ANNUAL REPORT

2010

PIR MEHR ALI SHAH
ARID AGRICULTURE UNIVERSITY
RAWALPINDI
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE</td>
<td>03</td>
</tr>
<tr>
<td>ACADEMICS</td>
<td>04</td>
</tr>
<tr>
<td>ADMINISTRATIVE</td>
<td>09</td>
</tr>
<tr>
<td>FINANCIAL RESOURCES</td>
<td>10</td>
</tr>
<tr>
<td>DEVELOPMENT PROJECTS</td>
<td>11</td>
</tr>
<tr>
<td>DELEGATES &amp; VISITS</td>
<td>13</td>
</tr>
<tr>
<td>SEMINARS, WORKSHOPS AND CONFERENCES</td>
<td>15</td>
</tr>
<tr>
<td>STUDENTS EXTRA CURRICULAR ACTIVITIES</td>
<td>27</td>
</tr>
<tr>
<td>SPORTS ACTIVITIES</td>
<td>28</td>
</tr>
<tr>
<td>UNIVERSITY PUBLICATIONS</td>
<td>30</td>
</tr>
<tr>
<td>FACULTY PUBLICATIONS</td>
<td>31</td>
</tr>
</tbody>
</table>


**PREFACE**

During the year 2010, Pir Mehr Ali Shah (PMAS) Arid Agriculture University made substantial efforts to improve academic as well as Research activities alongwith 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 52 Research Projects worth Rs. 64.493 million sponsored by various agencies.

Forty Three faculty members were promoted/inducted to over come staff shortage for teaching in different faculties. Professional Development Center was established at UIIT to facilitate the students for the award of scholarships, seeking employment and unforeseen emerging issues.

Faculty members attended Ninety two National and International workshop/ seminars/ symposium/conferences to share/transfer knowledge in different scientific fields with in the country and globally.

The linkage between faculty, Industry and farming community was further promoted to ensure the penetration and achievements of objectives of the university.

Memorandum of Understandings with various national and International organizations were signed for academic and research sharing. The provision of better Research facilities encouraged the faculty to publish 218 Research Publications in National and International reputed journals. With this effort University stood in HEC research ranking at 13\(^{th}\) out of 93 Universities of Pakistan. University has improved its standing to 12\(^{th}\) out of 93 this year and now 2\(^{nd}\) in Agriculture Universities of Pakistan.
ESTABLISHMENT OF PROFESSIONAL DEVELOPMENT CENTER

To reduce the gap between academia and industry particularly in the discipline of Informational technology, a Professional Developmental Center (PDC) was established at University Institute of Information Technology (UIIT) and impart training for continuous professional development in the field of project management and information technology. The center will not only increase the visibility of UIIT and its students in the industry but will also help to generate revenue and further self sustainability. The center will be helpful in building capacity of graduates in terms of sharpening their IT and project management skills as per market needs. The two continuous Professional Development (CPD) courses IT Essentials and Cisco Network Associate (CCNA) are being offered at PDC

NEW DEGREE PROGRAMS INITIATED

The University initiated two new degree programs in M. Phil Sociology and M.Phil Education. The Academic council also approved the following M.Phil degree programs:

- Veterinary Pathology
- Veterinary Parasitology
- Veterinary Microbiology
- Animal Nutrition

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. During 2010, PMAS-AAUR management 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. Keeping above in view following new staff was inducted in various departments on the recommendation of the selection board after subsequent approval by the University Syndicate.
<table>
<thead>
<tr>
<th>Department</th>
<th>Lecturer</th>
<th>Assistant Professor</th>
<th>Associate Professor</th>
<th>Professor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop &amp; Food Sciences</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Sciences</td>
<td>2</td>
<td>9</td>
<td>2</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Range Management &amp; Forestry</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>03</td>
</tr>
<tr>
<td>Veterinary &amp; Animal Sciences</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>08</td>
</tr>
<tr>
<td>University Institute of Information Technology</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>02</td>
</tr>
<tr>
<td>University Institute of Management Sciences</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>02</td>
</tr>
<tr>
<td>Woman Division</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>11</strong></td>
<td><strong>18</strong></td>
<td><strong>10</strong></td>
<td><strong>4</strong></td>
<td><strong>43</strong></td>
</tr>
</tbody>
</table>

**SHORT COURSES HELD**

In addition to degree programmes, the Faculty of Crop & Food Sciences, the Faculty of Forestry, Wildlife & Environment and Faculty of Veterinary & Animal Sciences organized many short courses in the past year. Two hundred participants were trained in the following courses.

- Veterinary Assistant: 12 Months
- Field Assistants course: 04 months
- Computer Application: 12 Weeks
- English Language Course: 08 Weeks
- Professional Floristry: 02 weeks
- Tunnel Farming: 01 week
- Tissue culture Laboratory Technician & Nursery Management: 01 week

**STUDENT ENROLLMENT**

There has been continuous increase in the student intake in various disciplines and the student enrollment increased from 4183 to 5192 in the last four years. The detail of which is given in table below:
<table>
<thead>
<tr>
<th>$\text{No}$</th>
<th>$\text{Name of Degree}$</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Graduates</td>
<td>1677</td>
<td>1967</td>
<td>2291</td>
<td>2513</td>
</tr>
<tr>
<td>02</td>
<td>Post Graduates</td>
<td>2369</td>
<td>2566</td>
<td>2564</td>
<td>2494</td>
</tr>
<tr>
<td>03</td>
<td>Doctoral</td>
<td>137</td>
<td>144</td>
<td>160</td>
<td>185</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4183</td>
<td>4677</td>
<td>5012</td>
<td>5192</td>
</tr>
</tbody>
</table>

**LINKAGE WITH NATIONAL/INTERNATIONAL ORGANIZATIONS**

In order to work and carry out research in close co-operation with National and International organization, the University signed ten memorandum of understanding (MoU) with the following International/national organizations:

- Massey University New Zealand
- Ministry of Environment’s Pakistan Wetlands Program (PWP)
- University of Agriculture Faisalabad
- NWFP Agriculture University Peshawar.
- Sindh Agriculture University Tandojam.
- State Life Insurance Corporation of Pakistan
- Catania University Italy
- Human Resource Development, Islamabad
- Capital Development Authority Islamabad
- Four Brothers Group of Companies Lahore

**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. In the objectivity, two faculty members completed Ph. D in the fields of Plant Breeding and Genetics from University of Edinburgh UK and Entomology from Imperial College London UK. Four faculty members obtained post-doctoral fellowship from HEC and executed research work in Australia, Canada & Italy. Moreover, seven faculty members proceeded on short-term trainings/courses in USA, Italy, Syria, Thailand, Austria & U.K.
RESEARCH FOCUS

University faculty focused their research activities on the issues of farming community of Barani areas in general and potohar 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 2010.

- Allelopathic Crop Residue use for weed management in Rainfed areas of Punjab.
- 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.
- Varietals Improvement of Gladiolus through in vitro Mutation.
- Effect of Agricultural Insecticides on Neurological Behavior of Honeybee (*Apis mellifera*) in Pakistan.
- Identifying drought tolerant synthetic wheat lines and determining their genetic diversity through DNA markers.
- Genetic diversity an phylotyping of Ralsotnia solanacearum strains causing bacterial wilt of chillies in major chillies growing areas of Pakistan.
- Study of polyphenol oxidase activity and its association with molecular markers in different wheat genotypes.
- Isolation, Purification and Monetary for the production of edible oil from wild olive.
- Production of ethanol and butanol from agricultural waste.
- Epidemiology of Fasciolosis in large ruminants of Potohar Region.
- Repercussion of depletions in vulture populations on the ecology of the Potohar region.
- Growth performance of culturable carps feed on different diets prepared from plant based feed ingredients.
- Isolation/Identification of pathogenic bacteria from buffalo bull semen: Development high efficiency antibiotic combination to improve fertility rate.
- Ecology of Indian pangolin (Manis crassicaudata) in Potohar region.
- Baseline studies on wildlife diversity in selected protected areas of Pakistan.
➢ Conservation of Urial (Ovis vignei punjabiensis) through semen preservation.

➢ Effect of protease enzyme with decreasing amino acids levels and different protein sources on growth parameters, serum biochemistry and carcass characteristics in broilers.

➢ Influence of Naringenin on performance, meat quality and antioxidant status of broilers.

➢ Pre and Post Harvest Treatments of Food Grade Chemicals to Improve Peach Fruit Quality and Shelf-Life.

➢ Disease mapping and characterization of lentil with pathogens in Pakistan.

➢ Prevalence of Non-alcoholic liver disease (NAFLD) in Local Population of Pakistani Origin.

➢ Determination of Biological Activities and Micropropagation of Polygonum amplexicaulis: a popular medicinal plant of North Pakistan.

➢ Ethnobotanical survey of Thal Desert, Punjab Pakistan.

➢ Detection of anthelmintic resistance in astromintestinal nematodes in small Ruminants.

➢ Ecology, status and management of fisheries in Mangla Dam.

➢ Identification of chemically defined extender for cryopreservation of buffalo bull spermatozoa.

➢ Phenotypic plasticity of Safflower (Carthamus tinctorius) in response to environment and integrated nutrient management.

➢ Utilizing bacterial ACC-deaminase biotechnology enhance water use efficiency for sustainable production of cereals.

➢ Mutator M. tuberculosis in Tehran and Rawalpindi; A comparative study on fingerprinting, mutator genes and antibiotic resistance genes of the isolates.

➢ Ethnobotanical Study of Mountain Range of Kalla Chitta in Potohar Region, Pakistan.

➢ Assessment of Seasonal Changes in Biomass Production and Utilization of Rangelands in Pothwar Tract.

➢ Studies on the distribution and management of root-knot nematodes (Meloidogyne spp.).

➢ Isolation and identification of plant growth promoting N₂-fixing soil bacteria using molecular techniques for improving legume-cereal cropping system

➢ Characterization of soil bacteria using gene sequencing and response of cereal to associative N₂-fixer and P-solubolizers
RESEARCH PROJECTS

The PMAS-AAUR Faculty also undertook Research Projects in addition to teaching assignments. These projects were sponsored by different funding/donor agencies. During 2010, the faculty fetched 49 Research Projects amounting to Rs. 64.493 millions. The detail of Research Projects is given below:

<table>
<thead>
<tr>
<th>S No</th>
<th>Name of Funding Agency</th>
<th>No of Projects</th>
<th>Total Amount Rs. in Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Higher Education Commission</td>
<td>19</td>
<td>46.644</td>
</tr>
<tr>
<td>2.</td>
<td>Pakistan Science Foundation</td>
<td>07</td>
<td>8.175</td>
</tr>
<tr>
<td>3.</td>
<td>Pakistan Agriculture Research Council</td>
<td>01</td>
<td>1.913</td>
</tr>
<tr>
<td>4.</td>
<td>Ministry of Science &amp; Technology</td>
<td>00</td>
<td>0.000</td>
</tr>
<tr>
<td>5.</td>
<td>Endowment Fund UAF</td>
<td>01</td>
<td>2.222</td>
</tr>
<tr>
<td>6.</td>
<td>International Funding Agencies</td>
<td>02</td>
<td>3.179</td>
</tr>
<tr>
<td>7.</td>
<td>University Own Resources</td>
<td>19</td>
<td>2.360</td>
</tr>
<tr>
<td></td>
<td><strong>Total Rs. In Million</strong></td>
<td></td>
<td><strong>64.493</strong></td>
</tr>
</tbody>
</table>

In addition to above mentioned project, University also completed following 52 research projects, sponsored by different funding agencies worth Rs. 68.869 millions:

<table>
<thead>
<tr>
<th>S No</th>
<th>Name of Funding Agency</th>
<th>No of Projects</th>
<th>Total Amount Rs. in Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Higher Education Commission</td>
<td>02</td>
<td>16.706</td>
</tr>
<tr>
<td>2.</td>
<td>Pakistan Science Foundation</td>
<td>06</td>
<td>4.399</td>
</tr>
<tr>
<td>3.</td>
<td>Pakistan Agriculture Research Council</td>
<td>07</td>
<td>15.499</td>
</tr>
<tr>
<td>4.</td>
<td>Ministry of Science &amp; Technology</td>
<td>01</td>
<td>29.625</td>
</tr>
<tr>
<td>5.</td>
<td>University Own Resources</td>
<td>36</td>
<td>2.64</td>
</tr>
<tr>
<td></td>
<td><strong>Total Rs. In Million</strong></td>
<td></td>
<td><strong>68.869</strong></td>
</tr>
</tbody>
</table>

ADMINISTRATIVE

In pursuant to good governance and transparency in the system, the meetings of administrative bodies of PMAS-AAUR were held regularly under the Chairmanship of the Vice Chancellor. A participatory approach was adopted in decision making and various academic, developmental and administrative decisions were taken in consultation with all members of committees constituted for the purposes and thereafter, approved by the statutory bodies.
UNIVERSITY SYNDICATE

The Syndicate is the highest executive body of the University, which holds its meeting as and when required to take up & ratifying the decisions of lower bodies and embark upon decisions of its own. During the reporting period, 04 Syndicate meetings were arranged and necessary decisions were taken in the best interest of PMAS-AAUR.

ACADEMIC COUNCIL

In year 2010, two meeting of Academic Council was conducted, wherein revised/amended and new curricula for under-graduate and post-graduate 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.

FINANCE & PLANNING COMMITTEE

The Finance & Planning Committee collaborated twice in 2010 for resolution of financial issues and authorization of budget. After interactive sessions by the members, budget for the year and other related financial matters were approved.

ADVANCED STUDIES & RESEARCH BOARD

In the academic year 2010, Advanced Studies & Research Board was collaborated in two series of meetings; 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.

FINANCIAL RESOURCES

Utmost efforts had been put in to enhance the financial resources of the University. The total budget of PMAS-UAAR for the year 2010-11 was escalated up to Rs. 600.173 millions in comparison to correspondence year’s budget amounting to Rs: 333.456 millions.
DEVELOPMENT PROJECTS

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.

**Development Projects (On-Going)**

| 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 |
| Establishment of R&D Facility in Hydrophonic | 52.546 |
| Strengthening of Department of Entomology | 34.783 |
| Strengthening of Department of Wildlife Management | 36.141 |
| Strengthening/ Up gradation of Library Facilities at PMAS-AAUR | 41.021 |

Total: **1334.954**

**Development Projects (Submitted)**

| Construction of New Academic Block | 59.403 |
In addition to above Development projects, following construction works were completed in the University during the year under report:

<table>
<thead>
<tr>
<th>Work</th>
<th>Cost (million Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction of Residential Flats for Grade 1-10</td>
<td>24.951</td>
</tr>
<tr>
<td>Construction of Residential Flats for Grade 15-17</td>
<td>20.165</td>
</tr>
<tr>
<td>Construction Work at University Sports Ground</td>
<td>4.419</td>
</tr>
<tr>
<td>Extension / Rehabilitation of University Mosque</td>
<td>19.023</td>
</tr>
<tr>
<td>Construction of Shed / Store for Store Department at Main Campus</td>
<td>1.684</td>
</tr>
<tr>
<td>Construction of Transport Shed Near Gate # 03, PMAS-AAUR</td>
<td>2.523</td>
</tr>
<tr>
<td>Development of Road between New Academic Blocks of UIBB, FV &amp; AS</td>
<td>2.000</td>
</tr>
<tr>
<td>Up-Gradation of Sound System at Auditorium</td>
<td>0.430</td>
</tr>
<tr>
<td>Extension of Data Centre at Main Library</td>
<td>0.649</td>
</tr>
<tr>
<td>Supply / Laying of Cable &amp; Power Distribution Panels for the Fields Labs and Glass House at Koont Farm</td>
<td>0.564</td>
</tr>
<tr>
<td>Brick Soling for Approach to Laboratories at Research Farm Koont</td>
<td>0.250</td>
</tr>
<tr>
<td>Making &amp; fixing of MS grated door at seven (07) nos. Laboratories of research farm koont</td>
<td>0.536</td>
</tr>
<tr>
<td>Supply and Installation of Brand New Diesel Engine Generator (DG) of 50 KVA Cummins Engine with Stamford Alternator and Allied Equipment (Origin and Make : UK Brand Fine Power)</td>
<td>1.444</td>
</tr>
<tr>
<td>Supply And Installation of Brand New Diesel Engine Generator (DG) of 100, 200 &amp; 300 KVA Cummins Engine with Stamford Alternator and Allied Equipment (Origin and Make : UK Brand Fine Power)</td>
<td>12.190</td>
</tr>
<tr>
<td>Supply and Installation of Diesel Engine Generator (DG) of 50 KVA with Siemens or Equivalent Alternator and Allied Equipments at Main Library</td>
<td>1.433</td>
</tr>
</tbody>
</table>

**Total** 92.261
DELEGATES & VISITS

1. The Department of Zoology conducted a study tour for M.Phil and M.Sc students on January 12, 2010 to visit Trout Fish Hatchery, Kali Matti, Murree.

2. The Department of Wildlife Management conducted a study tour on 24-26 January 2010 to four notable wetlands (Kallar Khar, Khabbeki, Jahlar and Ucchali Lakes).


4. Dr. Rahmatullah Qureshi conducted a week long research work at Botanical Garden & Herbarium at Shah Abdul Latif University, Khairpur to avail Lab. facility for M. Phil./PhD students during 20-2-2010 to 28-2-2010. They learnt working on scanning electron microscopy as well.

5. The Governor of the Punjab Mr. Salmaan Taseer inaugurated a four days (March 17-20, 2010) Spring Flower Show organized by Department of Horticulture in collaboration with the National Horticultural Society of Pakistan, Islamabad.


8. A fifteen members delegation of students from Sindh University, Jamshoro visited the University on August 02, 2010. Prof Dr Azhar Naeem briefed the delegation about academic background and objective of the University.

10. Prof. Dr. Khalid Mahmood Khan S.I. the Vice Chancellor visited Turkey to attend the regional workshop on “Science Academies in Central and Southern Asia and their role in Society” on September 1-2, 2010.

11. Prof. Dr. Khalid Mahmood Khan S.I. the Vice Chancellor visited Korea to attend the ninth General Assembly of the Association of Academics of Science in Asia (AASA) and the fourth council meeting of the Federation of Asian Scientific Academies and Societies (FASAS) organized by the Korean Academy of Science and Technology on October 18-22, 2010.


13. A delegation from South China Agricultural University comprising of 5 persons headed by Dean Faculty of Agriculture, Prof. Lin visited Department of Horticulture of PMAS-AUR and the loquat growing areas of Pakistan for molecular characterization of genotypes on December 07, 2010.

14. Two visits of experts from Winroch International, USA. Mr. Danial Jerome Gudahl, Mr. Don and Mr. Henry discussed about the cool chain project to be launched in Bolochistan and how the post harvest section of Department of Horticulture PMAS-AUR can help to resolve any possible issues during postharvest handling of fruit and vegetables. The possibilities of coordination of Winroch and Department of Horticulture were the main focus of discussion.

15. A field study tour of M.Sc./M.Phil./PhD students of Department of Botany was organized to visit Thandiani, Santh Saroola, Shahdrah, Salghira, Jhelum & Marghalla Hills.

16. Dr. Abdul Saboor, Chairman of the Department of Economics and Agri. Economics, visited University of Gujrat and delivered a lecture on Economics of Climate Change.
SEMINARS, WORKSHOPS & CONFERENCES

Seminar, Workshops and Conferences are regular feature of universities where experts from various fields are invited to share their experience with faculty, students & various fields are invited to share their experience with faculty, students & researchers on current issues of international and national levels. Such an activity is important for research and academic development of an institution as it provides guidelines for policy development at national level. During 2010, 92 International / National Conferences/ Seminars/ Workshops were held at PMAS-AAUR or attended by Faculty, apart from departmental seminars. A brief detail of each is given below:

1. Dr. Syed Moazzam Nizami Associate Professor, Department of Forestry and Range Management, chaired the Preliminary meeting of the NCRC of Forestry organized by HEC on 5-7 Jan 2010 at Islamabad.


3. Dr. Noshin Ilyas, Department of Botany, participated in 2nd International Seminar on Medicinal Plants (ISMP) held in Lahore College for Women University on Jan 14-16, 2010.

4. Prof. Dr. Nemat Ullah, Department of Veterinary Obstetrics and Gynecology attended one day workshop on “Veterinary Education” at the University of Veterinary and Animal Sciences, Lahore organized by Livestock and Dairy Development Department Government of the Punjab, Lahore, January 19, 2010.


7. Mr. Muhammad Ramzan, University institute of Information and Technology, delivered a seminar at National University, NU-FAST, Islamabad Campus in Feb 2010.


9. Dr. Manzoor Hussain, Associate Professor, Department of Veterinary Microbiology attended a Seminar,” Progressive Control of Foot & Mouth Disease in Pakistan and Afghanistan”, organized jointly by the Ministry of Livestock & Dairy Development and USDA on February 14, 2010.

10. Prof. Dr. Nemat Ullah, Department of Veterinary Obstetrics and Gynecology, attended a Trilateral Conference on Control of Foot and Mouth Disease in Pakistan and Afghanistan sponsored by Ministry of Livestock & dairy Development, Islamabad and USDA on February 16-17, 2010


12. Hafiz Muhammad Waheed, Dr Farhana Ch, and Mr. Muhammad Irfan, Department of Zoology and biology, attended the Workshop on Teachers Training Workshop: laboratory methods in genetics. One week intensive practical training workshop for the understanding of fundamental principles of heredity held on February 22-26, 2010 at Department of Animal Sciences, Quaid –i-Azam University Islamabad.

13. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences, attended an International Conference on Agriculture and Animal Science on February 26-28, 2010, Singapore.

14. Dr. Maqsood Anwar, Associate Professor, Dr. Tariq Mahmood, Assistant Professor, Dr Muhammad Sajid Nadeem, Ms. Bushra Allah Rakha, Mr. Muhammad Rais, attended and presented research papers in 30th Pakistan
Congress of Zoology (International) on March 02-04, 2010 at University of Agriculture, Faisalabad.

15. Ms Asma Zafar, Lecturer, Department of Sociology and Anthropology, attended a seminar on “Preventing Plagiarism: A complete Roadmap” through video conference held on 4th March, 2010 organized by QEC-PMAS-AAUR in collaboration with the Quality Assurance Agency of HEC in University Institute of Information Technology of PMAS-AAUR.

16. Dr. Syed Moazzam Nizami, Department of Forestry and Range Management, attended workshop on “Propagation of Healthy Shisham in South East Asia” held on March 4-6 2010 at Avari Hotel Lahore.

17. Prof Dr. Sarwat N Mirza and Dr. Aamir Saleem, Department of Forestry and Range Management, participated in the National consultative workshop on “Formation of National Rangeland Policy”. March 16, 2010. Organized by Ministry of Environment at Margallah Hotel, Islamabad.

18. Dr. S. M. Saqlan Naqvi, Department of Biochemistry, delivered a seminar on “Emergence, Evolution and control of the cotton leaf curl disease complex” on March 19, 2010 at NUST, Rawalpindi.

19. Prof. Dr. Tariq Mahmood, Chairman, Department of Environmental Sciences, participated in 24th IUFRO Conference for Specialists in Air Pollution and Climate Change Effects on Forest Ecosystems. “Adaptation of Forest Ecosystems to Air Pollution and Climate Change” March 22-26, 2010 at Antalya Turkey.


22. Mr. Muhammad Ramzan, University institute of Information and Technology, delivered a seminar at International Islamic University, Islamabad in April 2010.

23. Dr. Muhammad Javaid Asad participated in Bioplastics & Green Composites Workshop organized by Bioproducts Discovery and Development Centre, University of Guelph, Canada, from 31-March- 01 April, 2010.

24. Dr. Muhammad Arshad, Dr. Rahmatullah Qureshi and Zia-ur-Rehman Mashwani, Department of Botany, participated in National workshop to trained stakeholders about the implications of WTO/TRIPs on traditional knowledge/ traditional medicines organized by NIH and Ministry of Health and WHO Islamabad on April 4, 2010.

25. Zia-ur-Rehman Mashwani, Department of Botany, attended 2 days National workshop on “Adaptation and Implementation of GACP and FCP guideline” at NIH, Islamabad. April 5-6, 2010.

26. Dr. Syed Moazzam Nizami, Associate Professor, Department of Forestry and Range Management, chairied the final Meeting of National Curriculum Revision Committee for Forestry organized by HEC at HEC Regional Office 11-15 April 2010, Lahore.

27. Dr. S. M. Saqlan Naqvi and Dr. Muhammad Gulfraz and Dr. Rahmatullah Qureshi, participated in workshop titled “Training Workshop on Biofuel Production from Agriculture Waste” held at PMAS-Arid Agriculture University Rawalpindi, Pakistan, April 13-14, 2010.


30. Dr. Azra Khanum, Department of Biochemistry, attended 3rd National Symposium on “Recent Trends in Endocrinology and Reproductive Sciences Sponsored by the Pakistan Academy of Sciences, Centre for Research in Molecular Medicine, University of Lahore, Lahore from 15-16 May, 2010, and delivered a lecture on Regulatory Mechanisms Involved in Control of Steroidogenesis.

31. Prof. Dr. Nadeem Akhtar Abbasi, Department of Horticulture, participated and presented papers in Horticultural CRSP Inception Workshop at Singapur from 16-18 May 2010.

32. Ms Asma Zafar, Lecturer, Department of Sociology and Anthropology, participated in a seminar on “Sports Management and its Role in Development” held on 19th May, 2010 organized by QEC in collaboration with ConsTech in PMAS-AAUR.

33. Dr. Rahmatullah Qureshi, Department of Botany, participated one day seminar on conserving and restoring the undesignated remnants of natural plant communities organized by Pakistan Botanic Garden Network Secretariat held at GC University Botanic Garden, Lahore on 20-05-2010.

34. Prof. Dr. Nemat Ullah, Department of Veterinary Obstetrics and Gynecology, attended Workshop on “Logical Framework Approach” To Prepare Livestock Development Schemes For the year 2010-11 for the Livestock and Dairy Development Department, Government of the Punjab from May 23-26, 2010 at Lahore.

35. Dr. Aamir Saleem, Department of Forestry and Range Management, participated in the National workshop on “Sustainable Land Management”. May 26-27, 2010. Sponsored by UNDP and GEF, at Hill View Hotel Islamabad.

36. Dr. S. M. Saqlan Naqvi, Department of Biochemistry, participated as Resource Person for Two week elementary Teacher Training Programme from May 24-June 4 2010 under CIDA Project at NISTE, Islamabad.

37. Dr. Nasir Mukhtar, Assistant Professor, Department of Poultry Sciences attended a Conference, “Nutrition – acid base status – human health: A critical

38. Prof. Dr Tariq Mahmood, Dr. Muhammad Rasheed, Mr. Irfan Aziz, Dr Noshin Ilyas and Dr Abida Akram Participated in workshop on “Climate change and Sustainability of Agro-environment: Challenges and Interventions” organised by Department of Environment Sciences, PMAS-Arid Agriculture University, Rawalpindi in June 3-4, 2010.

39. Dr. Rifat Hayat Department of Soil Science attended the International workshop on Climate change and sustainability of agro-environment: Challenges and interventions, PMAS-AAUR; June 3-4, 2010.

40. Dr. S. M. Saqlan Naqvi, Department of Biochemistry organized a training course on Real-Time PCR, during 8-11, June 2010.

41. Dr. Rifat Hayat participated in Training workshop on Real Time PCR, June 08-11, 2010. Department of Biochemistry. PMAS Arid Agriculture University, Rawalpindi


43. Dr. S. M. Saqlan Naqvi, Department of Biochemistry, participated in National Training Workshop on “Analytical Laboratory Management” held on 23-25 June, 2010 at University of Gujrat, Gujrat.

44. Faculty of Veterinary and animal Sciences, organized one day seminar on “Current Status of Foot & Mouth Disease and its Progressive Control in Pakistan” at the PMAS-Arid Agriculture University, Rawalpindi on 23.06.2010.

45. Mr. Muhammad Ramzan, University institute of Information and Technology, delivered a seminar at First UIIT Research Conference during UIIT Open House at UIIT Auditorium, July 2010.

47. Dr. Noshin Ilyas, Department of Botany, delivered a presentation at 1st International Conference on Biotechnology and microbiology at Bara Gali on July 3 to 7, 2010.


49. Dr. S. M. Mughal, Department of Plant Pathology, participated in National conference on global warming, impact on agriculture and adaptation strategies. Organized by the Agriculture Foundation of Pakistan and Pakistan Meteorological department, Islamabad. July 8, 2010.

50. Dr. S. M. Saqlan Naqvi and Ms. Beenish Saba, participated in the Conference on “Utilization of Modern Agriculture Technology in Changing Environment Perspective” held on 21-23 July, 2010 at University of AJK, Muzaffarabad.

51. Dr. Abdul Khaliq Ch., Department of Forestry and Range Management, attended a seminar on “Social forestry” Organized by Society of Upgradation of Knowledge, Health and Infrastructure (SUKHI) and UNDP/GEF. 22 July, 2010, Islamabad

52. Dr. Noshin Ilyas, Department of Botany, participated in workshop Development of Sustainable and Collaborative Research Networks under Talented Research Exchange programme-INSPIRE-Pakistan held at Lahore College for Women University on 2nd to 3rd August.

53. Prof. Dr. Fayyaz ul Hassan attended the Oilseed stalk holder’s workshop at University of Agriculture, Faisalabad, held on 4th Aug, 2010.

54. Dr. Shahzada Sohail Ijaz attended the meeting on Tear Down the Walls at Nebraska, USA on August 10-11, 2010
55. Dr. Javaid Iqbal, Assistant Professor (HEC-IPFP), Department of Entomology attended the Training workshop on ‘Sustainable management of insect pests of fruits with special reference to Citrus through modern protection and post-harvest losses reduction techniques’ from 1-4 September, 2010, at University of Agriculture, Faisalabad.

56. Prof. Dr. Nemat Ullah, Department of Veterinary Obstetrics and Gynecology, attended International Workshop on “Veterinary Education in South Asia Specific: New Approaches to Teaching and Learning for Evolving Scenario”, September 21-22, 2010, held at Chittagong Veterinary and Animal Sciences University, Khulsi Chittagong, Bangladesh.

57. Prof. Dr. Nemat Ullah, Department of Veterinary Obstetrics and Gynecology, attended 8th Annual Scientific Conference 2010; Networking for Promoting Changes Towards One World, September 23-25, 2010 held at Hotel Agarabad Chittagong, Bangladesh.

58. Prof. Dr Tariq Mahmood, Chairman, Department of Environmental Sciences, attended Fifth International Popular Symposium “Popular and Willows: from research models to multipurpose trees for a bio-based society” 20 – 25 September 2010, Palazzo de Popolo, Orvieto (TR) Italy.

59. Ms Beenish Saba, Department of Environmental Sciences, participated in International conference “Challenges in Environmental Science and Engineering (CESE-2010)” from 26 Sep to 01 October, Cairns Australia.

60. Prof. Dr. M. Naeem, Department of Entomology, attended a seminar on September 30, 2010 at the Department of Entomology and Zoology “Filippo Silvestri” in University of Naples.

61. Dr. Muhammad Gulfraz, Department of Biochemistry, delivered a lecturer on “Biofuel production from agro wastes, in two days workshop on alternative energy” in Pakistan Academy of Sciences Islamabad in September, 2010.

62. Mr. Nawazish Naveed, University institute of Information and Technology, attended a seminar IEEE ICET 2010 at National University of computer and Emerging Sciences, October 2010.
63. Ms Asma Zafar, Lecturer, Ms Faria Ibad Mirza, Lecturer, Department of Sociology and Anthropology, attended a regional conference on “21st Century and Policing in South Asia, Response towards Gender based Violence: Challenges and prospects” held on October 5 & 6, 2010 organized by Rozan in collaboration with Federal Ministry of Human Rights, Government of Pakistan and Islamabad Capital Territory Police in Best Western Hotel, Islamabad.

64. Dr. Manzoor Hussain, Associate Professor, Department of Veterinary Microbiology, attended a Conference, “Lessons learnt during the Rinderpest eradication in Pakistan.” October 13-15, 2010, FAO Head Quarter, Rome, Italy

65. Dr. Azra Khanum, Department of Biochemistry, participated in International Seminar on Alternate Sources of Energy: Prospects and Options at Pakistan Academy of Sciences, Islamabad, Pakistan from October 14-15, 2010.

66. Dr. Azra Khanum, Department of Biochemistry attended National Biotechnology Exhibition and Seminar 2010 at Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore from October 20-21, 2010.

67. Prof. Dr. Nemat Ullah, Department of Veterinary Obstetrics and Gynecology, attended Workshop entitled “Developing Training Module for Project Preparation, Monitoring & Evaluation” at the Pakistan Science Foundation Conference Hall, Islamabad on October 21, 2010.

68. Prof. Dr. M. Naeem, Department of Entomology, delivered a seminar on October 25, 2010 at IPP-CNR (Institute for Plant Protection, the National Research Council) Portici, Italy.

69. Dr. Abida Akram, Department of Botany, attended the Mycotoxin training workshop on 27th & 28th Oct. 2010 organized by Romer Labs, Rawalpindi, Pakistan.

70. Dr Audil Rashid, Department of Environmental Sciences, delivered an oral presentation at “9th International Conference on Urban Health”. October 27–29, 2010, NY, USA.
71. Dr. Azra Khanum, Department of Biochemistry presented a paper on “Isolation and characterization of peptide(s) from *Pisum sativum* having antimicrobial activity against mammalian pathogenic bacteria” in 2nd International Symposium on Medicinal Plants, Their Cultivation and Aspects of Uses. Petra, Jordan. 3-4 November, 2010.

72. A one day Seminar on Policy Adequacy and Awareness of Agri. Financing was held in the University on November 3, 2010 in collaboration with State Bank of Pakistan.

73. Dr. S. M. Saqlan Naqvi, Department of Biochemistry, participated in “6th International Conference on Biological Sciences” from November 10-11, 2010 at Tanta University Egypt.


76. Mr. Nawazish Naveed, University institute of Information and Technology, delivered a seminar at National University, NU-FAST, Islamabad, December 2010.

77. Prof. Dr. Nadeem Akhtar Abbasi, Department of Horticulture, participated and presented paper in “Expert Consultation Meeting on Postharvest and Value Addition of Horticultural Produce 2010” from Nov. 29 to Dec. 2, 2010 at Marriott Hotel, Putrajaya, Malaysia organized by Malaysian Agricultural Research and Development Institute (MARDI) and Asia-Pacific Association of Agricultural Research Institutions (APAARI).

79. Dr. Abdul Saboor, Chairman of the Department of Economics and Agri.
Economics, participated in 10-Year Celebration Conference, South Asian
Network of Development and Environmental Economics (SANDEE) from 5th
to 7th of December, 2010, Khatmandu, Nepal.

80. Ms Asma Zafar, Lecturer, Department of Sociology and Anthropology,
participated in a seminar on “Protection against Harassment of Women at the
Work Place Act 2010” held on 7-12-2010 organized by the Division of
Continuing Education, Home Economics and Women Division, Government
of Pakistan in PMAS-AAUR.

81. Dr. Abdul Saboor, Chairman of the Department of Economics and Agri.
Economics, Research and Training Workshop, South Asian Network of
Development and Environmental Economics (SANDEE), from 8th to 11th of

82. Dr. Ghazala Kaukab, Department of Biochemistry participated in one day
seminar on “Impact of Various Assessment Tools on Teacher’s Training
Assessment” at Learning Innovation Division, HEC on 13th Dec 2010.

83. Professor Dr. Sarwat N. Mirza Dean FRW chaired the 13th conference on
Sustainable Development in South East Asia held at Best Western on 23rd

84. Dr. Syed Moazzam Nizami Department of Forestry and Range Management,
presented on “REDD+: Protocols for Assessment of Carbon Stocks in
Pakistan “in 13th conference on Sustainable Development in South East Asia
held at Best Western on 23rd Dec. 2010.

85. Dr. Rahmatullah Qureshi, Department of Botany, participated in International
Conference on “Biodiversity is our Life” December 29-31, 2010 organized by
the centre of Biodiversity Conservation, Shah Abdul Latif University,
Khairpur, Sindh, Pakistan.

86. Zia-ur-Rehman Mashwani Department of Botany, participated in three days
International conference (December 29-31, 2010) on “Biodiversity is our Life
(IC Biour-Life)” at Centre of Biodiversity and Conservation, Shah Abdul Latif
University (SALU) Khairpur.
87. Mobushir Riaz Khan, Assistant Professor, Department of Entomology delivered a seminar on “Applications of Remote Sensing and Geographical Information Systems in Natural Resource Management” at PMAS-AAUR.

88. Ms Faria Ibad Mirza, Lecturer, Department of Sociology and Anthropology attended a seminar on “Women Empowerment through Employment” organized by PMAS-AAUR in collaboration with USAID.

89. Ms Faria Ibad Mirza, Lecturer, Department of Sociology and Anthropology, attended a seminar on “Human Rights in Pakistan & role of academia” organized by PMAS-AAUR in collaboration with Islamic International University Islamabad.

90. Dr. Rahmatullah Qureshi, Department of Botany, organized a stall in spring flower show 2010 conducted by the Horticulture Department, PMAS-AAUR. The theme of stall was “Arid zone Medicinal Plants”.

91. Dr Zia-ul-Qayyum, Director, University institute of Information and Technology, participated in 24th International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems (IEA/AIE 2011) held in Syracuse, USA.

92. Dr. Aamir Saleem, Department of Forestry and Range Management, attended the National Workshop on “GIS and Remote Sensing, and their use in NRM”. Sponsored by UNDP, GEF and Ministry of Environment, at Margallah Hotel, Islamabad.
STUDENTS EXTRA CURRICULAR ACTIVITIES

Following co-curricular activities were performed by Directorate of Students Affairs during year 2010.

1. A one day intensive and interactive training workshop titled “Leadership Development” 07-Jan-10
2. Science Projects Competition 09-Jan-10
3. Arfana Kalam/ Folk singing competition 09-Jan-10
4. Drama Long Play 14-Jan-10
5. Training Workshop Exam. Conduct 21-Jan-10
6. Arfaana Kalaam 21-Jan-10
7. Dramatic club staged a Drama “Hum Milat Kay Pasban” 21-Jan-10
8. Celebration of Eid Melad-un-Nabbi & Naat competition 11-Mar-10
9. Students of UIMS organized a one day Fun Fair 27-Mar-10
10. Students Week 2010 06-10-Apr-2010
   Inter Faculty competitions
   - Software competition
   - Poster competition
   - Flower Arrangement Competition
   - Games Competition
   - Writing Competition (Essay & Story)
   - Art Exhibition
   - Urdu Mushaira
   - Drama Competition
   - Photography
   - Video games

   Inter University Competitions
   - Qiraat & Naat Competition
   - Solo performance Competition
   - Bilingual Declamation
   - Arfana Kalam competition
   - Video making competition

11. Inter faculty debates 06-May-2010
12. Traffic Awareness Program 17-Jun-2010
13. Orientation for new enrolled students 30-Sep-2010
14. Qiraat & Naat Competition 14-Oct-2010
15. Bilingual Declamation 28-Oct-2010
16. Allama Iqbal Day Celebrations 11-Nov-2010
17. Arfana Kalam/ Folk singing competition 16-Dec-2010
18. Allama Iqbal Shield – Debate Contest 23-Dec-2010
19. Training Workshop Leadership development 30-Dec-2010
SPORTS ACTIVITIES

The Directorate of Sports is striving hard for the promotion of sports at PMAS-Arid Agriculture University. The beautiful and prestigious Khalid M. Khan Gymnasium has been completed in the university premises. The Inaugural ceremony was held on 07-10-2010. His Excellency Prof. Dr. Khalid Mahmood Khan SI, Vice Chancellor, PMAS-Arid Agriculture University was the chief guest on this jubilant occasion.

The following Intervarsity Championship 2009-10 were organized by Directorate of Sports at Khalid M. Khan Gymnasium, PMAS-Arid Agriculture University Rawalpindi.

- Intervarsity Badminton Championship 2009-10 Zone “C” March 14-17, 2010
  Sixteen Universities from Rawalpindi/Islamabad and AJ&K participated in the championship. PMAS-AAUR Team was the Winner while NUST was Runner up.

- All Pakistan Intervarsity Badminton Championship 2009-10 March 24-27, 2010
  Sixteen Universities (winner and runner up from 14 Zones) from all over Pakistan participated in the championship.

- Intervarsity Table Tennis Championship 2009-10 Zone “C” April 14-17, 2010
  Sixteen Universities from Rawalpindi/Islamabad and AJ&K participated in the championship.

- Intervarsity Volleyball Championship 2009-10 Zone “C” Feb. 09-12, 2010
  Sixteen Universities from Rawalpindi/Islamabad and AJ&K participated in the championship. PMAS-AAUR team was the runner up.

PMAS-AAUR Students teams also participated in the following Intervarsity Sports Championship during 2009-2010.

- All Pakistan Intervarsity Volley Ball Championship 2009-10 Feb. 24-27. 2010 at University of the Punjab, Lahore.
- Inter University Cricket Championship (Zone “C”) held at Bahira University Islamabad Dec.15-18, 2009
- Inter University Basket Ball Championship (Zone “C”) held at Bahira University Islamabad Feb.22-24, 2010
- Inter University Foot Ball Championship (Zone “C”) held at National University Science & Technology, Islamabad January 08-10, 2010
- All Pakistan Inter University Hiking Championship (Zone “C”) held at AJ&K University Muzzaffarabad May 13-16, 2010
- **All Pakistan Inter University Athletics Championship (Zone “C”)** held at Sargodha of University Sargodha Oct 31 to Nov. 3, 2009
- **All Pakistan Inter University Tug of War Championship (Zone “C”)** held at Tandujam University, Tandujam Jan 22-28, 2010

The following Inter Faculty sports Championship was organized by Directorate of sports were organized by Directorate of sports during 2009-10.

- **INTER FACULTY BADMINTON (Boys) CHAMPIONSHIP 2009-10**
  
  Inter Faculty Badminton Championship was organized in which all faculties, UIMS and UIIT teams participated in the Championship. Basic Sciences stood 1st while faculty of Agriculture remained second.

- **INTER FACULTY VOLLEYBALL (Boys) CHAMPIONSHIP 2009-10**
  
  Inter Faculty Badminton Championship was organized in which all faculties, UIMS and UIIT teams participated in the Championship. Agriculture Sciences A stood 1st while Agriculture Sciences B 2nd.

The following Inter Faculty Sports/Games Championship (Boys) was organized during Students Week (April 2010) at University convocation Lawn.

- Inter faculty Tug of War Championship
- Inter faulty Three Leg Race
- Inter Faculty Handkerchief Game Championship
- Inter Faculty Musical Chair championship

The following Inter Faculty Sports/Games Events (Girls) were also organized during Students Week (April 2010) at Girls Hostel.

- Inter faculty Tug of War Championship
- Inter faculty Three Leg Race
- Inter Faculty Handkerchief Game Championship
- Inter Faculty Musical Chair championship
UNIVERSITY PUBLICATIONS

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 caries creative contribution from students and is managed by an Editorial Board mainly comprised of students.

STUDENT DISSERTATIONS
Two Hundred and Ninety Four (294) theses were delivered during 2010 by postgraduate students of the university out of which Twenty-One (21) theses were received on account of PhD degrees.


31. **Akhter, S., B. A. Rakha, M. S. Ansari.** 2010. Cryopreservation of Sahiwal bull epididymal spermatozoa from slaughtered animal in extender containing different avian egg yolk. Animal Science Papers and Reports. (Accepted).


34. **Akhter, S., M. S. Ansari, B. A. Rakha.** 2011. Effect of bovine serum albumin on motility, plasmalemma, viability and chromatin integrity of buffalo bull spermatozoa. Romanian Biotechnological letters (Accepted)


131. **Khan, A, I. Iqbal, A. Shah, F. Ahmad and M. Ibrahim.** 2010. Alleviation of adverse effects of salt stress in Brassica (*B. campestris*) by pre sowing seed
treatment with Ascorbic acid. American Eurasian Journal of Agriculture and Environmental Science. 7: 557-560


fertilization. Acta Agriculturae Scandinavica, Section B - Plant and Soil Science, 60: 485-493


PREPARED BY:

**PROF. DR. MUHAMMAD IQBAL LONE**  
Director Research  

**MR. SHAHID ALI KHAN**  
Deputy Registrar (Planning)  

DIRECTORATE OF RESEARCH & PLANNING