

**Confidential**



**National Agriculture Education Accreditation Council**

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

**Prof. Dr. Muhammad Munir  
Dr. Muhammad Iqbal**

**To accredit  
Plant Breeding and Genetics programs  
College of Agriculture, D. G. Khan  
Sub-Campus of  
University of Agriculture  
Faisalabad**

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## **ACKNOWLEDGMENT**

The Evaluation Team acknowledges the support and cooperation of the honorable Principal, College of Agriculture, Head of Section of Plant Breeding & Genetics and Faculty / Staff members of the Section. The immense help, guidance and logistic support of Mr. Naseer Alam Khan (Secretary), NAEAC and Raja Mr. Mehtab Yasin (Admn. and Finance Officer), NAEAC Secretariat is highly appreciated.

Accreditation Inspection Committee (AIC), NAEAC

## **Accreditation of Agriculture Education Institutions in Pakistan**

### **Executive Summary**

The Accreditation Inspection Committee (AIC) setup by the National Agriculture Education Accreditation Council (NAEAC) for the external review of the Degree Programs B.Sc. (Hons) and M.Sc. (Hons) of the Plant Breeding & Genetics Section, College Of Agriculture, Sub-Campus of University of Agriculture, Faisalabad visited the College/Section on January, 21-22, 2013 for the in-depth review of the degree programs.

The College of Agriculture was started in 1999 as a sub-campus of University of Agriculture Faisalabad. Firstly the classes were started in rental building in the city. It remained there up to 2008. Then the classes were shifted to new campus which is situated about 25 km from the main city. The college of Agriculture is headed by the Principal. The college is divided in 6 sections of Agriculture and related subjects

The PBG discipline is one of the pioneer subjects and integral part of the college. Degree of B.Sc (Hons) Agriculture in PBG as a major subject was started in 2001. M.Sc. (Hons) Agriculture was started in 2008. Since it is a sub- campus of UAF, same scheme of study is being followed and degree is awarded by UAF. There are five full time faculty members and one faculty member is working as a visiting faculty. The faculty members are energetic; a few of them are well qualified and have national and international exposure. The College has large area which can be used for research. The area has typical topography/ecology.

There are many short comings in the progress. There is a shortage of senior faculty: More faculty members such as Professors and Associate Professors may be appointed. Up-gradation and strengthening of the facility of laboratories and qualified lab staff is required. Computer facilities for the students within the discipline/college for approaching the online journals and textbooks may be provided. Alumni association, Placement Bureau , functional tutorial groups and counseling for students may be initiated at the college and made functional.

The degree programs in PBG CADGK are seriously deficient in major criteria namely “Infrastructure and Learning Resources and Strength and Quality of faculty. Hence, the Degree programs are not meeting some of major criteria and in recommended Y2 Category.

### **1.1 Introduction:**

The Accreditation Inspection Committee (AIC) setup by the National Agriculture Education Accreditation Council (NAEAC) for the external review of the Degree Programs B.Sc. (Hons) and M.Sc. (Hons) of the Plant Breeding & Genetics Section, College of Agriculture, Sub-Campus of University of Agriculture, Faisalabad visited

the College/Section on January, 21-22, 2013 for the in-depth review of the degree programs. The report of the Committee is presented below:

The AIC met on January, 21-22, 2013 in the Section of Plant Breeding & Genetics to carryout external review of the B.Sc. (Hons) and M.Sc. (Hons) degree programs for accreditation.

### **1.2 The College of Agriculture, Dera Ghazi (D.G) Khan**

The college of agriculture was started in 1999 as a sub-campus of University of Agriculture Faisalabad. Firstly the classes were started in rental building in the city. It remained there up to 2008. Then the classes were shifted to new campus which is situated about 25 km from the main city. City campus still exists. MBA classes are taken and girl hostel is there. The college of Agriculture is headed by the Principal. The college is divided in 6 sections of Agriculture and related subjects as given below:

1. Plant Breeding and Genetics and Horticulture
2. Agri. Entomology and Plant Pathology
3. Agronomy, Soil Sciences and Forestry
4. Social Sciences and Rural Development
5. Animal Production and Health
6. Agricultural Engineering and Technology/ Food Science and Technology

M.Sc. (Hons) classes in the subjects of PBG, Soil Science, Agronomy and Agri. Entomology have also been started. The College faculty consists of about 49 faculty members i.e. 2 Professors, 16 Assistant Professors and 31 Lecturers.

### **1.3 Plant Breeding & Genetics Degrees**

The PBG discipline is one of the pioneer subjects and integral part of the college. Degree of B.Sc (Hons) Agriculture in PBG as a major subject was started in 2001. M.Sc. (Hons) Agriculture was started in 2008. Since it is a sub- campus of UAF, same scheme of study is being followed and degree is awarded by UAF. There are five full time faculty members and one faculty member is working as a visiting faculty. One course of 3 credit hours is taught as a general course to the B.Sc. (Hons) agri. Students. Average CGPA of graduated students of B.Sc.(Hons) for the last years was 3.3 .Total number of students passed from the discipline of PBG is 131. Average in-take of students PBG major in B.Sc (Hons) Agri. 5th semester has been 20 and that in 1<sup>st</sup> semester M.Sc. (Hons) has been 4.

### **Program Mission**

The mission of the program of Plant Breeding and Genetics is to provide high quality education to future plant breeders and geneticists for improvement of agronomic crops to enhance food, feed and fiber production.

## **Section-2: Point wise Analysis**

### **2.1 Strength and Quality of Faculty**

At present there are five full time faculty members i.e. two Assistant Professors and three Lecturers. This is below the recommended level of HEC which says that there should be at least six faculty members with the ratio of one Professor: one Associate professor: two Assistant professors: two Lecturers. Three faculty members hold Ph.D. degree and the two have M.Sc. (Hons). One faculty member is Ph.D. from abroad and two earned their Ph.D. degrees locally. One Lecturer has proceeded abroad and one teacher is working as visiting faculty. The qualification of the faculty is also low, that is, there should be five PhDs in a degree program. Teacher student ratio is very good (1:9).

The faculty has 30 publications during the last three years; one in impact factor journal, 16 in HEC approved journals and 13 in other journals/proceedings etc. Existing teaching load of each faculty member is within the prescribed limit by HEC. Publications of the faculty are OK.

Salaries of the teachers are according to the national pay-scales. All the faculty members interviewed were found satisfied with their job and working environment except a few small problems such as the campus is far away from the city, lack of suitable irrigation water and unlevelled land.

### **2.2 Curriculum Design and Development**

The curriculum followed in the PBG section is same as that being taught in PBG Department, UAF. It was observed that the curriculum developed by National Curriculum Revision Committee of HEC is not followed fully. The variation is more than 20 % as recommended by HEC. The faculty members of the college are not members of departmental board of studies of Department of PBG, UAF; hence they cannot express their opinion. It was told that only Principal of the college attends the meeting of Faculty Board and Dept. Board of Study and Academic Council. Sufficient numbers of text books are not available in the college /section library. There is no access to HEC facility (books/journals etc) to the faculty members and students of the college.

#### **Students Perception:**

The students were satisfied about the teaching methodology and the covering of the theoretical as well as practical components of the courses as per available facilities except biotechnological courses. It is because a well established lab does not exist.

Net credit hours are according to HEC plans and courses are generally completed before the examinations. Proper course files are not maintained by the teachers

although information needed for the course file was found with the teachers when asked for them.

Admissions, course registration and withdrawal policy is well documented and matches with that planned by HEC.

No QEC exists in the college but it is working in the university. The course evaluation system is more or less according to the HEC instructions. The mid semester, final semester and practical examinations are being held according to the scheduled date sheet. Quizzes, Assignments are also given to the students.

### **2.3 Infrastructure and Learning Resources**

There are no independent departments in the college. Overall there are seven lecture rooms of 23'\*35', two teaching labs of 24'\*40' and four postgraduate labs of 23'\*25'. These are used by faculty members of various departments as and when needed by them.

The laboratory facilities for the students are inadequate; no well-equipped biotechnological research laboratory exists in the college. Only one Lab Assistant is in the section. There is a need of more qualified and regular lab staff. There are a few number of multimedia in the college and the teachers have access to it and they can use them as and when required. There are only few M.Sc. (Hons) students in the section. A budget of Rs 100,000 has been allocated under the head of Lab budget for the whole college which looks insufficient.

Limited farm field facilities are available at the campus for student's and faculty research and field activities.

There is no library in the PBG section however there is a college library which has total of about 2000 books including 1800 text books and 200 reference books for the college library. No local/foreign journals are received in the college library. Only honorary copies of the local journals are received. No facility of book bank exists in the college. DVD writer, scanner and limited photocopy facility is available to the students in the college. No website of the college is there. There is one computer lab with about 40 computers for undergraduate and post graduate students within the college. More number of computers are required to accommodate maximum post and under graduate students.

The degree program in PBG is seriously deficient in learning infrastructure including labs library greenhouses internet facilities.

### **2.4 Students Support and Progression**

Response of students to B.Sc. (Hons) PBG is moderate. Average number of intake of students in PBG major is about 20, and in M.Sc. (Hons) is only a few students. Only one student has completed M.Sc. (Hons) in the discipline. Drop out is almost nil in B.Sc. (Hons) and very low in M.Sc. (Hons).

Admission system is transparent. Some merit scholarships are available from the university. A limited number of need based scholarship facilities to the students are available from other sources like HEC. Adequate hostels facilities are available for both boys and girls. Adequate medical facilities for faculty and students are available. Limited outdoor sports facilities are available at main campus. There is a need for proper play grounds and gym in the college.

## **2.5 Research and Consultancy activities**

Research activities of the staff and the students were visited. Some research in the field was observed. A few faculty members were actively involved in field research. No project has been obtained by the faculty from HEC nor other resources as yet. There is no research fund for the faculty research. However they can get funds for student's research from the college. About Rs 250,000 have been kept for that purpose. The faculty has research collaboration with National and International organizations such as CIMMYT and PBI, University of Sydney, Australia for receiving germplasm. Faculty is also rendering advisory services to some farmers.

## **2.6 Governance and Leadership**

The college is mainly run by the Principal. The allocated operational funds for student's practical are at the disposal of the Principal who has all the administrative and financial powers. An annual budget of the college which is quite low. There are no proper Alumni Association and Placement Bureau to develop a database of outgoing students, their employment record and feed back from them. However, the students have access to the organizations of the University of Agri. Fd. No newsletter is published by the college.

## **2.7 Adoption of Good Practices:**

Practice of curriculum review as arranged by HEC is followed by the PBG Dept. of the University. At university level the faculty make improvements according to the local environments. Teachers get their assessment from the students informally. Quality Enhancement Cell as proposed by HEC does not exist in the college. However, some action is reported to QEC of the University. Research on the development/maintenance of germplasm of wheat is being carried out by a few faculty members, which can lead for the development of varieties for the area.

## **Section-3 Overall/ SWOT Analysis**

### **3.1 Major Strengths:**

The PBG program has the following strengths:

1: The faculty members are energetic; a few of them are well qualified and have national and international exposure.

2: The College has large area which can be used for research. The area has typical topography/ecology.

### **3.2 Major Weaknesses:**

1. Lack of well experienced senior faculty members such as Professors and Associate Professors.
2. Deficiency of high quality equipment for quality teaching and research.
3. Lack of essential facilities of green house, irrigation water and precision leveled experiment fields.
4. Lack of basic facilities like electricity, telephone, internet access, natural gas etc. in the college.
5. Non-availability of independent offices for faculty members and computer facilities for students are limited.
6. Post-graduate research funds are grossly inadequate.
7. No research journals are subscribed for the college library .
8. There is no departmental library.
9. Deficiency of technically trained staff.

### **3.4 Major Opportunities:**

1. As the college/section of Plant Breeding & Genetics has special ecology, it can take lead in developing good varieties for commercial cultivation in that area.
2. Prime duty of faculty is teaching, supervise graduate research, conduct research and extend services to the community.
3. The Department also could look for training the scientists with advanced techniques of plant breeding including MAS (marker assisted selection), double haploid production, tissue culture and gene transformation for which the facilities need to be developed.
4. The students have good employment opportunities in government and private organizations / companies.



### **3.5 Major Challenges:**

There is a need that i) More faculty, especially professors and associate professors are recruited in the college, ii) independent departments are established and iii) Initiation of such projects which make the use of brackish water.

### **Section- 4 Actionable Recommendations:**

The following suggestions may be considered for institutional interest:

1. Shortage of senior faculty: More faculty members such as Professors and Associate Professors may be appointed.
2. Up-gradation and strengthening of the facility of laboratories and qualified lab staff is required.
3. Computer facilities for the students within the discipline/college for approaching the online journals and textbooks may be provided.
4. Independent offices for faculty members should be made available.
5. Green house with facilities to control the environmental factors is needed to maintain and develop the promising material.
6. Post-graduate research funds of the department should be increased by the college according to the student strength.
7. Research journals of the subject need to be subscribed for the departmental /main library.
8. Alumni association, Placement Bureau , functional tutorial groups and counseling for students may be initiated at the college and made functional.
9. More furnished lecture rooms and teaching aids like the use of multimedia within the department are recommended.
10. The sports and co-curricular activities including formal counseling must be initiated at the department level.

The degree programs in PBG CADGK are seriously deficient in major criteria namely “Infrastructure and Learning Resources and Strength and Quality of faculty. Hence, the Degree programs are not meeting some of major criteria.

On the basis of the inspection / evaluation, the team recommends Accreditation of the Degree Programs of Plant Breeding and Genetics, College of Agriculture, Sub-

campus of University of Agriculture Faisalabad in “Y2” category of National Agriculture Education Accreditation Council/HEC.

#### 4.4 Signatures of AIC Members

<u>Name and Designation</u>		<u>Signatures</u>
Dr. Muhammad Munir EX-Dean Crop and Food Sciences/ PMAS Arid Agriculture University, Murree Road, Rawalpindi	(Convener)	
Dr Muhammad Iqbal Associate Professor UCA,IUB	(Member)	
Dated: January 31,2013		

#### 4.5 Comments and Signatures of Chairman

#### Annexure I

#### Composition of AIC, Term of Reference (TORs)

In pursuance to its mandate given by the HEC under clause 10 subsections (d) and (1) of the byelaws of NAEAC, an Accreditation Inspection Committee (AIC) was constituted comprising of the following scientists to review the the programs of Plant Breeding & Genetics Section, College of Agriculture, D. G. Khan, Sub-Campus of University of Agriculture, Faisalabad for the assessment and accreditation of degree awarding academic programs:

- |   |          |
|---|----------|
| i) Prof. Dr. Muhammad Munir<br>Ex-Dean, Faculty of Crop and Food Sciences,<br>PMAS Arid Agriculture University Rawalpindi | Convener |
| ii) Dr. Muhammad Iqbal<br>Associate Professor,UCA, IU Bahawalpur  | Member   |

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

To validate the self-assessment report (SAR) of the degree programs (B. Sc. (Hons) Agri. and M.Sc. (Hons) Agri. prepared by the Plant Breeding & Genetics discipline.

To carry out external evaluation of the degree programs in a transparent, neutral, holistic and participatory manner for accreditation and rating **based on the evaluation criteria given in the Evaluation Manual of NAEAC.**

To submit synthesized and concise analytical report consisting of short introduction, criterion-wise analysis, self explanatory SWOT Analysis and explicit actionable recommendations along with completely filled-in evaluation manual(toolkit) based on validation of SAR and interaction with the Chairman/Head of the section, Faculty Members, Students and Support Staff and Alumni as well as detail on-site visit of physical infrastructure, facilities and other teaching-learning resources available for offering of degree programs.

To submit clear, specific and justified actionable accreditation and rating recommendations to the chairman NAEAC within two weeks of the on-site visit.

## Annexure II

### Faculty and Support Staff Profile

Name	Academic Degree		Major Area	Teaching Experience		Publication Records							
	Degree	Awarding Institution		Graduate	Undergrad	Journal Publications		Conference Publication		Books		Patents	Tech. Reports
						Intl	Local	Intl	Local	Books	Book Chapters		
Dr. Fida Hussain	Ph.D PBG	QAU	PBG	4 years	4 years	03	25	03	22	Nil	Nil	05	01
Dr. Shahzadi Mahpara	Ph.D PBG	UAF	PBG	Nil	4 years	01	01	Nil	Nil	Nil	Nil	Nil	Nil
Mr. Ali Bakhsh	M.Sc.(Hons) PBG	UAF	PBG	2 years	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Ms. Sanobar Gull	M.Sc.(Hons) PBG	UAF	PBG	3 years	3 years	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Ms. Irum Aziz (Long leave)	M.Sc.(Hons) PBG	UAF	PBG	4 years	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil

One Lab Attendant

### Annexure III

#### Inventory of Lab/Field Apparatus/Equipment of the College

- i Total field experimental area: (acres) 08 to 10 acre
- ii Total number of field implements and Agricultural Machinery

<b>Sr. Item</b>	<b>Quantity</b>
1: Tractors	05
2: Trolleys	02
3: Water Tanker	02
4: Scraper/Blade	04
5: Front Blade	02
6: Land Leveler	01
7: Laser and Leveler	01
8: Cultivator	03
9: Furrow Ridger	01
10: Mold Board Plough	01
11: Disc Harrow	01
12: Drill Machine	02
13: Cotton Planter	01
14: Boom Sprayer	01
15: Reaper	01
16: Rotavator	02
17: Lawn Mover	02
18: Post hole digger	01
19: Wheat Thresher	01
20: Spade	45
21: Sickles	28
22: Khurpa	06
23: Pruning Scissor (Big)	01
24: Hand Saw	02
25: Axe (Kulhari)	02

### Annexure IV

List of last three years completed and ongoing research projects

Nil

### Annexure V

List of text and reference books in the departmental and main library

(There is no departmental library. List of the books yet to be provided by the program.)

Annexure VI

**YEAR-WISE ADMISSION of  
the College**

Sr.	Session	Male	Female	Total
1	1997-98	57	2	59
2	1999-2000	63	7	70
3	2000-2001	62	9	71
4	2001-2002	58	7	65
5	2002-2003	81	5	86
6	2003-2004	84	5	89
7	2004-2005	82	16	98
8	2005-2006	93	15	108
9	2006-2007	93	12	105
10	2007-2008	96	13	109
11	2008-2009	97	22	119
12	2009-2010	105	24	129
13	2010-2011	114	23	137
14	2011-2012	111	25	136
15	2012-2013	87	14	101
	<b>TOTAL</b>	<b>1283</b>	<b>199</b>	<b>1482</b>

Annexure VII

**YEAR-WISE OUTPUT of the Discipline**

Sr.	Year	Total	Male	Female	PBG-M	PBG-F	Total
1	2002	40	38	2	6		6
2	2003	43	37	6	4	3	7
3	2004	46	40	6	6		6
4	2005	49	43	6	7	3	10
5	2006	66	62	4	9		9
6	2007	68	64	4	8	2	10
7	2008	65	51	14	14	2	16
8	2009	80	66	14	11	3	14
9	2010	86	74	12	21	5	26
10	2011	103	93	10	22	4	26
11	2012	91	73	18	14	3	17
		<b>737</b>	<b>641</b>	<b>96</b>	<b>106</b>	<b>25</b>	<b>131</b>