



National Agriculture Education Accreditation Council

52

Report of the

**Accreditation Inspection Committee
(AIC)**

on

**Department of Plant Pathology
University College of Agriculture (UCA)
University of Sargodha,
Sargodha**

June, 2012

Acknowledgments

The Accreditation Inspection Committee (AIC) gratefully acknowledges the excellent support provided by the management, faculty, staff and students of the Department of Plant Pathology, University College of Agriculture (UCA), University of Sargodha (UOS), Sargodha. The AIC also acknowledges with thanks to Chairman, NAEAC and his team especially Mr. Naseer Alam Khan, Secretary, National Agriculture Education Accreditation Council (NAEAC), for the excellent arrangements made for conducting the visit to the College and their valuable contributions during the preparation of the report.

Accreditation Inspection Committee (AIC) of NAEAC

Contents

Acknowledgment	02
Contents	03
Section-1: General	
1.1 Constitution of Accreditation Inspection Committee (AIC)	04
1.2 Term of Reference of AIC	04
1.3 The University and the Department	05
1.4 Program mission and objectives	05
Section-2: Criterion-wise program evaluation and analysis	
2.1 Criteria-I: Strength and quality of faculty	05
2.2 Criteria-II: Curriculum design and development	06
2.3 Criteria-III. Infrastructure and learning resources	06
2.4 Criteria-IV: Students support and progression	07
2.5 Criteria-V: Research and consultancy activities	07
2.6 Criteria-VI: Governance and leadership	08
2.7 Criteria-VII: Innovative practices	08
Section-3: Overall analysis of the degree programs based on Strengths, Weaknesses, Opportunities and Threats (SWOT)	
3.1 Major strengths	09
3.2 Major weaknesses	09
3.3 Major opportunities	09
3.4 Major threats	09
3.5 Stake holder's feedback	09
Section-4: Recommendations	
4.1 General recommendations	09
4.2 Final recommendation	10
4.3 Consent of Chairman of the Department of Plant Pathology	11
4.4 Name and designation of the AIC members	11
Section-5: Annexes	
Annexure I-XI	12-17

1. General:

1.1 Constitution of Accreditation Inspection Committee (AIC)

The Chairman, National Agriculture Education Accreditation Council (NAEAC), in pursuance to its mandate given by the HEC under clause 10 subsections (d) and (1) of the byelaws of NAEAC, constituted an Accreditation Inspection Committee (AIC) for the external review of the Degree Programs (B. Sc (Hons) and M. Sc (Hons) of the Department of Plant Pathology, University College of Agriculture, University of Sargodha, Sardogha. The AIC consists of the following members who visited the Department of Plant Pathology on May 09 to 10, 2012 for the inspection and in-depth review of the degree programs of the Department:

1. Prof. Dr. Muhammad Arif Convener
Chairman,
Department of Plant Pathology,
Khyber Pakhtunkhwa Agricultural University,
Peshawar

2. Dr. Muhammad Bashir Member
Chief Scientific Officer (CSO) (Rtd.),
Crop Disease Research Program (CDRP),
National Agricultural Research Center (NARC),
Park Road, Islamabad

1.2 Term of Reference of AIC

The main terms of reference (TOR) of the committee were as follows:

- To validate the Self-Assessment Reports (SAR) of the degree programs (B. Sc and M. Sc (Hons)) prepared by the Department of Plant Pathology, University College of Agriculture, University of Sargodha, Sardogha.
- To carry out an external evaluation of the degree programs in a transparent, neutral, holistic and participatory manner for accreditation and rating of degree programs based on evaluation criteria given in the Evaluation Manual (Toolkit).
- To submit synthesized and concise analytical report (7-8 pages only) consisting of SWOT analysis and actionable recommendations based on interaction with the Dean, Chairman, faculty members, students and support staff 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.

The itinerary of the AIC visit schedule is given at Annex-I.

1.3 The University and the Department

The University College of Agriculture (UCA), University of Sargodha, Sardogha, was established in 2005. The Department of Plant Pathology started its B. Sc (Hons) Agriculture specialization in Plant Pathology program in 2010. The Department initiated its M. Sc (Hons) agriculture specialization in Plant Pathology and Ph. D Programs in Plant Pathology in 2012.

The Department of Plant Pathology, University College of Agriculture, University of Sargodha, Sargodha, has reasonable infrastructure consisting of class rooms, teaching and research laboratories and experimental field focus on teaching and research activities of four essential areas in Fungal Plant Pathology, Plant Virology, Phyto-nematology and Phyto-bacteriology. The Department has only one Plant Pathology Laboratory, a shared Hitech laboratory and Computer Laboratory, limited library resources of relevant books also shared with the College library.

1.4 Program Mission and Objectives

Mission Statement

The Department of Plant Pathology will develop and foster innovative research and teaching programs keeping in view changing needs of the society and the environment.

- Ensure sustainable agricultural productivity and management of our natural resources and environment.
- Provide solutions to plant disease and health concerns.
- Develop new knowledge of plant-pathogenic microorganisms.
- Provide quality education to students.
- Arrange research-oriented educational programs.
- Provide plant disease diagnostic support for the education programs.
- Develop effective and eco-friendly strategies for managing important plant diseases.

Program Objectives

1. To understand plants, microbes and their interactions to devise approaches for effective disease management.
2. To offer superior education in plant pathology to broaden its perspectives at undergraduate, graduate, and post graduate level.
3. To provide services that create awareness of plant diseases and that enhance plant health.
4. To disseminate latest information on diseases of field crops and orchards and current issues through PBC, Sargodha and University radio FM 98.2.

1.5 Academic Programs

The Department is presently offering three degree programs as per following details:

1. B. Sc (Hons) Agriculture specializing in Plant Pathology
2. M. Sc (Hons) Agriculture specializing in Plant Pathology
3. Ph. D in Plant Pathology

2. Criterion-wise Program Evaluation and Analysis

2.1 Criteria-I: Strength and quality of faculty

As per ToR, the AIC met individually or in groups with almost all of the faculty members in the Department during its visit to the College. The AIC members discussed various issues with faculty members such as academic and professional background, areas of their research and recorded their views and professional input on strengths, weaknesses, opportunities and threats to the degree programs of the Department. Presently there are five faculty members in the Department. It is interesting to note that all the five faculty members are regular and none of the faculty either on TTS or HEC sponsored Foreign Faculty or on contractual basis, is in the Department. Among five faculty members, no full time Professor, one Associate Professor, three

Assistant Professors and one lecturer respectively. Out of five faculty members, four have Ph. D degrees and one have M. Sc (Hons) degree. In connection with four essential areas in Fungal Plant Pathology, the faculty members of the Department of Plant Pathology at UCA, UoS have reasonable trained faculty members in Fungal Plant Pathology and Plant Virology. However, the Department is deficient trained faculty members in areas of Phyto-nematology and Phyto-bacteriology. A summary of the faculty strength, qualification, status, teaching experience and publications is given in Annex-II. The faculty strength is below from the HEC approved criterion of minimum 6 for a Department, the required faculty composition ratio is 1:1:2:2 and at Department of Plant Pathology 0:1:3:1 (Annex-III). Two faculty members are over 15 years of teaching and research experience, and others are young with minimum one to four years of teaching and research experience. The work load shown for Associate Professor and Assistant Professors and Lecturers is six , nine credit hours each, respectively which is less as per HEC standard/ guidelines.

Most of the faculty members are satisfied with their job, however, some are only partially satisfied, both internal working atmosphere in the department as well as in the university besides the financial benefits and freedom of professional activity. Most of the faculty members were satisfied with their salaries but have a consistent complaint for ever increasing living costs and non payment of house requisition.

2.2 Criteria-II: Curriculum design and development

The Department has acquaintance with HEC approved curriculum for the degree programs [B. Sc (Hons) Agriculture (Plant Pathology) and M. Sc (Hons) Agriculture (Plant Pathology)]. The HEC requirement for the B. Sc (Hons) Agriculture specialization in Plant Pathology is eight semesters degree program with 130-140 credit hours, including four credit hours internship/project in the eighth semester.

As per HEC policy, M. Sc (Hons) in Agriculture specialization in Plant Pathology degree program requires four semesters with minimum of 30 credit hours including 6 credit hours for thesis research and 24 credit hours course work of major and minor courses.

The committee had gone through the course contents and found that objectives of all the courses for B. Sc, M. Sc. and Ph. D were well defined and according to the HEC guidelines. While interviewing the faculty, it was noted that all the faculty members are maintaining and regularly up-dating respective course files. The AIC was satisfied with lecture wise course details, time of mid-test, assignments, quizzes and final examination conducted by the faculty members. Evaluation system of each course is in place and functional.

2.3 Criteria-III: Infrastructure and learning resources

2.3.1 Research and Teaching Laboratories: The Department of Plant Pathology at UCA, UoS is newly established and has only one laboratory used for teaching and research activities. The AIC visited the departmental infrastructure and found inadequate for teaching and research activities relevant to the degree programs under accreditation [(B. Sc Hons) and M. Sc (Hons) in Agriculture (Plant Pathology)]. The Department needs at least three to four laboratories that could cater the teaching and research activities of four major areas of the Plant Pathology (Fungal Plant Pathology, Virology, Nematology and Phyto-bacteriology). Further more, the Departmental infrastructure is deficient of safety arrangements and security plans.

2.3.2 Laboratory Equipment: The Department has only one laboratory for teaching and research activities. The laboratory is equipped with only a limited number of equipment (Annex-V). The laboratory is deficient with basic and essential equipment used in Plant Pathology such as incubators, homogenizer, Walk-in Plant growth chamber, high efficiency compound microscopes, photometer, high speed centrifuge, etc. AIC further recorded that the supply of laboratory chemicals and diagnostics are not adequate and sufficient to fulfill the requirement of quality teaching and research activities at degree programs under accreditation. The laboratory manuals are not available in all subjects. Student's views about practical learning were not encouraging and reported that most of the practical were limited to laboratory demonstration. The availability and qualification of laboratory staff is given in Annex-IV. The AIC noticed that there was inadequate number of support staff available in the Department but technical competency of the staff is not relevant. In service training of support staff is not in place.

2.3.3 Safety arrangements: There is no proper safety arrangement and no security plan is in place in case of emergency. No fire extinguishers have been installed in any laboratory. No first aid kits/facilities provided in the laboratory/department.

2.3.4 Greenhouses and experimental field facility: Facility of screen house and glass house is not available in the Department. Seventy two acres of land is available as UCA experimental field which is sufficient to conduct field experiment for the degree programs.

2.3.5 Departmental and main library

Departmental Library: The UCA has its own library with almost 158 relevant books including seating capacity of about 70 students. There is insufficient budget (Rs. 0.10 million/year) for the purchase of books, journals, etc at institute level. However, the library is linked with HEC library digital data base. The existing library facility is not sufficient to fulfill the requirement of the student until it is linked with main library of the university.

2.3.6 Computer Laboratory: The UCA has a computer laboratory with 50 computers for students with basic facilities access to internet. There is no computer laboratory for the Department of Plant Pathology. Only three faculty members have their computers in their offices. The computer ratio for student is about 1:20 and faculty is 1:1.

2.3.7 Classrooms and teaching aids: There are two classrooms for under and post graduate students each with 865 sq. ft of size. Teaching aids such as multimedia, overhead projectors, etc are not available in laboratory and class rooms of the Department. However, it was indicated the portable multimedia facility is provided to the faculty members for class teaching.

2.3.8 Faculty Offices: More than four faculty offices are available. Senior faculty members are sitting in rooms adjacent to the laboratory and have their computer purchased by themselves or in project grants.

2.4 Criteria-IV: Students support and progression

The number of students enrolled in various semesters of under- and postgraduate programs show reasonable response. HEC guidelines are being followed for admissions both at B. Sc (Hons) and M. Sc (Hons) degree programs. The students support such as hostel, sport, medical, transport facilities and financial aid and academic counseling support is not in place and not available to the students. No financial support is available at the UCA as different needs and merit based scholarships but the number of such scholarships is not at par with the requirements. There is need to increase such facilities so that maximum students can avail scholarships opportunities.

Student interaction with teachers is excellent and their attitude toward studies was found encouraging. Students from B.Sc. (Hons) are sent to various research institutes for internship throughout the province where they acquire practical training and submit a formal report.

2.5 Criteria-V: Research and consultancy activities

The Department is a newly established; therefore, research and consultancy activities at the Department are not adequate as reflected by the research projects completed, ongoing and submitted for funding (**Annex-IV**). The department has developed a reasonable research culture and the staff is motivated to contribute to research journals. However, more encouragement should be provided to faculty staff to carry forward the spirit and implementation of research programs. The Department has not completed any research project so far; however, five research project proposals have been submitted to various national donors such as Pakistan Science Foundation (PSF) and Higher Education Commission (HEC) for grants.

2.6 Criteria-VI: Governance and leadership

The Department of Plant Pathology is constituent of UCA, UoS. The UoS is an autonomous body having its own charter of functions. . The highest governance authority is the Vice Chancellor assisted by the Registrar, Treasurer, and Controller of Examinations and Dean of the faculties and Principal of the College (UCA). The Vice Chancellor performs his functions through bodies including the Syndicate, the Senate, Academic Council, Advance Studies & Research Board, Finance and Planning Unit, and directorates of Student Affairs, Quality Control and Placement Bureau. All these bodies function within the frame work of rules & regulations and guidance defined by HEC. Funds are provided by HEC for regular activities and specific research & special programs. There is a good working relationship between faculty members and the management; however, some operational constraints have been experienced. The role and functions of the Principal office is conflicting with office of Dean of the Faculty. The AIC observed that it could solve if all departments of UCA considered under Dean of the Faculty (Faculty of Agriculture) and each Department administered through its Chairperson. The budget allocation for operational expenses and research are low as compared to the requirements and expectations.

2.7 Criteria-VII: Adoption of best practices

The AIC confirm that mechanism for ensuring quality exists. However, improvement is needed in various areas of conduct. Some innovative practices adopted by Department and short fall are highlighted as under:

- Teacher and student assessment system has been implemented which has created sense of responsibility and all time attentiveness.
- Assessment of individual courses based on feed back from students also deserves appreciation.
- Evaluation of students is based on mid term examination, assignments and final examination which requires a student to be attentive and responsive through out the semester and improve his abilities. The students were allowed to check their answer books and resolve anomalies if any for their satisfaction.
- Introduction of comprehensive exam/ paper covering major subjects is an important tool for revision of important topics before award of degree.

3. Overall analysis of the degree programs based on strength, weakness, opportunities and threats (SWOT)

3.1 Major strengths

The Department does not have any strength except existing faculty are young and the Department has sufficient experimental field

3.2 Major weaknesses

- Lack of qualified faculty members particularly in areas of Plant Nematology and Phyto-bacteriology. The Department does not have single Professor in Plant Pathology
- Lack of essential infrastructure for the programs offered. One laboratory, two class rooms, a few faculty offices are insufficient and inadequate for the degree programs such as B. Sc (Hons), M. Sc (Hons) and Ph. D in Plant Pathology. The Department needs at least three more laboratories to cater the teaching and research requirements of the programs under accreditation.
- Lack of basic and essential equipment used in Plant Pathology, Insufficient laboratory supply such as chemicals, reagents and diagnostics to fulfill the requirement of quality teaching and research activities for the degree programs.
- Lack of hostel (male students), transport and medical facilities for the students.
- Limited library and no book bank facility.
- The work load shown for Associate Professor, Assistant Professors and Lecturer is not at par HEC standards and guidelines.

3.3. Major opportunities

- Due to the location of the Department at UCA, UoS, the faculty may have better opportunities to hunt funds for their research and development programs especially for citrus pathology. Due to the significance of the citrus, international donors could be attracted for funding to solve die back, citrus tristeza, root rot problems of citrus and production pathogen-free propagative materials.
- The Department is newly established, therefore, chances of additional funds are available.
- Strong linkages could be developed with various research and developmental organizations and corporate sector. The institute has better opportunity to develop academia-industry linkages for the socio-economic development of the country.

3.4. Potential threats

- Lack of quality teaching faculty and trained laboratory staff.
- Lack of financial resources.
- Inadequate laboratory and library facilities.
- Insufficient residential, medical and transport facilities.

4. Recommendations

4.1. General recommendations

After careful SWOT analysis of the degree programs offered at Department of Plant Pathology, UCA, UoS, the AIC suggested following recommendations:

- The Department is short of qualified faculty, there is urgent need to appoint Associate and Assistant Professors in areas of Phyto-bacteriology, Plant Virology, Phyto-nematology and Physiological Plant Pathology with relevant educational background.

- The Department is deficient of infrastructure required for the degree programs, therefore, three more laboratories equipped with essential equipments, supplies, chemicals and reagents are required.
- The Department needs to appoint technically qualified supporting staff. Each laboratory may have at least one trained Laboratory Assistant and one Laboratory Attendant.
- The Department need to establish a separate library equipped with modern learning tools, subject books, reference books, journals and has access to HEC digital library resources.
- The Department does not have hostel facility for male students, therefore, hostel facility for male students need to construct on urgent basis.
- The Department does not have transport and medical facility for the student. It needs to provide transport and medical facility to the student at least during working hours.
- The Department is newly established and in most of the cases under transition, therefore, needs financial resources to construct more laboratories, class rooms, faculty offices, office and laboratory equipments, supplies, chemicals, reagents. Therefore, it is recommended that sufficient financial resources need to be allocated to cater the department requirement for the degree programs
- Financial assistance could improve the quality of internship programs at B. Sc (Hons) degree program, thesis research at M. Sc (Hons); therefore, it is recommended that budget could be allocated to the Department for conduction of postgraduate research.
- The department library could be enriched with induction of books, local and international journals, literature and computers on continuous basis by allocation of additional funds for departmental library.
- Safety arrangements and security plans are not in place. Emergency exits may be arranged. The laboratories may also be equipped in first aid kits/facilities.
- To broaden the view of the students and teachers, more linkages could be developed with institutions of higher learning both at national and international levels.
- Participation of faculty members in conferences, seminars and workshops may be encouraged to improve exposure and interaction with peer groups worldwide.

4.2 Final Recommendation

- The academic programs [(B. Sc (Hons) and M. Sc. (Hons) Agriculture specialization in Plant Pathology] of the Department of Plant Pathology, University College of Agriculture, University of Sargodha, Sargodha, may be strengthened to cater the need of present enrolment of graduate and postgraduate levels of the above mentioned plant pathological degrees. The institute needs to address major weaknesses discussed in this report.
- On the basis of the inspection / evaluation, the team unanimously recommends Accreditation of the Degree Programs of [(B. Sc (Hons) and M. Sc (Hons) Agriculture specialization in Plant Pathology] of the Department of Plant Pathology, University College of Agriculture, University of Sargodha, Sargodha,, in the “**Y1**” category of National Agriculture Education Accreditation Council/Higher Education Commission with scope for up-gradation to category “**X or W** after appropriate improvements in due course of time.

4.3 Comments and signature of the Director:

I agree with the observations and recommendations made by the Accreditation Inspection Committee (AIC) in this report which is based on the discussions and visit to different facilities of this Department.

The Chairman,
Department of Plant Pathology,
University College of Agriculture,
University of Sargodha, Sargodha

Dated: June 19, 2012

4.4 Name, Designation and signatures of the AIC Members

Prof. Dr Muhammad Arif

Chairman,
Department of Plant Pathology, (Convener)
KPK Agricultural University,
Peshawar



Dr. Muhammad Bashir

Chief Scientific Officer (CSO)
(Rtd.), Crop Disease Research
Program (CDRP), National (Member)
Agricultural Research Center
(NARC), Park Road,
Islamabad

Dated: June 19, 2012

**ANNEXURE-I:
Itinerary of AIC On-Site Accreditation Visit**

Host Institution: University College of Agriculture, University of Sargodha, Sargodha

Institute/Program: Department of Plant Pathology

Review Team:

1. **Prof. Dr. Muhammad Arif** (Convener)
Chairman,
Department of Plant Pathology, KPK AUP
2. **Dr. Muhammad Bashir** (Member)
Chief Scientific Officer (CSO) (Rtd.),
CDRP, NARC, Park Road, Islamabad

NAEAC Resource Person: Naseer Alam Khan, Secretary NAEAC

Schedule of Visit: May 08-09, 2012

Day 01	Time	Activity
	09:00-10:30	<p>Presentation: Chairman, Department of Plant Pathology</p> <ul style="list-style-type: none"> • History of Department /Academic Programs • Mission Statement • Program Goals and Objectives • Annual operational budget (2011-12) & Human Resources (teaching, non teaching) • Curricula Summary, Revision/Update • Admission and withdrawal policy • Faculty Summary, Qualification/ Experience, Support Staff • Students intake, teaching load, students-teacher ratio • Grading System • Infrastructure Summary, Labs, Greenhouse, Library, class rooms and faculty offices etc. • Employers Feedback • Alumni Survey • Parents Viewpoint • Question/Answer Session • Strengths and weaknesses of degree programs, Mechanism of ensuring merit, transparency and unbiased-ness
	10:30-12:00	<p>Curriculum Review: Department of Plant Pathology Coordinator</p> <ul style="list-style-type: none"> • Course files maintenance - evidence • Intended students learning outcomes • Curricula is current - evidence • Curricula is globally compatible - evidence • Curricula is periodically reviewed by BOS & BOF - evidence • Stakeholders feedback for revision of curricula – minutes of BOS meetings • Course review reports - evidence • Attendance requirements • Maintenance of Examination Record • Session/Semester Record • Students Evaluation Instruments, examination of a sample of graduate Research Synopsis and theses • Research Projects by faculty/students
	12:00 – 13:00	<p>Infrastructure Visit: Dr. M. Usman Ghazanfar, Departmental Coordinator</p> <ul style="list-style-type: none"> • Research & Teaching Labs, quality & use of lab equipment, lab manuals • Greenhouses & Experimental farms & farm machinery & equipment
	13:00-14:30	Zohar Prayers & Lunch
	14:30-16:00	<p>Infrastructure Visit: Dr. M. Usman Ghazanfar, Departmental Coordinator</p> <ul style="list-style-type: none"> • Departmental and main Library, availability of recommended text-books & reference books • Computer Labs, Internet and multimedia facilities • Classrooms number & size with multimedia facility • Faculty Offices & facilities, Committee room & seminar room etc
	16:00-17:00	Meeting of AIC for review and synthesis

Day 02	Time	Activity
	08:30-10:30	Faculty Meetings: 10-15 minutes one-to-one with each Faculty Member <ul style="list-style-type: none"> • Graduation and Higher studies • Personal Background, courses being taught • Area of Interest Vs teaching –learning environment • Perception about the academic programs, Students and peers • Opportunities for professional growth • Research Opportunities, participation in seminars/conferences • Salary Perception and other incentives, Job satisfactions • Teaching Load, student- teacher ratio • Meetings with Support Staff
	10:30-12:00	Classroom Visit: Two classrooms with 45 min. each <ul style="list-style-type: none"> • Students dropout rate (B.Sc & M.Sc) scholarships, financial assistance, guidance & counseling facilities • Financial support, scholarships, interest free loans • Hostel accommodation, transport, outdoor –indoor sports • Medical facility • Counseling & guidance, interaction with teachers • Students perception about degree programs • SWOT analysis on curriculum, faculty and other teaching-learning resources • Access and quality of services of main library and other facilities • Job prospects, placements , Alumni association • Students Interviews (B.Sc Hons final & M.Sc Hons) • Students Assessment System (IAGS Coordinator) • Senior students views and suggestions to improve teaching-learning environment, facilities, resources & quality of teaching <p>* In case of no class, Meeting of AIC members with two groups of Undergraduate and Graduate (M.Sc Hons) students.</p>
	12:00-13:30	Prayers and Lunch
	13:30-15:00	SWOT Analysis: Faculty/Students view point <ul style="list-style-type: none"> • Strengths of Academic Programs • Weaknesses of Academic Programs • Opportunities for Academic Programs • Threats to Academic Programs
	15:00-15:15	Concluding Meeting with Director of the Institute
	15:15-16:00	Concluding/Exit meeting with Dean <ul style="list-style-type: none"> • Salient Findings of the on-site review • Sharing of salient findings and recommendations • Program for submission of final report • Formulation of Actionable Recommendations based on participatory SWOT Analysis • Next Procedure

ANNEXURE-II: Faculty profile- Experience and Publications

Name	Academic Degree		Major Area	Teaching Experience (years)		Publication Record							
	Degree	Awarding Institute		Graduate	Under graduate	Journal publications		Conference Publications		Books		Patents	Tech. Reports
						Intl	Local	Intl	Local	Books/ Monographs	Books Chap.		
Dr. Zafar Iqbal	Ph.D. Post doc	B.Z. University, Multan Curtin Univ. of Technology Australia	Plant Pathology (Mycology/ Postharvest Pathology)	17 years	6	10	28	27	9	4	-	-	4
Dr. Muhammad Usman Ghazanfar	Ph.D.	University of Agriculture Faisalabad	Plant Pathology (Mycology/ (Fungal Biochemistry)	12 Years	3 years	12	30	01	02	01	-	-	2
Dr. Yasir Iftikhar	Ph.D.	University of Agriculture Faisalabad	Plant Pathology (Plant virology)	3.5 Years	3.5 Years	8	17	0	4	1	1	-	-
Dr. Imran Hamid	Ph.D.	Huazhong Agriculture University, China	Molecular Plant Pathology	-	4 Months	3	1	4	-	-	-	-	-
Mr. Salman Ahmad	M.Sc. (Hons) Agriculture	University of Agriculture Faisalabad	Plant Virology	----	3 Years	7	9	----	----	3	----	----	----
Mr. Qaiser Shakeel*	M.S.c. (Hons) Agriculture	University of Agriculture Faisalabad	Plant Nematology	----	7 month	---	3	----	1	----	----	----	2

*Teaching Assistant

ANNEXURE-III

Standards/criteria for degree awarding department: strength and quality of faculty

S. No	Parameters	HEC Criteria/ Standards	Department of Plant Pathology, UCA, UoS	AIC Remarks
1	Faculty strength	Minimum six teachers /Department	Five	Do not qualifies the minimum limit of HEC
2	Visiting faculty	20% of teaching staff	Nil	Not as per HEC Standards
3	Ph. D qualified faculty	At-least five Ph. D	Four	Not as per HEC Standards
4	Faculty composition	Prof: Assoc. Prof: Asstt. Prof: Lecturer (1:1:2:2)	0:1:3:1	Not as per HEC Standards
5	Teacher student ratio	1:20	B. Sc (Hons) Program 1:9	Below HEC Standards
6	Supporting staff vs teaching staff ratio	1:2	1:1.6	Below HEC limits
7	Teaching work load (Credit Hours/ week)	Prof: Assoc. Prof: Asstt. Prof: Lecturer (8, 8, 12 &12 Cr. Hr/Wk), respectively	Assoc. Prof: Asstt. Prof: Lecturer (3,12 & 9 Cr. Hr/Wk),	Not as per HEC Standards

ANNEXURE-IV

List of supporting staff indicating name, designation, highest qualification and In-line experience

S. No	Name of supporting staff	Designation	High Qualification	In-line experience (Years)
1	Syed Mukarram Ali	Lab Assistant	B.Sc.	Three
2	Mr. Samiullah	Lab Attendant	Matric	One
3	Mr. Ehsan	Naib Qasid	Matric	Four

ANNEXURE-V:
Complete inventory of operational Laboratory Equipment

S.No.	Equipments	Quantity
1	Refrigerator/freezer combination	1
2	Cool Incubator	1
3	Laminar Flow Chamber*	1
4	Digital Balance	1
5	Hot Plate	1
6	Centrifuge Machine	1
7	Liquid Shaker	1
8	Autoclave*	1
9	Compound Microscopes*	10
10	Stereoscope	1
11	Imaging Microscope with camera and computer system	1

*Items at S. No. 3, 8, 9 were not seen in the laboratory upon AIC visit, however, the Chairman intimated for the availability of these equipment during revision of the report

ANNEXURE-IV:

Detail of funded research projects: P.I. and funding source, cost and status

S. No	Project title	Principal Investigator	Funding source	Total cost (Pk Rs)	Status
1	Studies on malformation of mango inflorescence	Dr. Ahmad Saleem	PARC (ALP)	2.24 million	Completed
2	Diagnosis and management of postharvest disease incursions in citrus	Dr. Zafar Iqbal	PARB	20.087 million	Submitted
3	Molecular characterization and non conventional management of early and late blight of potato	Dr. Muhammad Usman Ghazanfar	HEC	11.13 million	Submitted
4	Management of pre- and postharvest diseases of citrus using their natural resistance mechanisms	Dr. Muhammad Usman Ghazanfar	HEC	9.696 million	Submitted
5	Rejuvenation of uneconomical citrus orchards by managing abiotic and biotic factors	Dr Muhammad Usman Ghazanfar	Pakistan Science Foundation	1.926 million	Submitted
6	Monitoring of Huanglongbing in citrus growing areas of Punjab and its management	Dr Yasir Iftikhar	Pakistan Science Foundation	1.927 million	Submitted
7	Biological control of <i>Phytophthora</i> spp. in citrus.	Dr Muhammad Imran Hamid	HEC	0.5 million	Submitted