



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

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**Department of Plant Protection
KPK Agricultural University, Peshawar**

ACKNOWLEDGMENT

The assessment Team is extremely thankful for the generous cooperation of the Worthy Vice Chancellor, Dean Faculty of Crop Protection Sciences, Chairman of Plant Protection / Staff members of the Department, KPK Agriculture University, Peshawar, Pakistan.

The Evaluation Team also like to thank NAEAC for providing immense help, timely guidance and logistic support during the assessment process. Regarding this, retendless contributions by Mr. Naseer Alam Khan (Secretary), and Malik Muhammad Kashif Anwar (Admnin Assistant), NAEAC Secretariat are commandable.

Accreditation Inspection Committee (AIC)
NAEAC

Section -1 General

NAEAC Inspection Team

The Chairman NAEAC nominated an Accreditation Inspection Committee (AIC) for the evaluation of Department of Plant Protection, Khyber Pakhtunkhwa Agricultural University, Peshawar for accreditation. The committee comprises of the following members who undertook a visit to the said institute on April 11 and 12, 2011.

- 1. Dr. Ghulam Jilani** **(Convener)**
Chief Scientific Officer (Rtd.),
NARC, Islamabad

- 2. Prof. Dr. Muhammad Naeem** **(Member)**
Chairman,
Department of Entomology,
PMAS-Arid Agriculture University,
Rawalpindi

The Terms of Reference of the Committee

The team officially made an official visit to the KPK Agricultural University on April 11-12, 2011 with the following objectives.

- I. To evaluate the Self-Assessment Report (SAR) and Peer Team Report of the Department of Plant Protection
- II. To assess the external evaluation of the academic programs for rating and accreditation.
- III. To prepare and compile the consolidated report in the light of the interaction with Dean, Chairman, Faculty Members and students as well as examining the infrastructure and facilities.
- IV. To submit recommendations regarding inspection to NAEAC Chairman.

The Department of Plant Protection, KPK Agriculture University

The Accreditation Committee was given a detailed briefing by Prof. Dr. Ahmad-Ur-Rahman Saljoqi, Chairman of the Department regarding its history, mandate/vision, mission statement, Program goals and objectives, faculty, students, research projects and future plans. He also mentioned the contributions made by the Department and its indispensable role in the national economy.

Mission Statement

To implement and strengthen a sound teaching and research system in the field of Plant Protection based on the knowledge, wisdom, expertise and vision for awarding Bachelor, Master and Ph.D. degrees.

Objectives

- a) To build up highly qualified and technical human resources in the field of Plant Protection
- b) To undertake research for protection of horticultural and field crops from insect pests and diseases.
- c) To evolve various techniques for minimizing the pesticide risk hazards

The AIC was briefed that the Department of Plant Protection was established in 1986. It started B.Sc. (Hons.) degree programme in 1985, M.Sc. (Hons) in 1986, and Ph.D. in 1997. Regarding the academic achievements, the Department has produced 4 Ph.D's, 128 M.Sc. (Hons) and 172 B.Sc. (Hons) Agriculture. Currently 9 students are enrolled in Ph.D. degree, **21 students in 2nd & 4th semester in M.Sc (Hons) and 46 in B.Sc.(Hons.)**

Academic Programmes:

The Chairman briefed that the Department is presently offering three degree programs viz;
B.Sc. (Hons) Plant Protection,
M.Sc (Hons) Plant Protection and
PhD in Plant Protection

Academic Program Mission:

The main objective is to produce highly skilled and technically sound person to tackle the problems relating to insect pests and diseases both in field crops, horticultural crops and stored commodities.

Program Objectives

1. To produce latest education to the graduates and post-graduates having both theoretical and practical knowledge regarding Integrated Pest Management (IPM) with least damage to environment.
2. To impart training to workers in research and development sector in a more systematic way to minimize crop losses and the cost of production with particular focus on plant protection.
3. To arrange seminars, conferences and workshops relating to plant protection measures to help timely legislation and policy making process at provincial and national level.

Section -2 Criterion wise Analysis

Curriculum Design and Development

❖ **Does the curriculum of degree Programs meet HEC requirements?**

Yes, the syllabus for degree Programs are absolutely approved by the Higher Education Commission (HEC).

❖ **Number of courses and credit hours for each program of B.Sc. (Hons.) & M.Sc (Hons.)**

Academic Programmes: Department is presently offering three degree programs

i) B.Sc. (Hons.) Plant Protection, ii) M.Sc. (Hons) Plant Protection and iii) PhD in Plant Protection.

The B.Sc. (Hons) Plant Protection Degree is of four years that is spread over eight semesters. Degree requirement is 130-140 credit hours, including 4 credit hours internship in the eighth semester.

The M.Sc. (Hons.) Plant Protection Degree is of two years that is spread over four semesters with (24Major + 12 Minor + 10 thesis and 1 thesis defense) credit hour's course work and research thesis.

❖ **Revision and update of curricula (how often)**

The curriculum is thoroughly revised according to the needs and requirement with the approval of department board of studies, faculty board of studies, academic council and syndicate, after five years as per guide lines by HEC.

❖ **Meeting current market demands and global challenges**

The Curriculum is regularly revised keeping in view the national and international requirements and also according to the local and foreign market demand.

- ❖ **Feedback from all stakeholders (parents, peer faculty, students, alumni, graduating students, employers)**

Parents Viewpoint

The parents in general visit the department to get the information regarding education and job opportunities. They are mainly satisfied with the quality of education and job opportunity in the relevant field.

Employers Feedback

The survey conducted to know the competence of students indicated that graduate produced by the department had made significant contribution by rendering services in boosting agricultural economy of the country.

Alumni Survey

Survey revealed that old students were normally sound in their knowledge and had reasonable communication skills. Alumni association at the department level is also functional and playing its useful role in different spheres of life.

- ❖ **Curricula should be outcome oriented**

Majority of the students have shown their satisfaction in the academic programs and contents of the curricula.

Strength and Quality of Faculty

The evaluation team shared its views and sought the opinions in individual meetings held with each faculty member (professors, associate professors, assistant professors and lecturers) in the department of Plant Protection. Discussions were held on their academic program, professional background, areas of research interest and students and peers, opportunities for professional growth besides research opportunities, facilities available, teacher-student relationship, teaching load and strengths and weaknesses of the program.

❖ Size of Faculty, categorization by qualification, position and teaching experience

Presently there are 9 members, including four Professor, one Associate Professor, two Assistant Professor and two Lecturers. Among the faculty, eight are having PhD degrees while four of the members also have completed their post doc fellowships from abroad.

❖ **Area of specialization and sections/labs in the department**

❖ Table: 1. Area of specialization

Specialization	Faculty with Specialization	Faculty with Ph.D. Degree	Status	
			Regular	Contract
IPM	Prof. Dr. Farman Ullah	Ph. D (USA) Post Doc. (USA & Australia)	Regular	
Acarology	Prof. Dr. Inamullah Khan	Ph. D (Australia) Post Doc. (China)	Regular	
Biological Control	Prof. Dr. Ahmad-Ur-Rahman Saljoqi	Ph. D (England) Post Doc. (China)_.	Regular	
Host Plant Resistance	Dr. Shah Alam Khan (Associate Professor)	Ph. D (AUP-Pakistan) Post Doc. (USA)	Regular	
IPM/Stored Grain Pest Management	Dr. Muhammad Anwar Khan (Assistant Professor)	Ph. D (AUP-Pakistan)	Regular	
Toxicology	Dr.. Shahid Sattar (Assistant Professor)	Ph.D (AUP-Pakistan)	Regular	
Toxicology	Dr. Naseer Hussain (Contract Prof.)	Ph. D. (USA)		Contract
IPM	Dr. Muhammad Shahid Khan (Contract Lecturer)	Ph. D (England)		Contract
IPM	Mr. Jabir Alam Khan (Contract Lecturer)	M.Sc.(Hons) (AUP-Pakistan)		Contract
Total	09		06	03

❖ **Laboratory division in the department**

Table: 2. Sections/labs. in the department with their staff position: In fact in the department total Lab Assistants & Junior Lab Assistants, so from field staffs (Field Assistants and Junior Field Assistants) are taken in the labs.

S.#	Laboratory	Laboratory Assistant	Laboratory Attendant	Required
1	Lab. No. 001	1. Mr Tahseen Ullah Lab. Superintendent 2. Mr. Sameen Jan Lab. Assistant	Mr. Tasleem Lab. Attendant	
2	Lab.No.019	1.Miss. Shabana Jabeen Lab. Superintendent 2. Mr. Muhammad Zahir Junior Lab. Assistant (Contract base)	Mr. Riaz Muhammad Lab. Attendant	
3	Small rearing Room	1. Mr. Shamshad Khan Senior Lab. Assistant	Mr. Hidayatullah (Contract base)	
4	Small rearing Room	Mr. Jan Muhammad Lab. Assistant		One Lab. Attendant

Faculty needs as per HEC requirements

In order to meet the future acquire of faculty with observe to regular increase in enrollments at graduate and post-graduate level, and the number of students per teacher basis increasing associated with subsequent the HEC standards, it becomes necessary to induct more faculty members in the department on permanent basis.

❖ **Teaching load existing and recommended for each category of faculty member**

Teaching load B.Sc.(Hons.) 1:7

Teaching load M.Sc.(Hons.) 1:5

Existing teaching load: teacher student ratio

Existing teaching load is as per HEC requirement = 1:16, However, if there is consideration in research teaches are overloaded.

❖ **Salary and other incentives**

Most of the faculty members were of the opinion that salary package is fair and reasonable but looking forward for relatively better financial package.

❖ **Reward and punishment system**

This work is being done by Disciplinary Action Committee of the University.

❖ **Student-Teacher interaction, counseling etc.**

Majority of the students expressed their overall satisfaction with the level of cooperation and assistance provided to them by the teachers. Students were also of the view that there was a good interaction with the teachers.

❖ **Department seminars, exhibitions and other curricular activities**

Seminars regarding the advancements made in the field of pest management are regularly held in the department. For this purpose, experts from different research organizations are invited as a guest speaker.

❖ **Job satisfaction**

Overall teachers are satisfied with their job.

The faculty has diverse research skills with expertise in the fields of .IPM, biological control, acorology, toxicology, host plant resistance, stored grains pest management and nematology.

❖ National and International awards and recognitions.

All the faculty are having memberships with different national and international professional societies

Infrastructure-Learning Resources

Research and Teaching Labs.

There are two specific research labs (detail given above), one for postgraduate and one undergraduate teaching laboratories.

Laboratories are not spacious and some are without Ac facilities and safety arrangements. Equipments like Stereomicroscope, Microtome, Growth chambers, Stereoscope, HPLC and GLC, Centrifuges, Electrophoresis, PCR, Spectrophotometer, relevant software, are required whereas chemicals and glass wares budget is very low to meet the requirement.

Greenhouses and Experimental Fields

Greenhouse: There is no such facility in the Department but rearing cages are available.

Experimental field: The total experimental area of the university research farm is 250 acres. As per requirement on seasonal basis, the space is allotted to various departments for their research work.

Departmental and Main Library

Departmental Library: Presently the departmental library is few selves consisting of Internship Reports, Reviews, Thesis and Dissertation of its qualified students. Also the library is having some text books. Faculty and students use the Central Library of the University. The departmental library needs to be upgraded.

Departmental and Main Library

Departmental Library:

Central library: There is a central library which is centrally air-conditioned and contains many plant protection books most of them are very old editions, in addition to the journals, relating to various disciplines in agriculture including plant protection and allied subjects. However, the central library needs further improvement and fresh arrivals of journals and books.

The library is linked with digital library developed by Higher Education Commission of Pakistan, where, over 15000 full text journals and 25000 abstracted journals are available free of cost. The library also has good electronic equipment including internet, multimedia, and other facilities. At present one computer is available for 11 students. Keeping in view the large number of post graduate students, more computers with printers and internet facilities are required.

Computer Labs, Internet and Multimedia Facilities

Computer Lab: The university is having two mega computer labs, where internet facility is available for all the university students all the time. Some computers along with the internet facility are also available for all the university students in the main library.

Recently, this department has established computer laboratory with the internet facility for the students. But these computers are not sufficient enough to cater the needs of the students. Further, these computers need to be upgraded.

Classrooms number and size with Multimedia

Classrooms: There are only three classrooms for under-and-post graduate students having appropriate size. There is serious shortage of classrooms. Increasing number of students results in the congestion of classrooms which affects adversely the quality of teaching.

Multimedia: There is only one multimedia,

Faculty Offices and Facilities

Faculty Offices: Most of faculties offices are having separate offices with ACs and telephone facilities as per statutory provision but separate offices for two of the faculty members are needed.

SWOT Analysis:

Major Strength of Academic Programs

- The department has qualified and experienced teaching staff, among 9 faculty members, eight possess Ph.D degrees from well reputed universities of the advanced countries and 4 faculty have also completed Post Doc fellowship from abroad.
- The main strength of the department is its ability of conducting research in the field of IPM, biological control, acarology, toxicology, host plant resistance and stored grains pest management.
- Field area for research is available and well maintained.

Major Weaknesses of Academic Programs

- Lack of lab. Equipment including stereomicroscope, HPLC, growth chambers, centrifuges, electrophoresis, PCR, spectrophotometer, relevant software, chemicals and glass-ware, books, national and international journals in different areas of entomology needed for graduate research program.
- The department lacks in spacious and controlled conditioned laboratories with safety arrangements and security plan, class rooms, green house facilities and common room.
- Lack of well equipped departmental library and computer room.
- Lack of appropriate office space for faculty offices.
- Course files of the courses offered are hardly maintained by the faculty.
- Inadequate technical and support staff not trained for the job.
- Student –Faculty ratio is very low due to limited intake.
- Lack of research funds for the faculty and graduate research.

Opportunities:

- Opportunities exist for technical collaboration with private sector in the area of Plant Protection especially for the cash crops of the area.
- The faculty may extend consultancy and advisory services to private sector.
- Some students have availed national and international competitive grants for higher studies.

Threats:

- Lack of coordination with department of Entomology for course work and research activities.
- Intake of students indicates less preference of the students for the subject of Plant Protection.

Actionable Recommendations

- The department is in need of equipment like Stereomicroscope, microtome, growth chambers, stereoscope, drying cabinet, ovens, cool incubators, digital electronic balance, high magnification stereoscopes, camera fixed stereoscopes, desiccators, HPLC, GC, PCR, electrophoresis, atomic absorption, and high speed centrifuges.
- Additional working space is required for both laboratories & class rooms.
- Faculty members need to be particularly trained in digital teaching methods. For some faculty members require faculty offices.
- A large green house is required for research/ experiments at Post-graduate level.
- The faculty needs training in modern molecular and biotechnological areas.
- Insect rearing facilities are required for bio-ecological and toxicological studies.
- The capacity of young faculty members may be enhanced through short term and long term (doctoral and post-doctoral) training abroad.

- Project on “Strengthening of Department of Plant Protection” should be developed as soon as possible.
- The departmental library may have latest edition of text books, local & international journals, literature and computers with internet facility.
- Safety arrangements and security plan are not in place. The laboratories should also be well equipped in first aid kits/facilities.
- Multimedia may be installed in classrooms with better furniture and ventilation arrangements.
- The present computer lab. facilities need to be strengthened. A separate large computer room is strongly recommended.
- Funds should be arranged for faculty members to participate in conferences, seminars and workshops to improve exposure and interactions with peer groups worldwide.

Final Recommendation

The independent existence of the Department of Plant Protection is hardly justified particularly in view of lack of infrastructure, low intake, low student-teacher ratio and duplication of coursework and research activities. Hence, this department may be merged with the Department of Entomology with the nomenclature of Department of Agri. Entomology.

Accreditation Recommendation

On the basis of the inspection/evaluation, the team recommended accreditation/rating of the Degree Programs of the Plant Protection discipline at Khyber Pakhtunkhwa Agricultural University, Peshawar in the lower band (56.4% score) of “Y” category of National Agriculture Education Accreditation Council/HEC, implying that the degree programs are not meeting some the major criteria i.e. teaching/learning infrastructure and resources.