

ANNUAL REPORT

2013



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. RAI NIAZ AHMAD

EXECUTIVE SUMMARY

During the year 2013, Pir Mehr Ali Shah (PMAS) Arid Agriculture University Rawalpindi made substantial 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. The faculty members completed so far 37 Research Projects worth Rs. 70.218 million which were sponsored by various funding agencies i.e. HEC, PSF, PARC, & UAF.

Faculty members attended eighty six National/International workshops/ seminars/ symposiums/ conferences to share/transfer knowledge in different scientific fields within the country and globally. 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, faculty members of different departments of the University obtained doctoral/post-doctoral fellowships and executed research work in Canada, UK, and China.

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 341 Research Papers in National (144) and International (197) reputed journals. For achieving high standards in teaching and research, the university has been ranked at 152 among the Agriculture and Forestry universities of the world (according the ranking carried out by the world's most renowned and prestigious ranking agency Quacquarelli Symonds (QS), UK).

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 Forestry, Range Management & Wildlife, Faculty of Veterinary & Animal Sciences, Faculty of Agricultural Engineering & Technology, Division of Continuing Education, Home Economics & Women Development, University Institute of Management Sciences (UIMS), University Institute of Information Technology (UIIT) and University Institute of Biochemistry & Biotechnology. 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/DIVISION

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 Soil Science & SWC
Department of Food Technology
Department of Agri. Extension
FACULTY OF SCIENCES
Department of Zoology/Biology
Department of Botany
Department of Biochemistry
Department of Economics and Agricultural Economics
Department of Mathematics/Statistics
Department of Sociology & Anthropology
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
DIVISION OF CONTINUING EDUCATION, HOME ECONOMICS & WOMEN DEVELOPMENT
UNIVERSITY INSTITUTE OF MANAGEMENT SCIENCES
UNIVERSITY INSTITUTE OF INFORMATION TECHNOLOGY
UNIVERSITY INSTITUTE OF BIOCHEMISTRY & BIOTECHNOLOGY
JOINT VENTURE INSTITUTES
BARANI INSTITUTE OF MANAGEMENT SCIENCES
BARANI INSTITUTE OF INFORMATION TECHNOLOGY
ISLAMABAD COLLEGE OF MANAGEMENT AND DESIGN (ICMD)

ACADEMIC PROGRAMS

UNDERGRADUATE PROGRAMS		
BSc (Hons) Agriculture	BS in Biochemistry	BS in Computer Science
BS in Economics	BS in Forestry	B.Ed (Bachelor in Education)
BBA (Bachelor of Business Administration)	BS in Information Technology	DVM (Doctor of Veterinary Medicine)
BSc (Hons) Agri. Engineering		
POST GRADUATE PROGRAMS		
Biochemistry	Information Technology	Biology
Botany	MBA (Agribusiness)	Economics
Statistics	Masters in Development Management	Sociology
Anthropology	MBA (3 ½ Years)	Zoology
Wildlife Management	MBA (1 ½ Year)	Environmental Sciences
Education	M.Ed (Masters in Education)	Computer Science
M.SC (HONS)		
Soil Science & SWC	Agriculture Engineering	Entomology
Food Technology	Agricultural Economics	Plant Pathology
Plant Breeding & Genetics	Agriculture Extension & Communication	Agronomy
Horticulture	Poultry Science	
M.PHIL/MS		
Biochemistry	Environmental Sciences	Statistics
Sociology	Management Sciences	Botany
Zoology	Wildlife Management	Biology
Forestry & Range Management	Computer Sciences	Education
	Remote Sensing and Geographical Information System	
PHD		
Soil Science & SWC	Wildlife Management	Biochemistry
Food Technology	Computer Science	Zoology
Plant Breeding & Genetics	Agricultural Economics	Forestry & Range Management
Horticulture	Entomology	Environmental Sciences
Botany	Plant Pathology	Poultry Science
Economics	Agronomy	Education
Agriculture Engineering	Management Sciences	

ACADEMIC ACHIEVEMENTS

The university offers seventy two degree programmes in various disciplines of Agriculture, Basic & Social Sciences, Veterinary, Forestry, Range Management, Wildlife, Business Administration, Computer Sciences & Information Technology and Education. Currently the enrollment of the University is 7401 which is increasing every year. The University initiated the new degree programs in 2013 i.e. BS (Forestry), B.Sc (Hons) in Agri. Engineering, MSc. (Hons) Agri. Engineering, MS (RS&GIS) and Ph.D in Agri. Engineering, Management Sciences and Computer Science which were also approved by the Academic Council. This University has so far turned out more than 191 Ph.D., about 11629 M.Phil, M.Sc. (Hons.)/ MS/ M.Sc. and, 5016 B.Sc.(Hons.)/ D.V.M/ BS/B.Ed.

Establishment of Faculty of Agricultural Engineering & Technology

The University established a new faculty in 2013 i.e. Faculty of Agricultural Engineering & Technology. It is the dire need of Barani area to introduce Agricultural Engineering in this institution. Water conservation technology is also of prime importance due to the rain fed agriculture. The major task of Faculty of Agricultural Engineering & Technology is to apply technological and engineering tools to increase agriculture production, improve product quality and increase system efficiency while preserving the quality of the environment.

The Agricultural Engineering program emphasizes engineering technology and the management of physical and biological systems for agricultural production, handling and processing of agricultural commodities, and maintaining environmental quality. Agricultural Systems Management is the application of biological, physical, mechanical, and business knowledge to support and manage agricultural production systems, product processing systems, and related industries.

Following Teaching Departments will be working under this faculty:

- Department of Irrigation Engineering
- Department of Soil & Water Management
- Department of Drainage Engineering
- Department of Farm Machinery
- Department of Hydrology

HONOURS AND AWARDS

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi (PMAS-AAUR) ranked at 152 among the Agriculture and Forestry universities of the world in 2012-13, according to the ranking carried out by the world's most renowned and prestigious ranking agency Quacquarelli Symonds (QS), UK. The University also improved its position in HEC ranking of the Universities and stood 7th out of 116 Universities and 2nd in Agriculture Universities of Pakistan.

Awards of the Faculty

Prof. Dr. Nadeem Akhtar Abbasi, Chairman, Dr. Ishfaq Ahmad Hafiz, Associate Professor, Department of Horticulture, Prof. Dr. Tariq Mahmood, Dr. Azeem Khalid, Associate Professor and Dr. Audil Rashid, Assistant Professor, Department of Environmental Sciences have been awarded “**Research Productivity Award**” from Ministry of Science and Technology, Pakistan Council for Science and Technology, Islamabad.

A Gold Medal Award 2013 (Best Scientist in Agriculture) has been awarded to Dr. Azeem Khalid, Associate Professor, Department of Environmental Sciences.

SHORT COURSES HELD

In addition to degree programmes, the Faculties of the University organized following short courses during the year 2013.

- ❖ Livestock Curative and Preventive Measures Training
- ❖ Backyard Poultry Curative and Preventive Measures Training
- ❖ Training Course on Livestock Community Workers
- ❖ Commercial Poultry Farming
- ❖ Training Course in Tunnel Farming and Kitchen Gardening
- ❖ Green House Technology and Floriculture
- ❖ Short Skilled Training in Horticultural Crops

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

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

Establishment of Nursery Training Project

A plant nursery comprising of various indigenous and exotics species was established at the main campus of the University. The main objective of establishing this facility is to strengthen the practical facilities of the undergraduate and postgraduate students. Beside thus plants of various species will be sold at cheaper rates to the public in order to enhance their esthetic sense as well as to curb the menace of pollution.

Establishment of Clean Drinking Water Facility

With increase 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.

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 2013.

- Potential application of nanotechnology in crop/vegetable growth, nutrient use efficiency, crop tissue culture and tolerance to osmotic stress
- Promotion of safflower (*Carthamus tinctorius*) through participatory approach in Pothwar
- Strengthening informal seed supply system at two locations in Pothwar through participatory technology transfer
- Characterization of soil bacteria using gene sequencing and response of cereal to associative N₂ – fixer and P-solubilizers

- Stimulation of soil biological activity through organic amendments for enhancing phosphorus availability in soil-plant system
- Isolation and Identification of plant growth promoting N₂-fixing soil bacteria using macular techniques for improving legume cereal cropping system
- Collection of loquat genotypes of Pakistan and their multiplication through conventional vegetative methods and tissue culture techniques
- Production of pathogen free, true to type olive plants through tissue culture
- Varietal improvement of gladiolus through in vitro mutation
- Pre and postharvest treatments of food grade chemicals to improve peach fruit quality and shelf life
- Technology transfer to potato growers in relation to pathogen free seed potato, management of diseases and adoption of improved agro techniques
- Identifying drought tolerant synthetic wheat lines and determining their genetic diversity through DNA makers.
- Genetic Analysis of SUMOylation in Tomato and its Role in Plant Defense
- Genetic diversity and phylotyping of *Ralstonia solanacearum* strains causing bacterial wilt of chilies in major chili growing areas of Pakistan
- Surveillance and pathogen characterization of bacterial canker of stone fruits using biochemical and molecular methods and its bio-management
- Disease mapping and characterization of lentil wilt pathogen in Pakistan
- Studies on characterization and management of leaf crinkle virus infecting black gram
- Utilization of plant growth promoting rhizobacteria for the induction of systemic resistance in potato seed against bacterial rot diseases
- Rhizobacterial formulations application technology for the control of major pathogenic root infecting fungi in chickpea for sustainable crop production
- Molecular studies on a complex of potyviruses infecting solanaceous vegetable / crops in Pakistan and their management
- Establishing year-round rearing facilities of bumble bees, important pollinator of commercial fruit and vegetable crops.
- Insecticide Resistance and mechanisms of resistance in brinjal shoot and fruit borer *Leucinodes orbonalis* (Lepidoptera: pyralidae)
- Production of Butanol and ethanol from agricultural and Municipal Wastes
- Characterization of putative promoter elements in OsRGLP2 promoter region
- Determination of biological activities and micro propagation of *Polygonum amplexicaulis*; A popular medicinal plant of North Pakistan

- Identification of Genetic Risk Factors for Metabolic Syndrome in a Pakistani Population of Local Origin
- Population size, food Habits and Economic Importance of Commensal Rodents in Rural Pothwar
- Screening of different avian egg yolks for cryopreservation of buffalo semen: a step to improve fertility in buffaloes with frozen semen
- Biodiversity and ecology of bats and rodents in the thorn forests and croplands of the Potohar plateau
- Biological Control of Rats and Mice in Agricultural Areas of Pothwar Barn Owl (*Tyto Alba*)
- Exploring of genetic variation for drought tolerance in wheat by using physiological biochemical attributes
- Virulence Analyses of *Xanthomonas campestris* pv *sesami* and *Pseudomonas syringae* pv *sesami* the causal organisms of sesame (*Sesamum indicum* L) bacterial blight.
- Floristic study of arid zone (Thal desert), Punjab Pakistan”
- Ethno botanical survey of Thal desert, Punjab, Pakistan
- Baseline Studies on Wildlife Diversity in Selected Protected Areas of Pakistan (Phase-II)
- Ecology on Indian pangolin *Manis Crassicaudata* in Potohar Region
- Spatial distribution of habitats influences anuran diversity and space use in the landscape implications for conservation beyond species level
- Role of Crop Field Boundary Vegetation in Population Ecology of Passerine Birds in Pothwar Area
- Monitoring of polycyclic aromatic hydrocarbons exposure among highway toll bar attendants and GT road bus drivers as indicator of environmental and occupational hazards in suburbs of Rawalpindi and Islamabad cities
- Bio treatment of Industrially Discharged Azo Dye Contaminants Using Bio augmentation
- Utilizing bacterial ACC-deaminase biotechnology to mitigate impact of water stress (drought) on cereal crops
- Development of breed identification marker for Pakistani dairy cattle breeds
- Demonstrational Hydroponic Model of Vegetable Production Under Shade House

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	18	24	42	144.706
2	Pakistan Science Foundation	08	12	20	32.673
3	Pakistan Agriculture Research Council	10	01	11	25.432
4	Punjab Agricultural Research Board	00	01	01	3.800
5	Endowment Fund UAF	01	04	05	9.783
7	International Foundation for Science/WWF	00	04	04	4.179
	Total	37	46	83	220.573

PUBLICATIONS

The faculty published 341 Research Publications in National and International reputed journals in 2013. (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 2013, different departments of the University organized Sixteen (16) International and National Workshops/Seminars/Conferences. The university faculty also participated and contributed research papers in Nineteen (25) International and Fifty Five (61) National Workshops/Seminars/Conferences (Details are given at Annexure-II)

RESEARCH JOURNALS

Journal of Agriculture and Biological Sciences

In order to infuse a culture of publications among the faculty and research students the charges for publication in the journal were revised. Any student who intends to publish will be charged at subsidized rate, while faculty members can publish one paper free of cost per journal as first author of the journal. The journal is circulated to about 80 different organizations in the country and 10 international organizations without price.

PMAS-AAUR-News

In order to have a close contact with community and activities at university “PMAS-AAUR NEWS” is published on monthly basis. This is widely circulated among students, faculty and to all sister organizations.

Naveed-e-Baran

This magazine is an annual publication which carries creative contribution from students and is managed by an Editorial Board mainly comprised of students.

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-Mal

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

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

The Quality Enhancement Cell (QEC) was established at the university in February, 2007 with the objective of significant enhancement of quality in higher learning and international compatibility. The major-functions of the QEC are to:

- Review quality standards and the quality of 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 and evaluation, departmental review of different degree programs, student'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 IN THE UNIVERSITY

Quality assurance demands not only a standardized mechanism of checks and balances but it also requires an extensive training to understand the demands of upcoming challenges in the field of education. From examination papers to research articles, from admissions to thesis dissertations, feedback from the faculty, feedback from the students, feedback from the parents is satisfactory to a great extent because Rome was not built in a day. Quality enhancement cell, directorate of academics, directorate of advanced studies, directorate of research innovation and commercialization are doing their best in our goal of quality assurance. A positive change is visible in the upsurge of research publications, projects, and student participations.

The QEC is striving hard to improve the University ranking at national as well as international levels via identification of missing links in different academic and research endeavors, propose rectification and ensure their execution and monitoring. Resultantly, university gained 152nd position in world ranking in the field of Agriculture & Forestry and 2nd position amongst the Agricultural Universities in the country.

ACCREDITATION OF PROGRAMMES FROM RELEVANT COUNCILS

Following departments of the University have been accredited by NAEAC while the accreditation of others departments are in process.

- i. Department of Forestry & Range Management
- ii. Department of Wildlife Management
- iii. Department of Agronomy
- iv. Department of Horticulture
- v. Department of Food Technology
- vi. Department of Plant Pathology
- vii. Department of Plant Breeding & Genetics
- viii. Department of Soil Science & SWC
- ix. Department of Entomology
- x. Department of Economics & Agri-Economics

MEMBERSHIP OF ASSOCIATIONS/NETWORKS

The Quality Enhancement Cell (QEC) of the University is linked with the Quality Assurance Agency of Higher Education Commission, Pakistan. The QEC has availed membership of an international quality network named “Asia Pacific Quality Network (APQN)”.

Asia Pacific Quality Network (APQN) has been developed with the purpose of serving the needs of quality assurance agencies in higher education in a region that contains over half of the world's population and Pir Mehr Ali Shah Arid Agriculture University Rawalpindi is an institutional member of APQN. It has been participating in its online discussion on Internal Quality Control.

The QEC has also availed the membership of “*TUFTS University/Talloires Network*” and “*QA-Islamic*”.

QEC-AAUR ACHIEVEMENTS COMMENDED BY THE HEC

The Higher Education Commission of Pakistan has lately assessed the progress of Quality Enhancement Cells (QECs) of Pakistani Universities through quantitative/scorecard system. Based on the evaluation, the QEC at PMAS-AUR has achieved a total score of 89% and has been ranked as "W category" (80-100%). The Vice Chancellor has received a letter of appreciation from the QAA-HEC in this regard. The Vice Chancellor has congratulated the Director QEC, and said that due to the efforts made by the QEC squad during past four years, the quality of education and research at the institution has phenomenally enhanced. The Director QEC has also appreciated the full support and personal involvement of the Vice Chancellor and hoped that, with the continued support and guidance of the Vice Chancellor, the QEC will achieve the objectives of strengthening the internal Quality Assurance procedures at the university. The Director QEC has also congratulated the entire faculty, Deans and Directors and appreciated their cooperation and support since establishment of the QEC.

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 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.

DOCTORAL /POST DOCTORAL TRAININGS / SHORT-TERM TRAININGS

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, four faculty members obtained doctoral/post-doctoral fellowships and executed research work in Canada, UK, and China. Moreover, four faculty members/ staff proceeded on short-term trainings/courses in China, Germany and UK.

ACCESS

BASIC ENROLLMENT

There has been continuous increase in the student intake in various disciplines and the student enrollment increased from 5012 to 7401 in the last five years. The detail of which is given in below table:

S No	Name of Degree	2009	2010	2011	2012	2013
01	Graduates	2291	2513	2907	3028	3715
02	Post Graduates	2561	2494	2647	2998	3437
03	Doctoral	160	185	191	214	249
	Total	5012	5192	5745	6240	7401

GENDER-WISE DETAIL

SR. NO.	PROGRAM	MALE	FEMALE	TOTAL
1.	Bachelors	2686	1029	3715
2.	Masters	975	1493	2468
3.	M.Phil/MS (Hons)/MS	537	432	969
4.	Ph.D	149	100	249
	TOTAL	4347	3054	7401

EMPLOYABILITY

In order to facilitate the graduates in job placement, Students Resource Centre (SRC) consistently striving to develop linkages with the industry by providing the online recruiting tools either through its own resources and/or the private partners. Presently, the University has about 4000+ registered members on its Alumni Association who are regularly informed about various opportunities/job openings through electronic email. Students of the Agriculture Department found job different fields of government, semi-government and private sectors.

FACULTY-STUDENT RATIO

The faculty-students ration is Approximately 1 : 25.

UNIVERSITIES 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

The University has taken new initiatives by establishment of following offices in order to introduce the entrepreneur culture, boost up the linkages with the local industrial eco system and to generate funds for smooth running of the institution. The efforts will be made to tape up the existing resources of the University for revenue generation and to look into the new opportunities and avenues for fund raising:

- Business Incubation Center
- Directorate of External Linkages
- Directorate of University Development
- Directorate of Academics

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 increase 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	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	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.

INTERNSHIP AND PLACEMENT OFFICE

The activities of students resource centre regarding placement / internship opportunities & alumni achievements are as under:

- i. Laptop distribution ceremony under the Chief Minister E-Youth Initiative “Award of Free Laptops Phase-II” for the eligible Students was held on 4th & 5th Feb, 2013.
- ii. The Worthy Vice Chancellor & Director SRC along with 10 Scholars of Punjab Educational Endowment Fund attended an event “To Celebrate the Success; Four Years Journey of PEEF” on 5th March, 2013.
- iii. A Seminar regarding “Fulbright Scholarship Program and other educational services of United States Educational Foundation (USEFP) in Pakistan” was conducted on 14th March, 2013.

- iv. Students Resource Centre conducted first Job Fair of Arid Agriculture University on 28th March, 2013. Thirty different multinational companies, including banks, software houses and agriculture based companies participated in this event and provided guidance to the university graduates. They also conducted recruitment interviews of university graduates.
- v. A Lecture regarding “Career Counseling Techniques” was held on 4th June, 2013 in University Seminar Room. Ms. Saima Shahzadi, Career Development Officer delivered the lecture.
- vi. A session on “Career Counseling & CDC Services” for Faculty, Students and Alumni was conducted at University Seminar Room on 11th June 2013. Mr. Sajjad Haider, from Department of Anthropology, Quaid-e-Azam University, was the guest speaker.
- vii. SRC established an information desk at Govt. Post Graduate Girls College Rawalpindi on 25th July, 2013 at the time of result declaration of SSC & HSSC for awareness of different degree programs offered in the University and scholarship opportunities available for the new entrants in the University.
- viii. Physical Verification of 40 USAID Merit & Needs Based Scholarship Awardees was carried out successfully as per the guidelines of the donor agency. During the verification process; it was found that all the awardees are real deserving individuals and the selection of Institutional Scholarship Award Committee was transparent.
- ix. PMAS-Arid Agriculture University Rawalpindi celebrated the 152nd Position in the field of Agriculture and Forestry on October 8, 2013. University Alumni actively participated in this celebration activity.
- x. Students Resource Centre signed the MoU with Pakistan Bait-ul-Mal on 26th Nov, 2013 for provision of scholarships to the University students.
- xi. Interactive meeting of USAID Merit & Need Based Scholars & Alumni was held on 4th Dec, 2013. Mr. Larry Sampler, Assistant to the Administrator, Office of Afghanistan & Pakistan Affairs & Gottlieb Gregory, Mission Director, USAID Pakistan were the chief guests. Prof. Dr. Mukhtar Ahmed, Executive Director Higher Education Commission & Prof. Dr. Rai Niaz Ahmed, Vice Chancellor of AAUR also shared their views with University Students & Alumni.
- xii. British Council signed an agreement with PMAS-Arid Agriculture University Rawalpindi on 17th December, 2013 for providing scholarships under the Pakistan Scottish Scholarship Program to female students of this university.

- xiii. Students Resource Centre executed different scholarship programs like Punjab Educational Endowment Fund, USAID Merit & Need Based Scholarship Program, Pakistan Scottish Scholarship under British Council Pakistan, HEC Need Based Scholarship Program, Ministry of Religious Affairs Scholarship, Prime Minister's Tuition Fee Reimbursement Programme, Educational Assistance through Pakistan Bait-ul-Mal and several others. Traditional activities i.e. advertisements of scholarship programs, ensure scrutiny of application in the light of eligibility criteria, meetings of Institutional Scholarship Award Committee, final selection of scholarship awardees, issuance of funds, preparation of fund utilization reports and evaluation of academic progress were successfully carried out for all scholarship programs.
- xiv. Verification of scholarship forms of students funded through external sources is also a regular activity of the Centre. Approximately 1394 application forms were processed efficiently.
- xv. Job portal was updated on regular basis and shared with the concerned alumni through email.

STUDENT COUNSELING AND CAREER GUIDANCE

The counseling is done under the patronage of Directorate of Student's Affairs where a compact counseling system is answering day to day queries of students. Directorate of Students Affairs is important components of university where students enjoy delightful environment and deliver a series of programmers to enrich the campus life. Primarily this office communicates the problems being faced by the students to the concerned quarter's and helps them in their amicable solutions. This office also enhancing student's awareness and provide a platform for multi-cultural exchanges between student's and encourages students to achieve the objective of building a balanced personality

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. Eighteen development projects have already been completed. Currently the University is implementing four such projects (Rs. 1565.963 million) while two new proposal were also submitted to HEC in next year PSDP. 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 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 Korean International Cooperation Agency (KOICA) has signed a Memorandum of Understanding/Record of Discussion with the PMAS-AAUR to establish a capacity building for training/capacity building of the local farming community about agriculture and livestock. The total cost of the project in the form of aid and grant is 3.5 million US\$ committed by the KOICA in order to implement the project. Thereafter a PC-I was drafted/prepared and submitted to the Agriculture Department, Government of the Punjab for approval. After the approval from Government of the Punjab, the PC-I was sent to Higher Education Commission of Pakistan for further processing which was also approved by the CDWP.

In the leadership of Prof. Dr. Rai Niaz Ahmad, the Vice Chancellor of PMAS-AAUR, a delegation of 12 academic and administrative staff had a detailed visit of Korea for two weeks. This visit was arranged by KOICA (Korean International Cooperation Agency) under the project “Pak-Korea Capacity Building Centre for Agriculture and Livestock Technology at Arid Agriculture University Rawalpindi”. Under this project Pakistani experts will first get training from its Korean counterpart Kyungpook National University (KNU), Daegu, Korea, and then will transfer the knowledge and technology to the local experts and farmers.

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
Total (Rs. in Million)	615.569

ii) Ongoing

Development Projects (On-Going)	Cost (million Rs.)
Establishment of Faculty of Veterinary & Animal Sciences	468.620
Establishment of University Institute of Biochemistry & Biotechnology	358.619
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
Total (Rs. in Million)	1565.963

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 many 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	Quantity	Make/Model	Main Specification
Gas Chromatograph	1	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	1	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	1	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	1	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	1	CRYODOS-50 Telstar Spain	Air cooled Refrigerator 0.37KW (1/2 HP). CFC and H-CFC free refrigerant without vacuum pump ice condenser temperature appro. -55C ⁰

Ultra Centrifuge	1	Optima-100P. Beckman Switzerland US Coulter	CE Mark Speeds to 100,000 Rpm g. Forces to 802,400g vacuum-encased, frequency controlled direct drive (induction)
Flame Photometer	1	Jenway-PFP-7	-
Deionizer	1	SG Hamburg	Microprocessor controlled purity monitor. Providing digital resistivity readings temperature to 25C
Precision Analytical Balance	2	(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	1	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	2	(i) UE-600 Memmert Germany (ii) 100-800 Memmert Germany	Digital Microprocessor temperature range up to 300C ⁰ capacity -256 Ltr
Porometer	1	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	1	LCA-4 IRMECO England	Different measurements, non-dispersive infra-red gas analyzer Range 0.3000ppm frequency 80HZ Source Life 10,000 Hours
Confocal Microscope	1	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

HEC National Digital Library (DL) is a programme to provide researchers within public and private universities in Pakistan and non-profit research and development organizations with access to international scholarly literature based on electronic (online) delivery, providing access to high quality, peer-reviewed journals, databases, articles and e-Books across a wide range of disciplines. The e-books support programme allows researchers to access most of the important text and reference books electronically in a variety of subject areas. Around 75,000 number of electronic contents have been made available through the Digital Library Programme. The Faculty Members/Researchers/Scholars of the University are taking full advantage of the above mentioned facility in the form of e-library and access to the internet.

The new resources added in the last year and changes will appear on the website page soon. The new sources are as follows:

- Informs
- Duke University press
- IET library
- American Society of Agriculture and Biological Society
- Canadian Science publishing
- International Forestry Review
- University of Chicago Press
- Royal College of Physician
- World Bank Library

Their access of URLs is as follows and one may test on access and disperse the information for these resources to most of the scholars.

<https://elibrary.asabe.org/>

<http://www.ingentaconnect.com/content/nrc>

www.dukejournals.org

<http://digital-library.theiet.org/>

<http://journals.informs.org/>

http://www.cfa-international.org/international_forestry_review.php

www.journals.uchicago.edu

<http://elibrary.worldbank.org/>

PERN2

Pakistan Education & Research Network PERN2 established a high speed dedicated link for the universities/institutes and other academic sectors of Pakistan. PERN2 provides students, faculty members and researchers a fully integrated and dedicated communication infrastructure using advanced Information & Communication Technologies.

CAMPUS MANAGEMENT SYSTEM

Campus Management System (CMS) is the most effective tool that has automated the management functionality of this university by streamlining 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. This system was introduced in this university in the year 2010 and since then the performance of this system is improving day by day. At present the following modules are working in this system.

CAMPUS MANAGEMENT MODULES.

- Admissions Module
- Academic Module
- Examinations Module
- Personnel Module

The **Admission Module** automates the admission process of the university and streamlines the process involved for efficient and effective management. This module starts with the admission offered by the University for the new Session. Then prospectus sale starts. This module keeps track of all the information Department wise / Degree wise.

The system first keeps record of the entire candidates that applied for various degree programs offered by the university and automate the process of merit lists generation and

fee submission process. It also provides the facility to transfer the degree programme of student if required and transfer the fee structure accordingly.

In the **Academic Module** the complete academic record of each student has been maintained in this system. It includes Enrolments, Course Offering, Scheme of Study, Students Attendance, Teacher Course Evaluation etc.

In the **Examination Module** the complete examinations record of each student has been managed. This helps in preparation of DMCs / Degrees as well.

In the **Personnel Module** the Employees record has been maintained. All these modules produce different reports that help the management in proper decision making. The next target of the CMS team is to develop an online Admission System.

VIDEO CONFERENCING

PMAS-AAUR established a video conferencing room at University Institute of Information Technology. The video conferencing room is equipped with latest video conferencing equipment and sound system. It is being used for holding multi-party conferences without traveling, delivering and attending courses and interacting with other academics and partners across the globe.

WEB PORTAL

www.uaar.edu.pk

UNIVERSITIES 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.

ALUMNI AFFAIRS: OUTSTANDING ACHIEVEMENTS ETC.

The Directorate of Student Resource Center is entrusted the responsibility to provide an interactive platform to closely link Alumni with their Alma Mater and fellow graduates. In order to achieve this goal, Student Resource Center has started compilation of Alumni database since 2006. Currently, database consists of over 4000 registered graduates of different faculties and institutes of the University. Student Resource Center is making consistent efforts to encourage graduates to join this forum for development of friendly and business relationships amongst Alumni having similar background and diversified professions.

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 were organized by Directorate of Sports:

INTERVARSITY VOLLEYBALL BOYS CHAMPIONSHIP 2012-13 ZONE “C”

Sixteen Universities from Rawalpindi/Islamabad and AJ&K participated in the championship. COMSATS team was the Winner while Quaid-i-Azam University, Islamabad was runner up.

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

- **INTER UNIVERSITY BASKET BALL CHAMPIONSHIP 2012-13 (ZONE “C”)** held at Bahria University, Islamabad.
- **INTER UNIVERSITY FOOT BALL CHAMPIONSHIP 2012-13 (ZONE “C”)** held at Quaid-i-Azam University Islamabad.
- **ALL PAKISTAN INTER UNIVERSITY ATHLETICS CHAMPIONSHIP 2012-13 (ZONE “C”)** held at Sarhad University, Peshawar.
- **ALL PAKISTAN INTER UNIVERSITY TUG OF WAR CHAMPIONSHIP 2012-13 (ZONE “C”)** held at Government College University, Faisalabad.
- **INTER UNIVERSITY TABLE TENNIS CHAMPIONSHIP 2012-13 (ZONE “C”)** held at International Islamic University Islamabad.
- **INTER UNIVERSITY BADMINTON CHAMPIONSHIP 2012-13 (ZONE “C”)** held at NUST Islamabad.
- **INTER UNIVERSITY BADMINTON GIRLS CHAMPIONSHIP 2012-13 (ZONE “C”)** held at NUST Islamabad.

The following Inter Faculty Sports Championship was organized by Directorate of Sports during the year.

- **INTER FACULTY BADMINTON (BOYS) CHAMPIONSHIP 2012-13**
- **INTER FACULTY BADMINTON (GIRLS) CHAMPIONSHIP 2012-13**

- **INTER FACULTY VOLLEYBALL (BOYS) CHAMPIONSHIP 2012-13**
- **INTER FACULTY BASKETBALL (BOYS) CHAMPIONSHIP 2012-13**

Following Inter Faculty Sports/Games Championship (Boys) was organized during Students Week (March 2013) at University Ground.

- **INTERFACULTY TUG OF WAR CHAMPIONSHIP**
- **INTER FACULTY 100 METER RACE**
- **INTER FACULTY HANDKERCHIEF GAME CHAMPIONSHIP**

Following Inter Faculty Sports/Games Events (Girls) were organized during Students Week (March 2013) at Girls Hostel

- **INTER FACULTY TUG OF WAR CHAMPIONSHIP**
- **INTER FACULTY THREE LEG RACE**
- **INTER FACULTY CHATTI RACE**
- **INTER FACULTY HANDKERCHIEF GAME CHAMPIONSHIP**

UNIVERSITIES BUILDING LEADERSHIP

STUDENT LEADERSHIP (CO-CURRICULAR ACTIVITIES : UNIVERSITY DRAMAS, EXHIBITIONS, EXPOS, COMPLETIONS, DEBATES AT NATIONAL AND INTERNATIONAL LEVELS)

Following extra-curricular activities were organized by the Directorate of Students Affairs during the year 2013.

DATE	EVENT	PLACE
24-01-2013	Seerat un Nabi Quiz Competition	University Auditorium
21-01-2013	Speech Competition about Serah	Dawah Academy, IIUI
01-02-2013	Participation in Seminar for Job Hunting	Pakistan Industry Academia Relations Association
03-03-2013 to 08-03-2013	Participation in Student Week	University of Agriculture, Faisalabad
08-03-2013	All Pakistan Radio Production Awards	Pak Broadcasting Corporation
14-03-2013 to 16-03-2013	Women's Week	FJWU
27-03-2013	Student Week 2013 - Punjabi Taakra	University Auditorium
28-03-2013	Student Week 2013 - Horse Dancing Show	University Front Lawn
29-03-2013	Student Week 2013 - Cultural Evening	New Academic Block Lawn
29-03-2013	Student Week 2013 - Flower Arrangement Competition	Convocation Lawn
29-03-2013	Student Week 2013 - Games / Sports (Boys)	Cricket Ground
29-03-2013	Student Week 2013 - Solo Performance	University Auditorium
30-03-2013	Student Week 2013 - Flower Arrangement Competition	Convocation Lawn
30-03-2013	Student Week 2013 - Games / Sports (Girls)	Fatima Jinnah Hall

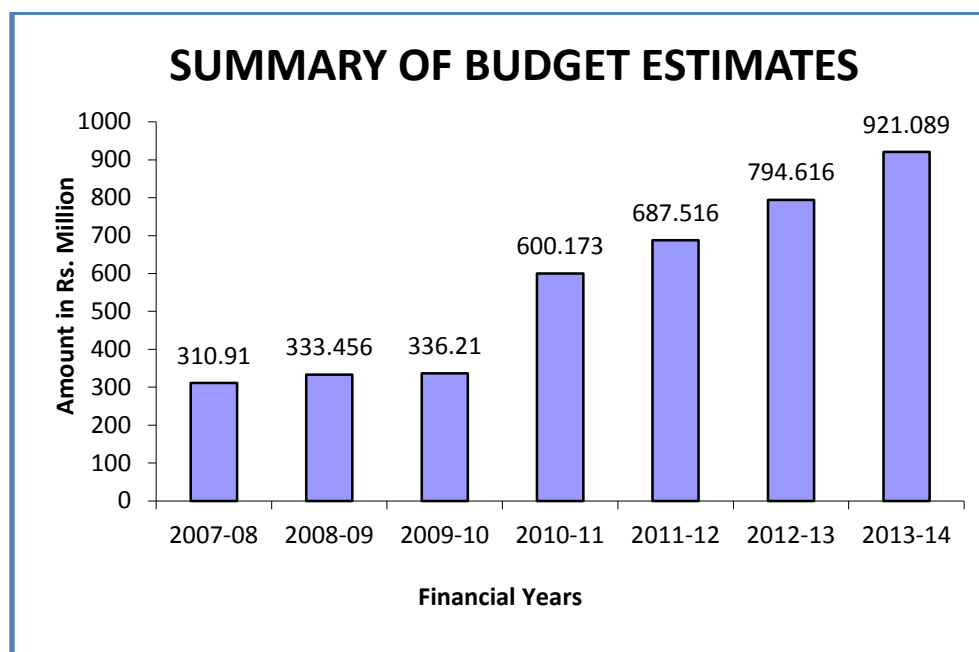
30-03-2013	Student Week 2013 - Singing Competition	University Auditorium
30-03-2013	Student Week 2013 - Live Performance	University Auditorium
15-04-2013 to 20-04-2013	Spring Splash 2013	Preston University
29-05-2013 to 30-05-2013	Express Education and Career Expo	Pak China Friendship Center
06-06-2013	Environment Day - Poster Competition	-
20-06-2013	Interfaculty Drama Competition	University Auditorium
14-08-2013	Celebrations of Independence Day	University Auditorium
03-09-2013	Seminar on Alltech Young Scientist Awards	Main Seminar Room
08-10-2013	Celebrations of 152 nd Position & Alumni Day	University Gymnasium Ground
21-11-2013	International Seminar on Sameual Undong & Economic Development	University Auditorium
04-11-2013	Declamation Contest, Painting & Arfana Kalam Competition	Qaid-e-Azam University
24-11-2013 to 30-11-2013	All Punjab Inter-University Drama Festival	Rawalpindi Arts Council
02-12-2013 to 07-12-2013	Fall Fest 2013	Preston University

FINANCE

SUMMARY OF REVISED BUDGET ESTIMATES FOR THE YEAR 2013-2014

INCOME ESTIMATES				EXPENDITURE ESTIMATES			
Sources of Income	Estimates 2012-2013	Revised Estimates 2012-2013	Estimates 2013-2014	Head of Accounts	Estimates 2012-2013	Revised Estimates 2012-2013	Revised Estimates 2012-2013
Opening Balance	93327352	93327352	120111667	Pay and Allowances	396886387	403875886	467737886
Punjab Government	43079000	43079000	50241000	Purchase of Durable Goods	10465000	11100000	12000000
Federal Government	364251000	364251000	414441000	Research Projects	4000000	3000000	5500000
Supplementary Grant from Federal Government	43366476	43366476	20000000	Construction Work	24190000	24140000	47081708
Own Resources	103418425	115719581	116696069	Repair of Durable Goods	5500000	5500000	6000000
University Fee From UIMS	45809536	53179322	54307193	Commodities & Services	92569000	95469000	91800000
University Fee from UIIT	65314637	69239991	98000000	Transfer Payments	74212127	74212127	89269000
Income from Affiliated Institutes	4500000	8145720	9000000	Miscellaneous Expenditure	17000000	17500000	17000000
Khushab Campus	1500000	1500000	2554167	Contingent Paid Staff	3000000	5500000	6100000
Federal Government Grant for Tenure Track Faculty	15225245	11478916	14242086	Overtime/Evening sitting	5000000	5000000	4500000
Federal Government Grant for Need Base Scholarships	14825000	14825000	21496000	Reimbursement of Medical Charges	3000000	4000000	5000000
				Building Rent (old building of UIIT)	1500000	1500000	1500000
				UIMS Department	42473646	43909404	38046634
				UIIT Department	52009374	54791920	47803682
				IT Network Data Centre	21617600	24238300	22064372
				UAAR Sub Campus Khushab	12963628	15051928	16014728
				UAAR Research Farm Chakwal	3140000	2840000	5520440
				Tenure Track System	15225245	11478916	14242086
				Need Base Scholarships	14825000	14825000	21496000
Total	794616671	818112358	921089182	Total	799577007	817932481	918676536

FINANCIAL YEAR AT A GLANCE



RECURRING BUDGET

Recurring Funding (Punjab Govt.) In Million Rs.						
2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
17.112	17.112	20.53	22.64	41.36	43.079	50.241
Recurring Funding (HEC) In Million Rs						
2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
142.619	142.62	213.928	237.668	298.117	364.251	414.441

TREND OF PER STUDENT SPENDING

For FY 2012-13 = Rs. 128100 per student on total expenditure basis
For FY 2013-14 = Projected as Rs. 153700 per student on total expenditure basis

SUMMARY OF DEVELOPMENT BUDGET ESTIMATES (2013-14)

S. No.	Name of Project	Estimated Cost (Rs. In m)	Total Exp. Upto (30.06.12) Actual (Rs. In m)	Unspent Balance Carried Forward for (2012-13) (Rs. In m)	Releases during (2012-13) (Rs. In m)	Total Available Funds (2012-13) (5+6) (Rs. In m)	Exp. During (2012-13) (Rs. In m)	Total Exp. (4+8) (Rs. In m)	Unspent Balance Carried forward 2013-14 (7-8) (Rs. In m)	PSDP Allocation (2013-14) (Rs. In m)	Estimated Budget During (2013-14) (10+11) (Rs. In m)
1	2	3	4	5	6	7	8	9	10	11	12
i.	Establishment of Faculty of Veterinary & Animal Sciences	468.620	256.245	21.639	66.574	88.213	79.133	335.378	9.080	72.285	81.365
ii.	Establishment of University Institute of Biochemistry & Biotechnology	358.619	238.965	16.809	30.000	46.809	23.320	262.285	23.489	45.477	68.966
iii.	Development of On-Farm Students Research Facilities at Koont Gujar Khan	343.224	211.327	27.732	10.000	37.732	19.817	231.144	17.915	78.224	96.139
	Grand Total	1247.625	706.537	66.18	106.574	172.754	122.27	828.807	50.484	195.986	246.47

AUDIT REPORT



DIRECTOR GENERAL AUDIT PUNJAB

6th Floor, AG Punjab Complex

Phone No: 042-99210147 Fax No: 042-99210166

16. TEST AUDIT NOTE

No test audit note was issued during audit. Minor issues were settled at the spot.

17. GENERAL REMARKS

Subject to the foregoing paragraphs on the financial matters and internal controls over the expenditure, stores/stocks, incidental charges and vehicles etc. accounts prepared and maintained according to the accounting standards, were found satisfactory. (2011-2012) & (2012-2013)


A.O.
13/11/13

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, two (02) Syndicate meetings were 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 2013, two (02) meetings of Academic Council were 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 2013, Advanced Studies & Research Board was met for two 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 2013, 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

DELEGATIONS AND VISITS

- A delegation comprising of two persons PYEONG IK CHOE, Senior Professor and KI YONG HONG, President, Dankoon University Korea visited the Department of Horticulture and Laboratories on January 10, 2013.
- Thirty members' delegation of farmers and researchers of Baluchistan headed by Mr. Aijaz Hussain Awan, National Expert Water Resource Management visited PMAS-Arid Agriculture University Rawalpindi on February 01, 2013. On the occasion farmers visited the research area of different departments and discussed their problems with the individual scientists. While sharing their experiences they appreciated the positive efforts of PMAS AAUR.
- Mr. Ahmad Ali Zafar, Additional Secretary, Agriculture Department, Government of Punjab visited PMAS-Arid Agriculture University Rawalpindi and met the University Vice Chancellor, Prof. Dr. Rai Niaz Ahmad on February 13, 2013. The Vice Chancellor briefed Mr. Ahmad Ali Zafar about the research and development activities of the University.
- Prof. Dr. Rai Niaz Ahmad, Vice Chancellor, PMAS-Arid Agriculture University Rawalpindi visited Barani Agricultural Research Institute (BARI) Chakwal on February 18, 2013 to witness the Farmers' Day organized to encourage the Olive Cultivation. On the occasion, Sardar Mumtaz Khan Tamman, MNA, Dr. Noor-ul-Islam Director General, Agricultural Research, Dr. Mubarik Ali, Chief Executive, Pakistan Agricultural Research Board, Dr. Muhammad Tariq Director, BARI and Dr. Muhammad Ashraf from ICARDA also address the farmers.
- A delegation comprising of two persons Dr. Koh Chi-Yong and Mr. KIM Jiun from KOICA visited the Department of Horticulture on March, 8, 2013. Prof. Dr. Nadeem Akhtar Abbasi told them about training programs in Tunnel Farming at PMAS-AAUR. The delegation showed interest to visit the local farmers who got training from department and doing their farming on the same guidelines. Ms. Mehwish Yaseen, Lecturer and Mr. Abdul Ahad Qureshi, Lecturer facilitated their visit to progressive farmers of Jabbi, Farash Twon and Chatha Bakhtawar.
- An Italian expert Mr. IVAN Virtusosi came to visit the Department of Horticulture on May 23, 2013. He visited Laboratories of postharvest, tissue culture and cold store chamber.
- A delegation of USAID headed by Mr. James E. Hill, Ph.D, Associate Dean, International Program Office, College of Agriculture and Environmental Sciences visited the department on May 30, 2013 and visited field area for off season vegetable production through glass house. The Worthy Vice Chancellor and Prof. Dr. Nadeem Akhtar Abbasi discussed many issues regarding Horticulture produce and emphasized on collaboration and development of joint projects.

- A delegation of University of California, USA headed by Dr. Mark A. Bell, Director, College of Agricultural and Environmental Sciences, University of California USA visited PMAS-Arid Agriculture University, Rawalpindi on June 2, 2013. University of California, USA and PMAS- Arid Agriculture University Rawalpindi have agreed to initiate collective research projects and joint academic programmes in the field of agriculture. It was decided in a meeting of Vice Chancellor Prof. Dr. Rai Niaz Ahmad with Dr. Mark A. Bell, who called on him to discuss and explore possibilities of academic and research collaboration between both the universities.
- A delegation of foreign Scientists from Italy and Greece visited the University Research Farm Koont for international workshop on Soil and Water Management Techniques for Semi-Arid Regions on June 10-13, 2013.
- The Two members team of Pakistan Engineering Council (PEC) consist of Prof. Taj Ali Khan, UET Peshawar and Engineer Jahanzaib Khan, Deputy Registrar (PEC) Peshawar visited PMAS-AAUR Arid Agriculture University Rawalpindi on July 26, 2013 to assess the facilities and infrastructure for granting the accreditation of Agricultural Engineering programme in the University.
- Prof. Dr. Rai Niaz Ahmad Vice Chancellor PMAS-Arid Agriculture University Rawalpindi had exclusive meeting with Australian High Commissioner Mr. Peter Heyward along with Director UIIT, Dr. Sohail Asghar, on August 21, 2013 in Sarina Hotel, Islamabad. The Vice Chancellor exchanged the views to enhance the education and research in Agriculture and Information Technology. Mr. Peter showed interest and he asked to enhance collaboration in Agriculture and IT.
- A three members delegation of Sate Bank of Pakistan (SBP) headed by Mr. Mazhar-ul-Haq, Director Development Finance Support Department, visited PMAS-Arid Agriculture University Rawalpindi on August 28, 2013, with an aim to establish linkages between technical/educational institutions and the banking industry.
- Dr. Kenneth D. Sayre, Consultant Conservation Agriculture-Based Crop Management, CIMMYT visited the PMAS-Arid Agriculture University Rawalpindi on September 4, 2013. PMAS- Arid Agriculture University Rawalpindi and International Maize and Wheat Improvement Center (CIMMYT) decided to collaborate in the field of Agricultural Research. The decision was taken during a meeting between Vice Chancellor, Prof. Dr. Rai Niaz Ahmad and Dr. Kenneth D. Sayre, Consultant Conservation Agriculture-Based Crop Management, CIMMYT, Dr. Mushtaq Ahmad Gill, Chief Executive, (SACAN), and Senior faculty members of the University also attended the meeting. The participants of the meeting also visited University Research Farm and Hydroponics Plant.
- A delegation of foreign scientists from Italy and Greece visited the University Research Farm Koont for infrastructure Development and equipment installation under SAWaM-Pak Project on September 12-26, 2013.
- Mr. Sikandar Hayat Khan Bosan, Federal Minister for National Food Security visited University Research Farm, Koont on September 27, 2013. The minister appreciated the

rainwater harvesting program of the university and emphasized the significance of water availability for agriculture land. The federal minister also stated that adequate management of rainwater particularly during the monsoon spells will also reduce the flood risks in addition to providing agricultural benefits and recharging of groundwater.

- Mr. Ahsan Iqbal, Federal Minister for Planning & Development and Dr. Farrukh Javed, Minister for Agriculture Punjab visited PMAS-AAUR on November 21, 2013. Federal Minister appreciated the efforts and developments being made by the University for socio-economic Uplift of the forming community with special emphasis on rain-fed agriculture in the country. Dr. Farrukh Javed, Minister for Agriculture Punjab, in his address appreciated the efforts of PMAS-AAUR for producing highly educated, trained and inspired manpower and said that University is playing pivotal role in modernizing agriculture and enlightenment of rural communities in Pakistan and abroad. Dr. Farrukh Javed and Dr. Song Jong-hwan, the Ambassador of the Republic of Korea did the ground breaking ceremony of Pak-Korea Capacity Building Center for Agriculture & Livestock Technology at University Campus.
- Dr. Eklabya Sharma, Director Program Operations, ICIMOD, Kathmandu, Nepal, visited the PMAS-Arid Agriculture University on December 12, 2013. PMAS-AAUR and ICIMOD agreed to cooperate for the stability of fragile mountain ecosystems and the livelihoods of mountain people. This was decided in a meeting among Prof. Dr. Rai Naiz Ahmad, Vice Chancellor, PMAS-AAUR and Dr. Eklabya Sharma, Director Program Operations, ICIMOD. On the occasion, Dr. Abdul Wahid Jasra, Director General, ICIMOD, PMAS-AAUR Deans, Directors and faculty members were also present.

ANNEXURE-I

Faculty Publications

FACULTY OF CROP & FOOD SCIENCES

NATIONAL PUBLICATIONS

S. #	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Agronomy					
1.	Bano, Q., N. Ilyas, A. Bano, N. Zafar, A. Ikram and F. U. Hassan	Effect of <i>AZOSPIRILLUM</i> inoculation on Maize (<i>Zea mays</i> L) under drought stress	Pakistan Journal of Botany	0.872	45:13-20
2.	Akhtar, S., A. Shahzad, M. Arshad and F. U. Hassan	Morpho-physiological evaluation of Groundnut (<i>Arachis hypogaea</i> L) genotypes for iron deficiency tolerance	Pakistan Journal of Botany	0.872	45(3): 893-899
3.	Wasaya, A., R. Ahmad, F.U.Hassan, M. Ansar, A. Manaf and A. Sher.	Enhancing crop productivity through wheat (<i>Triticum aestivum</i> L)-Fenugreek intercropping system	Journal of Animal & Plant Sciences	0.638	23:210-215
4.	Ansar, M., M. A. Mukhtar, R. S. Sattar, M. A. Malik, G. Shabbir, A. Sher and M. Irfan	Forage Yield as affected by common vetch in different seeding ratios with winter cereals in Pothar Region of Pakistan.	Pakistan Journal of Botany	0.872	45(SI): 401-408,
5.	Khalid M., M. Arshad, G. M. Ali and A. Razzaq.	Tissue culture responses of some wheat (<i>TRITICUM AESTIVUM</i> L.) cultivars grown in Pakistan	Pakistan Journal of Botany	0.872	45(SI): 545-549
6.	Razzaq, A., Q. Ali, A. Qayyum, I. Mahmood, M. Ahmad and M. Rasheed.	Physiological responses and drought resistance index of nine wheat (<i>Triticum aestivum</i> L.) cultivars under different moisture conditions.	Pakistan Journal of Botany	0.872	45(SI): 151-155
7.	S. Abbas I. Aziz, T. Mahmood and M. Akmal	Influence of different tillage practices and earthworm on selected soil physio-chemical parameters and yield of maize	Soil Environment	-	32(2): 114-120
8.	Ahmed, M., and S. Farooq.	Growth and physiological responses of wheat cultivars under various planting windows.	The Journal of Animal & Plant Sciences	0.638	23(5): 1407-1414
9.	A. N. Chaudhry, M. A. Naeem, G. Jilani, A. Razzaq, D. M. Zhang, M. Azeem and M. Ahmed	Influence of composting and poultry litter storage methods on Mineralization and nutrient dynamics	The Journal of Animal & Plant Sciences	0.638	23(2): 500-506

10.	Tahir, M. N., J. Li, B. Liu, G. Zhao, F. Yao, C. Cui	Hyperspectral estimation model for nitrogen contents of summer corn leaves under rainfed condition	Pakistan Journal of Botany	0.872	45 (5): 1623-1630
11.	Aziz I., T. Mahmood, R. I. Khandakar and E. Ashraf	Estimation of cropping system impacts on carbon and nitrogen status of soil	International Journal of Agriculture & Applied Sciences	-	5: 1-7
12.	Ashraf E., F. Shah, M. L. Samiullah, M. Younis, I. Aziz and U. Farooq	Use of untreated wastewater for vegetable farming: a threat to food safety	International Journal of Agriculture & Applied Sciences	-	5 – 27-33

Department of Horticulture

13.	Abbasi, N.A., A. Akhtar and A. Hussain.	Maintaining quality of loquat (<i>Eriobotrya japonica</i> Lindl.) fruit after harvest.	Pakistan Journal of Botany	0.872	45(1): 247-251
14.	Zakia, S., N. Yousaf, M. Yaseen, N. Khokhar & N. A. Abbasi	Standardization of an efficient protocol for micropropagation of <i>Aloe vera</i> using different hormonal regimes.	Pakistan Journal of Pharmaceutical Sciences	0.947	Vol.26, No.6, November 2013, pp.1083-1087
15.	Abbasi, N. A., A. Akhtar, A. Hussain and I. Ali.	Effect of anti-browning agents on quality changes of loquat [<i>Eriobotrya japonica</i> (Thunb.) Lindley] fruit after harvest.	Pakistan Journal of Botany	0.872	45(4): 1391-1396.
16.	Qureshi, K. M., S. Chughtai, U. S. Qureshi and N. A. Abbasi.	Impact of exogenous application of salt and growth regulators on growth and yield of strawberry.	Pakistan Journal of Botany	0.872	45(4): 1179-1185.
17.	Abbasi, N.A., L. Zafar, H. A. Khan, A. A. Qureshi	Effects of naphthalene acetic acid and calcium chloride application on nutrient uptake, growth, yield and post-harvest performance of tomato fruit.	Pakistan Journal of Botany	0.872	45(5): 1581-1587
18.	Mahmood, M.A., I. A. Hafiz, N.A. Abbasi and M. Faheem	Detection of Genetic Diversity in <i>Jasminum</i> species through RAPD Techniques.	International Journal of Agriculture & Biology	0.808	15(3): 505-510.

Department of Plant Breeding & Genetics

19.	Hina, A., Z. Akram and T. N. Khan	Wheat genotypes for quality traits through molecular characterization	Journal of Biology and Biotechnology	-	10 (2) : 221-228
20.	Rana, R. M., S. U. Rehman,	A comprehensive overview of recent advances in drought stress tolerance research in wheat	Asian Journal of Agriculture & Biology	-	1(1): 29 : 37
21.	Rana, R. M., M. Bilal, S. U. Rehman, F. Iqbal and M. K. N. Shah	Synthetic Wheat: a new hope for the hungry world	Asian Journal of Agriculture & Biology	-	1(2): 91-94
22.	Mahmood, T., M. Bilal, M. A. Khan, G. Shabbir, N. Akhtar and M.S. Arif	Genetic variability and character association studies in spring and autumn sown sunflower	International Journal of Agriculture & Biology	0.808	15(2): 301-306
23.	Bibi, T., T. Mahmood, Y. Mirza, T. Mahmood and E.U. Hassan	Correlation studies of some yield related traits in linseed, <i>Linum usitatissimum</i>	Journal of Agricultural Research	-	51(2): 121-132
24.	Rehman, A., M. Sajjad, S. H. Khan, M. Nadeem	Prospects of wheat breeding for durable resistance against brown, yellow and black rust fungi	International Journal of Agriculture and Biology	0.808	15(6): 1209-12220.
25.	Ansar, M., M. A. Mukhtar, R. S. Sattar,	Forage yield as affected by common vetch in different seeding ratios with	Pakistan Journal of Botany	0.872	45(SI): 401-408.

	M. A. Malik, G. Shabbir, S. Ahmad and A. Sher	winter cereals in pothowar region of Pakistan.			
26.	Cheema, N. M., U. Farooq, G. Shabbir, M. K. N. Shah and M. Musa	Prospects of Castor Bean Cultivation in Rainfed Tract of Pakistan.	Pakistan Journal of Botany	0.872	45(1): 219-224.
27.	Ahmad, N. H., G. Shabbir, Z. Akram and M.K.N. Shah	Combining ability of some phenological traits in bread wheat.	Sarhad Journal of Agriculture	-	29(1): 15-20.
28.	Ahmad, M., G. Shabbir, N. M. Minhas and M. K. N. Shah.	Identification of drought tolerant wheat genotypes based on seedling traits.	Sarhad Journal of Agriculture	-	29(1): 21-27.
29.	Mahmood, T., B. Hussain, M.A. Khan, G. Shabbir, N. Akhtar and M. A. Saleem.	Genetic variability and character association studies in spring and autumn sown sunflower.	International Journal of Agriculture and Biology	0.808	15(2): 301-306.
30.	Hassan, M. U., Z. Akram, S. Ajmal, T. Mukhtar, S. Nasim, G. Shabbir and Y. Zafar	Highly Efficient <i>In Vitro</i> Root Induction in Peanut by Mechanical Stress Method.	Journal of Animal and Plant Sciences	0.638	23(2): 425-429.
31.	Rehman, R., K. N. Shah, M. S. Masood, M. Arshad, A. Ghafoor.	Genetic divergence among Pakistani bread wheat varieties and advanced lines for randomly amplified Polymorphic DNA (RAPD) markers.	Pakistan Journal of Botany	0.872	45(S1): 327-332.
32.	Zeb, M., M. K. N. Shah, R. Faryal	Development of putative molecular markers to trace durable rust resistance genes in wheat breeding stocks.	Pakistan Journal of Botany	0.872	45(S1): 359-366.

Department of Plant Pathology

33.	Riaz, A., J. Nicklin, I. Haque, C. A. Rauf, G. Qadir and F. Naz.	Toxicity induced by solanapyrone in chickpea shoots and its metabolism through glutathione/glutathione-S-transferase system.	Pakistan Journal of Botany	0.872	45 (1) :135-139
34.	Batool, S. K., Naqvi, S. A., C. A. Rauf and S. M. S. Naqvi.	Amplification and Sequencing of Internal Transcribed Region 1 & 2, and 5.8S rDNA from local isolated of <i>Fusarium</i> Species.	Pakistan Journal of Botany	0.872	45(Sp): 301-307
35.	Perveen, N., T. Mukhtar, M. Fahim Abbas and C. A. Rauf	Management of root-knot nematode with marigold (<i>Tagetes erecta</i> L.) and antagonistic fungus (<i>Paecilomyces lilacinus</i> (Thom) Samson) in tomato crop	International Journal of Biology and Biotechnology	-	10 (1): 61-66
36.	Hassan, M. U., Z. Akram, S. Ajmal, T. Mukhtar, S. Nasim, G. Shabbir and Y. Zafar	Highly efficient <i>in vitro</i> root induction in peanut by mechanical stress method	Journal of Animal and Plant Sciences	0.638	23 (2): 425-429
37.	Mukhtar, T., I. Arshad, M. Z. Kayani, M. A. Hussain, S. B. Kayani, A. M. Rahoo and M. Ashfaq	Estimation of damage to okra (<i>Abelmoschus esculentus</i>) by root-knot disease incited by <i>Meloidogyne incognita</i>	Pakistan Journal of Botany	0.872	45 (3): 1023-1027

38.	Riaz, A. F. A. Shah and T. M. Butt.	Intra-specific variability among <i>Metarhizium anisopliae</i> strains in their ability to produce blastospores in liquid culture media.	Pakistan Journal of Botany	0.872	45(3): 1099-1103.
39.	Irshad. G., F. Naz, M. I. U. Haque and A. Rauf	Population dynamics of aeromycoflora at three sites of Rawalpindi by evaluating two sampling methods.	Pakistan Journal of Phytopathology		25(1): 31-36
40.	Naqvi, S. F., M. I. Haq, M. A. Khan, M. I. Tahir, Z. Ali and H.M. Rehman.	Morphological and biochemical characterization of <i>Xanthomonas campestris</i> (Pammel) Dawson pv. <i>sesami</i> and its management by bacterial antagonists.	Pakistan Journal of Agricultural Sciences	1.240	50(2): 229-235

Department of Food Technology

41.	Ahmad, Z., M. S Butt, R Hussain, A Ahmed, M Riaz	Effect of oral application of xylanase on some hematological and serum biochemical parameters in broilers.	Pakistan Veterinary Journal	1.365	33(3): 388-390
42.	Adnan, M., A Ahmad, A Ahmed, N Khalid, I Hayat, I Ahmed	Chemical Composition and Sensory Evaluation of Tea (<i>Camellia Sinensis</i>) Commercialized In Pakistan	Pakistan Journal of Botany	0.872	45(3): 901-907

Department of Entomology

43.	Javed, H., J. Iqbal and T. M. Khan	Studies on population dynamics of insect pest of safflower, <i>Carthamus tinctorius</i> L.	Pakistan Journal of Zoology	0.309	45(1): 213-217.
44.	Nasir, M., M. Imran and M. Ahmad	Pyrethroids synergize new chemical insecticides in field populations of <i>Plutella xylostella</i> (Lepidoptera: Plutellidae).	Pakistan Journal of Zoology	0.309	45: 629-633
45.	Aziz, M. A., M. Ahmad, M. F. Nasir and M. Naeem	Efficacy of different neem (<i>Azadirachta indica</i>) products in comparison with imidacloprid against english grain aphid (<i>Sitobion avenae</i>) on wheat	International Journal of Agriculture & Biology	0.808	15 (2): 279-284
46.	Ahmad, M., A. Ghaffar and M. Rafiq	Host plants of leaf worm, <i>Spodoptera litura</i> (Fabricius) (Lepidoptera: noctuidae) in Pakistan.	Asian Journal of Agriculture & Biology	-	1(1): 23-28
47.	Bhatti, S. S., M. Ahmad, K. Yousaf and M. Naeem	Pyrethroids and new chemistry insecticides mixtures against <i>Spodoptera litura</i> (Noctuidae: Lepidoptera) under laboratory conditions.	Asian Journal of Agriculture & Biology	-	1(2): 45-50
48.	Gulzar, A., and D. Wright	Fluctuating Asymmetry, Morphological Changes and Flight Muscle Ratio in a Vip3A Resistant Sub-population of <i>Heliothis virescens</i> (WF06)	International Journal of Agriculture and Biology	0.808	Accepted
49.	Bodlah, I., Naeem, M	Record and trophic associations of three aphid hyperparasitoids from Punjab Province of Pakistan	Pakistan Journal of Zoology	0.309	45(2), 558-562.
50.	Ahmad, W., M. Naeem and I. Bodlah	Genus <i>Aulacophora</i> Chevrolat, 1836 (Coleoptera: Chrysomelidae) From Pothohar, Punjab, Pakistan	Pakistan Journal of Zoology	0.309	45(3), 868-871
51.	Bodlah, I., Naeem, M., Akhtar ,T.	Morphology and Natural enemies of <i>Tinocallis kahawaluokalani</i> (Kirkaldy)	Asian Journal of Agriculture and	--	1 (1): 13-16

		(Homoptera:Aphididae) from Punjab Pakistan	Biology.		
52.	Bodlah, I., Waqar, M.	Pollinators visiting summer vegetables ridge gourd (<i>Luffa acutangula</i>), bitter gourd (<i>Momordica charantia</i>) and brinjal (<i>Solanum melongena</i>)	Asian Journal of Agriculture and Biology.	--	1(1): 8-12
53.	Aziz, M. Asif. A. Iftikhar, and M. Hanif	Life table studies of <i>Trilocha virescence</i> (Bombycidae: Lepidoptera) of <i>Ficus Nitida</i>	Asian Journal of Agriculture and Biology	--	1(1):2-7
Department of Soil Science & SWC					
54.	Asghar, I., M. Akmal, M. Ishtiaq, M. Maqbool, T. Hussain	Analysis of soil microbial biomass dynamics in rainfed wheat fields in arid zone of Pakistan	Pakistan Journal of Botany	0.872	45: 389-399
55.	Abbas, S., I. Aziz, T. Mahmood, and M. Akmal	Influence of different tillage practices and earthworm on selected soil physio-chemical parameters and yield of maize	Soil and Environment	-	32:114-120
56.	Ullah, R., M. I. Lone, K. S. Ullah, S. M. Mehdi, and M. A. Qazi	Effect of cropping system and seasonal variation on soil microbial biomass and enzymatic activities in Arid soils	Journal of Animal and Plant Sciences	0.638	23(2): 493-499
57.	Ullah, I., G. Jilani, K. S. Khan, M. S. Khan, and U. S. Qureshi	Effect of organic amendments on vegetative growth, fruit and yield of strawberry	Pakistan Journal of Agricultural Research	1.240	26(3): 161-169
58.	Bangash, N., A. Khalid, T. Mahmood, M. T. Siddique	Screening of rhizobacteria containing AEC-deaminase for growth promotion of wheat	Pakistan Journal of Botany	0.872	45(SI): 91-96
59.	Khalid, S., A. Khalid, B. Saba, M. T. Siddique	Effect of ACC-deaminase bacteria on tomato plants containing AZO dye waste water	Pakistan Journal of Botany	0.872	45(SI): 529-534
60.	Ramzan, A., T. Iqbal, A. Riaz, M. Azeem, M. I. Tahir, T. Ahmad	Assessment of phosphorus loading and eutrophication in Rawal Lake	Soil and Environment	-	32(2): 173-179
61.	Ali, S., A. Hasan, S. S. Ijaz, M. Ansar	Mungbean yield and dinitrogen fixation under minimum tillage at semiarid Pothwar	Journal of Animal and Plant Science	0.638	23: 198-200
62.	Chaudhry, A. N., M. Azeem, G. Jilani, A. Razzaq, D. Zhang, M. Ahmad	Influence of composting and poultry litter storage method on mineralization and nutrient dynamics	The Journal of Animal and Plant Sciences	0.638	23(2): 500-506
63.	Hussain, M., S. Ali, S. Ijaz and K. Bashir	Soil physical properties and wheat performance under various preparatory tillage practices in a subtropical dryland pothwar	Soil and Environment	-	32:100-113
64.	Ullah, G., E. A. Khan, I. U. Awan, M. A. Khan, A. A. Khakwani, M. S. Baloch, Q. U. Khan, M. S. Jilani, K. Wasim, S. Javeria and G. Jilani	Wheat response to application methods and level on nitrogen fertilizer: I. Phenology, growth indices and protein content.	Pakistan Journal of Nutrition	-	12(4): 365-370
65.	Ullah, G., E. A. Khan, I. U. Awan, M. A. Khan, A. A. Khakwani, M. S. Baloch, Q. U. Khan, M. S. Jilani, K.	Wheat response to fertilizer application technique and nitrogen levels: II. Crop growth and yield attributes	Pakistan Journal of Nutrition	-	12(7): 636-641

	Wasim, M. Ullah and G. Jilani				
66.	Ullah, I., G. Jilani, M. I. Haq, M. S. Akhtar and M. Rasheed	Phosphorus solubilization from phosphate rock by interactive effect of thiobacilli and elemental sulfure	Journal of Agricultural Research	-	51(4): 431-443

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Agronomy					
1.	Ahmad M. M. Asif & F. U. Hassan	Augmenting drought tolerance in sorghum by silicon nutrition.	Acta Physiologiae Plantarum	1.305	10.1007/s11738-013-1427-2.
2.	Ahmed M., M. Asif, M. Sajad, J. Z. K. Khattak, W. Ijaz, F. U. Hassan, A. Wasaya & J. A. Chun..	Could agricultural system be adapted to climate change? A Review	Australian Journal of Crop Sciences.	1.63	7:1642-1653
3.	Ahmed., M, A. Kamran, M. Asif, U. Qadeer, Z. I. Ahmed, A. Goyal	Silicon priming: a potential source to impart abiotic stress tolerance in wheat: A review.	Australian Journal of Crop Sciences.	1.63	7(4): 484-491
4.	Sher, A., L. Barbanti, M. Ansar and M A Malik.	Growth response and plant water status in forage sorghum (sorghum bicolor (L.) Moench cultivars subjected to decreasing levels of soil moisture	Australian Journal of Crop Sciences.	1.63	7(6): 801-808
5.	Hassan, M. U., A. Qayyum, A. Razzaq, M. Ahmad, I. Mahmood, S. U. Khan and M. A. Jenks.	Evaluation of Maize Cultivars for Drought Tolerance Based on Physiological Traits Associated with Cell Wall Plasticity.	Jokull Journal	1.604	63 (7): 466-478
6.	Razzaq, A., M. Arshad, S. Ashraf, A. Ikram, A. Qayyum, I. Mahmood	Evaluation of Psyllium Husk (<i>Plantago ovata</i>) as a low cost gelling agent for callus formation and regeneration in wheat (<i>Triticum aestivum</i> L.) cultivar	Wulfenia Journal	0.267	20 (7):153–161
7.	Razzaq, A., I. Mahmood, J. Iqbal, A. Qayyum, M. Rasheed, M. Ahmad.	Enhancing drought tolerance of wheat (<i>triticum aestivum</i> L.) through chemical priming.	Wulfenia Journal	0.267	20 (7):44–58
8.	Aslam, Z., M. Ahmed, M. Sajad, M. Asif, M. Akmal, F. K. Awan, W. Ijaz, R. Ashraf, and J. Z. K. Khattak.	A Comparison of Statistical and Dynamic Modeling of Wheat (<i>Triticum aestivum</i> L.) Fungal Diseases under the Climate Change.	Journal of Food Agriculture and Environment	0.44	11 (2): 1327-1332.
9.	Ahmed, M., A. H. Hirani, M. Asif, M. Sajad.	Modeling soil water dynamics under rainfed agriculture to mitigate climate change.	Journal of Agriculture Science	2.88	5(3):90-104
10.	Ogtrop, F. V., M. Ahmed, C. Moeller.	Principle Components of Sea surface temperatures as predictors of seasonal rainfall in rainfed wheat growing areas of Pakistan.	Meteorological Applications	1.318	Vol: 20 Issue 4
11.	Batool, N., M. Asif, M. Arshad, F. U. Hassan, M. Ahmed and S. Basu.	Effects of silique position on physico-chemical composition of canola (<i>Brassica napus</i> L.) seed.	Plant Knowledge Journal.	-	2(1):51-55

Chapter Published					
12.	Ahmed, M., M. Asif, A., H. Hirani, M. N. Akram and A. Goyal.	Modelling for Agricultural Sustainability: A Review. Book Name: Agricultural Sustainability Progress and Prospects in Crop research	Springer Book Publisher	-	-
13.	Kamran, A., M. Asif, S. B. Hussain, M. Ahmad and A. Hirani.	Major Insects of Wheat: Biology and Mitigation Strategies. Chapter 8 Published by Intech	InTech Janeza Trdine 9, 51000 Rijeka, Croatia	-	http://dx.doi.org/10.5772/55799
Department of Horticulture					
14.	Abbasi, N. A., T. Pervaiz, I. A. Hafiz, M. Yaseen and A. Hussain.	Assessing the response of indigenous loquat cv. Mardan to phytohormones for <i>in vitro</i> shoot proliferation and rooting.	J Zhejiang Univ-Sci B (Biomed & Biotechnol),	1.099	14(9):774-784. (DOI 10.1631 /jzus. B1200277)
15.	Saeed, T., I. Hassan, N. A. Abbasi, G. Jilani	Zinc augments the growth and floral attributes of gladiolus, and alleviates oxidative stress in cut flowers.	Scientia Horticulturae	1.396	Ms. No. HORTI9511R2
16.	Ahmad, T., G. Sablok, T. V. Tatarinova, Q. Xu, X. X. Deng and W.W. Guo	Evaluation of codon biology in <i>Citrus</i> and <i>Poncirus trifoliata</i> based on genomic features and frame corrected expressed sequence tags.	DNA-Research	4.425	20 (2): 135-150
17.	Yaseen. M., T. Ahmad., G. Sabloak., A. Standardi and I. A. Hafiz.	Review: role of carbon sources for <i>in vitro</i> growth and development	Molecular Biology Reports	2.506	40 (4): 2837-49.
18.	Linkun W., Z. Li., Ji Li., M. A. Khan., W. Huang., Z. Zhang., W. Lin	Assessment of shifts in microbial community structure and catabolic diversity in response to <i>Rehmannia glutinosa</i> monoculture.	Applied Soil Ecology	2.106	67:1– 9
19.	Saeed, T., I. Hassan, N. A. Abbasi, G. Jilani.	Effect of gibberellic acid on the vase life and oxidative activities in senescing cut gladiolus flowers.	Plant Growth Regulation	1.990	10(1007-1012)
20.	Ahmed, A., N. Khalid, A. Ahmad, N. A. Abbasi, M. S. Z. Latif and M. A. Randhawa.	Phytochemicals and biofunctional properties of buckwheat: a review	Journal of Agricultural Sciences	2.88	Online pages 1-21.
Department of Plant Breeding & Genetics					
21.	Ahmad, M., M. Iqbal, A. Shahzad, M. Asif and M. Sajad.	Genetic Analysis of Yield and Yield Contributing Quantitative Traits in Bread Wheat Under Sodium Chloride Salinity.	Journal of Agricultural Science	2.88	5(6): 156-163.
22.	Ahmad, M., M. Iqbal, A. Shahzad, M. Asif and A. H. Hirani.	Morphological and molecular genetic variation in wheat for salinity tolerance at germination and early seedling stage.	Australian Journal of Crop Sciences	1.63	7(1):66-74.
23.	Ahmad, R., M.S. Iqbal, D. Ibrar, T. Mahmood, M.S. Naveed and M.K. Naem	A review on heat stress responses in different genotypes of tomato crop (<i>Solanum lycopersicon</i> L.)	International Journal of Modern Agriculture	-	ISSN: 2305-7246, 2(2)
24.	Rehman, A, M. Sajjad, S. H. Khan, R. J. Peña,	Lower tendency of allelic variation of <i>Glu</i> genes and absence of 1BL-1RS	Cereal Research Communication	0.55	42(1):DOI:10.1556/

	N. I. Khan	translocation in modern Pakistani wheats.			CRC.2013.0050
25.	Hassan, S.M.F., M.S. Iqbal, G. Rabbani, N.U. Din, G. Shabbir, M. Riaz and I.R. Noorka.	Correlation and path analysis for yield and yield components in sunflower (<i>Helianthus annuus</i> L.).	African Journal of Biotechnology	0.57	12(16): 1968-1971.
26.	Naeem, M. K., S. Rauf, H. Iqbal, M. K. N. Shah, A. Mir.	In Silico Studies of C3 Metabolic Pathway Proteins of Wheat (<i>Triticum aestivum</i>)	BioMed Research International	2.88	2013:1-7.
27.	Sajjad, M., S. H. Khan, M. Q. Ahmad, A. Rasheed. A. Mujeeb-Kazi, I. A. Khan	Association mapping identified QTLs on wheat chromosome 3A for yield related traits	Cereal Research Communication	0.55	Accepted
28.	Sajjad, M., S. H. Khan, N. Fatima, R. Memood and M. K. N. Shah	Family and /or friends: Gene mapping at crossroads.	American Journal of Plant Sciences	-	Accepted
29.	Khan, M.I., G. Shabbir, Z. Akram, M.K.N. Shah, M. Ansar, N.M. Cheema and M.S. Iqbal.	Character association studies of seedling traits in different wheat genotypes under moisture stress conditions.	SABRAO Journal of Breeding and Genetics,	0.227	(Accepted).
Department of Plant Pathology					
30.	Mukhtar, T., M. Z. Kayani and M. A. Hussain	Nematicidal activities of <i>Cannabis sativa</i> L. and <i>Zanthoxylum alatum</i> Roxb. against <i>Meloidogyne incognita</i>	Industrial Crops and Products	2.468	42: 447-453
31.	Kayani, M. Z., T. Mukhtar, M. A. Hussain and M. I. Haque	Infestation assessment of root-knot nematodes (<i>Meloidogyne</i> spp.) associated with cucumber in the Pothowar region of Pakistan	Crop Protection	1.303	47: 49-54
32.	Mukhtar, T., M. Z. Kayani and M. A. Hussain	Response of selected cucumber cultivars to <i>Meloidogyne incognita</i>	Crop Protection	1.303	44: 13-17
33.	Mukhtar, T., M. A. Hussain and M. Z. Kayani	Biocontrol potential of <i>Pasteuria penetrans</i> , <i>Pochonia chlamydosporia</i> , <i>Paecilomyces lilacinus</i> and <i>Trichoderma harzianum</i> against <i>Meloidogyne incognita</i> in okra	Phytopathologia Mediterranea	1.398	52 (1): 66-76
34.	Hussnain, Z. U. S., C. A. Rauf, M. I. Haque, S. Afghan, T. Mukhtar, F. Naz, M. K. N. Shah and A. Shahzad	Comparison of DAC-ELISA and tissue blot immunoassay for the detection of <i>Acidovorax avenae</i> subsp. <i>avenae</i> , causal agent of red stripe of sugarcane.	Journal of Plant Pathology & Microbiology	-	4:172 doi: 10.4172/2157-7471.1000172
Department of Food Technology					
35.	Yousaf, A. A., A. Ahmed, A. Ahmad, T. Hameed, M. A. Randhawa, I. Hayat, N. Khalid	Nutritional and functional evaluation of wheat flour cookies supplemented with gram flour	International Journal of Food Science and Nutrition	1.15	64(1):63-68
36.	Hayat, I., A. Ahmad, T. Masud, and A. Ahmed	Nutritional and health perspectives of beans (<i>Phaseolus vulgaris</i> L.) – An overview	Critical Reviews in Food Science and Nutrition	4.79	54(5):580-592 Published online
37.	Khalid, N., A. Ahmed, M. S. Bhatti, M. A.	A question mark on zinc deficiency in 185 million people in Pakistan-	Critical Reviews in Food Science and	4.82	DOI:http://dx.doi.org /

	Randhawa, A. Ahmad and R. Rafaqat	possible way out	Nutrition		10.1080/10408398.2011.630541 Published online
38.	Ahmed, A., M. Anjum, A. Ahmad, M.A. Randhawa, Z. Ahmad, N. Khalid, W. Farid	Effect of hydrocolloids on partial baking and frozen storage of wheat flour chapatti	Food Science and Technology Research	0.56	19(1): 97-103
39.	Sandhu, M. A., A. A. Saeed, M.S. Khilji, A. Ahmed, N. Khalid	Genotoxicity evaluation of chlorpyrifos: A gender related approach in regular toxicity testing	The Journal of Toxicological Sciences	1.893	38(2):237-244
40.	Ahmed, A., N. Khalid, A. Ahmad, N. A. Abbasi, M. S. Z. Latif, M. A Randhawa	Phytochemicals and biofunctional properties of buckwheat: A review.	Journal of Agricultural Science, Cambridge University Press	2.878	38(2): 237-244
41.	Akhtar, S., A. Ahmed , A. Ahmad, Z. Ali, M. Riaz, T. Ismail	Iron Status of Pakistani Population- Current Issues and Strategies	Asia Pacific Journal of Clinical Nutrition	1.13	22(3):340-7
42.	Khalid, N., A. Ahmad, S. Khalid, A. Ahmed, and M. Irfan	Mineral composition and health functionality of Zamzam water: A review	International Journal of Food Properties	0.877	DOI:10.1080/10942912.2012.660721 Published online
43.	Randhawa, M. A., F. M. Anjum, M. R. Asi, A. Ahmed, H. Nawaz	Field incurred endosulfan residues in fresh and processed vegetables and dietary intake assessment	International Journal of Food Properties	0.877	DOI: 10.1080/10942912.2012.694091 Published online
44.	Ahmad, A., I. Hayat, S. Arif, T. Masud, N. Khalid, A. Ahmed.	Mechanisms involved in the therapeutic effects of soybean (glycine max)	International Journal of Food Properties	0.877	DOI:10.1080/10942912.2012.714828 Published online
45.	Mehmood, S., A. Ahmad, A. Ahmed, N. Khalid, T. Javed	Drinking Water Quality in Capital City of Pakistan.	Open access Scientific reports.	-	doi:10.4172/scientificreports.6372: 637
46.	Ahmed, Z., Y. Wang, N. Anjum, A. Ahmad, S. T. Khan	Characterization of exopolysaccharide produced by <i>Lactobacillus kefiranofaciens</i> ZW3 isolated from Tibet kefir- Part II.	Food Hydrocolloids.	-	30: 342-350.
47.	Mehmood, T., A. Ahmad, A. Ahmed, A. Wakeel, A.S. Khan, H.H. Baig, A Rafique	Physico-chemical and sensory evaluation of different Vanaspati ghee available in Pakistan.	Innovative Romanian Food Biotechnology	-	12 (3): 61-68
48.	Mahmood, T., T. Masud, I. Muhammad, I. Ahmed and N. Khalid.	Selection and characterization of probiotic culture of <i>S. thermophilus</i> from Dahi.	International Journal of Food Sciences and Nutrition.	1.257	64 (4): 494-501.
49.	Irshad, I., A. Kanekanian, A. Peters and T. Masud.	Antioxidant activity of bioactive peptides derived from bovine casein hydrolysate fractions.	Journal of Food Science and Technology	1.123	DOI 10.1007/s13197-012-0920-8.
50.	Khan, S. R., and T. Masud.	Comparison of buffalo cottage cheese made from aqueous extract of <i>Withania coagulans</i> with commercial calf rennet.	International Journal of Dairy Technology	1.179	66 (3); 396–401.
51.	Maqsood, S., F. Hasan,	<i>In vitro</i> pre-selection criteria for	Malaysian Journal of	0.111	9 (4): 326-330

	T. Masud, S. Sammi and S. M. S. Naqvi	probiotic <i>Lactobacillus acidophilus</i> TS1 isolated from fermented milk product, Dahi.	Microbiology.		
Department of Entomology					
52.	Sattar, A., M. Naeem and E. U. Haq	Impact of environmental factors on the population dynamics, density and foraging activities of <i>Odontotermes lokanandi</i> and <i>Microtermes obesi</i> in Islamabad	Springer Open Journal	1.7	2:(1-7)
53.	Siddique, B., M. Aslam, M. A. Aziz and M. Ahmad	Grain damage, viability and weight loss in different barley cultivars due to <i>Sitotroga cerealella</i> (Oliv.) infestation.	Archives of Phytopathology and Plant Protection	NA	46(2): 205-214.
54.	Tariq, M., D. J. Wright, T. J. A. Bruce and J. T. Staley	Drought alters the response of above ground parasitoids to root herbivores through plant volatile signals.	PLOS One	3.73	Vol. 8, e69013. DOI: 0.1371/journal.pone.0069013.
55.	Tariq, M., D. J. Wright, J. T. Rossiter and J. T. Staley	Drought alters interactions between root and foliar herbivores: links with plant chemistry.	Oecologia	3.011	172: 1095-1104. DOI: 10.1007/s00442-012-2572-9.
56.	Aqeel, M., C. Collins, A. B. Raza, S. Ahmad, M. Tariq and S. Leather	Effect of plant nutrition on aphid size, prey consumption and life history characteristics of green lacewing.	Insect Science	1.786	Published online DOI:10.1111/ 1744-7917.12019
57.	Bushra S., and M. Tariq.	How aphid alarm pheromone can control aphids: a review.	Archives Of Phytopathology And Plant Protection.		DOI: 10.1080/03235408.2013.851331
Department of Soil Science & SWC					
58.	Ullah, I., G. Jilani, M. I. Haq and A. Khan	Enhancing bio-available phosphorus in soil through sulfure oxidation by thiobacilli	British Microbiology Research Journal	-	3(3): 378-392
59.	Islam, M., M. Akmal, M. A. Khan	Effect of phosphorus and sulphur application on soil nutrient balance under chickpea (<i>Cicer arietinum</i>) monocropping	Romanian Agricultural Research	0.226	30: 2013, Print ISSN 1222-4227; Online ISSN 2067-5720
60.	Hassan, W., M. Akmal, I. Muhammad, M. Younas, K. R. Zahaid, F. Ali	Response of soil microbial biomass and enzymes activity to cadmium (Cd) toxicity under different soil textures and incubation times	Australian Journal of Crop Science	-	7:674-680
61.	Malik, M. A., K. S. Khan, P. Marschner and S. Ali	Organic amendments differ in their effect on microbial biomass and activity and on P pools in alkaline soils	Biology and Fertility of Soils	2.156	49: 415-425
62.	Zhang, A., R. Bian, Q. Hussain, L. Li, G. Pan, J. Zheng, X. Zhang, J. Zheng	Change in net global warming potential of a rice-wheat cropping system with biochar soil amendment in a rice paddy from China	Agriculture, Ecosystem and Environment	2.860	173: 37-45
63.	Cui, L., J. Yan, G. Quan, C. Ding, T. Chen, Q. Hussain	Adsorption behavior of pymetrozine by four kinds of biochar from aqueous solution	Adsorption Science and Technology	0.560	31: 477-480
64.	Saeed, T., I. Hassan, N. A. Abbasi, G. Jilani	Effect of gibberellic acid on the vase life and oxidative activities in senescing cut gladiolus flower	Plant Growth Regulation	1.670	DOI: 10.1007/s10725-013-9839-y
65.	Saeed, T., I. Hassan, N. A. Abbasi, G. Jilani	Zinc augments the growth and floral attributes of gladiolus and alleviates stress in cut flowers	Scientia Horticulturae	1.396	164: 124-129

FACULTY OF SCIENCES

NATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Botany					
1.	Mehmood, K., M. Arshad, G. M. Ali and A. Razzaq	Tissue culture responses of some Wheat (<i>Triticum aestivum</i> L.) cultivars grown in Pakistan	Pakistan Journal of Botany	0.872	45(SI): 545-549
2.	Rahim, G., R. Qureshi, M. Arshad and M. Gulfraz	Phytochemical analysis and Antioxidant Properties of <i>Teucrium Stocksianum</i> Flowers from Malakand Division, Pakistan	International Journal of Agriculture & Biology	0.808	15(2): 377-381
3.	Ilyas M., R. Qureshi, M. Arshad and S. N. Mirza	A preliminary checklist of the vascular flora of Kabal Valley, Swat, Pakistan	Pakistan Journal of Botany	0.872	45(2): 605-615
4.	Muneer, M., R. Qureshi, M. Munazar, M. K. Lagari, M. Arshad and A. Khaliq Ch	Taxonomy of some pennate diatoms from Kallar Kahar Lake, District Chakwal, Pakistan	The Journal of Animal & Plant Sciences	0.638	23(2): 457-463
5.	Ali, A., M. Arshad, A. M. Mastrangelo, A. Rasheed, A. G. Kazi, T. Mahmood and A. Mujeeb-Kazi	Comparative assessment of glutenin composition and their relationship with grain quality traits in bread wheat germplasm	Pakistan Journal of Botany	0.872	45(SI): 289-296
6.	Akhtar, S. I., A. Shahzad, M. Arshad, and F. U. Hassan	Morpho-physiological evaluation of groundnut (<i>Arachis hypogaea</i> L.) genotypes for iron deficiency tolerance	Pakistan Journal of Botany	0.872	45(3): 893-899
7.	Ilyas, I. M., R. Qureshi, Z. K. Shinwari, M. Arshad, S. N. Mirza and Z. U. Haq	Some ethnoecological aspects of the plants of Qalagai Hills, Kabal Valley Swat	International Journal of Agriculture & Biology	0.808	15(5): 801-810
8.	Sadiq, M., R. Asghar, R. Qureshi and A. Ali	Study of polypeptides induced by drought stress in some local varieties of barley from Pakistan	Pakistan Journal of Botany	0.872	45(4): 1251-1254
9.	Abbas Q., R. Qureshi, A. N. Naqvi, S. W. Khan and I. Hussain	Floristic inventory and ethnobotanical study of the Naltar Valley (Karakoram Range), Gilgit, Pakistan	Pakistan Journal of Botany	0.872	45(SI): 269-277
10.	Bano, Q., N. Ilyas, A. Bano, N. Zafar, A. Akram and F. U. Hassan	Effect of <i>Azospirillum</i> inoculation on maize (<i>Zea Mays</i> L.) under drought stress	Pakistan Journal of Botany	0.872	45(SI): 13-20
11.	Nisa, S., Y. Bibi, M. Zia, A. Waheed, M. F. Chaudhary	Anticancer investigations on <i>Carissa opaca</i> and <i>Toona ciliate</i> extracts against human breast carcinoma cell line	Pakistan Journal of Pharmaceutical Sciences	0.947	26: 1009-1012
12.	Munir, M., R. Qureshi, M. K. Laghari, M. Arshad and A. Khaliq Ch.	Taxonomic study of some pennate diatoms from Kallar Kahar Lake, District Chakwal, Pakistan	Journal of Animal and Plant Sciences	0.638	23(2): 457-463

Department of Zoology/Biology					
13.	Afshan, K., M. A. Beg, S. S. R. Rizvi and M. Qayyum	Helminths and Nematode Infection in Norway Rats (<i>Rattus norvegicus</i>) Captured From Northern Punjab, Pakistan	Pakistan Journal of Zoology	0.33	45(5), 1456-1459, 2013
14.	Afshan, K., S. S. R. Rizvi, A. Muhammad and M. Qayyum	Geo-morphometric approaches to the study of sexual size dimorphism in murid rodents	Pakistan Journal of Zoology	0.309	45(4), 1035-1040, 2013.
15.	Afshan, K., M. A. Beg, I. Ahmad, M. M. Ahmad and M. Qayyum,	Freshwater Snail Fauna of Pothwar Region, Pakistan	Pakistan Journal of Zoology	0.309	45(1), 227-233, 2013.
16.	Khan, S. N., S. Neimann, M. Gulfraz, M. Qayyum, S. Siddiqi, Z. S. Mirza, S. Tahsin, M. Ebrahimi-Red and A. Khanum	Molecular Characterization of Multidrug-Resistant Isolates of <i>Mycobacterium tuberculosis</i> from Patients in Punjab, Pakistan	Pakistan Journal of Zoology	0.309	45(1), 93-100, 2013
17.	Ahmed, H., M. R. Khan, R. Panadero-Fontán, C. L. Sánchez, S. Asif, I. Mustafa and M. Qayyum	Influence of Epidemiological Factors on the Prevalence and Intensity of Infestation by <i>Hypoderma</i> spp. (Diptera: Oestidae) in Cattle of Potowar Region, Pakistan	Pakistan Journal of Zoology	0.309	45(6):1495-1500. 2013
18.	Ali, S., Q. Ali, E. N. Abatih, N. Ullah, A. Muhammad, I. Khan and S. Akhter	Sero-prevalence of <i>Brucella abortus</i> among Dairy Cattle and Buffaloes in Pothohar Plateau, Pakistan	Pakistan Journal of Zoology	0.309	45: 1041-1046
19.	Nadeem, M. S., S. Zafar, A. R. Kayani, M. Mushtaq, M. A. Beg, and M. F. Nasir	Distribution and Roosting Habitats of Some Microchiropteran Bats in Rawalpindi District, Pakistan.	Pakistan Journal of Zoology	0.309	45(2):565-569.
20.	Naqvi, S. R., M. Mushtaq, M. A. Beg, M. S. Nadeem, and A. R. Kayani	Dietary Habits of the House Rat (<i>Rattus rattus</i>) in Urban Rawalpindi, Pakistan.	Pakistan Journal of Zoology	0.309	45(2):531-536.
21.	Mahmood, T., F. Niazi, and M. S. Nadeem,	Diet composition of Asiatic Jackal (<i>Canis aureus</i>) in Margallah Hills National Park, Islamabad, Pakistan.	Journal of Animal & Plant Sciences	0.638	23 (2):446-456.
22.	Mirza, Z. S., M. S. Nadeem, M. A. Mirza, and I. Malik	Spatial and Temporal Fluctuations in the Physico-Chemical Limnology of Mangla Dam (Pakistan).	Pakistan Journal of Zoology	0.309	45(3):679-686.
23.	Ali, S., B. A. Rakha, I. Hussain, M. S. Nadeem, and M. Rafique	Ecology of Feral Pigeon (<i>Columba livia</i>) in Urban Areas of Rawalpindi/Islamabad, Pakistan.	Pakistan Journal of Zoology	0.309	45(5):1229-1234.
24.	Mirza, Z. S., M. R. Mirza, M. S. Nadeem, and A. Q. K. Sulehria	Revised Checklist of fishes of Mangla Reservoir, Pakistan.	Biologia (Pak).	-	59(1):1-6.
25.	Mushtaq, M., A. Mian, I. Hussain, S. Munir, I. Ahmed and A. A. Khan	Testing of Groundnut – Maize Bait as Carrier of Zinc Phosphide for the Management of Indian Crested Porcupine, <i>Hystrix indica</i> Kerr (Rodentia: Hystricidae)	Pakistan Journal of Zoology	0.309	45(2): 291–298

26.	Mahmood, T., K. Jabeen, I. Hussain, and A. R. Kayani	Plant species association, burrow characteristics and the diet of the Indian Pangolin, <i>Manis crassicaudata</i> , in the Potohar Plateau, Pakistan	Pakistan Journal of Zoology	0.309	45(6): 1533-1539
Department of Biochemistry					
27.	Shahzad, M. I., I. H. Khan, P. A. Luciw, M. Gulfraz and A. Khanum	Cloning, Expression and Genetic Immunization Studies of Mycobacterium tuberculosis Gene <i>esat6</i>	Pakistan Journal of Zoology	0.309	45(3):749-757
28.	Khan, S. N., S. Niemann, M. Gulfraz, M. Qayyum, S. Siddiqi, Z., S. Mirza, S. Tahsin, M. Ebrahimi-Rad and A. Khanum	Molecular Characterization of Multidrug-Resistant isolates of mycobacterium tuberculosis from patients in Punjab, Pakistan	Pakistan Journal of Zoology	0.309	45(1): 93-100
29.	Naqvi, S. K. B., M. S. Ahmad, C. A. Rauf and S. M. S. Naqvi	Amplification and sequencing of internal transcribed regions 1 & 2, and 5.8s rDNA from local isolates of fusarium species	Pakistan Journal of Botany	0.872	45(SI): 301-307
30.	Rahim, G., R. Qureshi, M. Arshad and M. Gulfraz	Phytochemical analysis and antioxidant properties of teucrium stocksianum flower from Malakand Division, Pakistan	International Journal of Agriculture & Biology	0.808	15(2): 377-381
31.	Mahmood, T., R. Aslam, S. Rehman and S. M. S. Naqvi	Molecular markers assisted genetic characterization of different salt tolerant plant species	Journal of Animal and Plant Sciences	0.638	23(5): 1441-1447
32.	Rehman, I., F. Deebea, M. I. Haque, S. M. S. Naqvi	Inhibition of sesame seedling growth by <i>Xanthomonas campestris</i> pv. <i>Sesame</i> culture secretions.	Journal of Animal and Plant Sciences	0.638	23(4): 1207-1210
33.	Naqvi, S. M. S., I. Batool, M. U. Farooq, F. Deebea, M. Z. Hyder, T. Mahmood.	Seed grain polyphenol oxidase activities in wheat (<i>Triticum aestivum</i> L)	Pakistan Journal of Botany	0.872	45(2): 407-410
34.	Naeem, M., I. Naveed, S. M. S. Naqvi and T. Mahmood	Standardization of tissue culture conditions and estimation of free scavenging activity in <i>viola odorata</i> L.	Pakistan Journal of Botany	0.872	45(1): 197-2002
35.	Shamim, F., G. N. Johnson, S. M. S. Naqvi, A. Waheed	Higher antioxidant capacity protects photosynthetic activities as revealed by Chl a fluorescence in drought tolerant tomato genotypes	Pakistan Journal of Botany	0.872	45(5): 1631-1642
36.	Khan, F., T. Sultana, F. Deebea, S. M. S. Naqvi	Dynamics of mRNA of glycine-rich RNA-binding protein during wounding, cold and salt stresses in <i>Nicotiana tabacum</i>	Pakistan Journal of Botany	0.872	45(SI): 297-300
Department of Sociology and Anthropology					
37.	Chaudhry, A. G., A. A. Chaudhry, S. H. Khokhar and A. Riaz	Coverage of TT vaccination during pregnancy among women of rural areas. A study in village Shah Bollah & Chak Kala, Tehsil & District Gujrat	Science International Lahore: ISSN 1013-5316	-	25(4): 1009-1011
38.	Chaudhry, A. G., A. A. Chaudhry, M. H. Farooq and A. Riaz	Short fall of compressed natural gas (CNG) & issues of affected community; An Anthropological study of vehicle owners in Islamabad &	Science International Lahore: ISSN 1013-5316	-	25(3): 623-626

		Rawalpindi			
39.	Chaudhry, A. G., A. A. Chaudhry, M. Khurum, S. H. Khokhar and A. Tahir	Ramification of complications occurring during pregnancy	Science International Lahore: ISSN 1013-5316	-	25(1): 119-122
40.	Chaudhry, A. G., A. A. Chaudhry, S. H. Khokhar, M. Khurum, M. A. Chohan and F. Fazal	Social institutions and suicidal behaviors among University students: A study of opinion evaluation of University graduates on depressive disorders in Islamabad	Science International Lahore: ISSN 1013-5316	-	24(4): 167-169
Department of Economics and Agri. Economics					
41.	Mahmood, R., S. Asad, and G. Sarwar	Comparative study of pollen trap on improvement in pollen collection technology	Pakistan Journal of Sciences	-	65(2): 202-205
42.	Kausar R., S. N. Mirza, A. Saboor, A. Saleem and B. Khalid	Role of ecotourism in promoting and sustaining conservation of nature: A case study of Murree forest recreational resort	Pakistan Journal of Agricultural Sciences	1.240	50(3): 463-468

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Botany					
1.	Aslam, U., I. Ahmad, M. Hussain, A. Khan, A. Ghani, I. Mustafa, S. Jalal, M. A. Aqeel, S. Asif	Effect of heavy metal pollution on mineral absorption in sunflower (<i>Helianthus annuus</i> L.) hybrids	Acta Physiologiae Plantarum	1.64	DOI 10.1007/s 11738-013-1390-y
2.	Mustafa, I., M. Arshad, A. Ghani, I. Ahmad, A. B. M. Raza, F. Siddique, S. Asif, M. R. Khan	Population dynamics of citrus leaf miner on different varieties of citrus in correlation with abiotic environmental factors in Sargodha District, Punjab, Pakistan	Phytoparasitica	0.80	DOI 10.1007/s 12600-013-0371-4
3.	Kouser, R. and R. Qureshi	Antimicrobial activity of <i>Fagonia indica</i> from Thal Desert, Punjab, Pakistan	International Journal of Phytomedicine	0.89	5(1): 113-118
4.	Kausar, R., M. Arshad, A. Shahzad and S. Komatsu	Proteomic analysis of sensitive and tolerant barley genotypes under drought stress	Amino Acid- Springer Link	4.1	44(2): 345-359
5.	Ahmed, E., M. Arshad, A. Saboor, R. Qureshi, G. Mustafa, S. Sadiq and S. K. Chaudhari	Ethnobotanical appraisal and medicinal use of plants in Patriata, New Murree, evidence from Pakistan	Journal of Ethnobiology and Ethnomedicine	2.42	9(13): 1-10
6.	Batook, N., M. Asif, M. Arshad, F. U. Hassan, M. Ahmed and S. Basu	Effects of silique position on physico-chemical composition of canola (<i>Brassica napus</i> L.) seed.	Plant Knowledge Journal	-	2(1): 51-55
7.	Chaudhry S. K., M. Arshad, E. Ahmed, G. Mustafa, S. Fatima and	Ethnobotanical evaluation of grasses from Thal Desert	Archive Des Science	0.474	66(5): 248-255

	M. S. Amjad				
8.	Amjad, M. S., M. Arshad, S. K. Chaudhry, K. Manzoor, S. Fatima, G. Mustafa and N. Z. Malik	Altitudinal variation in plant species diversity and its components in Kotli Hills Azad Kashmir	Archive Des Science	0.474	66(5): 614-621
9.	Razzaq, A., M. Arshad, S. Ashraf, A. Akram, A. Qayyum and I. Mahmood	Evaluation of psyllium husk (<i>Plantago ovate</i>) as a low cost gelling agent for callus formation and regeneration in wheat (<i>Triticum aestivum</i> L.) cultivar GA-2002	Wulfenia Journal	0.467	20(7): 153-161
10.	Nayyar B. G., A. Akram, M. Arshad, S. M. Mughal, S. Akhund and S. Mushtaq	Mycoflora detected from seeds of <i>Sesamum indicum</i> L. in Sialkot, Pakistan	IOSR Journal of Pharmacy and Biological Sciences	1.13	7(3): 99-103
11.	Amjad, M. S., M. Arshad and I. A. Qamar	Phytosociology of Pinus-Qurecus forest vegetation of Nikyal Hills, District Kotli, Azad Kashmir, Pakistan	International Journal of Agriculture and Crop Sciences	0.84	5(24): 2952-2960
12.	Amjad, M. S., M. Arshad and S. K. Chaudhry	Phenological pattern among the vegetation of Nikyal valley, District Kotli, Azad Kashmir, Pakistan	Journal of Applied Science & Technology	-	3(4): 1505-1518
13.	Chaudhary, S. K., M. Arshad, M. S. Amjad and S. Fatima	Taxonomic inventory of grasses on the basis of morphological attributes from Thal desert, Pakistan	International Journal of Scientific and Engineering Research	1.4	11(4): 509-517
14.	Amjad, M. S., M. Arshad and Z. H. Mali	An overview of human-plant interaction in Nikyal rangeland District Kotli, Azad Jammu and Kashmir	African Journal of Plant Sciences	-	7(12): 571-576
15.	Qureshi, R., and S. Rana	<i>Conyza sumatrensis</i> (Retz.) E. H. Walker: A new record from Pakistan	Plant Biosystems	1.910	http://dx.doi.org/10.1080/11263504.2013.850119
16.	Anwar, P., A. Bendini, M. Gulfranz, R. Qureshi, E. Valli, G. D. Lecce, S. M. S. Naqvi and T. G. Toschi	Characterization of olive oils obtained from wild olive trees (<i>Olea ferruginea</i> Royle) in Pakistan	Food Research International	3.005	54(2): 1965-1971
17.	Ahmed, D., M. Gulfranz, M. S. Ahmad, R. Qureshi, R. T. Mahmood and P. Anwar	Cytoprotective potential of methanolic leaves extract of <i>Taraxacum officinale</i> on CC14 induced rats	Pensee Journal	0.06	75(11): 220-227
18.	Jamil, S., S. A. Pirzad, M. K. Alam, H. M. Waris, R. Qureshi, K. A. Ansari and S. A. Sheikh	Seed Morphometry of some grasses and sedges from Cholistan Desert, Pakistan	Archives Des Sciences	0.3	66(1): 128-133
19.	Waheed, A., Y. Bibi, S. Nisa, M. Zia, S. Ahmed and M. F. Chaudhary	Anticancer activity of extracts from <i>Viburnum foetens</i> on human breast and colorectal cancer cells in vitro	Asian Pacific Journal of Tropical Diseases	-	3:32-36
20.	Sarwar, S., B. Dietz, Y. Ping, Y. Bibi, S. Nisa and M. F. Chaudhary	Novel anti-uterus cancer potential of fruit extract of <i>Lantana camara</i> as exhibited through the inhibition of alkaline phosphatase in human endometrial adenocarcinomatic cell line	Journal of Medicinal Plants Research	-	7: 1216-1221

Department of Zoology/Biology					
21.	Ahmed, H., R. Panadero-Fontán, C. L. Sández, M. R. Khan, S. Asif, I. Mustafa, A. Ghani, I. Ahmad, S. M. S. Naqvi, M. Qayyum	Development of Indirect ELISA for the Diagnosis of Bovine Hypodermosis (<i>Hypoderma lineatum</i>) in the Cattle of Subtropical Region of Pakistan.	Kafkas Univ Vet Fak Derg,	0.46	19 (6): 1017-1022, 2013
22.	Afshan, K., M. Qayyum, S. S. R. Rizvi, M. Mukhtar, M. Mushtaq, J. E. Miller.	Serological and coprological comparison for rapid diagnosis of <i>Fasciola hepatica</i> infection in small ruminants from sub-tropical area of Pakistan	Small Ruminants Research	1.2	113: 267-272, 2013.
23.	Ahmed,H., M. R. Khan, R. P. Fontan, C. L. Sandez, M. Irfan, A. Ghani, M. Hussain, S. Asif, A. Ahmad, S. M. S. Naqvi, and M. Qayyum	Prevalence of Bovine Hypodermosis in water buffalo (<i>Bulbalus bulbalus</i>) from Jhelum district, Pakistan	Kafkas Univ Vet Fak Derg,	0.46	19 (1): 79-84, 2013.
24.	Ejaz, R., M. S. Ansari, B.A. Rakha, N. Ullah, A. U. Husna, R. Iqbal and S. Akhter	Arachidic acid in extender improves post-thaw parameters of cryopreserved Nili-Ravi buffalo bull semen.	Reproduction in Domestic Animals	1.392	doi: 10.1111/rda.12239
25.	Ali, S., Q. Ali, F. Melzer, I. Khan, S. Akhter, H. Neubauer, S. M. Jamal	Isolation and identification of bovine <i>Brucella</i> isolates from Pakistan by biochemical tests and PCR.	Tropical Animal health and Production	1.09	DOI 10.1007/s11250-013-0448-6
26.	Akhter, S., M. S. Ansari, B. A. Rakha, S. M. H. Andrabi, S. Qadeer, R. Iqbal, N. Ullah.	Efficiency of ciprofloxacin for bacterial control, post thaw quality and in vivo fertility of buffalo spermatozoa.	Theriogenology	2.082	80: 378-383
27.	Ali, S., Q. Ali, H. Neubauer, F. Melzer, M. Elschner, I. Khan, E. N. Abatih, N. Ullah, M. Irfan, and S. Akhter	Seroprevalence and Risk Factors Associated with Brucellosis as a Professional Hazard in Pakistan.	Foodborne Pathogens and Diseases	2.283	10:500-5 DOI: 10.1089/fpd.2012.1360
28.	Rakha, B. A., I. Hussain, S. Akhter, M. S. Ansari, N. Ullah and S.M.H. Andrabi	Evaluation of tris-citric egg yolk, skim milk and egg yolk citrate extenders for the liquid storage Punjab urial (<i>Ovis vignei punjabiensis</i>) spermatozoa.	Reproductive Biology	1.333	13: 238–242
29.	Qadeer, S., A. Batool, K. Mehboob, M. S. Ansari, B. A. Rakha, S. M. H. Andrabi, N. Ullah, R. Iqbal, S. Akhter	Comparison of traditional antibiotic streptomycin with neomycin, polymyxin B or Colistin in extender for buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Journal of Applied Animal Research	0.123	41: 289-293
30.	Nighat, S., S. Iqbal, M. S. Nadeem, T. Mahmood, and S. I. Shah,	Estimation of heavy metal residues from the feathers of Falconidae, Accipitridae, and Strigidae in Punjab, Pakistan.	Turkish Journal of Zoology	0.414	37(4):488-500.
31.	Mahmood, T., S. M. Usman-Ul-Hassan, M.	Population and diet of migratory Common Starling <i>Sturnus vulgaris</i>	Forktail	0.808	29:102-103.

	S. Nadeem, and A. R. Kayani	wintering in agricultural areas of Sialkot District, Pakistan.			
32.	Mushtaq M., I. Hussain, A. Mian, S. Munir and I. Ahmed	Evaluation of some bait additives against Indian crested porcupine, <i>Hystrix indica</i>	Integrative Zoology	1.288	8(3): 285-292.
Department of Biochemistry					
33.	Anwar, P., A. Bendini, M. Gulfraz, R. Qureshi, E. Valli, G. Di Lecce, S. M. S. Naqvi and T. G. Toschi	Characterization of wild olive (<i>olea ferruginea</i>) oils from Pakistan	Food Research International	3.5	54:1965-1971
34.	Batool, S., M. J. Asad, S. M. S. Naqvi, R. T. Mahmood, A. Guffar, M. Gulfraz and S. H. Hadri	Production and partial purification of pectin lyase by <i>Aspergillus niger</i> grown on orange peels	African Journal of Microbiology Research	0.8	7(13): 1144-1149
35.	Afzal, U., M. Gulfraz, S. Hussain, F. Malik, S. Maqsood, I. Shah and S. Mahmood	Hepatoprotective effects of <i>Justicia adhatoda</i> L. against carbon tetrachloride (CC14) induced liver injury in swiss albino mice	African Journal of Pharmacy and Pharmacology	0.869	7(1): 8-14
36.	Shaiq, P. A., P. E. Stuart, A. Latif, C. Schmotzer, A. H. Kazmi, M. S. Khan, M. Azam, T. Tejasvi, J. J. Voorhees, G. K. Raja, J. T. Elder, R. Qamar, R. P. Nair	Genetic associations of psoriasis in a Pakistani population	British Journal of Dermatology	3.76	169(2): 406-411
37.	Raja, G. K., M. A. Sarzynski, P. T. Katzmarzyk, W. D. Johnson, Y. Tchoukalova, S. R. Smith, C. Bouchard	Commonality versus specificity among adiposity traits in normal-weight adults	International Journal of Obesity	5.221	doi: 10.1038/ijo.2013.153.
38.	Mahmood, R. T., M. J. Asad, N. Mehboob, M. Mushtaq, M. Gulfraz, M. Asgher, N. M. Minhas and S. H. Hadri	Production, purification and characterization of Exoglucanase by <i>Aspergillus fumigates</i>	Applied Biochemistry & Biotechnology	1.943	170: 895-908
39.	Ata, S., F. H. Wattoo, M. Feroz, M. H. S. Wattoo, S. A. Tirmizi and M. J. Asad	Analytical investigation of selected pesticide residues from fruits and vegetables by an improved extraction method using reverse phase high performance liquid chromatography	Ethiopian Journal of Environmental Studies and Management	-	6(4): 342-347
40.	Ahmad, M. S., S. M. S. Naqvi, S. Mushtaq, F. Ramzan, A. Sami, S. Batool, I. U. Haq and B. Mirza	Phytochemical and biological evaluation of <i>Polygonum amplexicaule</i> rhizome extract	Canadian Journal of Pure and Applied Sciences	-	7(3): 2491-2498
41.	Ahmed, D., M. Gulfraz, M. S. Ahmad, R. Qureshi, R. T. Mahmood and P. Anwar	Cytoprotective potential of methanolic leaves extract of <i>Taraxacum officinale</i> on CC14 induced Rats	Pensee Journal	0.063	75: 11(2)

42.	Ata, S. F. H. Wattoo, I. Qasim, M. H. S. Wattoo	Monitoring of anthropogenic influences on underground and surface water quality of Indus River at District Mianwali Pakistan	Turkish Journal of Biochemistry	0.26	38(1): 9-13
43.	Munir, F., S. M. S. Naqvi, Tariq Mahmood	Invitro and in silico characterization of <i>Solanum lycopersicum</i> wound inducible proteinase inhibitor-II gene.	Turkish Journal of Biology	0.914	37:1-10
44.	Shaiq, P. A., J. Klar, B. Bergendal and N. Dahl	WNT10A mutations account for ¼ of population-based isolated oligodontia and show phenotypic correlations	American Journal of Medical Genetics	2.304	9999:1-7
45.	Mahmood, T., T. Yasim, M. I. Haque and S. M. S. Naqvi	Characterization of rice germin-like protein gene promoter.	Genetic Molecular Research	-	12(1):360-369

Department of Sociology and Anthropology

46.	Chaudhry, A. G., F. Jadoon, E. A. Awan, B. Tariq	Contribution of parenting style in life domain of children	IOSR Journal in Humanities and Social Science (IOSR-JHSS) e-ISSN: 2279-0837, p-ISSN: 2279-0845	-	12(2): 91-95
47.	Chaudhry, A. G., A. A. Chaudhry, S. H. Khokhar	Education youth, role of biradarism and local politics: An anthropological analysis of students of PMAS-Arid Agriculture University Rawalpindi, Pakistan	International Journal of Educational Science & Research (IJESR); ISSN (Print): 2249-6947; ISSN(Online): 2249-8052	2.543	3(2): 21-26
48.	Zafar, A., M. Asim, N. Malik and M. I. Zafar	Socio-cultural factors responsible for crime committed by females of Adiala jail, Rawalpindi, Pakistan	Academic Journal of Interdisciplinary Studies	-	2(1): 2013
49.	Zafar, A., M. Asim, I. Gillani and N. Malik	The impact of contraceptive use on women health: A study of District Rawalpindi, Pakistan	Academic Journal of Interdisciplinary Studies	-	2(1): 2013

Department of Economics and Agri. Economics

50.	Hussain, A., F. Zulfiqar and A. Saboor	Changing food patterns across the seasons in rural Pakistan: Analysis of food variety, dietary diversity and calorie intake	Journal Ecology of Food and Nutrition	0.765	53: 39-43
51.	Khan, A. U., A. Saboor, A. Hussain, S. Sadiq and A. Q. Mohsin	Investigating multidimensional poversity across regions in the Sindh province of Pakistan	Social Indicators Research	1.264	DOI: 10.1007/s11205-013-0511-8
52.	Khan, A. U., A. Saboor, A. Hussain, S. Sadiq and A. Q. Mohsin	Poversity assessment as a multidimensional socio-economic concept: The case of Rawalpindi region in Pakistan	Asia Pacific Journal of Social Work and Development	0.107	12(11): 331-339
53.	Ahmed, E., M. Arshad, A. Saboor, R. Qureshi, G. Mustafa, S. Sadiq and S. K. Chaudhari	Ethno-botanical appraisal and medicinal use of plants in Patriata, New Murree: Evidence from Pakistan	Journal of Ethnobiology and Ethnomedicine	2.42	9(13). Doi: 10.1186/1746-4269-9-13

Department of Mathematics & Statistics

54.	Hanif, M.	Local linear estimation of jum-diffusion models by using asymmetric kernels	Stochastic Analysis and Applications	0.300	31: 956-974
55.	Hanif, M.	Nonparametric estimation of second	Communication in	0.298	Online Available

		order diffusion equation by using asymmetric kernels	Statistics-Theory and Methods		
56.	Sajjad, M. K., M. Hanif, J. Nasir	Inflation forecasting by ARIMA versus neural networks	Pensee Journal	0.063	75:64-73
57.	Sajjad M. K., M. Hanif, J. Nasir	Neural networks modeling of GDP in Pakistan	Pensee Journal	0.063	75:442-451
58.	Mustafa, S., P. Gowasmi, M. Arif,	Some radii problems related to certain p-valent meromorphic functions	Indian Journal of Pure and Applied Mathematics	0.274	Accepted

FACULTY OF FORESTRY, RANGE MANAGEMENT & WILDLIFE

NATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Forestry & Range Management					
1.	Kausar R., S. N. Mirza, A. Saboor, A. Saleem and B. Khalid	Role of ecotourism in promoting and sustaining conservation of nature: A case study of Murree forest recreational resort	Pakistan Journal of Agriculture Sciences	1.240	50(3): 463-468
Department of Environmental Sciences					
2.	Ali, U., A. Khalid, T. Mahmood and I. Aziz	Accelerated biodegradation of solid organic waste through biostimulation.	Proceedings of the Pakistan Academy of Sciences	-	50(1): 37-46.
3.	Ahmad, H., M.T. Siddique and A. Khalid	Availability assessment and GIS provisioned mapping of copper, manganese and boron in apple orchards of Murree Pakistan	Journal of Animal and Plant Sciences	0.638	Accepted
4.	Shahzadi, I., A. Khalid, S. Mahmood, M. Arshad, T. Mahmood and I. Aziz	Effect of bacteria containing ACC deaminase on growth of wheat seedlings grown with chromium contaminated water.	Pakistan Journal of Botany	0.872	45: 487-494
5.	Khalid, S., A. Khalid, B. Saba, S. Mahmood, M.T. Siddique and I. Aziz	Effect of ACC deaminase bacteria on tomato plants containing azo dye wastewater	Pakistan Journal of Botany	0.872	45: 529-534
6.	Bangash, N., A. Khalid, T. Mahmood and M.T. Siddique	Screening rhizobacteria containing ACC deaminase for growth promotion of wheat seedlings under water stress	Pakistan Journal of Botany	0.872	45: 91-96
7.	Imran, M., M. Arshad, A. Khalid, S. Kanwal and D.E. Crowley.	Perspectives of rhizosphere microflora for improving Zn bioavailability and acquisition by higher plants.	International Journal of Agriculture and Biology	0.808	accepted
Department of Wildlife Management					
8.	Mushtaq, M., A. Mian, I. Hussain, S. Munir, I. Ahmed and A. A.	Testing of groundnut-maize bait as carrier of zinc phosphide for the management of Indian crested	Pakistan Journal of Zoology	0.338	45(2): 291-298. 2013

	Khan.	porcupine, <i>Hystrix indica</i> Kerr (Rodentia: Hystricidae).			
9.	Shabbir, S., M. Anwar, I. Hussain and M. A. Nawaz.	Food habits and diet overlap of two sympatric carnivore species in Chitral, Pakistan.	The Journal of Animal & Plant Sciences	0.638	23(1):100-107, 2013
10.	Qureshi, B. D., M. Anwar, I. Hussain and M. A. Beg	Habitat utilization of Himalayan musk deer (<i>Moschus chrysogaster</i>) in the Musk Deer National Park , Gulraiz, Azad Jammu and Kashmir, Pakistan	The Journal of Animal and Plant Sciences	0.638	23(5): 1366-1369, 2013
11.	Mahmood, T., F. Niazi and M. S. Nadeem	Diet composition of Asiatic Jackal (<i>Canis aureus</i>) in Margallah Hills National park, Islamabad, Pakistan	The Journal of Animal and Plant Sciences	0.638	23(2): 444-456
12.	Mahmood, T., K. Jabeen, I. Hussain and A. R. Kayani	Plant Species Association, Burrow Characteristics and the Diet of the Indian Pangolin (<i>Manis crassicaudata</i>) in the Potohar Plateau, Pakistan	Pakistan Journal of Zoology (In Press)	0.309	45 (6): 0-0
13.	<u>Ali, S., B. A. Rakha, I. Hussain, M. S. Nadeem and M. Rafique</u>	Ecology of Feral Pigeon (<i>Columba livia</i>) in Urban Areas of Rawalpindi/ Islamabad, Pakistan	Pakistan Journal of Zoology	0.309	45(5): 1229-1234
14.	Rais, M., M. Z. Khan, S. A. Ghalib, R. Nawaz, G. Akbar, S. L. Islam and A. Begum	Global conservation significance of Chotiari Wetlands Complex, Sanghar, Sindh, Pakistan.	Journal of Animal and Plant Sciences	0.638	23(6): 609-1617

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Forestry & Range Management					
1.	Ashraf, M. I., Z. Zhao, C. P. Bourque, D. A. MacLean, F. R. Meng,	Integrating biophysical controls in forest growth and yield predictions with artificial intelligence technology	Canadian Journal of Forest Research	1.900	43(12): 1162-1171
2.	Zhao, Z., M. I. Ashraf, K. S. Keys, F. R. Meng,	Prediction of soil nutrient regime based on a model of DEM-generated clay content for the province of Nova Scotia, Canada.	Canadian Journal of Soil Science	1.200	93(2): 193-203
3.	Zhao, Z., M. I. Ashraf, F. R. Meng	Model prediction of soil drainage classes over a large area using a limited number of field samples: A case study in the province of Nova Scotia, Canada	Canadian Journal of Soil Science	1.200	93(1): 73-83
4.	Saleem, A.	Forestry in Pakistan	The Korean Society of Forest Genetics and Tree Physiology	-	Proceedings of International Conference on Forest Genetics & Tree Physiology

Department of Environmental Sciences					
5.	Brilli, F., T. Tsonev, T. Mahmood, V. Velikova, F. Loreto and M. Centritto	Ultradian variation of isoprene emission, photosynthesis, mesophyll conductance and optimum temperature sensitivity for isoprene emission in water-stressed <i>Eucalyptus citriodora</i> saplings	Journal of experimental Botany	5.242	62(2):519-528
6.	Kamal, A., U. Ali, M. I. Ramey, S. M. Z. Younas, S. Sumbul, R. N. Malik, A. Rashid	Principle component analysis of flue gas exhaust from a functional incinerator in the vicinity of Rawalpindi Pakistan.	Arabian Journal of Chemistry	1.36	Published on-line 26-08-2013
7.	Mehmood, F., A. Rashid, T. Mahmood, L. Dawson	Effect of DTPA on Cd solubility in soil, accumulation and subsequent toxicity to lettuce	Chemosphere	3.2	90: 1805 – 1810
8.	Rehman, M. S. U., A. Saif, A. Rashid, R. Ahmad, M. F. Malik, T. Mahmood	Chemometric classification of advanced oxidation processes for the degradation of pharmaceuticals and personal care products.	Environmental Engineering and Management Journal	1.435	12: 475 – 481
9.	Uddin, I., A. Rashid, T. Mahmood, A. Khalid	Effect of land use activities on PAH contamination in urban soils of Rawalpindi and Islamabad, Pakistan.	Environmental Monitoring & Assessment	1.4	185(10): 8685–8694.
10.	Chishti Z., S. Hussain, K.R. Arshad, A. Khalid and M. Arshad.	Microbial degradation of chlorpyrifos in liquid media and soil	Journal of Environmental Management	3.057	114: 372-380.
11.	Shahzad, S.M., A. Khalid, M.S. Arif, and R. Kausar	Co-inoculation integrated with P-enriched compost improved nodulation and growth of Chickpea (<i>Cicer arietinum</i> L.) under irrigated and rainfed farming systems.	Biology and Fertility of Soils	2.5	DOI 10.1007/s00374-013-0826-2.
12.	Khalid, A., B. Saba, H. Kanwal, A. Nazir and M. Arshad.	Responses of pea and wheat to textile wastewater reclaimed by suspended and attach growth sequencing batch bioreactors	International Biodeterioration and Biodegradation	2.074	85: 550-555.
13.	Saba, B., A. Khalid, A. Nazir, H. Kanwal and T. Mahmood	Reactive black-5 azo dye treatment in suspended and attach growth sequencing batch bioreactor using different co-substrates	International Biodeterioration and Biodegradation	2.074	85: 556-562
14.	Rashid, A., T. Mahmood, F. Mahmood, A. Khalid, B. Saba, A. Batool and A. Riaz	Phytoaccumulation, competitive adsorption, and evaluation of chelators metal interaction in lettuce plant	Environmental Engineering and Management Journal	1.435	http://omicron.ch.tuiasi.ro/EEMJ/
15.	Mahmood, S., A. Khalid, T. Mahmood, M. Arshad and R. Ahmad	Potential of newly isolated bacterial strains for simultaneous removal of hexavalent chromium and reactive black-5 azo dye from tannery effluents	Journal of Chemical Technology and Biotechnology	2.504	88: 1506-1513
16.	Saba, B., B. Zaman, T. Mahmood, and S. J. Khan	Treatment of wastewater with a high c/n ratio in sequencing batch bioreactor (SBBR) containing biocarriers	Environmental Engineering and Management Journal	1.435	Accepted
17.	Saba, B., A. Khalid, A. Nazir, H. Kanwal and T. Mahmood	Textile wastewater treatment in suspended and attach growth sequencing batch bioreactor using different carbon sources	International Biodeterioration and Biodegradation	2.074	http://dx.doi.org/10.1016/j.ibiod.2013.05.007

Department of Wildlife Management					
18.	Hussain, I., S. Abbasi, S. N. Mirza, M. Anwar, M. Rais, and T. Mahmood	Tree cavities and associated vertebrate fauna in a coniferous forest of Dhirkot, Azad Jammu and Kashmir part of Pakistan	Turkish Journal of Zoology	0.591	37: 647-658, 2013
19.	Bilal, S., M. Rais, M. Anwar, I. Hussain, M. Sharif, and B. Kabeer	Habitat Association of Little Grebe (<i>Tachybaptus ruficollis</i>) at Kallar Kahar Lake, Pakistan	Journal of King Saud University-Science (Elsevier)	--	25:267-270, 2013
20.	Mushtaq, M., I. Hussain, A. Mian, S. Munir, I. Ahmad and A.A. Khan	Field evaluation of some bait additives against Indian crested porcupine, <i>Hystrix indica</i> Kerr (Rodentia: Hystricidae)	Integrative Zoology	1.0	8: 285-292, 2013
21.	Sarwar, M., I. Hussain, A. Khan and M. Anwar	Diet composition of demoiselle crane (<i>Anthropoides virgo</i>) migrating through Lakki Marwat area of Pakistan	Avian Biology Research	0.674	6(4): 269-274
22.	Rakha, B.A., I. Hussain, S. Akhtar, N. Ullah, S.M.H. Andrabi and M.S. Ansari	Evaluation of Tris-citric acid, skim milk and sodium citrate extenders for liquid storage of Punjab Urial (<i>Ovis vignei punjabiensis</i>) spermatozoa	Reproductive Biology	1.222	13: 238-242, 2013
23.	Nighat, S., S. Iqbal, M. S. Nadeem, T. Mahmood, and S. I. Shah	Estimation of heavy metal residues from the feathers of Falconidae, Accipitridae, and Strigidae in Punjab, Pakistan	Turkish Journal of Zoology	0.414	37: 488-500
24.	Mahmood, T., N. Irshad and R. Hussain	Habitat Preference and Population Estimates of Indian Pangolin (<i>Manis crassicaudata</i>) in District Chakwal of Potohar Plateau, Pakistan	Russian Journal of Ecology (In Press)	0.236	45(1): 70-75
25.	Mahmood, T., S. M. U. Hassan, M. S. Nadeem and A. R. Kayani	Population and Diet of migratory Common Starling <i>Sturnus vulgaris</i> wintering in agricultural areas of Sialkot district, Pakistan	The Forktail	-	29: 143-144
26.	Kabir, M., M. S. Awan and M. Anwar.	Distribution status of common leopard (<i>Panthera pardus</i>) in and around Machiara National Park, Azad Jammu and Kashmir..	International Journal of Conservation Science	-	4 (1):3-12. 2013
27.	Akhter, S., M. S. Ansari, B. A. Rakha, S. M. H. Andrabi, S. Qadeer, R. Iqbal, N. Ullah	Efficiency of ciprofloxacin for bacterial control, post thaw quality and in vivo fertility of buffalo spermatozoa	Theriogenology	2.082	80: 378-383
28.	Rakha, B. A., I. Hussain, S. Akhter, M. S. Ansari, N. Ullah and S.M.H. Andrabi	Evaluation of tris-cirtic egg yolk, skim milk and egg yolk citrate extenders for the liquid storage Punjab urial (<i>Ovis vignei punjabiensis</i>) spermatozoa	Reproductive Biology	1.222	13: 238-242
29.	Qadeer, S., A. Batool, K. Mehboob, M. S. Ansari, B. A. Rakha, S. M. H. Andrabi, N. Ullah, R. Iqbal, S. Akhter	Comparison of traditional antibiotic streptomycin with neomycin, polymyxin B or Colistin in extender for buffalo (<i>Bubalus bubalis</i>) bull spermatozoa	Journal of Applied Animal Research	0.123	41: 289-293
30.	Ejaz, R., M. S. Ansari, B. A. Rakha, N. Ullah, A. U. Husna, R. Iqbal and S. Akhter	Arachidic acid in extender improves post-thaw parameters of cryopreserved Nili-Ravi buffalo bull semen	Reproduction in Domestic Animals	1.392	DOI: 10.1111/rda.12239

FACULTY OF VETERINARY & ANIMAL SCIENCES

NATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Clinical Studies					
1.	Kashif, J., R. Buriro, J. Memon, M. Yaqoob, J. Soomro, D. Dongxue, H. Jinhu and W. Liping	Detection of Class 1 and 2 Integrins, β -Lactamase Genes and Molecular Characterization of Sulfonamide Resistance in Escherichia coli Isolates Recovered from Poultry in China	Pakistan Veterinary Journal	1.365	33(3): 321-324.
2.	Memon, J., Y. Yang, J. Kashif, M. Yaqoob, R. Buriro, J. Soomro, W. Liping and F. Hongjie	Genotypes, Virulence Factors and Antimicrobial Resistance Genes of Staphylococcus aureus Isolated in Bovine Subclinical Mastitis from Eastern China	Pakistan Veterinary Journal	1.365	
3.	Zafar, M. A., N. Ullah, I. Sarfaraz and F. Raza	Evaluation of relative efficacy of hypertonic saline and lactated Ringer's solutions in experimentally-induced hypo-volumic shock in dogs	Proceedings of the Pakistan Academy of Sciences	-	50(2): 127-130
Department of Livestock Production and Management					
4.	Jabbar, M. A., M. Fiaz, T. Iqbal, M. Abdullah and I. B. Marghazani	Effect of different dietary energy levels on milk production in lactating Nili-Ravi buffalo	The Journal of Animal and Plant Sciences	0.638	23(1 Suppl.): 2013, Page: 13-16
5.	Iqbal, M. F., R. N. A. Khan, M. M. Hashim, T. Ahmad, A. A. Mian, K. Ishaq and A. Rehman	Formononetin Influences Growth and Immune Responses in Broilers	Pakistan Journal of Zoology	0.309	vol. 45(4), pp. 1015-1020
Department of Veterinary Biomedical Sciences					
6.	Sandhu, M.A., M. Raza, F. Afzal, F. Ahmad and M.S. Anjum	Managing immunocompetence of broiler chicken through vitamin E supplementation in low ambient temperature	International Journal of Agriculture and Biology	0.808	15: 1051-1058
7.	Hassan, S., I. Z. Qureshi, I. A. Khan, A. Riaz and A. Yousaf	Sero-biochemical and histopathological alterations due to prolong use of cephadrine on various body tissues of Sprague dawley rats	Journal of Animal and Plant Sciences	0.638	-
8.	Qureshi, A. S., M. Shah, S. Rehan, R. H. Pasha, and H. A. Ullah	Histomorphometrical investigations on the heart, kidneys and adrenal glands in normal Teddy Goats (<i>Capra hircus</i>) using image analysis system	Pakistan Veterinary Journal	1.365	33: 155-159
9.	Pasha, R. H., A. S. Qureshi, and W. A. Khamas	A survey of camel production in three different ecological zones of Pakistan	Journal of Agriculture and Biology	0.808	15: 62-68

Department of Poultry Science					
10.	Mukhtar, N., S. H. Khan, S. A. Syeda, and F. Khalid	Use of Mobile Phones and its Accessories at Poultry Farms-A Stern Breach in Biosecurity.	Reviews in Veterinary and Animal Sciences	-	1:1-6
11.	Sandhu, M. A., M. Raza, F. Afzal, F. Ahmad and M. S. Anjum	Managing Immunocompetence of Broiler Chicken through Vitamin E Supplementation at Low Ambient Temperature	International Journal of Agricultural and Biology	0.808	1051-1058
12.	Saleem, A., K. Abbas, K. Asad, and M. S. Anjum	Best statistical model estimation for musterd yield in Azad Kashmir, Pakistan.	Pakistan Journal of Science and Research	-	65 (1): 77-82

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
Department of Clinical Studies					
1.	Naseer, Z., E. Ahmad, N. Ullah, M. Yaqoob and Z. Akbar	Treatment of anestrous Nili-Ravi buffaloes using eCGand CIDR protocols	Asian Pacific Journal of Reproduction	-	2013; 1(3): 215-217
2.	Junaid, M.I., T. Ahmad, A. Yousaf, S. U. Rahman, M. Saqib, M. Nadeem and G. Muhammad	In Vivo Comparison of Specific Activity of Egg Yolk Immunoglobulins (IgY) andAntibiotic against Staphylococcus aureusCausing Mastitis in Buffaloes (Bubalusbubalis)	Proceeding 10th World Buffalo Congress May 6-8, 2013. Phuket, Thailand	-	-
3.	Ahmad, T., A. Yousaf, M. A. Zafar, M. Nadeem, G. Muhammad and A. H. Tahir	Effect of Severity of Mastitis on Nutritive Worth of Buffalo Milk	Proceeding 10th World Buffalo Congress May 6-8, 2013. Phuket, Thailand	-	-
Department of Livestock Production and Management					
4.	Din, M. M. U., G. Bilal, and H. M. Waheed.	Genomic Selection of Sahiwal Cattle: A Developing Country Perspective.	Journal of Dairy Sciences	2.564	Vol. 96, E-Suppl.
5.	Malik, N., M. M. U. Din and R. Zhao.	Ontogeny of mRNA expression of somatostatin and its receptors in chicken embryos in association with methylation status of their promoters.	Comparative Biochemistry & Physiology	1.923	165(4): 260–270.
6.	Ansari, J., S. H. Khan, A. U. Haq, T. Ahmad and M. I. Abbass	Effect of supplementation of Withania somnifera (Linn.) Dunal roots on growth performance, serum biochemistry, blood hematology, and immunity of broiler chicks	Journal of Herbs, Spices & Medicinal Plants	-	19:144–158
7.	Khawaja, T., S. H. Khan, N. Mukhtar, A. Parveen and T. Ahmed	Comparative study of growth performance, meat quality and haematological parameters of three way crossbred chickens with reciprocal F1	Journal of Applied Animal Research	0.123	41(3): 300-308

		crossbred chickens in a subtropical environment.			
8.	Bilal, G., R. I. Cue, A. F. Mustafa, and J. F. Hayes	Genetic parameters of individual fatty acids in milk of Canadian Holsteins	Journal of Dairy Science	2.566	97:1-7
9.	Bilal, G., R. I. Cue and J. F. Hayes	Genetic correlations between feed intake and type traits in dairy cattle.	Journal of Dairy Science	2.566	96(E-Suppl. 1): 388.
10.	Tahir, M. N., M. Hetta and P. Lund	The effects of and interactions between the maturity of grass silage and concentrate starch source when offered as total mixed rations on the performance of dairy cows	Animal	1.648	7(4): 580-590
11.	Tahir, M. N., M. Hetta, P. Lund and P. Huhtanen	<i>In vitro</i> estimations of the rate and extent of ruminal digestion of starch-rich feed fractions compared to in vivo data	Animal Feed Science and Technology	1.608	179, 36-45
12.	Hetta, M., M. N. Tahir, S. J. Krizsan, A. Puranen and P. Huhtanen	Effects of NaOH-treated wheat and a mixture of barley and oats the voluntary feed intake and milk production in dairy cows	Livestock Science	1.249	154, 103-111
Department of Veterinary Biomedical Sciences					
13.	Sandhu, M. A., A. A. Saeed, M. S. Khilji, A. Ahmed, M. S. Z. Latif and N. Khalid	Genotoxicity evaluation of chlorpyrifos: A gender related approach in regular toxicity testing	Journal of Toxicological Sciences	1.522	38:237-244
14.	Sandhu, M. A., A. A. Saeed, M. S. Khilji, R. H. Pasha, N. Mukhtar and M. S. Anjum	Ontogenic development of corticotrophs in fetal buffalo (<i>Bubalus bubalis</i>) pituitary gland	European Journal of Histochemistry	2.41	Accepted
Department of Poultry Science					
15.	Khawaja, T., S. H. Khan, N. Mukhtar, A. Perveen and G. Fareed	Production performance, egg quality and biochemical parameters of three way crossbred chickens with reciprocal F1 Crossbred chickens in sub-tropical environment	Italian Journal of Animal Sciences	0.789	12:127-132
16.	Khawaja, T., S. H. Khan, N. Mukhtar, N. Ullah and A. Perveen	Production performance, egg quality and biochemical parameters of Fayoumi, Rhode Island Red and their reciprocal crossbred chickens.	Journal of Applied Animal Research. (Taylor and Frances)	0.123	41:208-217
17.	Khan, S.H., and N. Mukhtar.	Dynamic role of cholecalciferol in commercial chicken performance.	World's Poultry Science Journal (Cambridge)	1.215	69 (3): 587-600
18.	Mukhtar, N., S. H. Khan and M. S. Anjum	Hatchling length is a potential Chickquality Parameter in meat type chickens.	World's Poultry Science Journal (Cambridge)	1.254	69 (4):
19.	Pasha, R. H., A. S. Qureshi, Z. U. Rehman, and W. A. Khamas	Seasonal anatomical changes in the testis of one-humped camel: a review	European Journal of Anatomy.	-	17 (3): 132-141

UNIVERSITY INSTITUTE OF INFORMATION TECHNOLOGY

NATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
1.	Dr. Sohail Asghar	A scrum framework for requirement engineering practices	Proceedings of the Pakistan Academy of Sciences (Accepted)	-	50(4): 263-270
2.	Dr. Sohail Asghar	Classification of scientific publications using swarm intelligence	Proceedings of the Pakistan Academy of Sciences	-	50(2): 115-126
3.	Dr. Sohail Asghar	Web usage logging framework for data mining	Sindh University Research Journal (Science Series)	-	45: A-1
4.	Dr. Sohail Asghar	Evaluation of similarity measurer for categorical data	The Nucleus: The Scientific Journal of Pakistan Atomic Energy Commission	-	50(4)
5.	Dr. Sohail Asghar	Mody genes; linkage analysis and subgroup discovery from text documents	Professional Medical Journal	-	20(4)
6.	Dr. Sohail Asghar	Subgroup discovery of the MODY genes of text documents	Professional Medical Journal	-	20(5): 644-652
7.	Dr. Sohail Asghar	Sanitizing sensitive association rules using fuzzy correlation scheme	The Nucleus: The Scientific Journal of Pakistan Atomic Energy Commission	-	50(4)

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
1.	Dr. Sohail Asghar	Scientific study of religion in vexillology	European Journal of Science and Theology EJST	0.389	9(4): 9-23
2.	Dr. Sohail Asghar	A novel mutual dependence measure for structure learning	Journal of the National Science Foundation of Sri Lanka	0.15	41(3): ISSN 1391-4588
3.	Dr. Sohail Asghar	An information theoretic scoring function in belief network	The International Arab Journal of Information Technology (IAJIT)	0.39	ISSN: 1683-3198, Vol 11(5)
4.	Dr. Sohail Asghar	An efficient AI based approach for multimedia traffic management in wireless network	Research Journal of Applied Sciences Engineering and Technology	-	6(4): 51-56
5.	Dr. Sohail Asghar	Fairness based dynamic routing technique (FsBDRT) in wireless mesh network	Research Journal of Applied Sciences Engineering and Technology	-	5(4):

6.	Dr. Sohail Asghar	Data flow analysis of UML models by ALF	International Journal of Trade, Economics and Finance	-	5(1):
7.	Dr. Sohail Asghar	QoS guarantee for VOIP over wireless LANs	International Journal of Hybrid Information Technology	-	6(3): 25-32
8.	Mr. Yasir Hafeez	A systematic approach for web engineering practices by integrating data mining technique with requirement change management	4 th IEEE Int. Conference, ISBN: 978-1-4673-5000-6/13/2013	-	373-376
9.	Mr. Yasir Hafeez	Effective usage of AI technique for requirement change management practices	Amman, Jordan. ISBN- 1-4673-5824-08 (HEC Recognized)	-	121-125
10.	Mr. Yasir Hafeez	Comparative study of traditional requirement engineering and agile requirement engineering	Advanced Communication Technology ISBN: 978-89-968650-0-1, (HEC Recognized)	-	1006-1014

UNIVERSITY INSTITUTE OF MANAGEMENT SCIENCES

NATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
1.	Abbas, Q., A. I. Hunjra and R. I. Azam	Financial Performance of Banks in Pakistan after mergers and Acquisition	1 st Abasyn International Conference on Technology and Business Management (AiCTM)	-	(AiCTM)
2.	Fatima, A., and M. Z. Iqbal	Interpersonal Conflict Handling Styles: A Collectivist Co-workers' Perspective on its Causes and Effects	Pakistan Journal of Psychological Research	-	28(1): 125-153
3.	Imran, R., & A. Fatima	Predicting job satisfaction through rewards: stress as a mediator	Psychology at work in Asia	-	3: 18-30. Cambridge Scholars Publishing.

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
1.	Yasir, M., R. Imran and M. K. Irshad	Mediating role of organizational climate in the relationship between	Actual Problems of Economics	-	7(145) 2013. ISSN: 1993-6788

		transformational leadership, its facets and organizational performance.			
2.	Zahid, G., A. U. Haque, and R. Imran	Bridging the Gap: Assessing Students' Performance through Student Academic Engagement in Light of National Education Policies.	The International Journal of Educational and Psychological Assessment	-	14(1). ISSN: 2094-0734.
3.	Aslam, N., R. Imran, M. Anwar, Z. Hameed, and A. Kafayat	The Impact of Work Family Conflict on Turnover Intentions: An Empirical Evidence from Pakistan	World Applied Sciences Journal	-	24(5), ISSN 1818-4952.
4.	Fatima, A., Z. Iqbal, & R. Imran,	Organizational Commitment and Counterproductive Work Behavior: Role of Employee Empowerment.	Proceedings of the Sixth International Conference on Management Science and Engineering Management	-	185: 665-679. Published by Springer.
5.	Imran, R., A. A. Khan, and F. Sheikh	Reducing Turnover Intentions through procedural justice and organizational citizenship behavior: Study of health sector of Pakistan.	Conference book, International Congress on Interdisciplinary Behavior and Social Sciences (ICIBSoS 2013), Jakarta, Indonesia.	-	pp.21-26 Considered for publication by Taylor Francis Group
6.	Ijaz, M. S., A. I. Hunjra, Z. Hameed, A. Maqbool and R. I. Azam	Assessing the Financial Failure Using Z-Score and Current Ratio: A Case of Sugar Sector Listed Companies of KSE	World Applied Sciences Journal (ISI-Journal) ISSN: 1818-4952	-	23 (06), 863-870
7.	Hassan, E. U., F. Shahzeb, M. Shaheen, Q. Abbas, Z. Hameed and A. I. Hunjra	Impact of Affect Heuristic, Fear, and Anger on Decision Making of Individual Investor: A Conceptual Study	World Applied Sciences Journal (ISI-Journal) ISSN: 1818-4952	-	23 (04): 510-514
8.	Ilyas, S., and A. Elahi	Impact of Negative Emotions on Leader's Performance	International Journal of Trends in Economics ,Management and Technology	-	ISSN: 2321-5518; Vol. II, Issue IV
9.	Hameed, Z., A. Maqbool, M. R. Athar, M. S. Ijaz and E. U. Hassan	How to Increase employee Performance: Investigating the Impact of Incentive Motivators and Organization- based self esteem in a Pakistani Perspective	Middle-East Journal of Scientific	-	14(5): 696-702
10.	Abbas, R., H. S. Murad, A. F. Siddiqui, and M. R. Athar	Mirror Up To Benevolent Pater nalistic leadership(BPL):	Social Sciences Bulletin	-	15(1): 42-60 ISSN1691-1881
11.	Kaini, M. S., N. Jamal, M. Hanif, N. Ali, M. R. Athar,	Neural Networks Modelling of GDP in Pakistan	Pensee Journal	-	75(9): 442-451

DIVISION OF CONTINUING EDUCATION, HOME ECONOMICS AND WOMEN DEVELOPMENTSSS

INTERNATIONAL PUBLICATIONS

S. No.	Name of Author(s)	Title of Research Paper	Name of Journal	Impact Factor	Volume & Page No.
1.	Dahar, M. A., and I. H. Padda	Equality of per student resource allocation leads to the optional usage of resource input and the higher quality: A study of the Punjab Education System	European Journal of Scientific Research	0.736	100 (1): 22-35
2.	Dahar, M. A., M. I. Yousaf, and R. T. Dahar	Present school leaders are misfit for the school management and the stumbling blocks for the quality: A case of Punjab Education System	European Journal of Scientific Research	0.736	100(1): 36-42
3.	Yousuf, M. I., Q. Parveen, and M. A. Dahar	Teachers participation in school administration at elementary schools of Punjab.	Educational Research International	-	2(3): 19-24
4.	Behlol, M. G., and Q. Parveen	Quality of education and supervisory practices	Asian Journal of Education and e-Learning	-	1(5): ISSN: 2321-2454

SEMINARS, WORKSHOPS & CONFERENCES

SEMINARS, WORKSHOPS & CONFERENCES HELD AT UNIVERSITY

- The Department of Entomology organized Apiculture Orientation Program on February 27 to March 01, 2013.
- The Department of Horticulture organized Spring Flower Festival at PMAS-AAUR on March 27-31, 2013.
- The Department of Zoology organized one day International Seminar on Scabies and Wild Life: Molecular Perspective for Old Parasite at Seminar Room of the University on April 10, 2013.
- The Department of Entomology organized a seminar on Dengue Control and Prevention at Seminar Room of the University on April 24, 2013.
- The Quality Enhancement Cell in collaboration with Pakistan Scientific & Technological Information Center (PASTIC) organized a seminar on Scientific and Technological Information Services Awareness at PMAS-AAUR on June 5, 2013
- The Department of Environmental Sciences organized a seminar on World Environment Day at PMAS-AAUR on June 06, 2013.
- The Department of Environmental Sciences organized a training workshop on Soil and Water Management Techniques for Semi-Arid Regions at PMAS-AAUR on June 10-13, 2013.
- The Department of Agronomy organized a seminar on Future Technologies & Global Adoption of Biotech Crops at Seminar Room of the University on August 21, 2013.
- The Department of Environmental Sciences organized the International Training on Infrastructure Development & Equipment Installation at University Research Farm Koont and Citrus Farm Sargodha on September 12-26, 2013.

- The Department of Agronomy organized a seminar on Water Modeling as an Adaptation Option to Climate Change at Seminar Room of the University on September 13, 2013.
- The Department of Poultry Science organized a seminar on Ostrich Revolution for Business and Meat Production in collaboration with Pakistan Ostrich Company at University Auditorium on October 08, 2013.
- Pir Mehr Ali Shah Arid Agriculture University ranked at 152 positions by “QS World University Ranking” among Agriculture and Forestry universities of the world. To celebrate this achievement a full day program was organized by the university on 08th October 2013. Mr. Muhammad Baligh-ur-Rehman, Minister of State for Education, Training & Standards in Higher Education was the Chief Guest. Dr. Jong Hwan Song, Ambassador of the Republic of Korea, Prof. Dr Khaild Mehmood Khan (S.I), Ex. Vice Chancellor PMAS-AAUR, Prof. Dr Iqar A Khan, Vice Chancellor of UAF, Prof. Dr Mukhtar Ahmad Khan, Executive Director, HEC Pakistan also attended the program.
- The Department of Entomology organized a seminar on Dengue Awareness at Seminar Room of the University on November 11, 2013.
- International Seminar on "Saemaul Undong & ECONOMIC Development” organized by PMAS-AAUR on November 21, 2013
- The Department of Agronomy organized a seminar on Strengthening Informal Seed Production and Supply in Pothwar Through Participatory Technology Transfer at Seminar Room of the University on December 11, 2013.
- A Seminar on Cardiovascular Diseases held at PMAS-AAUR on December 19, 2013.

WORKSHOPS, SEMINARS AND CONFERENCES ATTENDED BY THE FACULTY

INTERNATIONAL

1. Ms. Bushra Hamid, Lecturer, University Institute of Information Technology attended the 15th International Conference on Advance Communications and Technology (ICACT, 2013) at Phoenix Park, Korea (South) on January 27-30, 2013.
2. Dr. Muhammad Irfan Ashraf, Lecturer, Department of Forestry & Range Management attended In Graduate Research Symposium at University of New Brunswick, Fredericton, NB, Canada on March 26, 2013.
3. Dr. Irfan Ahmad Baig, Assistant Professor, Department of Economics & Agri. Economics attended Workshop on TOA-MD Analysis for Climate Change at Dubai on March 29 to April 4, 2013.
4. Dr. Riaz Hussain Pasha, Assistant Professor, Department of Veterinary Biomedical Sciences attended the Scientific Conference of Camel Research and Production at Khartoum, Sudan on April 17-18, 2013.
5. Dr. M. Inam-ul-Haq, Associate Professor, Department of Plant Pathology attended 3rd Asian Conference on Plant Growth-Promoting Rhizobacteria (PGPR) at Manila, Philippines on April 21-24, 2013.
6. Prof. Dr. Muhammad Naeem, Chairman, Department of Entomology attended Seminar on the Sericulture Production and Management for Developing Countries at South China University on May 22, 2013.
7. Mr. Yasir Hafeez, Assistant Professor, University Institute of Information Technology attended the IEEE 4th International Conference on Software Engineering and Service Science at Beijing, China on May 23-25, 2013.
8. Prof. Dr. Abdul Saboor, Chairman, Department of Economics & Agri. Economics attended the climate Change Scenario Workshop, Research Program on climate change, Agriculture and Food Security at Nagarkot, Katmandu, Nepal on June 3-5, 2013.
9. Mr. Zaib-ur-Rehman, Lecturer, Department of Poultry Science attended Workshop on Livestock and Poultry Farming and Breeding Technology at Ministry of Agriculture, P.R. China on June 16-30, 2013.
10. Dr. Ishfaq Ahmad Hafiz, Associate Professor, Ms. Najma Yousaf Zahid, Assistant Professor, Department of Horticulture, Dr. Muhammad Fiaz, Assistant Professor, Department of Livestock Production and Management

and Ms. Asia Latif, Lecturer, Department of Food Technology attended International Training for Agricultural Lecturers from Arid University Rawalpindi at KNU South Korea on July 5-19, 2013.

11. Dr. Ikram Ali, Associate Professor, Department of Economics & Agri. Economics attended Asia Food & Agri. Business Conference 2013: Bio-technology and Global Competitiveness at Thailand on July 14-19, 2013.
12. Dr. Irfan Ahmad Baig, Assistant Professor, Department of Economics & Agri. Economics attended the AgMIP South Asia Regional Research and Coordination Team Mid-Term Workshop at Nepal on July 22-26, 2013.
13. Prof. Dr. Nadeem Akhtar Abbasi, Chairman and Dr. Imran Hassan, Assistant Professor, Department of Horticulture participated in Training Course on Treatment and Utilization of Agriculture Waste Developing Countires at Chengdu Sichuan China on July 12 to August 16, 2013.
14. Dr. Audil Rashid, Assistant Professor, Department of Environmental Sciences attended the 2013 Conference Environment and Health – Bridging South, North, East and West in Basel, Switzerland on August 19-23, 2013.
15. Prof. Dr. Abdul Saboor, Chairman, Department of Economics & Agri. Economis attended the Workshop on Poversity Reduction Asia: Drivers, Best Practices and Policy Initiatives at Seoul Korea on August 23-24, 2013.
16. Dr. Abid Riaz, Assistant Professor, Department of Plant Pathology attended 10th International Congress of Plant Pathology at Beijing, China on August 25-30, 2013.
17. Prof. Dr. Abdul Saboor, Chairman, Department of Economics & Agri. Economis attended the 6th South Asian Summit at Colombo, Sri Lanka on September 2-4, 2013.
18. Dr. Azeem Khalid, Associate Professor, Department of Environmental Sciences attended the Seminar on Security and Integrity at Madrid, Spain on October 2-4, 2013.
19. Dr. Zahid Akram, Associate Professor, Department of Plant Breeding & Genetics attended Integrated Breeding Multiyear Course at Spain on October 14-25, 2013.

20. Dr. Raiba Imran, Assistant Professor and Ms. Afsheen Fatima, Lecturer, University Institute of Management Sciences attended International Congress on Interdisciplinary Behavior and Social Sciences at Jakarta, Indonesia on November 4-5, 2013.
21. Dr. Muhammad Naveed Tahir, Lecturer, Department of Agronomy attended Orientation Workshop on Globally Important Agricultural Heritage System (GIAHS) for Asia and the Pacific at Bangkok, Thailand on November 12-13, 2013.
22. Prof. Dr. Nadeem Akhtar Abbasi, Chairman, Department of Horticulture participated in Training Program on Multicountry Observational Study Mission on Innovative Farm Management of Practices to Enhance Agricultural Productivity at Tokyo Japan on November 18-22, 2013.
23. Dr. Tariq Mukhtar, Associate Professor, Department of Plant Pathology attended Annual Convention of Canadian Hemp Trade Alliance at Canada on November 24-27, 2013.
24. Dr. Muhammad Rais, Lecturer, Department of Wildlife Management attended World Biodiversity Congress at Chiang Mai, Thailand on November 26-30, 2013.
25. Dr. Badar Naseem Siddiqui, Associate Professor, Department of Agriculture Extension and Communication attended Ministerial Seminar on Modern Agri-Economy and Management in Developing Countries at Beijing, China on November 28 to December 12, 2013.

NATIONAL

1. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended Modeling Water Futures Using Environment Sustainability Approach at National University of Science and Technology (NUST) on January 22-23, 2013.
2. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended Water Policy Modeling Workshop by Pakistan Strategy Support Program and IFPRI at University of Agriculture Faisalabad on January 28 to February 01, 2013.
3. Prof. Dr. Abdul Saboor, Chairman and Dr. Irfan Ahmad, Assistant Professor, Department of Economics & Agri. Economics attended the Second Research Competitive Grants Conference at Islamabad on February 8-10, 2013.

4. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended International Conference on Crop Management in Changing Climate at University of Agriculture Faisalabad on February 11-13, 2013.
5. Dr. Tariq Mehmood, Assistant Professor, Department of Wildlife Management attended the Awareness Seminar on Indian Pangolin (*Manis crassicaudata*) at National Park, Islamabad on February 16, 2013.
6. Dr. Asim Gulzar, Assistant Professor, Department of Entomology attended Seminar on Launching the Indus Working Group Report at PMAS-AAUR on February 28, 2013.
7. Dr. Abid Ghafoor Chaudhry, Lecturer, Department of Anthropology participated in Debate on Public Policy on Ageing at MARGALLA Hotel, Islamabad on March, 2013.
8. Mr. Arshad MAhmoD, Assistant Professor, Department of Economics & Agri. Economics attended the Pak-China Forum at Islamabad on March, 2013.
9. Dr. Abid Ghafoor Chaudhry, Lecturer, Department of Anthropology attended the Seminar on Tareekh aur Jang (War and History) at Quaid-i-Azam University, Islamabad on March 4, 2013.
10. Prof. Dr. Fayyaz-ul-Hassan, Chairman, Dr. Mukhtar Ahmad, Assistant Professor, Dr. Muhammad Naveed Tahir, Lecturer, Department of Agronomy attended Simulating Modeling: Decision Support System for Agro-Technology Transfer for Improving the Standards of Research at BZU, Multan on March 04-05, 2013.
11. Prof. Dr. Muhammad Naeem, Chairman, Department of Entomology attended UNESCAP training Workshop on Integrating Environmental Consideration into Economic Policy Making Processes at Islamabad on March 6-8, 2013.
12. Dr. Irfan Ahmad Baig, Assistant Professor, Department of Economics & Agri. Economics attended the Research Writing Workshop at LUMS, Lahore on March 6-9, 2013.
13. Dr. Mukhtar Ahmed, Assistant Professor, Department of Agronomy attended United Nations/Pakistan International Workshop on Integrated Use of Space Technology for Food and Water Security at Islamabad on March 11-15, 2013.

14. Dr. Muhammad Javaid Asad, Associate Professor, Department of Biochemistry attended the Seminar on Hepatitis B Virus: Emergence and Surveillance at National University of Science & Technology, Islamabad on April 2, 2013.
15. Dr. Mansoor Abdullah, Assistant Professor, Dr. Riaz Hussain Pasha, Assistant Professor, Dr. Mujeeb-ur-Rehman Sohoo, Lecturer, Department of Veterinary Biomedical Sciences, Dr. Nasir Mukhtar, Assistant Professor, Mr. Zaib-ur-Rehman, Lecturer, Department of Poultry Science, Dr. Tariq Mukhtar, Associate Professor, Department of Plant Pathology, Dr. Tariq Mahmood, Assistant Professor, Ms. Bushra Allah Rakha, Lecturer, Department of Wildlife Management, Dr. Shamim Akhter, Associate Professor, Dr. Muhammad Sajid Nadeem, Assistant Professor and Dr. Muhammad Mushtaq, Assistant Professor Department of Zoology attended 33rd Pakistan Congress of Zoology at Pakistan Museum of Natural History on April 2-4, 2013.
16. Dr. Rauf-i-Azam, Director and Ahmed Imran, Lecturer, University Institute of Management Sciences attended 1st Abasyn International Conference on Technology and Business Management at Abasyn University, Peshawar on April 2-4, 2013.
17. Prof. Dr. Iftikhar Hussain, Dean, Faculty of Forestry, Range Management & Wildlife attended Consultative Workshop on Assessing Drivers of Climate Change in Upper Indus Basin at NARC, Islamabad on April, 29-30, 2013.
18. Dr. Muhammad Imran Yousuf, Director/Associate Professor, Ms. Sumaira Kayani, Lecturer and Ms. Tehsin Ehsan, Lecturer, Division of Continuing Education, Home Economics and Women Development attended Training of Trainers Workshop on Education for Sustainable Development at Allama Open University, Islamabad on May 7-8, 2013.
19. Prof. Dr. Abdul Saboor, Chairman, Dr. Ikram Ali, Associate Professor, Dr. Irfan Ahmad, Assistant Professor, Ms. Saima Asad, Lecturer, Department of Economics & Agri. Economics, Ms. Nazia Rafiq, Lecturer and Ms. Faria Ibad Mirza, Lecturer Department of Sociology, Mehwish Zeeshan, Lecturer, Ms. Humera Dinar, Lecturer, Department of Anthropology and Mr. Yasir Hafeez, Assistant Professor, University Institute of Information Technology attended National Seminar on Future of Research in Pakistan at Higher Education Commission, Islamabad on May 18, 2013.

20. Dr. Maqsood Anwar, Chairman, Department of Wildlife Management, Dr. Rahmatullah Qureshi, Associate Professor, Department of Botany and Dr. Muhammad Mushtaq, Assistant Professor, Department of Zoology attended the Symposium on International Biodiversity Day 2013 at Pakistan Museum of Natural History, Islamabad on May 22, 2013.
21. Dr. Rahmatullah Qureshi, Associate Professor, Department of Botany attended the Seminar on Industry-Academia Linkages for Plant Sciences and Plant Products at University of Gujrat on May 23, 2013.
22. Prof. Dr. Abdul Saboor, Chairman and Ms. Saima Asad, Lecturer, Department of Economics & Agri. Economics attended the Female Farmer's Day at Islamabad on June 2013.
23. Dr. Irfan Ahmad, Assistant Professor, Department of Economics & Agri. Economics, Dr. Shahzada Sohail Ijaz, Assistant Professor, Department of Soil Sciences & SWC and Dr. Muhammad Naveed Tahir, Lecturer, Department of Agronomy attended AgMIP-Pakistan Kickoff Workshop & International Seminar on Climate Change at University of Agriculture Faisalabad on June 04-06, 2013.
24. Prof. Dr. Tariq Mahmood and Dr. Azeem Khalid, Associate Professor, Department of Environmental Sciences attended Pakistan Engineering Congress at Lahore on June 5, 2013.
25. Dr. Maqsood Anwar, Chairman, Department of Wildlife Management attended World Environment Day 2013 at National Agricultural Research, Islamabad on June 5, 2013.
26. Dr. Rabia Imran, Assistant Professor, Mr. Ahmed Imran, Lecturer and Afsheen Fatima, Lecturer, University Institute of Management Sciences attended the 2nd International Conference on Emerging Trends in Management (ICETM 2013) at Muhammad Ali Jinnah University Islamabad on June 6, 2013.
27. Dr. Shahzada Sohail Ijaz, Assistant Professor, Dr. Arshad Nawaz Chaudhry, Assistant Professor, Department of Soil Science & SWC and Ms. Saira Asif, Lecturer, Department of Botany attended the Training Workshop on Soil and Water Management Techniques for Semi Arid Regions at PMAS-AAUR on June 10-13, 2013.
28. Prof. Dr. Mazhar Qayyum, Chairman, Department of Zoology/Biology attended the National Seminar on Emerging Trends and Prospects in

Fisheries Management held at Chashma Reservoirs, Mianwali on June 12, 2013.

29. Dr. Rahmatullah Qureshi, Associate Professor and Dr. Naveed Iqbal Raja, Assistant Professor, Department of Botany attended the Seminar and Exhibition on Medicinal and Aromatic Plants Named “Value Chain Development Project for Medicinal and Aromatic Plants (MAP) at Swat on June 17, 2013.
30. Ms. Nazia Rafiq, Lecturer, Ms. Faria Ibad Mirza, Lecturer and Ms. Asma Zafar, Lecturer, Department of Sociology, Ms. Mehwish Zeeshan, Lecturer, Ms. Humera Dinar, Lecturer and Mr. Zaheer Adnan, Lecturer, Department of Anthropology attended the Inaugural and Awareness Session on Rain Water Harvesting at University Research Farm, Koont on June 20, 2013.
31. Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended the Seminar and Awareness Session on International Drug Addiction Day at Islamabad Hotel on June 20, 2013.
32. Dr. Yamin Bibi, Assistant Professor, Department of Botany attended the National Conference on Prospects and Opportunities for Agricultural Development in Pakistan at Khanispur, Ayubia on June 25-27, 2013.
33. Ms. Faria Ibad Mirza, Lecturer, Department of Sociology and Ms. Humera Dinar, Lecturer, Department of Anthropology attended the Seminar on Civic Engagement and American Experience at Quaid-i-Azam University Islamabad on June 28, 2013.
34. Dr. Asim Gulzar, Assistant Professor, Department of Entomology attended Workshop on Modern Corn Technologies at PMAS-AAUR on August 21, 2013.
35. Prof. Dr. Tariq Mahmood and Dr. Azeem Khalid, Associate Professor attended Fifth International Conference on Environmentally Sustainable Development at Abbottabad, Pakistan on August 25-27, 2013.
36. Dr. Rahmatullah Qureshi, Associate Professor, Department of Botany attended International Conference on Date Palm: “Present Status and Future Prospects” at the Islamia University of Bahawalpur on September 2-3, 2013.

37. Dr. Muhammad Akmal, Assistant Professor, Department of Soil Science & SWC attended Pakistan 2025 Vision at Islamabad Hotel on September 5, 2013.
38. Dr. Muhammad Fiaz, Assistant Professor, Department of Livestock Production and Management attended International E-Learning Course on Global Gap Standard for Greater Market Access at UIIT, PMAS-AAUR on September 10-12, 2013.
39. Ms. Sumaira Hassan, Lecturer, Department of Veterinary Biomedical Sciences attended an International Video Conference on the Export Promotion and Market Access for Agriculture and Food Products from Asia at UIIT Video Conference Room on September 16-19, 2013.
40. Dr. Asma Sohail, Assistant Professor, Department of Food Technology attended e-Learning on Export Promotion and Market Access at PMAS-AAUR on September 17-19, 2013.
41. Dr. Ghulam Bilal, Assistant Professor, Department of Livestock Production and Management attended Workshop on Breeding and Genetics at University of Veterinary and Animal Sciences, Lahore on October 7, 2013.
42. Dr. Muhammad Tariq Siddique, Associate Professor, Department of Soil Science & SWC attended Optimizing Crop Yield by Nutrient Management at PMAS-AAUR on October 17, 2013.
43. Dr. Muhammad Naeem Tahir, Assistant Professor, Department of Livestock Production and Management attended International Livestock Nutrition Conference at University of Veterinary & Animal Sciences, Lahore on October 23-24, 2013.
44. Prof. Dr. Fayyaz-ul-Hassan, Chairman, Department of Agronomy attended Cultivation of Non-Traditional Crops in Pakistan: Prospective and Limitations at AARI, Faisalabad on October 26, 2013.
45. Dr. Abid Ghafoor Chaudhry, Lecturer, Department of Anthropology attended the National Launching of Pilot Study on Ageing in Rawalpindi at Serena Hotel, Islamabad on November 2013.
46. Mr. Zaib-ur-Rehman, Lecturer, Department of Poultry Science attended 36th All Pakistan Science Conference at Gomal University, Dera Ismail Khan on November, 12-14, 2013.

47. Dr. Arfan Yousaf, Associate Professor, Department of Clinical Studies attended National Symposium on One Health Pakistan at NARC, Islamabad on November 18, 2013.
48. Ms. Najma Yousaf Zahid, Assistant Professor, Department of Horticulture attended International Seminar on Sameul Undong & Economic Development of Korea at PMAS-AAUR on November 21, 2013.
49. Dr. Muhammad Javaid Asad, Associate Professor and Dr. Muhammad Sheeraz Ahmad, Assistant Professor, Department of Biochemistry attended 11th Biennial Conference of Pakistan Society of Biochemistry and Molecular Biology at University of the Punjab, Lahore on November 25-28, 2013.
50. Dr. Maqsood Anwar, Chairman, Department of Wildlife Management attended the 5th Meeting of South and Central Asia MAB Network (SACAM) at Marriot Hotel, Islamabad on November 27, 2013.
51. Ms. Sumaira Hassan, Lecturer, Department of Veterinary Biomedical Sciences attended Emerging Role of Women in Muslim Societies at Faisal Mosque, Islamabad on November 28-29, 2013.
52. Zia-ur-Rehman Mashwani, Lecturer, Department of Botany attended 2nd Annual Entrepreneur Conference LCL 2013 at Jinnah Convention Centre, Islamabad on November 30, 2013.
53. Dr. Muhammad Imran Yousuf, Director/Associate Professor, Division of Continuing Education, Home Economics and Women Development attended the Seminar on Science for Peace at Azeemia Foundation, Islamabad on November 30, 2013.
54. Dr. Abid Ghafoor Chaudhry, Lecturer, Department of Anthropology attended the Observance of International Volunteer Day at Islamabad Hotel on December, 2013.
55. Dr. Abid Ghafoor Chaudhry, Lecturer, Department of Anthropology attended the Seminar on Peace Issues and Terrorism in Pakistan at Christian Study Center, Rawalpindi on December, 2013.
56. Dr. Munir Ahmad, Assistant Professor, Department of Entomology attended 4th Annual Public Health Conference at Health Services Academy, Islamabad on December 2-3, 2013.

57. Ms. Afsheen Fatima, Lecturer, University Institute of Management Sciences attended South Asian International Conference (SAICON) at Bhurbun, Murree on December 4-6, 2013.
58. Ms. Bushra Zulfiqar, Assistant Professor and Mr. Ammar Asghar, Lecturer, University Institute of Management Sciences attended Islamic Finance Access Programme at Fatima Jinnah University Rawalpindi on December 16-17, 2013.
59. Ms. Nazia Rafiq, Lecturer, Ms. Faria Ibad Mirza, Lecturer and Ms. Asma Zafar, Lecturer, Department of Sociology, Dr. Abid Ghafoor Chaudhry, Lecturer and Ms. Mehwish Zeeshan, Lecturer, Department of Anthropology attended the Sensitization Session on Traffic Awareness at PMAS-AAUR on December 20, 2013.
60. Dr. Muhammad Tariq Siddique, Associate Professor, Department of Soil Science & SWC attended Role of ICT in Agriculture at University of Agriculture Faisalabad on December 23, 2013.
61. Ms. Faria Ibad Mirza, Lecturer, Department of Sociology attended the Seminar on Prevention of Heart Diseases at PMAS-AAUR on December 26, 2013.

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