



National Agriculture Education Accreditation Council

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**Report of the
Accreditation Inspection Committee
(AIC)**

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After thorough and critical visit of the Department, Library, other facilities, and meetings with B. Sc and M. Sc students and faculty members (including Dean and Chairman), following observations are made:

Historical Background of the University

- In 1963, Collage of Agriculture was established in University of Peshawar.
- Students were enrolled for B. Sc (Hon) degrees in various areas of agriculture.
- The college offered M. Sc (Hons) program in 1965.
- The college got the status of degree awarding organization in 1981 under the name “NWFP Agricultural University, Peshawar”.
- The higher degree (PhD) program was initiated in 1995.
- After amendment in the constitution of Islamic Republic of Pakistan in 2010, the university is renamed as Khyber Pakhtunkhwa Agricultural University, Peshawar.
- At present, Prof. Dr. Khan Bahadar Marwat is the Vice Chancellor of the university.

Department of Agricultural University

Agricultural Chemistry is an important area of agriculture sector. The Departmental Mission is the provision of quality education and trainings to develop highly skilled human resource in the field of Agricultural Chemistry with following objectives:

- To train manpower in Agricultural Chemistry Discipline.
- To solve the problems of the farming community
- To develop problem identification and solving abilities of the graduates to help food, pharmaceutical & agro-chemical sectors of Pakistan

The department offers the following degree programs:

- B.Sc. (Hons.) Agricultural Chemistry
- M.Sc. (Hons.) Agricultural Chemistry
- PhD in Agricultural Chemistry

The Faculty of Nutrition Sciences comprised of following three fields:

- Food Science & Technology
- Human Nutrition
- Agriculture Chemistry

Presently, Dr. Prof. Dr. Alam Zeb is working as Dean of the Faculty while the Department of Agricultural Chemistry is headed by Professor Dr. Hamidullah Shah.

So far the Department of Agricultural Chemistry has produced 154 graduates with B. Sc degree, 122 M. Sc postgraduates and 4 PhDs with following distinctions.

- National/international award owner students = 30

- Number of students got gold and medals = 10
- Number of students got silver medals = 10

The department is presently involved in following areas of research including:

- Production of bio-fuel from biological sources
- Pesticide residues analysis
- Identification and prevention of mycotoxins in food supply chain
- Investigation of medicinal plants for bioactive compounds
- Food/feed composition and analysis
- Development of drugs of pharmaceutical/ agro-chemical significance from fungi
- Screening of Water & Environment for Pollutants

Coordination/Collaboration

National

- HEJ Research Institute of Chemistry, University of Karachi
- Nuclear Institute for Food & Agriculture (NIFA), Tarnab, Peshawar
- Pakistan Council for Scientific & Industrial Research (PCSIR), Peshawar
- Agriculture Research Institute (ARI), Tarnab, Peshawar
- National Agricultural Research Centre (NARC), Islamabad
- Higher Education Centre, Islamabad
- University of Peshawar and other universities in the province

International

- University of Bristol, UK
- University of Cranfield
- University of Leeds, UK

Publications

- ❖ Papers published in impact factor Journals 100+
- ❖ Papers published in journals recognized by HEC 200+
- ❖ Papers published in International journals 100+
- ❖ Papers published in other journals 100+
- ❖ Scientific popular articles (for farming community) 15

Books published

- Bio- Analytical Chemistry (2004) Written by *Prof. Dr. Iqtidar Ahmad Khalil (late) & Saleemullah*, published by National Book Foundation, Islamabad
- Biochemistry (2004) by *Prof. Dr. Iqtidar Ahmad Khalil (Late), Prof. Dr. Hamid Ullah Shah & Mr. Saleemullah*, published by National Book Foundation, Islamabad

- Cropping Technology written by *Prof. Dr. Iqtidar Ahmad Khalil (Late)*, *Prof. Dr. Amanullah Jan*, Publisher HEC, Islamabad
- Food Security written by *Prof. Dr. Jehangir Khan Khalil*, published by HEC, Islamabad
- “Laboratory Safety Manual” by *Prof. Dr. Hamid Ullah Shah*, publisher BC-HEC
- The status of the sponsor projects which are of national interest is as under:

Projects

- Shelf life studies of Vitamin A in infant formula and fortified Milk available at local retail stores in NWFP, Pakistan, funded by TIPAN/USAID (1994).
- Stability of Vitamin A and Beta-Carotene in Vanaspati Ghee, and Oils during processing funded by UNICEF Islamabad (1997).
- Study on identification of constraints in the implementation of Salt Iodization Program and their remedies (WHO funded project) by Nutrition Section, Planning and Development Division, Govt. of Pakistan Islamabad, 2002.
- Iron Fortification of wheat flour through small-scale grinders (Chakki) (WHO funded project) by Nutrition Section, Planning and Development Division, Govt. of Pakistan Islamabad, 2003.
- Nutritional status of the people of NWFP (WHO, 1986)
- Contamination of dry Skim Milk Project for Afghan Refugees (WHO, 1987)
- Iodine Status of Food and Water in Northern Areas (Ministry of Health)
- Pesticide residue in fruit and vegetable grown in KP. PSF, 2006
- Mycotoxins in cereal crops as a risk factor for food safety in KP. HEC, 2006
- HEC-BC link program with Bristol University, UK for three years 2006-2009
- Phytochemical and Anti-diabetic Potential of Medicinal Plants of NWFP-Pakistan, funded by Higher Education Commission, 2008
- Coordinator PMI2 Project funded by UK 2008-2010

Events Organized

Following workshops/ Trainings for students, teaching staff and farmer communities:

- 3 Nos. Development of sustainable and collaborative research networks 1 (British Council - HEC, Feb. 2010; Nov. 2010 and Dec. 2010)
- Skill Development Program (3 months course) June- Sep, 2010
- Trainings on Chromatographic techniques, July, 2009

Contribution

- The graduates are serving in universities, agriculture and food departments, banks, Pharmaceutical and agro-chemical companies, tobacco companies.
- Many of the department graduates have been awarded foreign scholarships for PhD studies in UK, USA and China.

- The department has also rendered its services to the public by developing several agro-chemical products for the welfare of Farming community.

Vision

- To establish a state-of- the-art research laboratory for drug development from biological sources
- A mega project proposal for up-gradation of the department to the Institute of Agricultural & Biological Chemistry is underway and will be submitted to the HEC in near future for funding.

Standards/Criteria for University Teaching Departments

- Faculty strength is more than the required criteria.
- PhD qualified faculty is 7.
- Faculty composition ratio has missing the post of Associate Professor.
- Teacher student ratio and Admin vs Teaching Staff ratio are according to the criteria.
- Teaching load (Credit Hrs/Week) is below the criteria, hence comfortable.
- Curriculum objectives are cleared and is revised/updated, whenever required, by HEC at National Level.
- Students and the faculty members were satisfied from the curriculum.
- Maintenance of course files by the teachers, meetings of Board of Faculty and BOS, Yield Index, availability of text & reference books and research journals were found satisfactory
- Similarly, 2 class rooms, one seminar room, one committee, department library, access to online journals and internet service were also found as per HEC criteria.
- Research funding was met from the sponsor projects.
- Student's theses were very good and the note books of the students were complete.

SWOT Analysis of Degree Programs of B.Sc (Hons) and M.Sc (Hons)

1. Strengths of Degree Programs

- Foreign Qualified Faculty with Ph.Ds in different areas of agricultural chemistry and other chemistry fields
- Adequate Laboratory and field research facilities
- Strong coordination with other research organizations

2. Weaknesses of Degree Programs

- Lack of IT training of Faculty and support staff and usage of latest software for data analysis
- Non-availability of funds to improve laboratory facilities i.e. chemicals, latest lab equipment for quality lab experiments
- Greenhouse facility is required to conduct experiments under controlled conditions.

- Shortage of Class Rooms in view of increasing enrollment.

3. Opportunities for Degree Programs

- Qualified faculty for teaching different subjects and to undertake research as per curriculum
- Use of multimedia for lectures and seminars etc
- Access to latest literature via HEC digital library
- Up-gradation of Internet and computer facilities

4. Threats to Degree Programs

- Shortage of Funds for meeting lab requirements
- Non-availability of space for class rooms and advance labs for graduate research
- Non-availability of Standby generators in class rooms/labs
- Security, law and order situation in the province

Actionable Recommendations

Following recommendations are forwarded for consideration:

- Additional budget for chemicals, glassware, repair/maintenance of equipment and purchase of conventional instrument, updated text books, reference books and journals etc.
- A small library exists from personal/donated books etc. but special budget should be allocated to update the departmental facility.
- Industry based internship and need based research is required to improve the degree programs
- Faculty career development plan should be in place.
- Efforts are required to promote and encourage the use of innovative teaching methods.
- Short courses in IT and teaching methods may be organized for the young faculty.
- To ensure quality graduate research, the lab and greenhouse facilities may be upgraded.
- Selection of research topics for graduate as well as faculty research should be market oriented and relevant to the industry.

Accreditation Outcomes


Keeping in view the Standards and Criteria set by National Agriculture Education Accreditation Council, HEC for the accreditation of B.Sc(Hons) and M.Sc(Hons) programs, the Committee recommends that the degree programs the Department of Agricultural Chemistry, KPK University, Peshawar may be placed in the lower band (67.3%) of Category “X” which indicates that the degree programs of the department have minors shot falls. However, it is expected to meet the criteria as set by the Council.

Acknowledgement

At the end, the team is grateful to the NAEAC/HEC for nomination as experts to carry out the Accreditation/Evaluation process of the Degree programs of the Department of Agricultural

Chemistry, Khyber Pakhtunkhwa Agricultural University. The team also acknowledges the moral and technical support of Mr. Naseer Alam Khan, Secretary, NAEAC and Mr. Kashif during the visit and the hospitality and cooperation of the University.

As desired, the draft report is shared with Chairman, Department of Agricultural Chemistry at KP AUP. The recommendations are being submitted after the approval of the **Prof. Dr. Muhammad Kalim Tahir**, Convener of AIC.



Dr. IhsanUllah
Member
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