i.e. upload, edit, delete). This includes photos, videos, news, press clipping, tenders, staff members information and events.

Admin Panel Online Admission portal: There is also an admin panel for Admission portal through which they can received online form of all the candidates who's apply online throughout the Pakistan. The candidate also checks their application form status, if is it received or not.

Admin Panel -SRC: There is also a admin panel for SRC through which they can manage alumni data of the registered members. They can send emails for new job announcements to members. Latest events are also handle through this panel.

Along with all these, web portal provides the download facility for different manuals, Performa, application forms, notes, membership forms and scholarship forms.

Admin Panel Visiting Faculty Job Portal: There is also an admin panel for selection of visiting faculty. Admin panel Allow to respective Faculty/institute to search course wise application and view these applications.

UNIVERSITY BUILDING COMMUNITIES

UNIVERSITY-COMMUNITY INTERACTION

PMAS-AAUR is one of the leading higher education institutions in Pakistan. It plays a major role in grooming future leaders who can make a positive difference to the world around them. University has been involved with numerous community support programs. It has been working with different NGOs, government, semi-government/ non-profit organizations.

UNIVERSITY'S ROLE IN BUILDING COMMUNITY

The University has a significant social impact on the region. This impact extends beyond the staff and students to the broader community in general. University offers a wide range of cultural and recreational programs, contribute to the provision of health and community services, provide services to local government and provide assistance to community groups.

In addition to providing research, cultural and social fields, university provides valuable infrastructure for the community including venues for public events, libraries, sporting facilities and research laboratories.

The scholarly activities of a university serve to enhance the reputation of the local region both nationally and internationally. This may result in an increased attractiveness of the region to industries and investment. The University also offers regional communities a better chance to retain their talented youth population.

The students, faculty and administration of PMAS-Arid Agriculture University Rawalpindi have always worked tirelessly to serve their countrymen and at the time of floods when a catastrophe has hit our motherland, the university once again standing united to help the people of these areas in dealing with the after affects of this devastating flood. The University also dispatched the relief goods to the flood affected areas.

ALUMNI AFFAIRS: OUTSTANDING ACHIEVEMENTS ETC.

Career Counseling is important and have vital role in student's professional life. University Administration of PMAS-Arid Agriculture University Rawalpindi established a specific Career Counseling Centre (Directorate of Financial Assistance & University Advancement) as per requirement of current era. Directorate of Financial Assistance & University Advancement regularly share jobs (published in print & electronic media) with University Alumni and Final Semester Students.

Followings are the details of the career counseling workshops and trainings organized for University Scholars:

S. No.	Title of the Training / Workshop/Scholarship Activites	Month
1.	Cheque Distribution Ceremony of USAID Merit & Need Based Scholarship Program	May – 2018
2.	Entrepreneurial Skills Development Training Workshop for PEEF Scholarship Awardees	September – 2018
3.	Scholarship Card Distribution Ceremony of Punjab Educational Endowment Fund (PEEF)	October – 2018
4.	Youth Festival by USAID funded Merit & Need Based Scholarship Program	October – 2018
5.	Training Workshop regarding Student Advancement Fund Endowment (SAFE)	October – 2018
6.	Talent Grooming & Career Counseling Workshop for USAID Funded Merit & Need Based Scholarship Awardees	December – 2018

SPORTS

The Directorate of Sports is working hard for the promotion of sports and healthy activities at PMAS-Arid Agriculture University. The beautiful and prestigious **Khalid M. Khan Gymnasium** was completed in the university premises in 2010. The following Intervarsity Sports Championship was organized by Directorate of Sports:



PMAS-AAUR Students team also participated in the following Intervarsity Sports Championship during the year.

- **Inter University Foot Ball Championship 2017-18 (Zone “C”) held at COMSATS, Islamabad (December 19-22, 2017)**
- **Inter University Table Tennis Championship 2017-18 (Zone “C”) held at University of Engineering and Technology, Taxila (Jan. 01-04, 2018)**
- **Inter University Cricket Championship 2017-18 (Zone “C”) held at FAST, Islamabad (Jan.12-16 2018)**
- **Inter University Badminton Championship 2017-18 (Zone “C”) held at Bahria University, Islamabad (Jan. 16-19, 2018)**
- **Inter University Basket Ball Championship 2017-18 (Zone “C”) held at Bahria University, Islamabad (Jan. 20-23, 2018)**
- **All Pakistan Inter University Gymnastic Boys Championship 2017-18 held at Superior University, Lahore (Feb.12-15, 2018)**
- **All Pakistan Inter University Body Building Championship 2017-18 held at University of Veterinary & Animal Sciences, Lahore (Feb.15-18, 2018)**
- **Inter University Volleyball Championship 2017-18 (Zone “C”) held at University of Engineering and Technology, Taxila (Feb. 23-25, 2018)**
- **All Pakistan Inter University Tug of War Championship 2017-18 held at Education University, Lahore (Feb. 25-27, 2018)**
- **All Pakistan Inter University Rock Climbing Championship 2017-18 held at Islamic Intern National University Islamabad (March 01-03, 2018)**
- **All Pakistan Inter University Boxing Championship 2017-18 held at FAST, Islamabad (March.04-07 2018)**

- **All Pakistan Inter University Badminton (Girls) Championship 2017-18** held at Nawaz Sharif Agriculture University Multan (**March.11-14, 2018**)
- **All Pakistan Inter University Volleyball (Girls) Championship 2017-18** held at Fitama Jinnah University Rawalpindi (**March.28-30, 2018**)
- **All Pakistan Inter University Weight Lifting Championship 2017-18** held at University of Veterinary & Animal Sciences, Lahore (**April 09-12, 2018**)

The following Inter Faculty Sports Competitions were organized by Directorate of Sports during the year.

- **INTER FACULTY BADMINTON (BOYS) CHAMPIONSHIP 2017-18**
- **INTER FACULTY VOLLEYBALL (BOYS) CHAMPIONSHIP 2017-18**
- **INTER FACULTY BASKETBALL (BOYS) CHAMPIONSHIP 2017-18**
- **INTER FACULTY FOOTBALL (BOYS) CHAMPIONSHIP 2017-18**
- **INTER FACULTY CRICKET (BOYS) ARIDIAN PREMIER LEAGUE CHAMPIONSHIP 2017-18**
- **INTER FACULTY TUG OF WAR (BOYS) CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**
- **INTER FACULTY 100 METER (BOYS) CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**
- **INTER FACULTY HANDKERCHIEF (BOYS) CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**
- **INTER FACULTY TABLE TENNIS BOYS CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**
- **INTER FACULTY GIRLS CHATTI RACE CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**
- **INTER FACULTY HANDKERCHIEF GIRLS CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**
- **INTER FACULTY TUG OF WAR GIRLS CHAMPIONSHIP 2017-18 (DURING INDEPENDENCE DAY CELEBRATION)**

UNIVERSITY BUILDING LEADERSHIP

STUDENT LEADERSHIP (UNIVERSITY DRAMAS, EXHIBITIONS, EXPOS, COMPLETIONS, DEBATES AT NATIONAL AND INTERNATIONAL LEVELS)

Sr.#	Events	Events Date
1.	An awareness seminar on Drug Addiction and its Consequences	12.01.2018
2.	First Hayatians Olympiad, Kath Trophy, 70 Competitions	20.02.2018
3.	All Pakistan Muhammad Ali Jinnah Bilingual Declamation Contest 2018	27.02.2018
4.	Celebration of Pakistan	29.03.2018
5.	PRA Tax Awareness Campaign	02.04.2018
6.	20 th All Pakistan Inter-University Declamation Contest for Award of Allama Iqbal Shield	11.05.2018
7.	Aridian Art Showcase – 2018	16.05.2018
8.	Seminar on National Cyber Threats and Provocative Strategies	07.06.2018
9.	Celebrations of Allama Iqbal Day	15.11.2018

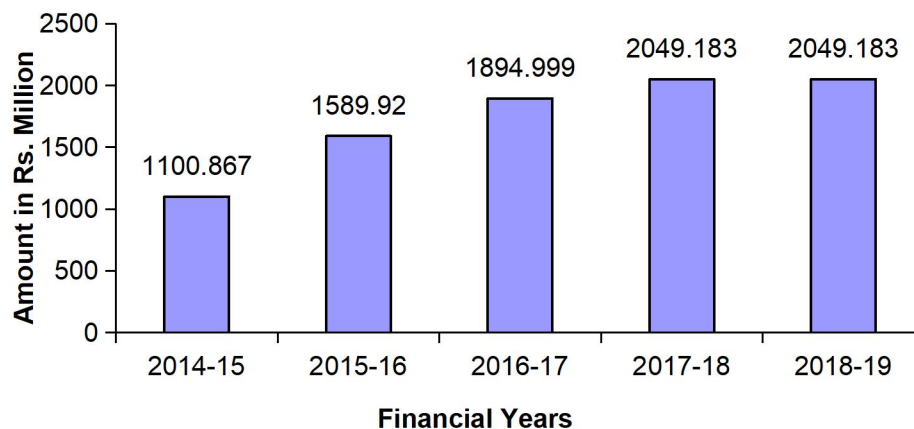
FINANCE

SUMMARY OF REVISED BUDGET ESTIMATES FOR THE YEAR 2018-2019

INCOME ESTIMATES				EXPENDITURE ESTIMATES			
Sources of Income	Estimates 2017-18	Revised Estimates 2017-18	Estimates 2018-19	Head of Accounts	Estimates 2017-18	Revised Estimates 2017-18	Estimates 2018-19
Opening Balance	506109585	486110000	505050000	Pay and Allowances	864761538	762030685	900662893
Punjab Government	78423000	71003000	71003000	Purchase of Durable Goods	35000000	32000000	32000000
Federal Government	631180641	633690000	663714000	Research Projects	12500000	11000000	11000000
Supplementary Grant from Federal Government	20000000	0	5000000	Construction Work	366769025	273859915	181188595
Own Resources	357712957	366604964	416786464	Repair of Durable Goods	12500000	9800000	13000000
University Fee From UIMS	92517384	97016100	96945871	Commodities & Services	158470000	175020000	173850000
University Fee from UIIT	229076200	220011964	198256877	Transfer Payments	156000000	167400000	215000000
Income from Affiliated Institutes	60500000	63290149	69051978	Miscellaneous Expenditure	32200000	30200000	36000000
Khushab Campus	17406720	15549539	17950700	Contingent Paid Staff	31300000	32000000	33000000
Federal Government Grant for Tenure Track Faculty	16344750	13513000	14575672	Overtime/Evening sitting	9800000	12000000	13000000
Federal Government Grant for Need Base Scholarships	33501000	33501000	33501000	Reimbursement of Medical Charges	7500000	7500000	8500000
PMAS-AAUR Sub Campus Attock	6410800	6502316	7275500	Building Rent	2000000	2000000	2000000
				Tenure Track System	16344750	16344750	14575672
				Need Based Scholarships	33501000	33501000	33501000
				IT Network Data Centre	33767408	35223456	34727704
				UIIT	75631955	78952610	79220814
				UIMS	63569950	66173460	66566940
				Institute of Soil Science	0	25383791	25558060
				Institute of Food & Nutritional Sciences	0	29262072	29472104
				Institute of Biochemistry & Biotechnology	0	29614562	31705048
				Institute of Geo-Information & Earth Observations	0	12447634	13102206
				Institute of Hydroponic Agriculture	32934654	42966938	37365110
				UAAR Research Farm Chakwal Road	27033953	36086058	34342550
				PMAS-AAUR Sub Campus Khushab	58817315	58646731	50447446
				PMAS-AAUR Sub Campus Attock	18771489	26331934	28079538
Total	2049183037	2049183037	2049183037	Total	2049173037	2005745596	2097865680

FINANCIAL YEAR AT A GLANCE

SUMMARY OF BUDGET ESTIMATES



RECURRING BUDGET

Recurring Funding (Punjab Govt.) In Million Rs.						
2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
43.079	50.241	55.265	73.984	78.423	78.423	71.003
Recurring Funding (HEC) In Million Rs						
2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
364.251	414.441	464.379	533.344	606.153	651.180	663.714

SELF GENERATED INCOME

For FY 2017-18 = Rs. 768.975 million

For FY 2018-19 = Rs. 806.267 million

SUMMARY OF DEVELOPMENT BUDGET ESTIMATES (2018-19)

S. No.	Name of Project	Estimated Cost (Rs. In m)	Total Exp. Upto (30.06.17) Actual (Rs. In m)	Unspent Balance Carried Forward for (2017-18) (Rs. In m)	Releases during (2017-18) (Rs. In m)	Total Available Funds (2017-18) (5+6) (Rs. In m)	Exp. During (2017-18) (Rs. In m)	Total Exp. (4+8) (Rs. In m)	Unspent Balance Carried forward 2018-19 (7-8) (Rs. In m)	PSDP Allocation (2018-19) (Rs. In m)	Estimated Budget During (2018-19) (10+11) (Rs. In m)
1	2	3	4	5	6	7	8	9	10	11	12
i.	Establishment of Sub Campus of PMAS-AAUR at Attock (Phase-II)	188.260	0.000	0.000	130.00	130.00	58.475	58.475	71.525	200.00	271.525
ii.	Strengthening of Agricultural Engineering & Women Development Programs at PMAS-AAUR	751.244	84.161	315.839	100.00	415.839	170.48	254.641	245.359	251.244	496.603
	Grand Total	939.504	84.161	315.839	230.00	545.839	228.955	313.116	316.884	451.244	768.128

AUDIT REPORT

DIRECTOR GENERAL AUDIT PUNJAB

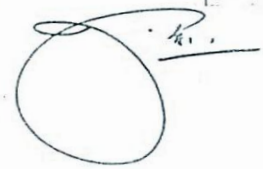
6th Floor, AG Punjab Complex
Phone No: 042-99210147 Fax No: 042-99210166

1. SIGNATURE BLOCK

SEEN AND DISCUSSED CERTIFICATE

Except that contained in the forgoing paragraphs, the maintenance of accounts was found satisfactory.

Audit				
Name	Designation	Authority	Signature	Date
Mr. Muhammad Rizwan Talib	Audit Officer	AIR Issuance Authority		
Mr. Muhammad Naveed	Senior Auditor			

Entity				
Name	Designation	Organizational Role	Signature	Date
Syeda Irum Umer	Treasurer	DDO		
Raja Arsal Mehd	Dy Treas	DDO (Financial Power up to Rs. 25,000)		
Abdul Wahid	Dy Treas	DDO (Financial Power up to Rs. 25,000)		

UNIVERSITY GOVERNANCE

SYNDICATE

The syndicate is the executive body of the University. Subject to the provisions of the Act and the Statutes, it takes effective measures to raise the standard of teaching, research and publications and other academic pursuits and exercises general supervision over the affairs and management of the property of the University. During the reporting period, three (03) **Syndicate meeting** was arranged and necessary decisions were taken in the best interest of PMAS-AAUR.

The University Syndicate consists of:

a.	The Vice Chancellor	Chairman
b.	Member of Provincial Assembly of the Punjab nominated by the Speaker of the Assembly	Member
c.	Chief Justice of the Lahore High Court, or his nominee	Member
d.	Secretary, Department of Agriculture, Government of Punjab, Lahore	Ex-officio Member
e.	Secretary, Department of Livestock and Dairy Development, Government of Punjab, Lahore	Ex-officio Member
f.	Secretary, Department of Finance, Government of the Punjab, Lahore.	Ex-officio Member
g.	One nominee of the Higher Education Commission	Member
h.	One Dean to be nominated by the Chancellor on the recommendations of the Vice Chancellor	Member
i.	Four elected members from the faculty of the University	Members
j.	Three persons of eminence to be nominated by the Chancellor	Members
k.	The Registrar	Secretary

ACADEMIC COUNCIL

The Academic Council is the academic body of the University. It is responsible to lay down proper standards of teaching / instructions, research, publications and examinations and to regulate and promote the academic life at the University. In year 2018, **two (02) meeting of Academic Council** was conducted, wherein revised/amended and new curricula for Undergraduate and Postgraduate studies were discussed and approved. The general rules and regulations pertaining to academic and administration were also argued and the decisions were made for implementation.

The Academic Council consists of:

a.	The Vice Chancellor	Chairman
b.	The Deans of the Faculties	Members
c.	The Directors of the Divisions/Institutes	Members
d.	All University Professors including Professors Emeritus	Members
e.	The Chairmen/Chairpersons of the Teaching Departments	Members
f.	All Associate Professors	Members
g.	Two Assistant Professors and two Lecturers to be elected by and from amongst themselves	Members
h.	The Librarian	Members
i.	The Controller of Examinations	Members
j.	Two Agricultural Scientists to be nominated by the Chancellor	Members
k.	Four representatives of NARC to be nominated by the Director General, NARC, Islamabad	Members
l.	The Registrar	Member/Secretary

ADVANCED STUDIES AND RESEARCH BOARD

The Advanced Studies and Research Board advise the authorities on all matters concerning promotion of advanced studies, publications and research in the University. The board considers and reports to the authorities on the institution of research degrees in the University. In the academic year 2018, Advanced Studies & Research Board was met for four times; the board afforded approvals and advised amendments, where necessary, on admission to post-graduate level, synopsis and research titles of post-graduate students, rules and regulations. The Board also scrutinized various research projects and approved/referred for revision.

Advanced Studies and Research Board consists of:

a.	The Vice Chancellor	Chairman
b.	The Deans	Members
c.	Directors of the Divisions and the Institutes of the University	Members
d.	Principals of Affiliated Colleges/Directors of affiliated Institutes	Members
e.	Three University Professors, other than Deans, to be appointed by the Syndicate	Members
f.	Three University teachers to be appointed by the Academic Council	Members
g.	Five experts from other sister Institutions to be nominated by the Syndicate	Members
h.	Director Advanced Studies	Secretary

FINANCE AND PLANNING COMMITTEE

The Finance and Planning Committee advise the Syndicate on all matters relating to planning, development, finance, investments, and accounts of the University. In year 2018, two (02) meetings of Finance and Planning Committee were conducted

The Finance and Planning Committee consists of:

a.	The Vice Chancellor	Chairman
b.	One member of the Syndicate to be appointed by the Syndicate	Member
c.	Two members of the Academic Council to be appointed by the Academic Council	Members
d.	Two nominees of the Chancellor, one each from Agriculture Department and Finance Department, Punjab	Members
e.	The Registrar	Member
f.	The Treasurer	Member/Secretary

CAMPUS COMMITTEE

The syndicate of the University approved the constitution of Campus Committee with the following Rules of Business:

- To approve all estimates for the purchase of lands and construction work on the campus
- To engage Architects and Engineering consultants
- To let out works to the contractors
- To do other necessary works to complete the construction at the campus

In year 2018, three (03) meetings of Campus Committee were conducted. The Campus Committee consists of:

a.	The Vice Chancellor	Chairman
b.	Director General RDA or His representative	Member
c.	Superintending Engineer Building Department Rawalpindi.	Member
d.	DCO Rawalpindi or His representative (for purchase of Land)	Member
e.	Dean FA&ET	Member
f.	Principal Officer Student Affairs	Member
g.	Principal Officer Estate Care & Security	Member
h.	The Registrar	Member
i.	The Treasurer	Member
j.	The Resident Auditor	Member
k.	Project Director Works	Member
l.	Director Planning & Development	Member/Secretary

FACULTY PUBLICATIONS

1. Abbas, A., M.F. Iqbal, A. Riaz, M.U. Hassan, M. Shoaib, A.A. Mian and K. Ishaq. 2018. Influence on Performance meat quality and antioxidant status of broilers. *Pakistan Journal of Science*. 70(3), 242-249.
2. Abbas, R., B. Shahbaz, N. A. Shah, N. Khan, I. Ashraf, and B. N. Siddiqui. 2018. Cotton leaf curls virus diseases in district Jhang Punjab Pakistan. *Asian Journal of Agricultural Extension, Economics & Sociology*, 28(1), 1-6. (International.)
3. Abbas, M. F. and F. Naz. 2018. First report of *Diplodia seriata* causing fruit rot of loquat in Pakistan. *Journal of Plant Pathology*. Print ISSN1125-4653 Online ISSN2239-7264. <https://doi.org/10.1007/s42161-018-0048-4> [IF=1.381]
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SEMINARS, WORKSHOPS & CONFERENCES

SEMINARS, WORKSHOPS & CONFERENCES HELD AT UNIVERSITY

Sr. No.	Title of Events	Date
1.	World Soil Day Seminar	02.01.2018 to 03.01.2018
2.	1 st International Poultry Training on Techniques and Management of Artificial Insemination in Poultry	11.01.2018 to 12.01.2018
3.	National dog show (GSDCP)	21.01.2018
4.	Use of ultrasonography on reproduction of domestic animals	30.01.2018
5.	Livestock health management	07.02.2018
6.	Advance in dairy technology	13.02.2018
7.	Modern Drugs and livestock health	13.02.2018
8.	4 th International Training workshop on Commercial Ostrich Farming	14.02.2018 to 15.02.2018
9.	Cancer Awareness	27.02.2018
10.	International seminar on promotion of floriculture in Pakistan	07.03.2018 to 08.07.2018
11.	International training on Innovative and sustainable water harvesting techniques for Agriculture	08.03.2018 to 13.03.2018
12.	A one day seminar regarding “Weeds Eradication” Campaign	14.03.2018
13.	Lab Biosafety and Biosecurity	19.03.2018
14.	One day seminar on “Nature for water and rural water demand attention”	27.03.2018
15.	Cryopreservation Techniques	02.04.2018 to 03.04.2018
16.	International seminar on cut flower	04.04.2018 to 05.04.2018
17.	Training and farmers day on “Water harvesting techniques”	05.04.2018
18.	International Horticultural conference Pakistan 2018	25.04.2018 to 27.04.2018
19.	1 st Food Product Development Competition	25.04.2018

20.	1 st National training workshop on commercial dairy farming	3.05.2018 to 04.05.2018
21.	Next Generation Sequencing Genomic Data Analysis	10.05.2018
22.	Seminar on the concept of “Halal and Tayyab”	15.05.2018
23.	Seminar on Poultry Export: Introduction, opportunities and Challenges	16.05.2018
24.	Seminar on Beekeeping and world bee day celebrations	21.05.2018
25.	International training on “Water harvesting techniques and installation of field equipment enviro scan	22.05.2018 to 25.05.2018
26.	Training of Women-folks on “Sustainable Agricultural water management and rain water harvesting techniques”	01.06.2018
27.	Training and capacity building in sustainable agriculture water management to address food security and social instability in Pakistan	27.06.2018 to 29.06.2018
28.	International seminar on olive micro propagation	18.07.2018
29.	Block Chain Training WorkShop	23.07.2018 to 17.08.2018
30.	1 st National training workshop on commercial mutton production	23.08.2018
31.	One day seminar on Improving Agricultural Extension in Pakistan through communication for development (C4D)	11.10.2018
32.	Farmers Field day	15.10.2018
33.	Seminar of “World Food Day Celebrations 2018	16.10.2018
34.	Food Product Development Competition at occasion of World Food day Celebrations	16.10.2018
35.	Farmer Field day	17.10.2018
36.	National conference on Pak- Agriculture at cross road of water scarcity and climate change	08.11.2018 to 09.11.2018
37.	One day seminar on Improving Agricultural Extension in Pakistan through communication for development (C4D)	20.11.2018
38.	National Poultry Symposium on Health and Welfare as Conference Secretary with collaboration of WPSA	11.12.2018 to 12.12.2018
39.	Three days Halal Auditor Course	12.12.2018 to 14.12.2018
40.	International Seminar on Avian Diseases Diagnosis	13.12.2018
41.	International e-learning course Global food safety trends: Application of advanced technologies	17.12.2018 to 20.12.2018

WORKSHOPS, SEMINARS AND CONFERENCES ATTENDED BY THE FACULTY

INTERNATIONAL

1. Dr. Yamin Bibi, Assistant Professor, Department of Botany attended 34th International Conference on Natrul Products Exploring Natural Products for Drug Discovery smd Health Care at Penang, Malaysia on March 19-21, 2018.
2. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Science attended 11th Asia Pacific Poultry Conference at Bangkok, Thailand on March 25-27, 2018.
3. Dr. Yamin Bibi, Assistant Professor, Department of Botany attended 2nd International Conference on Agriculture, Food, Forest Sciences and Technologies (ICAFOF 2018) at Izmir, Turkey at April 02-05, 2018.
4. Dr. Ghazala Koukab Raja, Director, University Institute of Biochemistry and Biotechnology attended 20th European Congress of Endocrinology at Barcelona, Spain on May 19-21, 2018.
5. Dr. Saud Altaf, Assistant Professor, University Institute of Information Technology attended 8th International Conference on Information Science and Technology at Cordoba, Spain on June 30 to July 06, 2018.
6. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended three days International Conference on Towards Inclusive and Sustainable Agricultural harmonizing Environmental Social and Economic Dimensions Is it Possible? at Kuching, Malaysia on July 09-11, 2018.
7. Dr. Bushra Allah Rakha, Lecturer, Department of Wildlife Management attended 55th Annual Meeting of the Society for Cryobiology Scientific Challenges of Cryobiology at Madird, Spain on July 10-13, 2018
8. Dr. Muhammad Rais, Assistant Professor, Department of Wildlife Management attended Joint Meeting of Ichthyologists and Herpetologists at Rochester, USA on July 11-15, 2018.
9. Dr. Noshin Ilyas, Assistant Professor, Department of Botany attended Botany 2018 Thriving Biodiversity at Rochester, USA on July 21-25, 2018.
10. Prof. Dr. Arfan Yousaf, Dean, Faculty of Veterinary & Animal Sciences, Dr. Ayesha Riaz Assistant Professor and Dr. Saif-ur-Rehman, Assistant Professor, Department of Parasitology and Microbiology attended One Health Training Workshop at Bali, Indonesia on July 23-28, 2018.
11. Dr. Tariq Mahmood, Assistant Professor, Department of Wildlife Management attended Developing Ecological Monitoring Methods for Pangolins at Cambridge University, United Kingdom on July 24-26, 2018.
12. Dr. Tariq Mahmood, Assistant Professor, Department of Wildlife Management attended Conservation Asia 2018 at American University of Central Asia, Bishkek, Republic of Kyrgyzstan on August 06-10, 2018.
13. Dr. Audil Rashid, Assistant Professor, Department of Environmental Sciences attended 2018 joint annual Meeting as Member Technical Organizing Committee for ISES-ISEE at Ottawa, Canada on August 26-30, 2018.

14. Dr. Murtaz-ul-Hassan, Assistant Professor, Department of Parasitology and Microbiology attended Advanced Agriculture Biorisk Management at Jakarta, Indonesia on August 08, 2018 to September 05, 2018.
15. Prof. Dr. M. Inam-ul-Haq, Department of Plant Pathology and Dr. Anwar Ahmad , Associate Professor, Institute of Food and Nutritional Sciences attended International Agricultural Biological and Life Science Conference at Edirne, Turkey on September 02-05, 2018.
16. Prof. Dr. Arfan Yousaf, Dean, Faculty of Veterinary & Animal Sciences, Dr. Tanveer Ahmad, Associate Professor, Mr. Munibullah, Lecturer, and Mr. Muhammad Shakeel, Lecturer, Department of Livestock Production attended Advanced Agriculture Bio risk Training at Indonesia on September 02-05, 2018.
17. Dr. Ghazala Koukab Raja, Director, University Institute of Biochemistry and Biotechnology attended Hypertension Beijing 2018. 27th Scientific Meeting of the International society of Hypertension (ISH) at Beijing, China on September 20-23, 2018
18. Prof. Dr. Abdul Saboor, Dean, Faculty of Social Sciences attended Hindu Kush Himalaya Science Policy Forum, Actions to Sustain a Global Asset at ICIMOD, Kathmandu, Nepal on November 13-14, 2018.
19. Prof. Dr. Abdul Saboor, Dean, Faculty of Social Sciences attended International Consultative Workshop on Strengthening Regional Cooperation across Trans boundary Landscapes and River Basins in the Hindu Kush Himalaya Trans boundary Cooperation 2018 at ICIMOD, Kathmandu, Nepal on November 15-16, 2018.
20. Prof. Dr. Abdul Saboor, Dean, Faculty of Social Sciences attended the 1st International Forum on Cross Boarder E- Commerce Cooperation, key Note Speaker on Scope and Potential of E-Commerce in the Agrarian Economy of Pakistan Triangulation of Ali Baba Model at Huazhong Agricultural University, Wuhan, China on November 26-29, 2018.

NATIONAL

1. Mr. Munibullah, Lecturer, Department of Clinical Studies attended the training workshop on Techniques and Management of Artificial Insemination in Poultry at PMAS-AAUR on January 18-19, 2018.
2. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended Public Policy Forum and Inequality Concert at PMAS-AAUR on January 2018.
3. Dr. Muhammad Naveed Tahir, Assistant Professor, Department of Agronomy attended Climate Change Risks in the Cotton Value Chain Seed Cotton Production at Islamabad Hotel on January 25, 2018.
4. Dr. Munir Ahmad, Assistant Professor and Dr. Muhammad Asif Aziz, Assistant Professor, Department of Entomology attended Honey quality control parameters and analytical methodologies at NARC, Islamabad on February 02, 2018.
5. Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended 3 days training workshop on Resource Mobilization for Rural Development at AHKNCRD on February 06-08, 2018.
6. Dr. Ghazala Koukab Raja, Director, Dr. Muhammad Javaid Asad, Associate Professor and Dr. Muhammad Sheeraz Ahmad, Assistant Professor, University Institute of Biochemistry and

Biotechnology attended Institutional Biosafety Committee Workshop at COMSTECH, Islamabad on February 12-16, 2018.

7. Dr. Abid Ghafoor Chaudhry, Associate Professor and Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended Seminar on The Dynamics of Fourth Industrial Revolution Opportunities for Pakistan at Institute of Police Studies, E-11/3, Islamabad on February 16, 2018.
8. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended Scope and Role of Social Sciences regarding women empowerment in Pakistan at Al Kousar College for Women in February 17, 2018.
9. Dr. Abid Ghafoor Chaudhry, Associate Professor and Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended International Conference on Owning Human Rights for a better world at Serena Hotel on February 19-21, 2018.
10. Prof. Dr. Abdul Saboor, Dean Faculty of Social Sciences attended International Conference on Social Sciences and Information Communication Technologies at Sindh Agriculture University, Tandojam on February 20, 2018.
11. Ms. Saima Asad, Lecturer, Department of Economics attended Training Workshop on Research Methodology at PMAS-AAUR on February 20-23, 2018.
12. Dr. Abid Ghafoor Chaudhry, Associate Professor and Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended International Seminar on Pluralism vs. Exclusionism: The case of rising extremism at Marriott Hotel, Islamabad on February 22, 2018.
13. Dr. Abid Ghafoor Chaudhry, Associate Professor, Department of Anthropology attended Certificate Distribution of thematic Lectures at PMAS-AAUR on February 23., 2018.
14. Dr. Munir Ahmad, Associate Professor, Department of Entomology attended the Seminar on Entomology for better world at Mian Nawaz Sharif University of Agriculture, Multan on February 26.2018.
15. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology and Dr. Tariq Mahmood, Assistant Professor, Dr. Muhammad Rais, Assistant Professor, Dr. Bushra Allah Rakha, Lecturer, Department of Wildlife Management and Dr. Muhammad Zubair Anjum, Assistant Professor, Department of Zoology attended 38th Pakistan Congress of Zoology at University of the Punjab, Lahore on February 27 to March 01, 2018.
16. Mr. Munibullah, Lecturer, Department of Clinical Studies attended Wild Animal Diseases Management at Wildlife Research Center, Faisalabad on March 03-18, 2018.
17. Prof. Dr. Asif Ahmad, Director and Dr. Anwar Ahmed, Associate Professor, Institute of Food and Nutritional Sciences attended International Conference on Plant Based Foods: Current Scenario and Future Perspectives at Mian Nawaz Sharif University of Agriculture, Multan on March 5-6, 2018.
18. Dr. Azeem Khalid, Associate Professor and Dr. Shahid Mahmood, Assistant Professor, Department of Environmental Sciences attended 17th International Congress of Soil Science Ultimate Solution to Food Security and Climate Change at Sarina Hotel, Faisalabad on March 13-15, 2018.
19. Dr. Noshin Ilyas, Assistant Professor, Department of Botany attended International Workshop on Plant Genetic Resources and Genebank Operation Management System at COMSTECH, 33-Constitution Avenue, G-5/2, Islamabad on March 08-11, 2018.

20. Dr. Muhammad Asif Aziz, Assistant Professor, Department of Entomology attended 14th National Beekeeping Workshop for Production of Honey and other Beekeeping Products at University of Punjab, Lahore on March 12-16, 2018.
21. Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended 05 days training workshop on Monitoring and Evaluation of Rural Development Projects at AHKNCRD National Center for Rural Development, Chak Shahzad, Islamabad on March 12-16, 2018.
22. Dr. Muhammad Akmal, Associate Professor and Dr. Qaiser Hussain, Assistant Professor, Institute of Soil Science attended 17th International Congress of Soil Science at Faisalabad on March 13-15, 2018.
23. Prof. Dr. Ata-ul- Mohsin, Department of Entomology and Dr. Muhammad Rasheed, Associate Professor, Department of Agronomy attended “A one day Seminar regarding Weeds Eradication Campaign” at PMAS-AAUR on March 14, 2018.
24. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended the 83rd Workshop on Human Rights of Women Social Cultural and Economic Challenges at March 15, 2018.
25. Prof. Dr. Asif Ahmad, Director, Dr. Anwar Ahmed, Associate Professor and Dr. Rai Muhamamd Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended 1st Pakistan Halal Assembly at Government College University Faisalabad on March 21-22, 2018.
26. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology, Dr. Noshin Ilyas, Assistant Professor, Dr. Zia-ur-Rehman Mashwani, Assistant Professor, Department of Botany, Dr. Farah Naz, Assistant Professor, Dr. Gulshan Irshad, Assistant Professor, Mr. Muhammad Usman Raja, Assistant Professor, Department of Plant Pathology and Dr. Muhammad Sheeraz Ahmad, Assistant Professor, University Institute of Biochemistry and Biotechnology attended 16th National and 7th International Botanical Conference at Islamia College Peshawar and University of Peshawar on March 23-27, 2018.
27. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended 14th National Weed Science Congress of Weed Science Society of Pakistan at Islamia College Peshawar on March 24-25, 2018.
28. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology, Dr. Ghulam Abbas Shah, Assistant Professor, Department of Agronomy and Dr. Imran Bodlah, Assistant Professor, Department of Entomology attended Challenges and Opportunities to Boost Agriculture in Changing Climate at College of Agriculture, BZU, Bahadur Sub-Campus Layyah on March 26-28, 2018.
29. Dr. Tariq Mahmood, Assistant Professor, Department of Wildlife Management and Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended Seminar on inclusive Wildlife Conservation Integrating Amphibians and Reptiles in Wildlife Conservation at PMAS-AAUR on March 29, 2018.
30. Dr. Muhammad Rais, Assistant Professor, Department of Wildlife Management attended the Seminar on Sensitivity of Various Herpetofauna Species in Agricultural at PMAS-AAUR on March 29, 2018.
31. Dr. Tariq Mahmood, Assistant Professor, Department of Wildlife Management attended the Seminar on Analyzing Global Climate Datasets using Grid Analysis and Display System at Allama Iqbal Open University, Islamabad on April 03-04, 2018.
32. Ms. Saima Asad, Lecturer, Department of Economics attended Training Workshop on Resources Mobilization for Rural Development at April 04-05, 2018.

33. Dr. Azeem Khalid, Associate Professor and Dr. Shahid Mahmood, Assistant Professor, Department of Environmental Sciences attended Training and Farmers day on Water Harvesting Techniques at University College of Agriculture, University of Sargodha on April 05, 2018.
34. Dr. Muhammad Rais, Assistant Professor, Department of Wildlife Management attended Seminar on Reptile Conservation Global Perspective at Margalla Hills National Park, Islamabad on April 08, 2018.
35. Prof. Dr. Maqsood Anwar, Department of Wildlife Management attended Coordination and Consultation meeting of Green Pakistan Programme Revival of wildlife resources of Pakistan at Green Pakistan Programme Office Adventure Complex, Garden Avenue, Islamabad on April 17-18, 2018.
36. Dr. Ghazala Koukab Raja, Director and Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry and Biotechnology attended Master Training Workshop at Margala Hotel, Islamabad on April 24-28, 2018.
37. Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended 5 days Training on Engaging Communities through Museum and Heritage at Lahore on April, 24-28, 2018.
38. Dr. Naveed Iqbal Raja, Assistant Professor and Dr. Zia-ur-Rehman Mashwani, Assistant Professor, Department of Botany attended Particle Distribution Techniques and Elemental Concentration EDDXRF Seminar at Rawalpindi Chamber of Commerce and Industries, Rawalpindi on April 25, 2018.
39. Prof. Dr. Asif Ahmad, Director and Dr. Rai Muhamamd Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended 1st Food Product Development Competition at PMAS-AAUR on April 25, 2018.
40. Dr. Imran Bodlah, Assistant Professor, Department of Entomology attended 1st International Conference on Climate Change Impacts on Agriculture and Food Supply at University of Sawabi, K.P.K. on April 26, 2018.
41. Prof. Dr. Ata-ul-Mohsin, Department of Entomology, Prof. Dr. Tariq Mukhtar, Department of Plant Pathology, Prof. Dr. Noshad Khan, Dr. Badar Naseem Siddiqui, Associate Professor, Department of Agricultural Extension, Dr. Asim Gulzar, Assistant Professor, Department of Entomology, Dr. Muhammad Ashfaq, Associate Professor, Mr. Muhammad Usman Raja, Assistant Professor, Department of Plant Pathology, Dr. Shahzada Sohail Ijaz, Associate Professor, Dr. Muhammad Akmal, Associate Professor, Institute of Soil Science, Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management, Dr. Anwar Ahmed, Associate Professor, Dr. Rai Muhamamd Amir, Assistant Professor and Dr. Kashif Sarfraz Abbasi, Assistant Professor, Institute of Food and Nutritional Sciences attended International Horticulture Conference Pakistan 2018 at PMAS-AAUR on April 25-27, 2018.
42. Prof. Dr. Muhammad Naeem, Department of Entomology attended Seminar on Biodiversity Ecosystem Management Approaches at April 27, 2018.
43. Dr. Muhammad Fiaz, Assistant Professor and Muhammad Imran Khan, Lecturer, Department of Livestock Production and Management attended International TVET Conference Pakistan 2018 at Marriot Hotel, Islamabad on May 03, 2018.
44. Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended Application of Drone for Forest Cover Mapping in REDD at Pakistan Forest Institute, Peshawar on May 07-10, 2018.

45. Dr. Audil Rashid, Assistant Professor, Department of Environmental Sciences attended International Workshop on Phyto Technologies for Environmental Cleanup organized by Institute of Environmental Sciences and Engineering at NUST, Islamabad at May 08-09, 2018.
46. Dr. Farid Asif Shaheen, Assistant Professor, Department of Entomology attended 3rd International Conference on Biosciences at G.C. University, Peshawar on May 09-11, 2018.
47. Dr. Imran Bodlah, Assistant Professor, Department of Entomology attended National Symposium on SoilPlant Water Interaction for Orchards Management under Changing Climate at University of Haripur, K.P.K. on May 09-11, 2018.
48. Prof. Dr. Asif Ahmad, Director, Dr. Asma Sohail, Assistant Professor, Dr. Rai Muhamamd Amir, Assistant Professor, Dr. Kashif Sarfraz Abbasi, Assistant Professor, Ms. Asia Latif, Lecturer and Mr. Muhammad Touseef, Lecturer, Institute of Food and Nutritional Sciences attended Seminar on the concept of “Halal and Tayyab” at PMAS-AAUR on May 15, 2018.
49. Dr. Azeem Khalid, Associate Professor, Department of Environmental Sciences attended International Training on Water Harvesting Techniques and Installation of field Equipment Envirosca at University Research Farm Koont and University College of Agriculture, Sargodha on May 22-25, 2018.
50. Prof. Dr. Tariq Mahmood, Dr. Azeem Khalid, Associate Professor and Dr. Shahid Mahmood, Assistant Professor, Department of Environmental Sciences attended Training of Women Folks on Sustainable Agricultural Water Management and Rain Water Harvesting Techniques at PMAS-AAUR on June 01, 2018.
51. Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended One day Seminar on Industry Academia Collaboration Commercialization of Academic Research at PMAS-AAUR on June 07, 2018.
52. Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended Significance of Institutional Performance Evaluation in Quality Assurance at HEI's at PMAS-AAUR on June 13, 2018.
53. Prof. Dr. Tariq Mahmood, Dr. Azeem Khalid, Associate Professor, Dr. Audil Rashid, Assistant Professor and Dr. Shahid Mahmood, Assistant Professor, Department of Environmental Sciences attended Farmers Day on Rain Water Harvesting Technique at U.R.F.K, Rawalpindi on June 21, 2018.
54. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended International Workshop on Sustainable Food Systems Under Climate Change in South Asia at Sarena Hotel, Islamabad on June 26-28, 2018.
55. Prof. Dr. Muhammad Naeem, Department of Entomology, Dr. Irfan Aziz, Associate Professor, Department of Agronomy, Prof. Dr. Tariq Mahmood, Dr. Azeem Khalid, Associate Professor, Dr. Audil Rashid, Assistant Professor, Dr. Shahid Mahmood, Assistant Professor and Ms. Anika Batool, Lecturer, Department of Environmental Sciences, Dr. Saeed Gulzar, Assistant Professor, Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management and Dr. Rai Muhamamd Amir, Assistant Professor, Institute of Food & Nutritional Sciences attended Training and Capacity Building in Sustainable Agriculture Water Management to address Food Security and Social Instability in Pakistan at PMAS-AAUR on June 27-29, 2018.
56. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended International Conference on Biological Control of Pests and Diseases Progress and Prospects at University of Karachi, Karachi on July 09-11, 2018.

57. Dr. Sadia Saeed, Assistant Professor, University Institute of Biochemistry and Biotechnology attended Pakistan China Genomics Workshop 2018 at Quaid-e- Azam University, Islamabad on July 17-19, 2018.
58. Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended One day seminar on Desertification and Ways to combat it at PMAS-AAUR on July 18, 2018.
59. Dr. Ghazala Koukab Raja, Director and Dr. Muhammad Javaid Asad, Associate Professor, University Institute of Biochemistry and Biotechnology attended National Diabetes Survey 2016-2017 Dissemination Seminar at Ramada Hotel, Islamabad on July 18, 2018.
60. Dr. Abid Riaz, Associate Professor, Department of Plant Pathology attended IPM Workshop at PMAS-AAUR on July 19, 2018.
61. Dr. Kashif Sattar, Assistant Professor, University Institute of Information Technology attended Block Chain Training Workshop at UIIT, PMAS-AAUR on July 23 to August 17, 2018.
62. Prof. Dr. Ata-ul-Mohsin, Department of Entomology attended Annual Review Workshop of the ACIAR Pulses Project 041 at Crop Sciences Institute at NARC, Islamabad on August, 02-03.2018.
63. Prof. Dr. Ata-ul-Mohsin, Department of Entomology attended Seminar of Dengue Mosquito Management at PMAS-AAUR on August 08, 2018.
64. Dr. Abid Ghafoor Chaudhry, Associate Professor and Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended One day Seminar on Water Crisis Issues and Way Forward at national center for Rural Development Chak Shahzad, Islamabad on August 16, 2018.
65. Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended Seminar on Youth Driven Climate Action at SDPI office, Islamabad on August 28, 2018.
66. Prof. Dr. Maqsood Anwar, Department of Wildlife Management attended Inception Workshop Pakistan Snow Leopard and Ecosystem Protection Program at Margalla Hotel, Islamabad on August 30, 2018.
67. Dr. Naveed Iqbal Raja, Assistant Professor and Dr. Zia-ur-Rhman Mashwani, Assistant Professor, Department of Botany attended 2nd International conference “Conservation of Medicinal and Aromatic plants for Improving the livelihood of mountain communities through industrial linkage” at University of Swat, Mangora on September 03-05, 2018.
68. Ms. Aniq Batoool, Lecturer, Department of Environmental Sciences attended Workshop on Environmental Impact Assessment at NCRD on September 03-05, 2018.
69. Ms. Aniq Batoool, Lecturer, Department of Environmental Sciences attended Mercury Awareness Seminar at Margalla Hotel, Islamabad on September 05, 2018.
70. Ms. Sabeeqa Usman Malik, Lecturer, Department of Forestry and Range Management attended National Workshop on Best Practices on Sustainable Forest Management in Pakistan at Naran on September 06-07, 2018.
71. Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry and Biotechnology attended International Biotechnology Brainstorming Workshop on Animal Genomics at PARC, Islamabad on September 11, 2018.
72. Dr. Naveed Iqbal Raja, Assistant Professor, Dr. Zia-ur- Rehman Mashwani, Assistant Professor, Department of Botany and Dr. Muhammad Sheeraz Ahmad Assistant Professor, Department of University Institute of Biochemistry and Biotechnology attended 2nd International Science

- conference Natural Science, Climate and Biodiversity at University of Azad Jammu & Kashmir, Muzaffarabad on September 15-17, 2018.
73. Prof. Dr. Asif Ahmad, Director, Dr. Anwar Ahmed, Associate Professor and Dr. Rai Muhamamd Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended All Pakistan Food Science Conference, at University of Agriculture, Faisalabad on September 24, 2018.
 74. Dr. Muhammad Javaid Asad, Associate Professor and Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry and Biotechnology attended Health Research A step towards attaining SDGs 2030 a September 24-25, 2018.
 75. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended Seminar on New Dimensions of Tajikistan, Uzbekistan Relations Positive Impact on the Region at Islamabad on October 04, 2018.
 76. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended Remote Sensing of Ruthenium in Pakistan: Technical Workshop at Ramada Hotel, Islamabad on October 04-05, 2018.
 77. Mr. Munibullah, Lecturer, Department of Clinical Studies attended International Conference of Transboundary Diseases of Veterinary and Public Health at University of Veterinary and Animal Sciences, Lahore on October 04-06, 2018.
 78. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended International Conference Climate Smart Agriculture the Way of Farming for 21st Century at Mian Nawaz Sharif University of Agriculture, Multan on October 8-9, 2018.
 79. Ms. Aniq Batool, Lecturer, Department of Environmental Science attended Curriculum Orientation Workshop on Environmental Sciences at HEC, Islamabad on October 08-10, 2018.
 80. Dr. Asim Gulzar, Assistant Professor, Department of Entomology attended IMRC, 4th International Multidisciplinary Research Conference at Sarhad University, Peshawar on October 09-11, 2018.
 81. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended the Seminar on Climate smart Agriculture: Building Resilience to Climate Change at PMAS-AAUR on October 12, 2018.
 82. Prof. Dr. Muhammad Ali Shah, Chairman, Dr. Mutraz-ul-Hassan, Associate Professor, Dr. Saif-ur-Rehman, Assistant Professor and Dr. Ayesha Riaz, Assistant Professor, Department of Pathobiology attended Awareness Seminar on Word Egg Day at PMAS-AAUR on October 12, 2018.
 83. Dr. Gulnaz Hameed, Assistant Professor, Department of Economics attended 11th Annual Conference on Rural Women day Making Democracy real for rural women and girls Setting a Shared agenda for empowerment and Progress at Islamabad on October 15-16, 2018.
 84. Dr. Muhammad Zubair Anjum, Assistant Professor, Department of Zoology attended a Workshop on Fish Production and Conservation (Workshop) at Fish Seed Hatchery and Research Centre, Rawal Town, Islamabad on October 16, 2018.
 85. Prof. Dr. Asif Ahmad, Director and Dr. Rai Muhamamd Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended Seminar at Occasion of “World Food Day Celebration at PMAS-AAUR on October 16, 2018.

86. Prof. Dr. Asif Ahmad, Director and Dr. Rai Muhamamd Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended Food Product Development Competition at PMAS-AAUR on October 16, 2018.
87. Dr. Tanveer Ahmad, Associate Professor, Department of Livestock Production and Management and Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry and Biotechnology attended Brainstorming Workshop on Development of National Biotechnology Policy at NUST, Islamabad on October 18, 2018.
88. Dr. Rai Muhammad Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended One Day Training on Quality Assurance and Quality Control Process of Wheat Flour Fortification at District Jhelum, Pakistan on October 26, 2018
89. Prof. Dr. Muhammad Ali Shah, Chairman, Dr. Mutraz-ul-Hassan, Associate Professor, Dr. Saif-ur-Rehman, Assistant Professor, Dr. Ayesha Riaz, Assistant Professor, Department of Pathobiology attended Awareness Seminar on World Rabies Day at PMAS-AAUR on October 10, 2018.
90. Dr. Muhammad Zubair Anjum, Assistant Professor, Department of Zoology attended a Seminar on Aquaculture: Challenges and Opportunities in Pakistan at University of Agriculture, Faisalabad on November 06, 2018.
91. Prof. Dr. Noshad Khan, Department of Agriculture Extension, Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy and Dr. Saeed Gulzar, Assistant Professor, Department of Forestry & Range Management attended National Conference on Pak. Agriculture at Cross Road of Water Scarcity and Climate Change at PMAS-AAUR on November 08-09, 2018.
92. Prof. Dr. Ata-ul-Mohsin, Department of Entomology attended Mid Term Review of ACIAR, Pulses Project 041 at NARC, Islamabad on November 12-14, 2018.
93. Dr. Tayyaba Zainab, Assistant Professor, University Institute of Biochemistry and Biotechnology attended Three Days National Conference on Bioactivity of Phytochemicals at University of Lahore, Lahore on November 13-15, 2018.
94. Dr. Safdar Ali, Assistant Professor, Department of Agronomy attended Workshop/ Short Course on Weed Biological Control at CABI CWA Office Rawalpindi on November 13-16, 2018.
95. Dr. Zahid Akram, Associate Professor, Department of Plant Breeding & Genetics attended Crop Wild Genetic Resources of Pakistan and their Utilization at NARC, Islamabad on November 14, 2018.
96. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended National Conference on Agricultural Problems and Food Security in the Changing Climate at University of Agriculture Peshawar on November 14-17, 2018.
97. Dr. Naveed Iqbal Raja, Assistant Professor and Dr. Zia-ur- Rehmen Mashwani, Assistant Professor Department of Botany attended 4th International Innovation Summit, KP, 2018 at CECOS University Peshawar on November 22-23, 2018.
98. Prof. Dr. Ata-ul-Mohsin, Department of Entomology attended Pak-UK Vice Chancellor Forum at Marriot Hotel, Islamabad on November 25-27, 2018.
99. Dr. Shahzada Sohail Ijaz, Associate Professor, Institute of Soil Science attended the 1st International Conference on Soil & Crop Health in Changing Climate at MNS-University of Agriculture, Multan on November 28-29, 2018.

100. Dr. Azeem Khalid, Associate Professor, Department of Environmental Science attended National Consultation on Pakistan at Global Warming of 1.5-2.0 C: Capturing Opportunities and Managing Challenges at Islamabad on November 30, 2018.
101. Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management attended International Sustainable Development Conference at Margallah Hotel, Islamabad on December 04-07, 2018.
102. Dr. Gulnaz Hameed, Assistant Professor and Ms. Saima Asad, Lecturer, Department of Economics attended 21st Sustainable Development Conference Corridors of Knowledge for peace and Development at Islamabad on October 15-16, 2018.
103. Prof. Dr. Tariq Mukhtar, Department of Plant Pathology attended 2nd International Conference of Plant Sciences at G.C. University, Lahore on December 05-07, 2018.
104. Mr. Bashir Ahmad, Lecturer, Department of Economics attended National Conference on Pak-Agriculture at Cross Road of Water Scarcity and Climate Change at PMAS-AAUR on November 08-09, 2018.
105. Prof. Dr. Asif Ahmad, Director, Institute of Food and Nutritional Sciences attended 15th annual Fulbright Alumni Conference at Serena Hotel Islamabad on December 02, 2018.
106. Dr. Abid Riaz, Associate Professor, Department of Plant Pathology attended International Mountain Day (IMD) Seminar at PMAS-AAUR on December 11, 2018.
107. Prof. Dr. Maqsood Anwar, Department of Wildlife Management and Dr. Lubna Ansari, Lecturer, Department of Forestry and Range Management, Dr. Gulnaz Hameed, Assistant Professor and Ms. Saima Asad, Lecturer, Department of Economics attended International Mountain Day (IMD) Seminar at Hotel Grand Ambassador, Islamabad on December 11, 2018.
108. Prof. Dr. Muhammad Ali Shah, Chairman, Dr. Mutraz-ul-Hassan, Associate Professor, Dr. Saif-ur-Rehman, Assistant Professor, Dr. Ayesha Riaz, Assistant Professor, Department of Pathobiology and Dr. Rai Muhammad Amir, Assistant Professor, Institute of Food and Nutritional Sciences attended National Poultry Symposium on Health and Welfare at PMAS-AAUR on December 11-12, 2018.
109. Prof. Dr. Asif Ahmad, Director, Dr. Asma Sohail, Assistant Professor, Dr. Rai Muhammad Amir, Assistant Professor, Dr. Kashif Sarfraz Abbasi, Assistant Professor, Ms. Asia Latif, Lecturer and Mr. Muhammad Touseef Azam, Lecture, Institute of Food and Nutritional Sciences attended Three days Halal Auditor Course at PMAS-AAUR on December 12-14, 2018.
110. Prof. Dr. Asif Ahmad, Director, Dr. Asma Sohail, Assistant Professor, Dr. Rai Muhammad Amir, Assistant Professor and Dr. Kashif Sarfraz Abbasi, Assistant Professor, Institute of Food and Nutritional Sciences attended International e-learning course on Global food safety trends: Application of Advanced technologies at PMAS-AAUR on December 17-20, 2018.

COMPOSED & DESIGNED BY:

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