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National Agriculture Education Accreditation Council

48

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

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We are also thankful to the NAEAC for their assistance guidelines and logistic support during the assessment process. The support provided by Mr. Naseer Alam Khan (Secretary), and Malik Muhammad Kashif Anwar (Admin Assistant), NAEAC Secretariat is highly acknowledged.

Accreditation Inspection Committee (AIC)

NAEAC

General

NAEAC Inspection Team

The Chairman NAEAC nominated an Accreditation Inspection Committee (AIC) for the evaluation of Deptt. Of Entomology, Faculty of Crop Protection, Sind Agriculture University, Tandojam for accreditation. The committee comprised of the following members who undertook a visit to the said institution on March 7-8, 2012.

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 Accreditation Inspection Committee shall have the following **TORs**:

- To validate the self-assessment report (SAR) of the degree programs (B.Sc and M.Sc (Hons) prepared by the Department of Entomology, Faculty of Crop Protection
- To carryout external evaluation of the degree programs in a transparent, neutral, holistic and participatory manner for accreditation and rating **based on seven (7) evaluation criteria given in the Evaluation Manual.**
- To submit a synthesized and concise analytical report (4-5 pages only) consisting of SWOT Analysis and actionable recommendations based on the interactions with the Dean, Chairman, Faculty Members, Students and Support Staff and alumni as well as detail visit of physical infrastructure, facilities and other teaching- learning resources available for the degree programs.
- To submit clear, specific and justified degree programs accreditation and rating recommendations to the Chairman-NAEAC.

1. INTRODUCTION

Deptt. Of Entomology, Faculty of Crop Protection, Sind Agriculture University, Tandojam

• DEPARTMENT HISTORY & MAIN FEATURES

The Accreditation Committee was given a detailed briefing by HOD regarding its history, mandate/vision, mission statement, Program goals and objectives, faculty, students, research projects and future plans. He also mentioned major achievements of Department of Entomology and its role in the national economy.

Agricultural Entomology as major subject was started with the establishment of Sindh Agriculture College in 1962, it was upgraded to the status of Sind Agriculture University in 1977, Faculty of Crop Protection was established in 1986 and Entomology Deptt. was made a part of this faculty. First batch of B.Sc. Entomology passed out in 1966. The Department is presently offering three degree programs viz; B.Sc. (Hons.), M. Sc (Hons.) and PhD in Entomology. The department is engaged in producing highly skilled and technically sound man power to solve the problems relating to insect pests and diseases in field crops, horticultural crops and stored commodities and transferring technologies to various stakeholders. The Deptt. of Entomology has produced 6200 graduates and 3040 M.Sc.s. Currently 60 students are in Entomology Major B.Sc.(Hons.) and 50 in M.Sc.(Hons.).

• DEGREE PROGRAMS OFFERED

- B.Sc. (Hons.) (Four years)
- M.Sc. (Hons.) (Two years)
- PhD, Ent. (3-5 years)

2. CRITERION WISE ANALYSIS

Criterion I: Strength and Quality of Faculty

The Faculty members at the Deptt. of Entomology, SAU are competent having current knowledge and skills in their field of specialization. Presently they are 10 in number comprising of 2 Professor, 1 visiting Professor, 4 Assistant Professors and 3 Lecturer (**Annexure # 1**). Two faculty have availed Post-Doctoral Fellowship, five have PhD degrees and one faculty member is in the process of completing his PhD. The range of the experience of the faculty is from 1-20 years. This makes enough expertise to meet the needs of an independent Department to fit into the HEC requirements. Deptt. has produced 2 PhDs and 50 M.Sc.(Hons.) and 380 B.Sc.(Hons.).

Most of the faculty members are satisfied with their jobs and agreed that salary package is fair and reasonable. Students are generally satisfied with lectures and practical's. Seminars by eminent scientists are occasionally held in the department. The entire faculty have membership of various national and international professional societies.

Criteria II: Curriculum Design and Development

The Department of Entomology at SAU is undertaking teaching and research for 4 years B.Sc. (Hons.), 2 years M.Sc.(Hons.) and 3-5 years Ph.D. degree programs. The curricula has gone under major revision during the last five years through brainstorming by University Professors, Research and Extension Scientists and Business community related to agriculture. The revised curricula approved by HEC have been in vogue since July, 2011. Therefore the current curricula are in line with national and international market demands. This has been implemented through department board of studies, faculty board of studies, academic council and university syndicate.

Majority of the students are satisfied with the academic programs and contents of the curricula. The parents get information regarding education of the students and jobs opportunities offered. They are satisfied. As a result students are well equipped with current knowledge and skills. The faculty members of the department are also involved in serving in various fields at national and international levels. Graduate have brought good name to the programs by rendering services to pesticides companies, agriculture research and extension departments, Arji. University and various other fields.

Criteria III: Infrastructure and Learning Resources

There are four research labs and three undergraduate teaching laboratories. Laboratories are spacious and but not equipped with safety arrangements, having equipments such as Hot air oven, Incubator, Digital balance, Microscope, Fume hood, shaker and rotators, Over head projector and Multimedia projector. There is no greenhouse facility in the Department but insect rearing labs are available. The experimental area of the research form is sufficiently large. As per requirement on seasonal basis, the space is allotted to various departments for their research work.

The insect museum is well maintained, mostly the collection associated with identified insect groups upto species level. Most of the collection present in the museum is related to insect crop pests.

Presently there is departmental library However, Thesis and Dissertation of its qualified students are present. Also the library is having very few text books. Faculty and students use the main Library. The departmental library needs to be strengthened. The main library contains around 500 entomological books most of which are very old editions. In addition to this few journals, relating to various disciplines in agriculture including entomology and allied subjects are also present. However, the main 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.

Criteria IV: Students Support and Progression

There is lack of resources for the students to get financial assistance from various sources. Facilities are not available for Entomological students to get financial assistance from the University. The sport facilities are existing in the University for both outdoor and indoor games. Reasonable buses are plying in town and within the university to facilitate transportation of students.

A week student-teacher interaction exists through tutorial meetings, department/faculty seminars, and workshops. Medical facilities for students are appropriate. Residential facilities in the university and hostels are excellent. Student's perception about the degree is positive because of ample employment opportunities both in public and private sectors, especially in pesticide in companies.

Criteria V: Research and Consultancy Activities

Amount of research grant received during last five years from Pakistan Science Foundation, Govt. of Sind and HEC, is amount Rs. 8.887 million. There is no allocated departmental budget to meet the routine necessities of the department.

Criteria VI: Governance and Leadership

The administration power of the University is well defined like other Public sector Universities. The chairman is responsible for all administrative and management matter of the Department. Defined and documented rules and regulations are being implemented in day to day Governance.

They is lack of maintaining necessary records of Alumni and to get feedback from them. The Deptt graduates are performing well in public service commission and pvt sector in and abroad. Annual Calendar of activities is prepared with the help of the faculty and staff. Course files are not well maintained. No regular news bulletin is issued by the University regularly.

Criteria VII: Recent Innovations and Best Practices

(To be obtained from SAU)

The members of the faculty have developed insect museum, which is mainly collection based and focus on the systematic. Work by members of the museum have involved several groups of insects identified, 2 new insect species in science, 27 new records from Sindh province, 12 synonyms and 4 new combinations. Currently scientists are involved in exploring the different insect groups fauna related to Sindh province of Pakistan. The members of the department is also working on Insect Pest Management of the different crop pests. The young faculty members are involved in insecticide resistance monitoring and resistance mechanism in relation to different pesticide groups.

3. SWOT ANALYSIS OF THE DEPT DEGREE PROGRAMS

(A brief SWOT of the deptt. of Entomology, SAU)

STRENGTHS

- Out of 10 faculty members 4 hold Post-doc, 5 hold Ph.D. degree and remaining 5 are M.Sc. (Hons). /M. Phil. They have expertise in different fields of entomology (insect bio-ecology, biological control, bio-systematic, physiology and IPM)
- They have 4 research labs with capacity of 10 students each and 3 teaching labs with capacity of 60 students.
- Sufficient land for on-farm research is available both for faculty and students.
- Research base is fairly good; they have obtained 5 projects worth 8.8 million during last 5 years; 3 completed 2 in progress.
- Text books and more than 200 research papers have been published in national and international journals.
- Department library have sufficient space with good environment.
- They have well maintained insect museum

WEAKNESS

There are certain areas regarding faculty, equipment and manpower which needs further improvements.

- The program lacks modern research equipment
- Course file are not maintained
- No regular budget allocation and no delegation of financial powers Departmental library does not contain sufficient number of relevant books
- Lack of green house facility
- No regular promotions of Teachers

OPPORTUNITIES

- Bright chance of Scholarships for senior but non-PhD faculty promotion of faculty members to higher vacant positions.
- Graduates of this department compete well for government and private jobs especially in Sindh and Baluchistan
- Some of the students have availed national and international competitive grants for higher studies.

THREATS

- Lack of coordination with other Universities and institutions for course work and research.
- Majority of the students appears to be involved with influential people
- It is felt that existence of language based groups in students and faculty is a threat to the program

4. ACTIONABLE RECOMMENDATIONS

- There is an immediate need to strengthen a departmental library and computer laboratory.
- The department needs equipments like camera-fixed stereomicroscope, high magnification stereomicroscope, drying cabinets, ovens, cool incubators, desiccators, electrophoresis and high speed centrifuge, growth chambers.
- Faculty members need to be trained in digital teaching methods.
- A green house is required for research at post-graduate level.
- The faculty needs training in modern molecular and biotechnological areas.
- The capacity of young faculty members may be enhanced through short term and long term training abroad.
- Linkages with national and international universities should be further strengthened.
- Post-graduate research should be expanded to molecular and bio-technological level.
- Funds should be arranged for faculty members to regularly participate in conferences, seminar and workshops at national and international level.
- Some budget should be allocated to HOD for faculty members for urgent and unforeseen requirements which can render strong hurdles in the experiments if not dealt immediately.
- Department of Plant Protection and Entomology having almost similar objectives and goals should be merged.

Signature: _____

Name: Ghulam Jilani

Designation: Ex CSO/Sr. Director, (Rtd),
PARC, Islamabad

Evaluation Criteria for Agricultural Degree Programs

Sr No	Criteria	Points Assigned	Points Awarded	
			M.Sc. (Hons.)	B.Sc. (Hons.)
Major Criteria				
1	Strength and Quality of Faculty	250	178	178
2	Curriculum Design and Development	150	120	120
3	Infrastructure and Learning Resources	200	126	126
4	Students Support and Progression	100	60	61
Sub-Total (a):		700	484	485
Minor Criteria				
5	Research and Consultancy Activities	150	109	109
6	Governance and Leadership	100	65	65
7	Recent Innovations and Best Practices	50	37	37
Sub-Total (b):		300	211	211
Grand Total (a+b):		1000	695	696

Dr. Ghulam Jilani

Name and Designation

Signature of Program Evaluator

Final Recommendation

On the basis of the inspection/evaluation, the team recommends accreditation/rating of the degree programs of Department of Entomology, Sindh Agriculture University, Tandojam, Pakistan in the Lower band (69%) of “X” category of National Agriculture Education Accreditation Council/HEC.

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,

I agree with the observations and recommendations made by the peer team in this report.

Chairman Department of Entomology.

Annex -1

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

Faculty	Faculty with Ph.D. Degree	Specialization	Status	
			Regular	Contract
Dr. Ghulam Hussain Abro (Professor & Chairman)	Ph. D (UK) Post-doc. (USA)	IPM	Regular	
Dr. Maqsood Anwar Rustamani (Professor)	Ph.D (Japan) Post-doc. (Japan)	Host Plant Resistance	Regular	
Dr. Syed Tajwar Sultana (Professor)	Ph. D (Pakistan)	IPM	Regular	
Dr. Rab Dino Khuhro (Professor)	Ph. D (USA)	IPM		Visiting Professor
Mr. Syed Shahzad Ali (Assistant Professor)	M.Phil (Pakistan)	IPM	Regular	
Mr. Abdul Ghani Lanjar (Assistant Professor)	M.Sc. (Pakistan)	Insect Ecology	Regular	
Mr. Syed Ali Hyder Shah (Assistant Professor)	M.Sc.(Hons.) (Pakistan)	Morphology	Regular	
Mr. M. Ibrahim Kubar (Lecturer)	M.Sc.(Hons) (Pakistan)	Insect Behaviour	Regular	
Miss Lubna Bashir Rajput (Lecturer)	On Study Leave China for Ph.D.	Insect Physiology	Regular	
Dr. Imran Khatri (Lecturer)	Ph.D. (Pakistan)	Taxonomy	Adhoc	
Total			09	01

Annex-2

Annexure # 1 : Area of specialization and sections/labs in the department

S.#	Laboratory	Laboratory Assistant	Laboratory Attendant	Required
1	Taxonomy	Mr. Shah Jahan Shah	Mr. Delawal Somoro	1 lab. Assistant
	General Lab.	Mr. Abdul Fatah	Mr. Niaz	1 Lab. Attendant