PIR MEHR ALI SHAH

ARID AGRICULTURE UNIVERSITY RAWALPINDI

DEPARTMENT OF AGRONOMY

Self Assessment Report

M.Sc. (Hons.) Agronomy

2014

Program Team

Prof. Dr. Fayyaz Ul Hassan	(Coordinator)
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Dr. Muhammad Rasheed	(Member)
Dr. Irfan Aziz	(Member)
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INTRODUCTION

Agronomy Department was established in 1984 in the Barani Agriculture College, Rawalpindi. The department started M.Sc. (Hons.) degree program in 1997 .The department offers research oriented M.Sc.(Hons.), degree Agriculture, in Agronomy. Students who fulfill the criteria are admitted in M. Sc.(Hons.) Agronomy degrees programs. Agronomy department expertises the student's in different subdisciplines viz. Crop Nutrition, Crop Production Technology, Seed Production Technology, Soil.Properties, Fertility and Fertilizers,Principles of Conservation Agronomy, Crop Growth Modeling, Allelopathy and Weed Management.

The students of Masters are encouraged to take part in national as well as international seminars, workshops and other training activities for their advancement in Agronomy in addition to leading the students in research publications.

The Department has highly qualified and experienced faculty mostly having post doctorate research experience from universities of International fame. The faculty has produced 45 publications during the reporting period in journals of national and international repute. The faculty members have specialization in the fields of Crop Modeling, Crop Physiology, Crop & Seed Production Technology, Plant Nutrition, Forage and Fodder Production, Organic Farming, Conservation Agronomy, Allelopathy/ Weed Management etc.

Components of Self Assessment Process:

There are eight criteria upon which the Self Assessment has been based

CRITERION 1
PROGRAM MISSION, OBJECTIVES AND OUTCOMES

Agronomy is a diverse profession that includes all the operations and practices of crop production and soil management.It makes the M.Sc.(Hons.) students professionally to cope with changing world. The ultimate goal of the Department for this program is to increase yield production, quality and profit by exploiting crop potentials and physiology.

Mission Statement of the Department for the Program:

To equip and impart training to M.Sc.(Hons.) students for high-quality education and research thereby enhancing scientific knowledge and skills for employment and productive citizenship is the ultimate mission of the program under the umbrella of the Department . Currently, to impart outstanding education and research skills, to the students of this program, the department is striving hard for multi-directional strategy.

STANDARDS

Standards 1.1:

Documented measurable objectives

Objectives:

Presently, the department is focusing on the following leading objectives:

- To use the superior analytical approaches to teach the realistic scientific skills of Agronomy
- To climax the department for education and research at M.Sc. (Hons.) level..
- To expand the practical apprehensions of students by teaching them integrated agriculture.
- To plan for current and confronting researchable tribulations through the use of innovtive teaching methods

Outcomes:

- The Departmentwas strengthened by focusing on need based education and research for M.Sc. (Hons.) students.
- M.Sc. (Hons.) students were imparted practical knowledge using advanced analytical techniques.
- Multi-purpose knowledge was achieved through induction of multidimensional courses for master's degree students along with the latestt developments in applied research projects/thesis research.
- An attitude of addressing the confronting researchable agri. issues has been achieved due to continuous and vigorous planning about the threats/ researchable issues.

Main elements of strategic plan to achieve mission and objectives to

- Award M.Sc. (Hons.) degrees to the students through a crash training system,collecting information'sthrough consultation from symposia and workshops world reviews and writings.
- For updating the curricula of major & minor courses, brain storming was started
- By stipulation of upto date facilities & equipments for departmental labs.
- Priotising/ preffering the scientific journals of world repute, books and other literature for publishing the research fndings

Programme Objectives Assessment

Table 1: Objective Assessment

sr. #	Objectives	How measured	When measured	Improvement identified	Improvement made
1	Improvement and escalation of Agronomy Department for Master's education	After assessing the accessibility of latest research services and practical appliance of new technology in the field of Agronomy	As a requisite requirement It is an incessant practice.	High profile. training and research style is required	Comprehensible and conspicuous teaching and research methods are induced.
2.	To teach practical / useful information to the M.Sc. (Hons.) students	Through the semestoral examinations, seminars and research presentation and examinations.	During their mid and final exams, seminars & research presentations.	Some novel courses and research facilities are necessary for Master's curricula	Master's degree curricula has been revised for meeting the HEC criteria as per policy.
3	Assimilation of multi-dimensional courses of Agronomy.	By examining the students in incorporation of the effects in semester and comprehensive exams.	During semester exams and in comprehensive exams after completion of research.	M.Sc. (Hons.) course work should be integrated with multidimensional courses.	For the coverage of discretary areas of Agronomy the inclusion of the novel courses has been practiced.
4	Anticipation of new teaching/research able areas	On feeling the need of recent progress in the pertinent areas of Agronomy	It is a constant process.	Need based fresh courses and research problems are considered necessary to be incorporated in curriculum.	Faculty Academic Council has accorded the approval for the addition of updating curricula and research priorities.

Standard 1.2:
Objectives vs. Outcomes

Table 2: Objectives vs. Outcomes

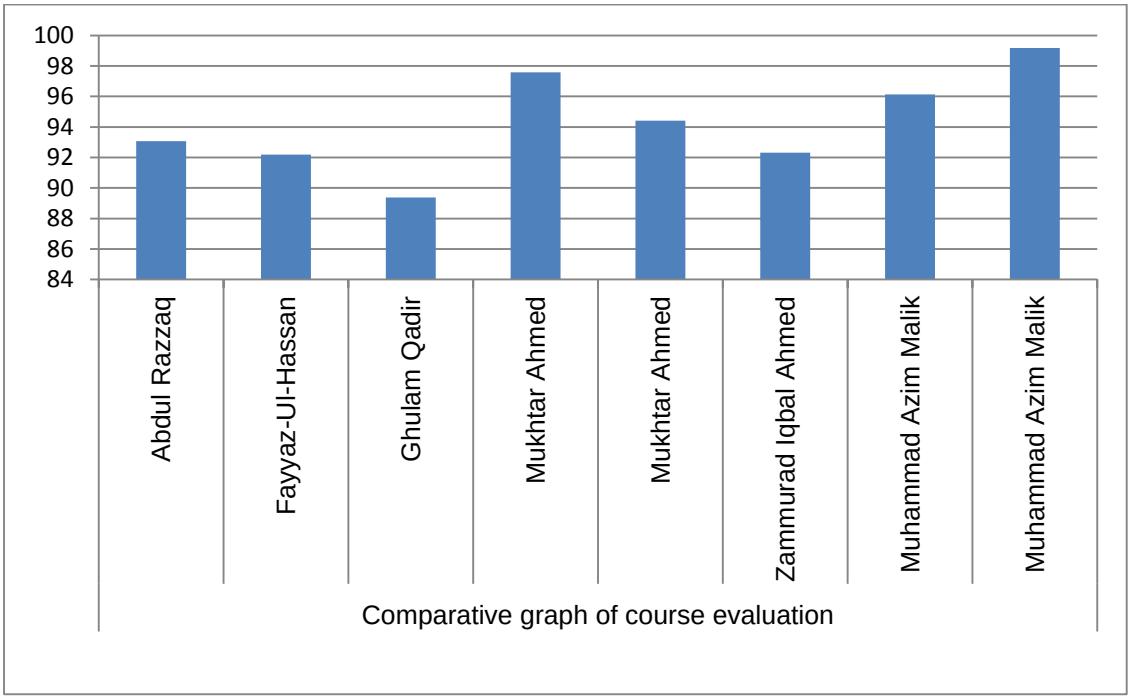
	Objectives				
Outcomes	Sr.#	1	2	3	4
	1	***	**	***	**
	2	**	***	**	**
	3	***	**	***	**
	4	**	**	**	**

* Relevant
** Relevant and satisfactory
*** Highly relevant and satisfactory

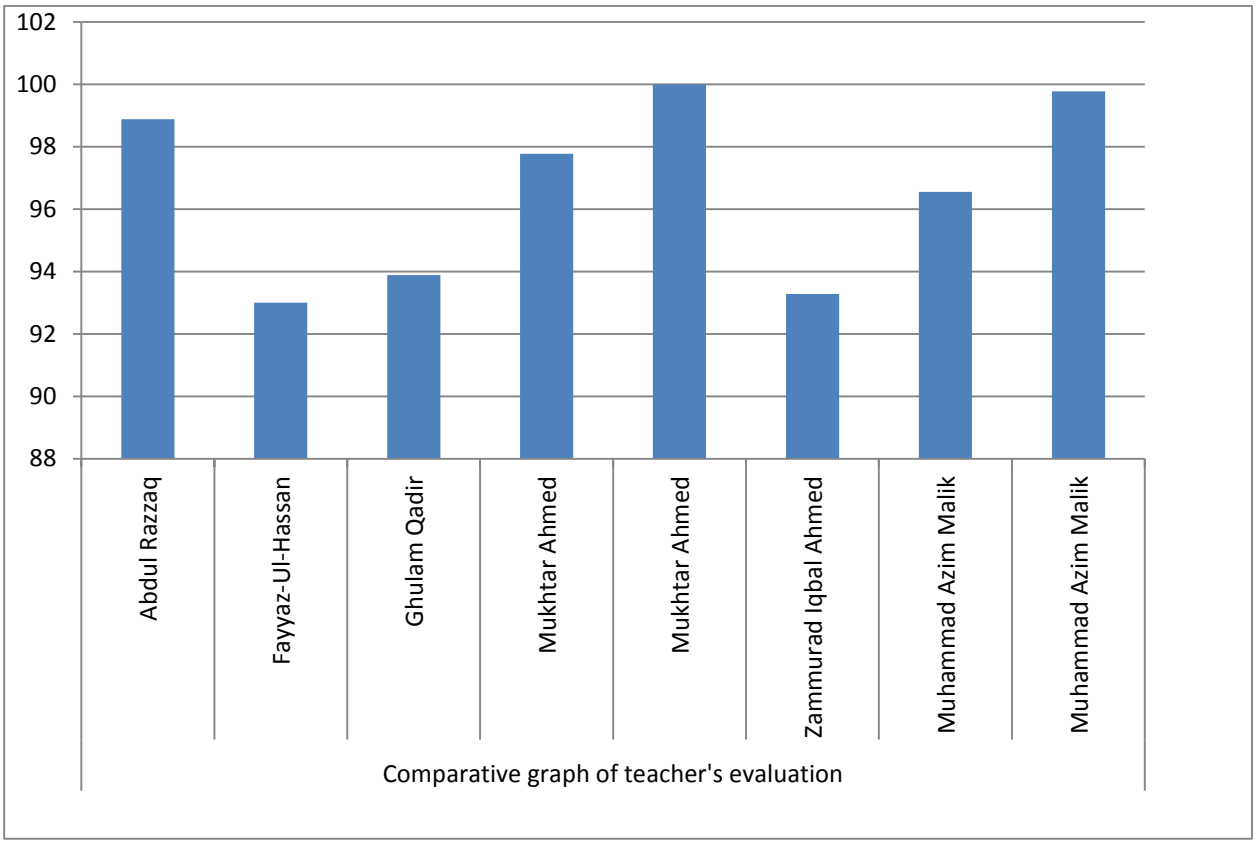
Preformat 1 & 10 Course and Teacher Evaluation

Comparative graph of courses evaluation:

The values were taken from the proformas filled by the students, and then the impact was calculated according to the formula given by QEC.



Comparative graph of teachers' evaluation:



1. **Dr. Zammurad Iqbal Ahmed**

i. Teacher Evaluation

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-707) taught by Dr. Zammurad Iqbal Ahmed had a performance value of 93.0.

Teacher evaluation parameters showed that the 84% of the students strongly agreed, 11% agreed, 3 % uncertain, 0% disagreed, and 3 % strongly disagreed that the instructor was prepared for each class. The data of rest of the parameters indicated that main percentage of the students were agreed that the teacher is fair in examination, the instructor came with good preparation the instructor demonstrated knowledge of the subject, instructor had completed the whole course, the instructor provided additional material apart from the textbook, the instructor gave citations regarding current in context with Pakistan, the instructor communicated the subject matter, the instructor showed respect towards students and encourages class participation effectively, the instructor maintained an environment that was conducive to learning, the instructo rarrived on time, the instructor returned the graded scripts etc. in a reasonable amount of time, the instructor was available during the specified office hours after class for consultations, the subject matter presented in the course had increased their knowledge of the subject, the syllabus clearly stated course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is current and updated.

Comments / Suggestions

- Conceptual way of communication in each lectures
- More practicals must be arranged in labs.
- Good behavior of the teacher and was available any time
- The course was completed in time

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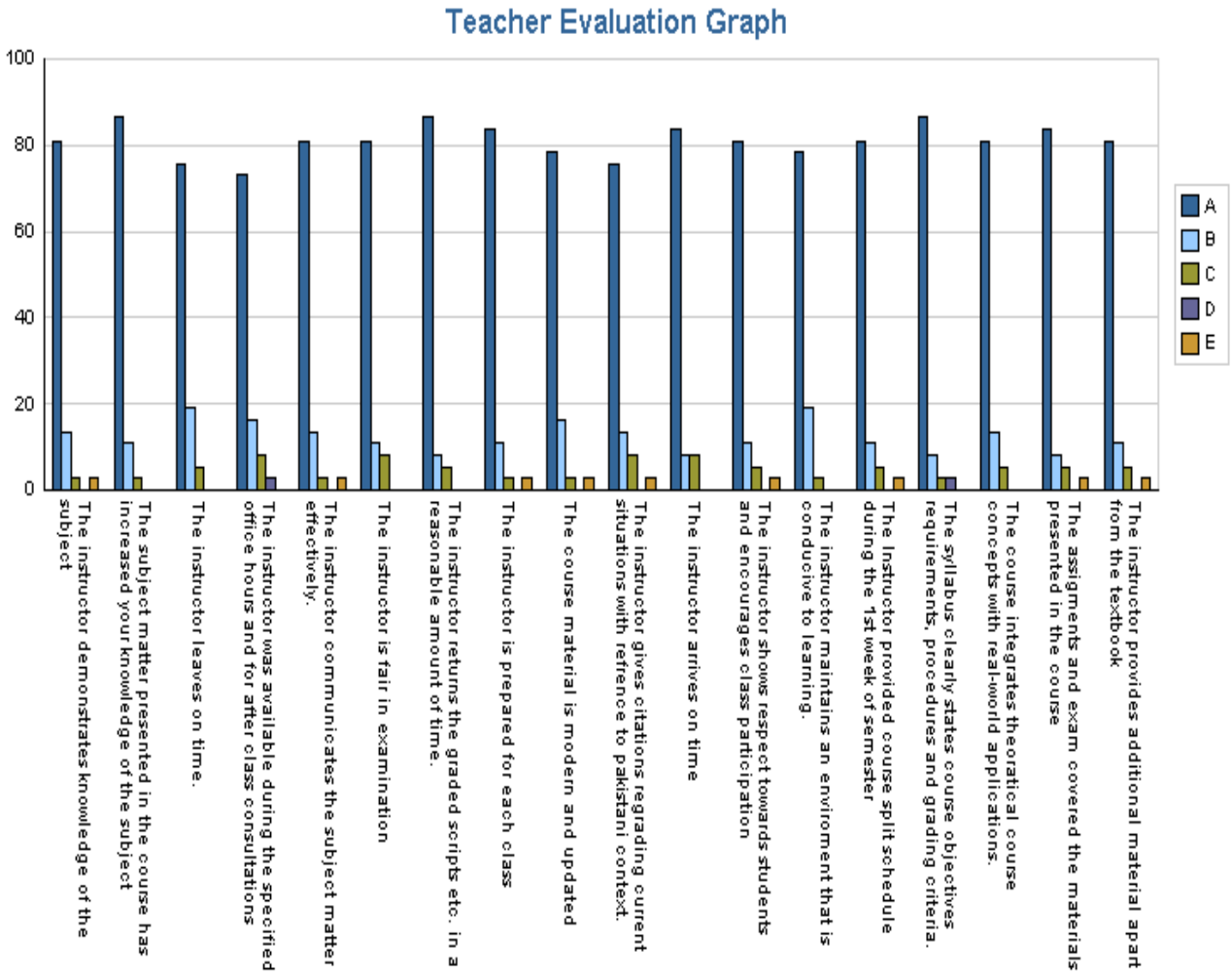
Teacher Evaluation Graph
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The instructor provides additional material apart from the textbook
The assigments and exam covered the materials presented in the course
The course integrates theoratical course concepts with real-world applications.
The syllabus clearly states course objectives requirements, procedures and grading criteria.
The Instructor provided course split schedule during the 1st week of semester
The instructor maintains an enviroment that is conducive to learning.
The instructor shows respect towards students and encourages class participation
The instructor arrives on time
The instructor gives citations regrading current situations with refrence to pakistani context.
The course material is modern and updated
The instructor is prepared for each class
The instructor returns the graded scripts etc. in a reasonable amount of time.
The instructor is fair in examination
The instructor communicates the subject matter effectively.
The instructor was available during the specified office hours and for after class consultations
The instructor leaves on time.
The subject matter presented in the course has increased your knowledge of the subject
The instructor demonstrates knowledge of the subject

ii. Course Evaluation

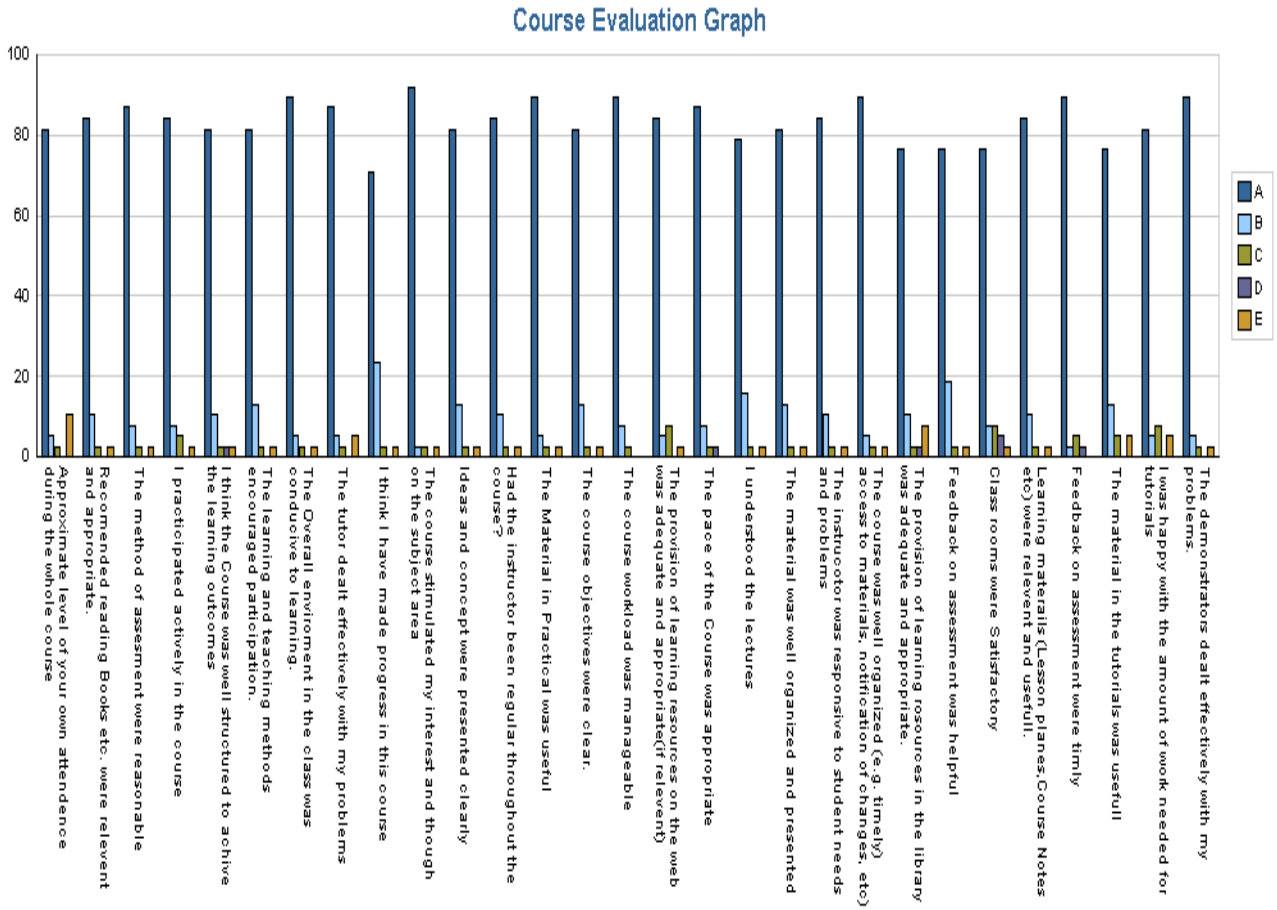
AGR-707 Semester- **Fall -2013**	Field crop experimentation	4(3-2)	Dr. Zammurad Iqbal Ahmed

Data were collected from 24 M. Sc. Students.Comparative graph of course evaluation showed that the course (AGR-707) taught by Dr. Zammurad Iqbal Ahmed had a performance value of 92.31.

Course evaluation parameters showed that 82% the students strongly agreed, 13% agreed, 3% uncertain and 2% strongly disagreed that the course objectives were clear. Data regarding other parameters showed that most of the students agreed about the effectiveness and objectivity of the course, the course workload was manageable, well organized, the course was well structured to achieve the learning outcomes, the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials were relevant, recommended reading books etc. were relevant and appropriate, provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area,, the pace of the course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable, the material was well organized and presented, the instructor was responsive to student needs and problems, instructor was regular throughout the course and the material in the tutorials was useful.

Comments / Suggestions

- By increasing the intensity of practicals and innovative techniques the course can be improved ..
- The course was thought motivating and useful.
- Lab facilities are needed to be updated and improved..


Course Evaluation Graph
100
80
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E
The demonstrators dealt effectively with my problems.
I was happy with the amount of work needed for tutorials
The material in the tutorials was usefull
Feedback on assessment were timly
Learning materails (Lesson planes,Course Notes etc) were relevent and useful.
Class rooms were Satisfactory
Feedback on assessment was helpful
The provision of learning rosources in the library was adequate and appropriate.
The course was well organized (e.g. timely) access to materials, notification of changes, etc)
The instrucotor was responsive to student needs and problems
The material was well organized and presented
I understood the lectures
The pace of the Course was appropriate
The provision of learning resources on the web was adequate and appropriate(if relevent)
The course workload was manageable
The course objectives were clear.
The Material in Practical was useful
Had the instructor been regular throughout the course?
Ideas and concept were presented clearly
The course stimulated my interest and though on the subject area
I think I have made progress in this course
The tutor dealt effectively with my problems
The Overall enviroment in the class was conducive to learning.
The learning and teaching methods encouraged participation.
I think the Course was well structured to achive the learning outcomes
I practicipated actively in the course
The method of assesment were reasonable
Recomended reading Books etc. were relevent and appropriate.
Approximate level of your own attendence during the whole course

Dr. Fayyaz ul Hassan

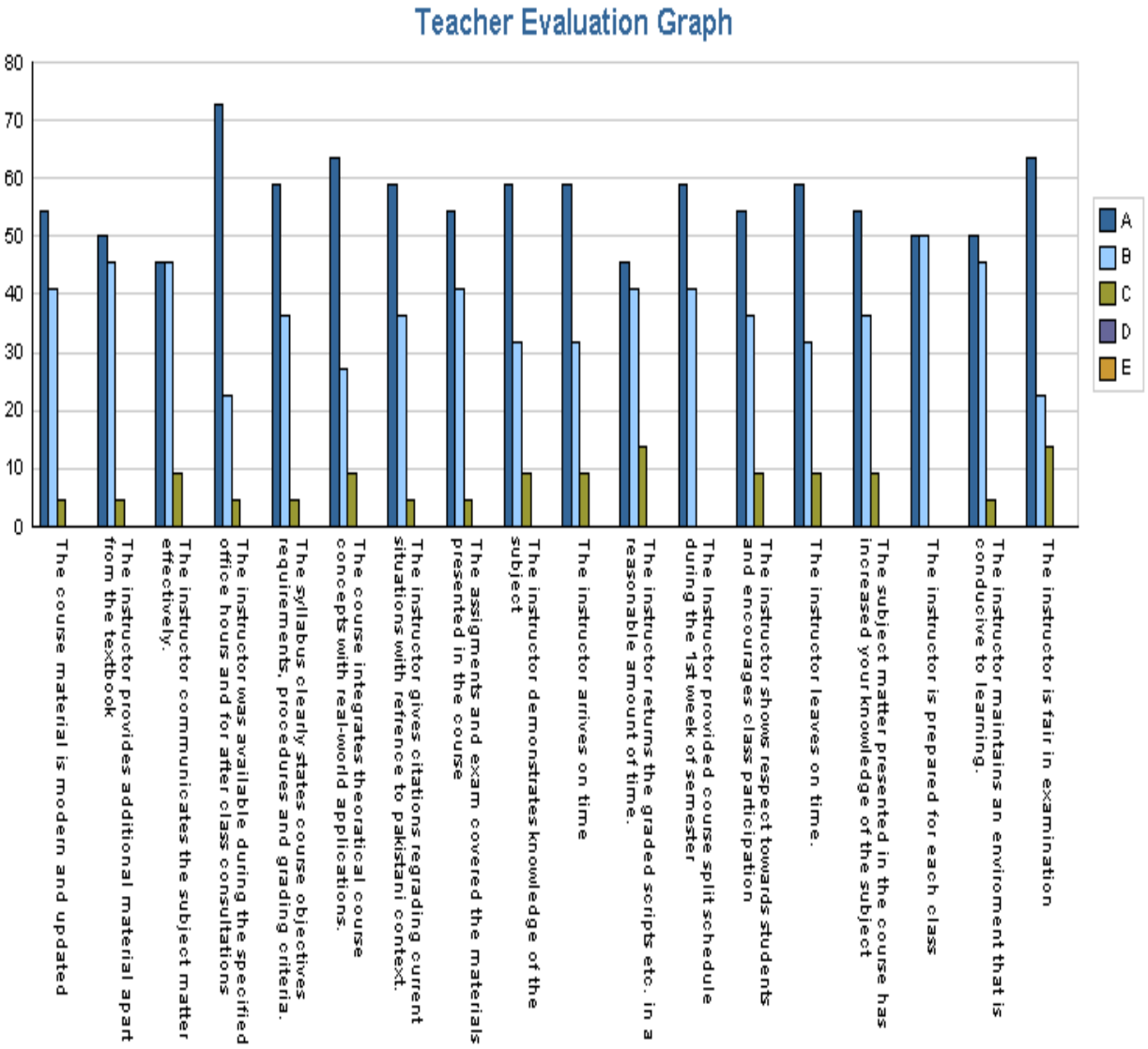
i. **Teacher Evaluation**

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-708) taught by Dr. Fayyaz Ul Hassan had a performance value of 93.0 %

The evaluation criteria parameters showed that the 50% of the students strongly agreed and 50% agreed that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that the teacher is fair in examination, the instructor came with good preparation,instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter,the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time,the Instructor was available during the specified office hours after class for consultations,the subject matter presented in the course has increased their knowledge of the subject.

Comments / Suggestions

- Availability of audio- video aids is needed to be improved
- Taching schedule was strictly followed by the teacher .
- The teacher thoroughly prepares himself before each lecture.
- While delivering his lecture, the teacher’s concepts were clear


Teacher Evaluation Graph
80
70
60
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40
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10
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E
The course material is modern and updated
The instructor provides additional material apart from the textbook
The instructor communicates the subject matter effectively.
The instructor was available during the specified office hours and for after class consultations
The syllabus clearly states course objectives requirements, procedures and grading criteria.
The course integrates theoratical course concepts with real-world applications.
The instructor gives citations regrading current situations with refrence to pakistani context.
The assigments and exam covered the materials presented in the course
The instructor demonstrates knowledge of the subject
The instructor arrives on time
The instructor returns the graded scripts etc. in a reasonable amount of time.
The Instructor provided course split schedule during the 1st week of semester
The instructor shows respect towards students and encourages class participation
The instructor leaves on time.
The subject matter presented in the course has increased your knowledge of the subject
The instructor is prepared for each class
The instructor maintains an enviroment that is conducive to learning.
The instructor is fair in examination

ii. Course Evaluation

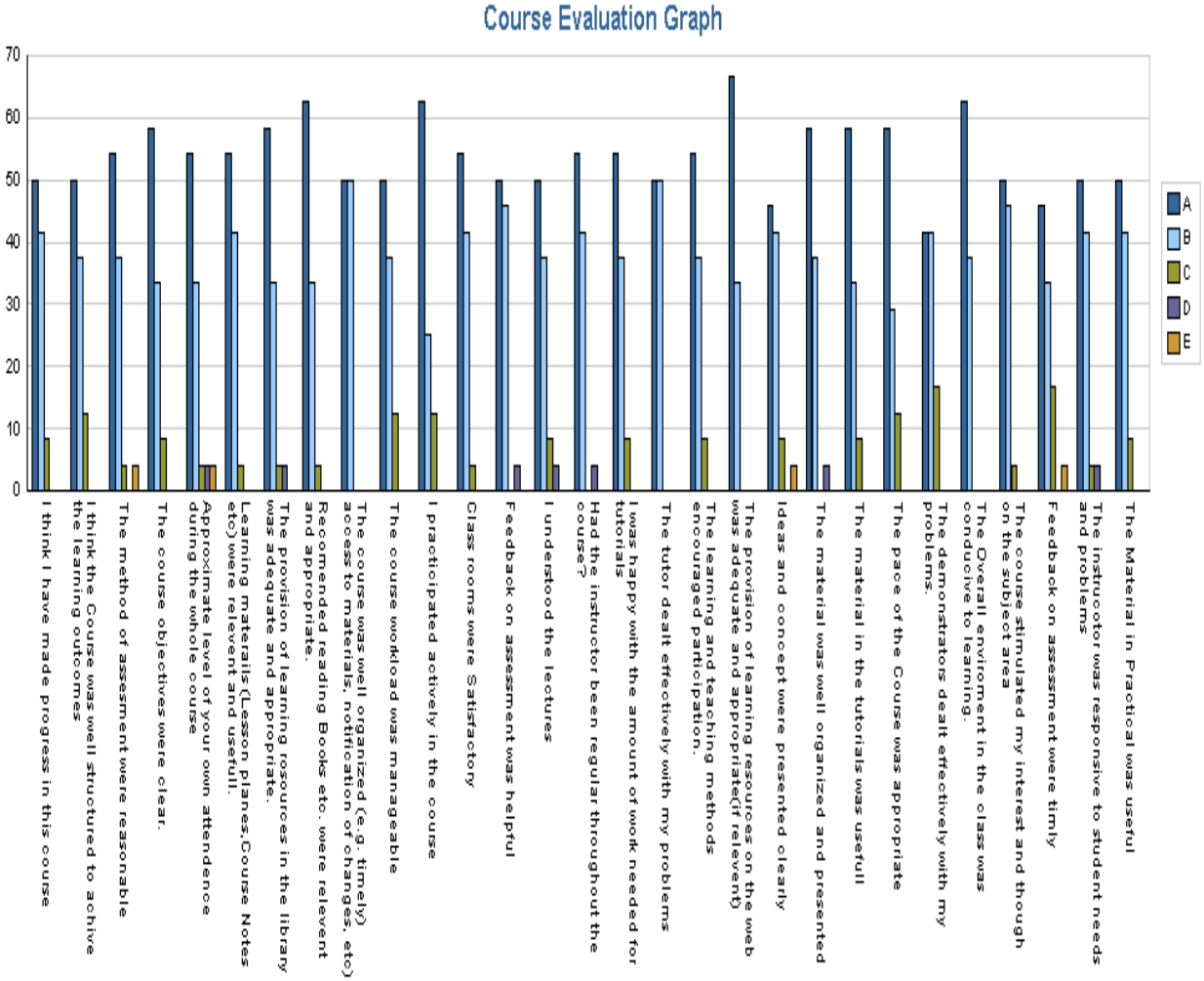
AGR-708 Semester-**Spring-2013**	Advanced Seed Technology	4(3-2)	Dr. Fayyaz ul Hassan

Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed, that the course (AGR-708) taught by Dr. Fayyaz ul Hassan had an impact value of 92.20.

The individual parameter showed that 58% students strongly agreed, 33% agreed and 8% students uncertain that the course objectives were clear.Data regarding other parameters showed that major proportion of the students agreed about the effectiveness and objectivity of the course, the course objectives were clear,the course workload was manageable, well organized , agreed that the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course, the course was well structured to achieve the learning outcomes (there was a good balance of lectures, tutorials, practical etc.). Similarly, they agreed that the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

Comments / Suggestions

- There is need for the augmentation of practical work and field visits
- Lack of ideal environment of the class which is needed to be improved.
- Class environment was not conducive for high profliled learning.
- The course was very broad spectrum and shows the explain.the principles of Agronomic
- There was lack of a well designed course.


Course Evaluation Graph
70
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50
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The Material in Practical was useful
The instrucotor was responsive to student needs and problems
Feedback on assessment were timly
The course stimulated my interest and though on the subject area
The Overall enviroment in the class was conducive to learning.
The demonstrators dealt effectively with my problems.
The pace of the Course was appropriate
The material in the tutorials was useful
The material was well organized and presented
Ideas and concept were presented clearly
The provision of learning resources on the web was adequate and appropriate(if relevent)
The learning and teaching methods encouraged particiation.
The tutor dealt effectively with my problems
I was happy with the amount of work needed for tutorials
Had the instructor been regular throughout the course?
I understood the lectures
Class rooms were Satisfactory
Feedback on assessment was helpful
I practicipated actively in the course
The course workload was manageable
The course was well organized (e.g. timely) access to materials, notification of changes, etc)
Recomended reading Books etc. were relevent and appropriate.
The provision of learning rosources in the library was adequate and appropriate.
Learning materails (Lesson plans,Course Notes etc) were relevent and usefull.
Approximate level of your own attendence during the whole course
The course objectives were clear.
The method of assesment were reasonable
I think the Course was well structured to achive the learning outcomes
I think I have made progress in this course

Dr. Muhammad Azim Malik

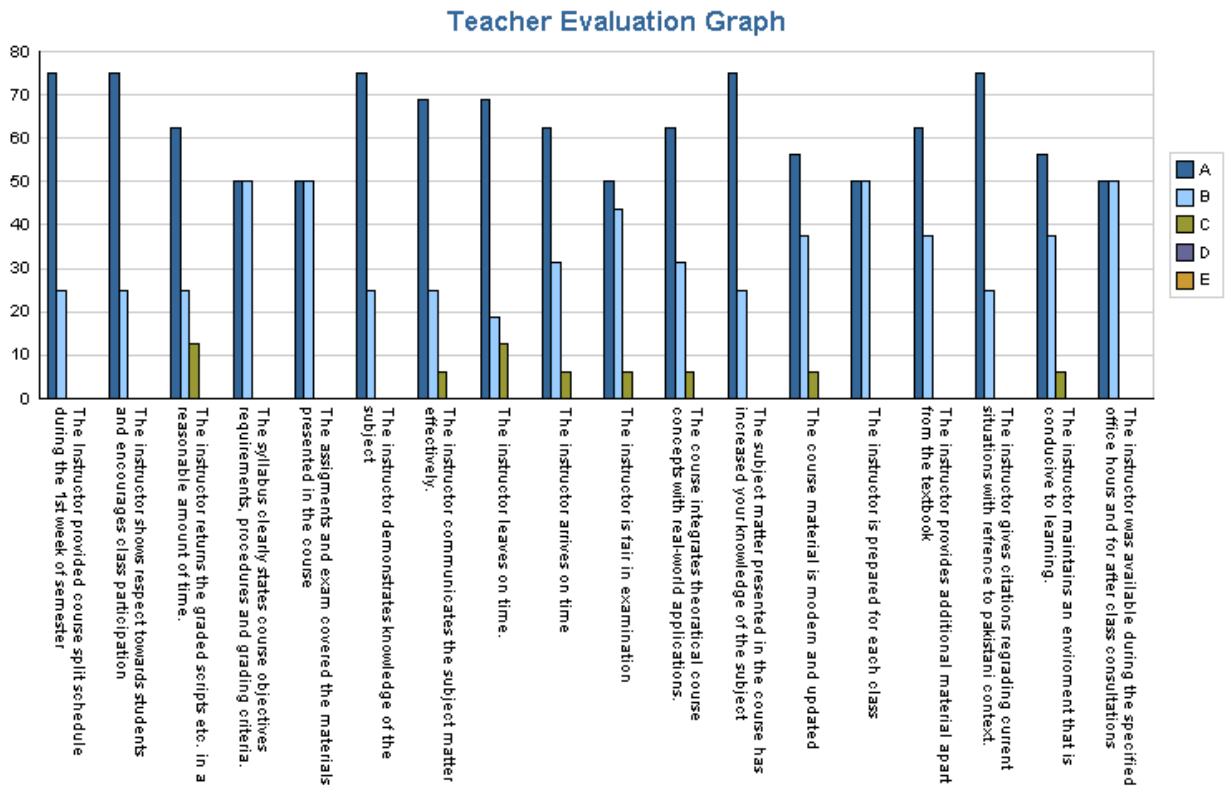
i. Teacher Evaluation

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-703) taught by Prof. Dr. Muhammad Azeem had a performance value of 96.25 % .

The teacher evaluation criteria showed that the 50% of the students strongly agreed and 50% agreed that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that the teacher was fair in examination , came with good preparation, the instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations.

Comments/Suggestions

- During lectures always cites from his practical experiences to make the understanding of the subject effective.
- Course was very motivating and was completed well in time.
- Competent, humane and good teacher with amiable and parental behavior with the students.



ii. Course Evaluation

AGR-703 Semester-**Spring-2013**	Dryland Agro-Management	3(3-0)	Dr. Muhammad Azim Malik

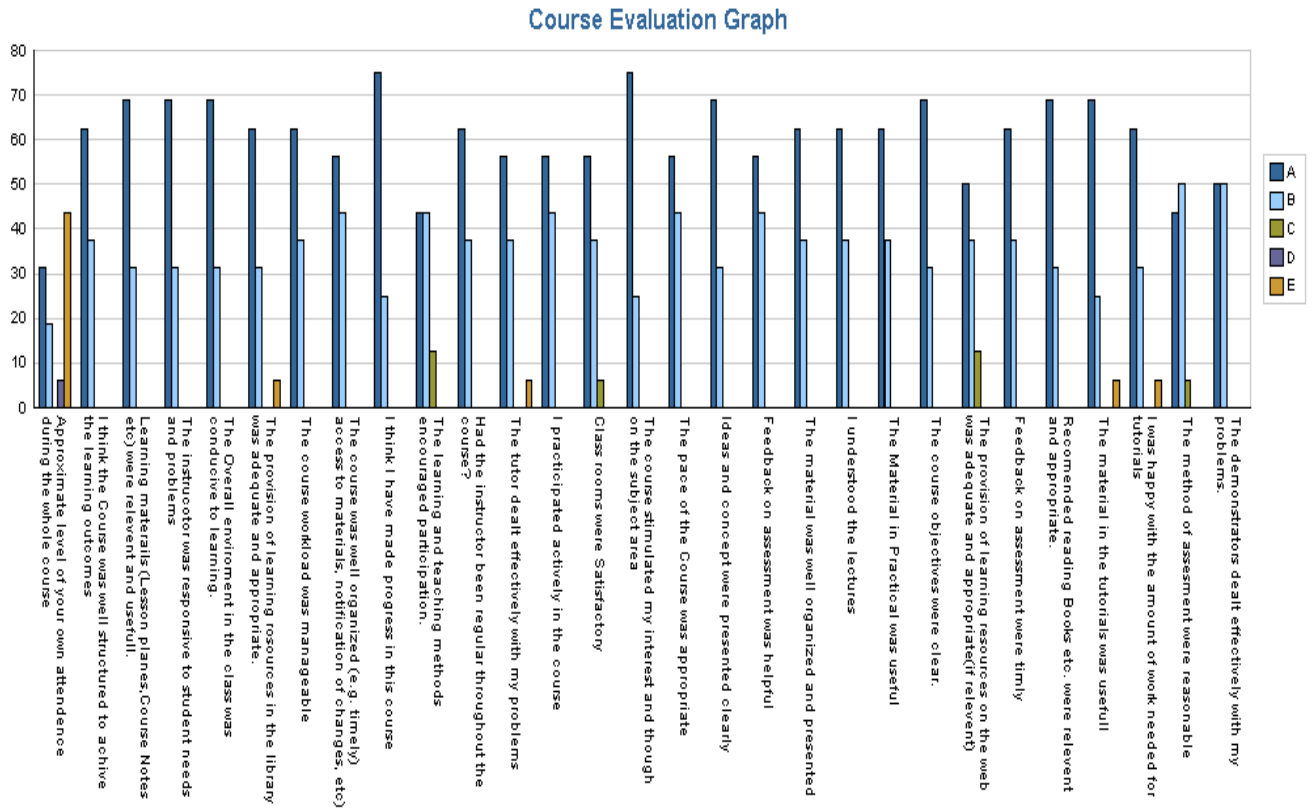
Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed, that the course (AGR-703) taught by Dr. Muhammad Azim Malik had an impact value of 96.13.

The individual parameter showed that 69% ofthe students strongly agreed and 31% agreed that the course objectives were clear.Data regarding other parameters showed that major proportion of the students agreedabout the effectiveness and objectivity of the course, the course objectives were clear, the course workload was manageable, well organized , the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course. Most of the students agreed that the course was well structured to achieve the learning outcomes,the

learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate, the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

Comments / Suggestions

- Use of latest audio –visual learning resources needed to be provided in the classroom.
- University library needed to be updated for the availability of course
- Course was helpful for future.
- Course was quite related and provides abundant informations.



Dr. Muhammad Azim Malik

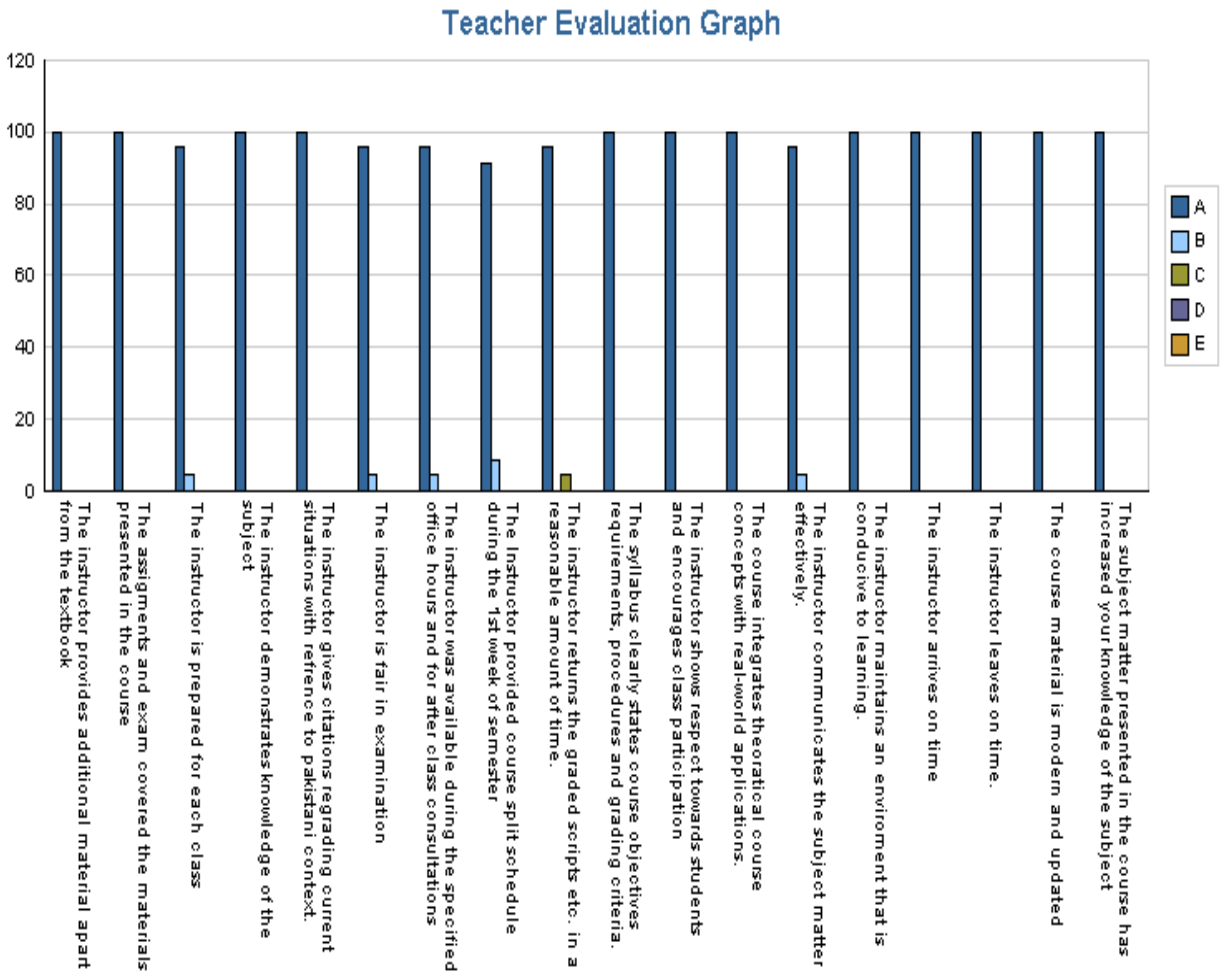
i. Teacher Evaluation

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-706) taught by Prof. Dr. Muhammad Azim had a performance value of 96.25 % .

The evaluation criteria parameters showed that the 96% of the students strongly agreed and 4% agreed that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that the teacher is fair in examination, the instructor came with good preparation. ,instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

Comments/Suggestions:

- The teacher always relates the course topics with his practical experiences under the local environmental conditions for proper understanding of the students.
- The teacher's attitude was amiable during and after his lectures with the students.
- The pace of course covering was commendable and understanding of the theme of the course was also appreciable.


Teacher Evaluation Graph
120
100
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The subject matter presented in the course has increased your knowledge of the subject
The course material is modern and updated
The instructor leaves on time.
The instructor arrives on time
The instructor maintains an enviroment that is conducive to learning.
The instructor communicates the subject matter effectively.
The course integrates theoratical course concepts with real-world applications.
The instructor shows respect towards students and encourages class participation
The syllabus clearly states course objectives requirements, procedures and grading criteria.
The instructor returns the graded scripts etc. in a reasonable amount of time.
The Instructor provided course split schedule during the 1st week of semester
The instructor was available during the specified office hours and for after class consultations
The instructor is fair in examination
The instructor gives citations regrading current situations with refrence to pakistani context.
The instructor demonstrates knowledge of the subject
The instructor is prepared for each class
The assigments and exam covered the materials presented in the course
The instructor provides additional material apart from the textbook

ii. Course Evaluation

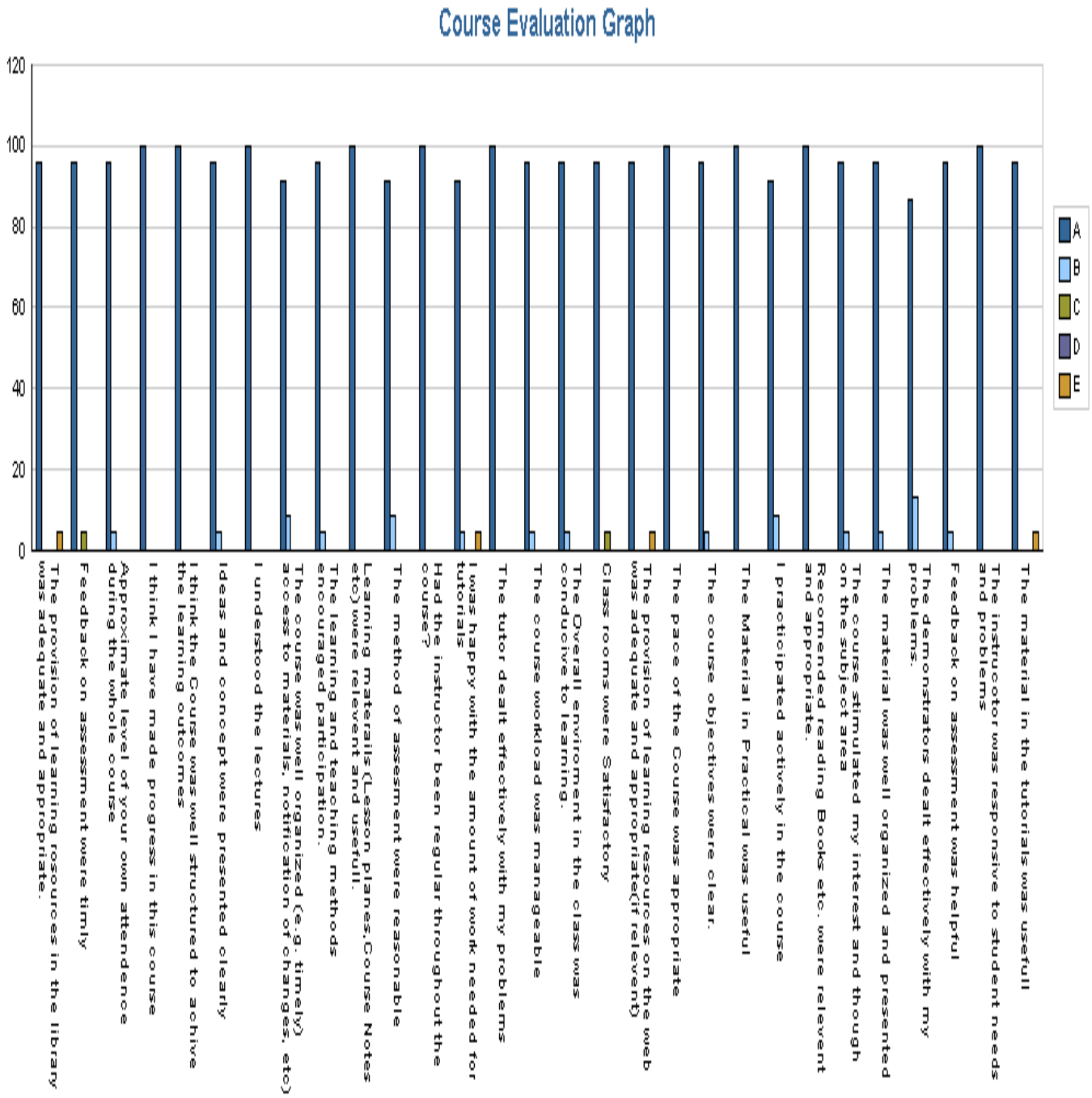
AGR-706 Semester-**Spring-2013**	Weed Management	4(3-2)	Dr. Muhammad Azim Malik

Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed, that the course (AGR-706) taught by Dr. Muhammad Azim Malikhad an impact value of 99.17.

The individual parameter showed that 96% of the students strongly agreed and 4% agreed that the course objectives were clear.Data regarding other parameters showed that major proportion of the students agreed that the course workload was manageable, well organized ,the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course, the course was well structured to achieve the learning outcomes ,the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

Comments / Suggestions

- More practicals will make the course better.
- Lab equipments were not ample.
- Projector and multimedia should be used to deliver lectures.
- There was lack of practical demonstrations in the practical part of the course.
- No doubt ,the course was enlightening and interesting.


Course Evaluation Graph
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The material in the tutorials was usefull
The instructor was responsive to student needs and problems
Feedback on assessment was helpful
The demonstrators dealt effectively with my problems.
The material was well organized and presented
The course stimulated my interest and though on the subject area
Recomended reading Books etc. were relevent and appropriate.
I practicipated actively in the course
The Material in Practical was useful
The course objectives were clear.
The pace of the Course was appropriate
The provision of learning resources on the web was adequate and appropriate(if relevent)
Class rooms were Satisfactory
The Overall enviroment in the class was conducive to learning.
The course workload was manageable
The tutor dealt effectively with my problems
I was happy with the amount of work needed for tutorials
Had the instructor been regular throughout the course?
The method of assesment were reasonable
Learning materails(Lesson planes,Course Notes etc)were relevent and usefull.
The learning and teaching methods encouraged participation.
The course was well organized (e.g. timely) access to materials, notification of changes, etc)
I understood the lectures
Ideas and concept were presented clearly
I think the Course was well structured to achive the learning outcomes
I think I have made progress in this course
Approximate level of your own attendence during the whole course
Feedback on assessment were timly
The provision of learning rosources in the library was adequate and appropriate.

Dr. Abdul Razzaq

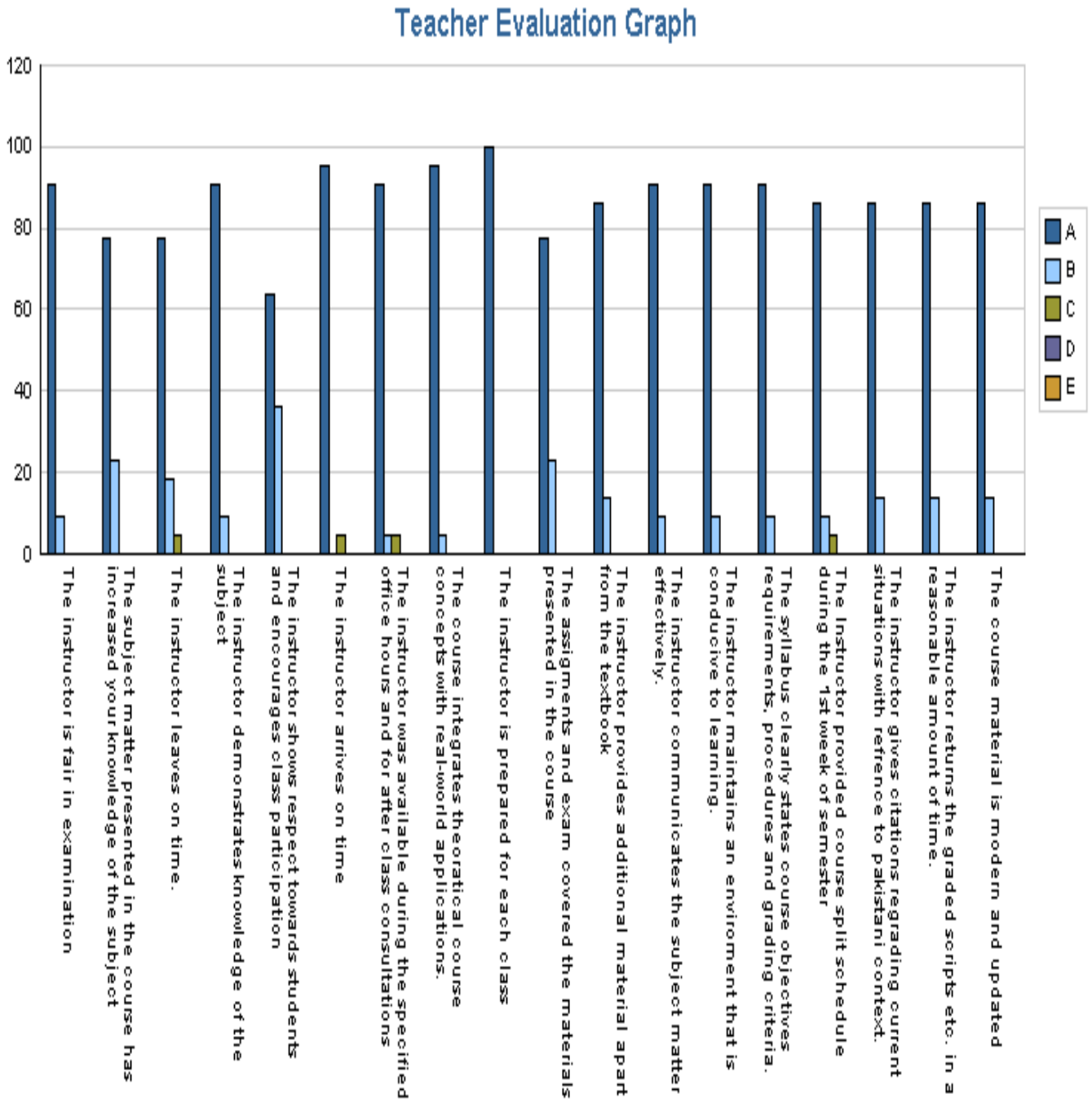
i. Teacher Evaluation

Data were collected from 24 M.Sc. students. Among the teachers, Dr. Mukhtar Ahmad achieved an excellent performance of 100 % , that was followed by Prof. Dr. Muhammad Azim (99.5) Whereas, the performance level/impact value for Dr. Abdul Razzaq was calculated as 99.0.

The evaluation criteria parameters showed that the 100% students strongly agreed that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that the teacher is fair in examination, the instructor came with good preparation,instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

Comments/Suggestions:

- The teacher always relates the course topics with his practical experiences under the local environmental conditions for proper understanding of the students.
- The teacher’s attitude was amiable during and after his lectures with the students.
- The pace of course covering was commendable and understanding of the theme of the course was also appreciable.


Teacher Evaluation Graph
120
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A
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D
E
The course material is modern and updated
The instructor returns the graded scripts etc. in a reasonable amount of time.
The instructor gives citations regrading current situations with refrence to pakistani context.
The Instructor provided course split schedule during the 1st week of semester
The syllabus clearly states course objectives requirements, procedures and grading criteria.
The instructor maintains an enviroment that is conducive to learning.
The instructor communicates the subject matter effectively.
The instructor provides additional material apart from the textbook
The assigments and exam covered the materials presented in the course
The instructor is prepared for each class
The course integrates theoratical course concepts with real-world applications.
The instructor was available during the specified office hours and for after class consultations
The instructor arrives on time
The instructor shows respect towards students and encourages class participation
The instructor demonstrates knowledge of the subject
The instructor leaves on time.
The subject matter presented in the course has increased your knowledge of the subject
The instructor is fair in examination

ii. Course Evaluation

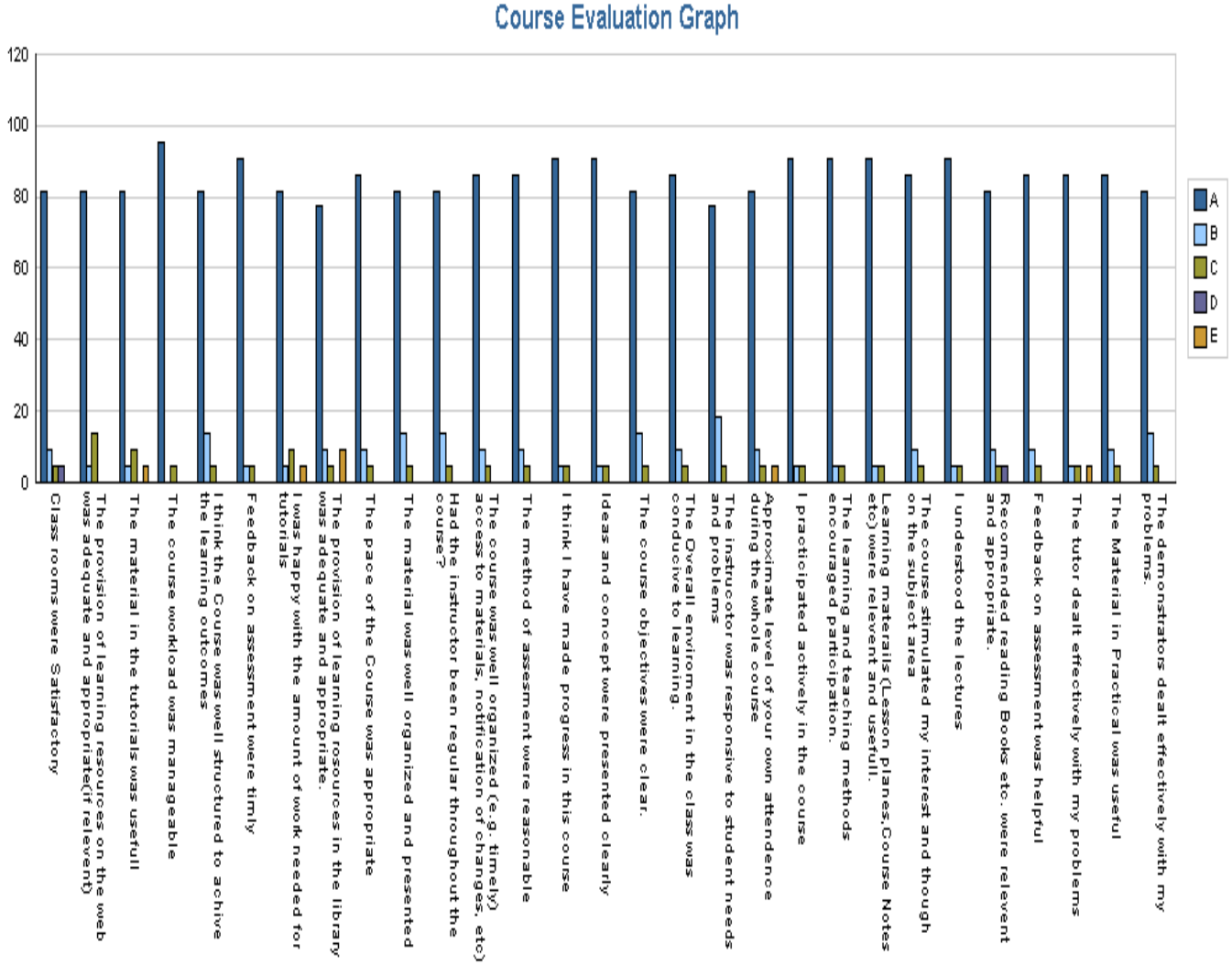
AGR-713 Semester-**Fall 2013**	Seed Physiology	3(3-0)	Dr. Abdul Razzaq

Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed that the course (AGR-713) taught by Dr. Abdul Razzaq had an impact value of 93.07.

The individual parameter showed that 82% of the students strongly agreed, 14% agreed and 4% uncertain that the course objectives were clear.Data regarding other parameters showed that major proportion of the students agreed that the course workload was manageable, well organized ,the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course, the course was well structured to achieve the learning outcomes ,the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

Comments / Suggestions

- More practicals will make the course better.
- Lab equipments were not ample.
- Projector and multimedia should be used to deliver lectures.
- There was lack of practical demonstrations in the practical part of the course.
- No doubt the course was enlightening and interesting.


Course Evaluation Graph
120
100
80
60
40
20
0
A
B
C
D
E
Class rooms were Satisfactory
The provision of learning resources on the web was adequate and appropriate(if relevent)
The material in the tutorials was usefull
The course workload was manageable
I think the Course was well structured to achive the learning outcomes
Feedback on assessment were timly
The pace of the Course was appropriate
The provision of learning rosources in the library was adequate and appropriate.
I was happy with the amount of work needed for tutorials
Had the instructor been regular throughout the course?
The material was well organized and presented
The course was well organized (e.g. timely) access to materials, notification of changes, etc)
The method of assesment were reasonable
I think I have made progress in this course
Ideas and concept were presented clearly
The course objectives were clear.
The instructor was responsive to student needs and problems
The Overall enviroment in the class was conducive to learning.
Approximate level of your own attendence during the whole course
I practicipated actively in the course
The learning and teaching methods encouraged participation.
Learning materails (Lesson planes,Course Notes etc) were relevent and usefull.
The course stimulated my interest and though on the subject area
I understood the lectures
Recomended reading Books etc. were relevent and appropriate.
Feedback on assessment was helpful
The tutor dealt effectively with my problems
The Material in Practical was useful
The demonstrators dealt effectively with my problems.

Dr. Ghulam Qadir

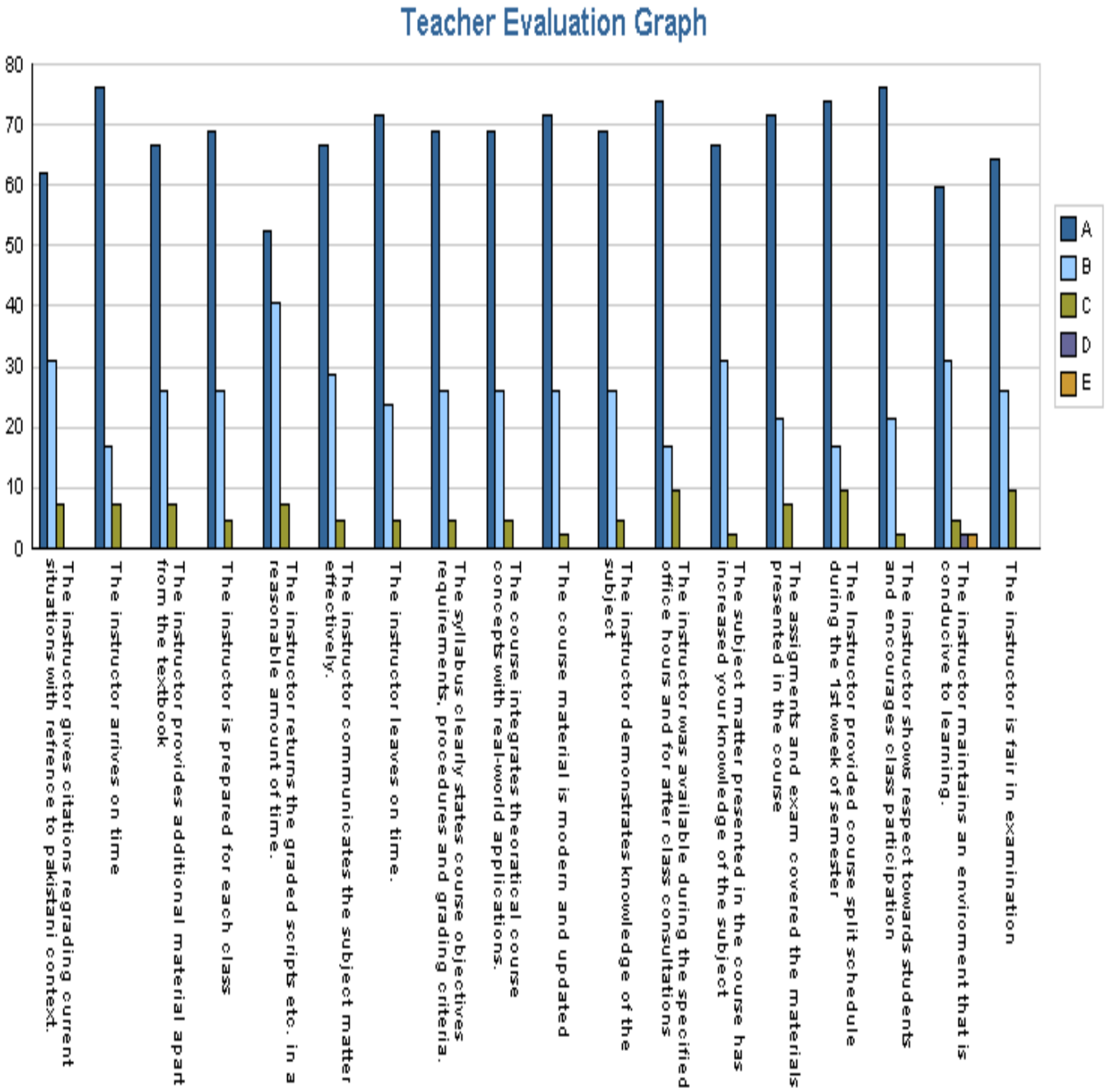
i. Teacher Evaluation

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-715) taught by Dr. Ghulam Qadir had a performance value of 97.5% .

The evaluation criteria parameters showed that the 69% of the students strongly agreed, 26% agreed and 5% uncertain that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that theinstructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

Comments/Suggestions

- The syllabus fulfills the requirements for course objectives .
- The teacher always relates the course topics with his practical experiences form routine life
- The assignments and exams materials should be related to the main course body.


Teacher Evaluation Graph
80
70
60
50
40
30
20
10
0
A
B
C
D
E
The instructor is fair in examination
The instructor maintains an enviroment that is conducive to learning.
The instructor shows respect towards students and encourages class participation
The Instructor provided course split schedule during the 1st week of semester
The assigments and exam covered the materials presented in the course
The subject matter presented in the course has increased your knowledge of the subject
The instructor was available during the specified office hours and for after class consultations
The instructor demonstrates knowledge of the subject
The course material is modern and updated
The course integrates theoratical course concepts with real-world applications.
The syllabus clearly states course objectives requirements, procedures and grading criteria.
The instructor leaves on time.
The instructor communicates the subject matter effectively.
The instructor returns the graded scripts etc. in a reasonable amount of time.
The instructor is prepared for each class
The instructor provides additional material apart from the textbook
The instructor arrives on time
The instructor gives citations regrading current situations with refrence to pakistani context.

ii. Course Evaluation

AGR-715 Semester-**Spring-2013**	Seed Production and Management	3(2-2)	Dr. Ghulam Qadir

Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed, that the course (AGR-715) taught by Dr. Ghulam Qadir had an impact value of 89.38.

The individual parameter showed that 62%of the students strongly agreed, 31% agreed, 5% uncertain and 3% disagreed that the course objectives were clear.Data regarding other parameters showed that major proportion of the students agreed that the course objectives were clear, the course workload was manageable, well organized ,the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course, the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate, the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area.

Comments / Suggestions

- The course improvement is conditioned with teacher regularity to his classes
- The classroom and sound system should be condusive for Learning
- The course effectiveness / improvement is proportionate to the increased standard of Practicals and rural excursions.

Dr. Mukhtar Ahmed

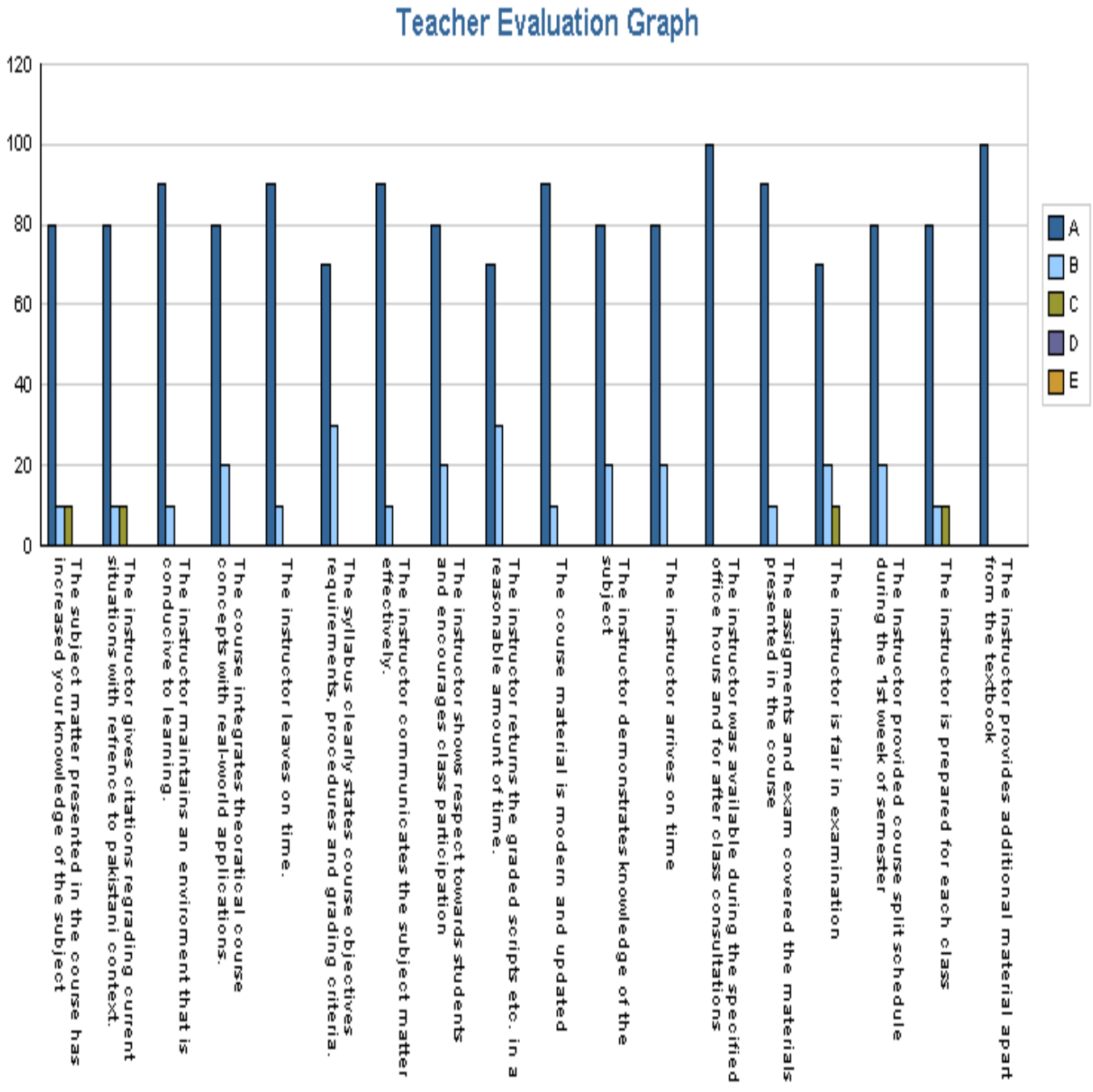
i. Teacher Evaluation

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-704) taught by Dr. Mukhtar Ahmad had a performance value of 97.5 %.

The evaluation criteria parameters showed that the 80% of the students strongly agreed, 10% agreed and 10% uncertain that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that the teacher is fair in examination, the instructor came with good preparation. ,instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

Comments/Suggestions:

- The teacher always relates the course topics with his practical experiences under the local environmental conditions for proper understanding of the students.
- The teacher's attitude was amiable during and after his lectures with the students.
- The pace of course covering was commendable and understanding of the theme of the course was also appreciable.


Teacher Evaluation Graph
120
100
80
60
40
20
0
A
B
C
D
E
The instructor provides additional material apart from the textbook
The instructor is prepared for each class
The Instructor provided course split schedule during the 1st week of semester
The instructor is fair in examination
The assigments and exam covered the materials presented in the course
The instructor was available during the specified office hours and for after class consultations
The instructor arrives on time
The instructor demonstrates knowledge of the subject
The course material is modern and updated
The instructor returns the graded scripts etc. in a reasonable amount of time.
The instructor shows respect towards students and encourages class participation
The instructor communicates the subject matter effectively.
The syllabus clearly states course objectives requirements, procedures and grading criteria.
The instructor leaves on time.
The course integrates theoratical course concepts with real-world applications.
The instructor maintains an enviroment that is conducive to learning.
The instructor gives citations regrading current situations with refrence to pakistani context.
The subject matter presented in the course has increased your knowledge of the subject

ii. Course Evaluation

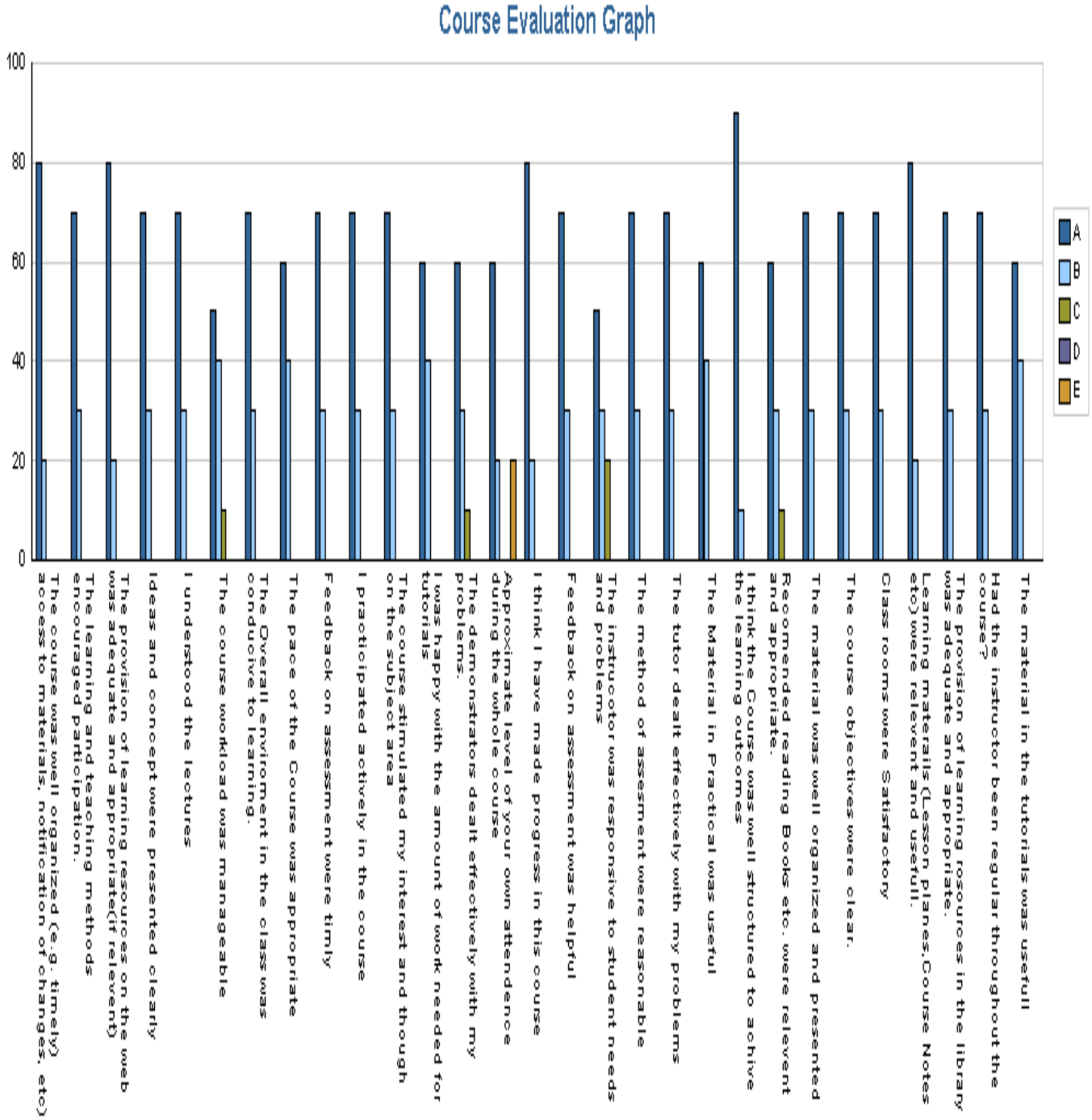
AGR-704 Semester-**Spring-2013**	Crop Environment	3(2-2)	Dr. Mukhtar Ahmed

Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed, that the course (AGR-704) taught by Dr. Mukhtar Ahmed had an impact value of 97.58.

The individual parameter showed that 70%of the students strongly agreed and 30% agreed that the course objectives were clear.Data regarding other parameters showed that major proportion of the students agreed that the course workload was manageable, well organized ,the approximate level of student's attendance during the whole course was higher; students participated actively in the course and have made progress in this course, the course was well structured to achieve the learning outcomes ,the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

Comments / Suggestions

- More practicals will make the course better.
- Lab equipments were not ample.
- Projector and multimedia should be used to deliver lectures.
- There was lack of practical demonstrations in the practical part of the course.
- No doubt the course was enlightening and interesting.


Course Evaluation Graph
100
80
60
40
20
0
A
B
C
D
E
The material in the tutorials was usefull
Had the instructor been regular throughout the course?
The provision of learning rosources in the library was adequate and appropriate.
Learning materails(Lesson planes,Course Notes etc)were relevent and usefull.
Class rooms were Satisfactory
The course objectives were clear.
The material was well organized and presented
Recomended reading Books etc. were relevent and appropriate.
I think the Course was well structured to achive the learning outcomes
The Material in Practical was useful
The tutor dealt effectively with my problems
The method of assesment were reasonable
The instrucotor was responsive to student needs and problems
Feedback on assessment was helpful
I think I have made progress in this course
Approximate level of your own attendence during the whole course
The demonstrators dealt effectively with my problems.
I was happy with the amount of work needed for tutorials
The course stimulated my interest and though on the subject area
I practicipated actively in the course
Feedback on assessment were timly
The pace of the Course was appropriate
The Overall enviroment in the class was conducive to learning.
The course workload was manageable
I understood the lectures
Ideas and concept were presented clearly
The provision of learning resources on the web was adequate and appropriate(if relevent)
The learning and teaching methods encouraged participation.
The course was well organized (e.g. timely) access to materials, notification of changes, etc)

Dr. Mukhtar Ahmed

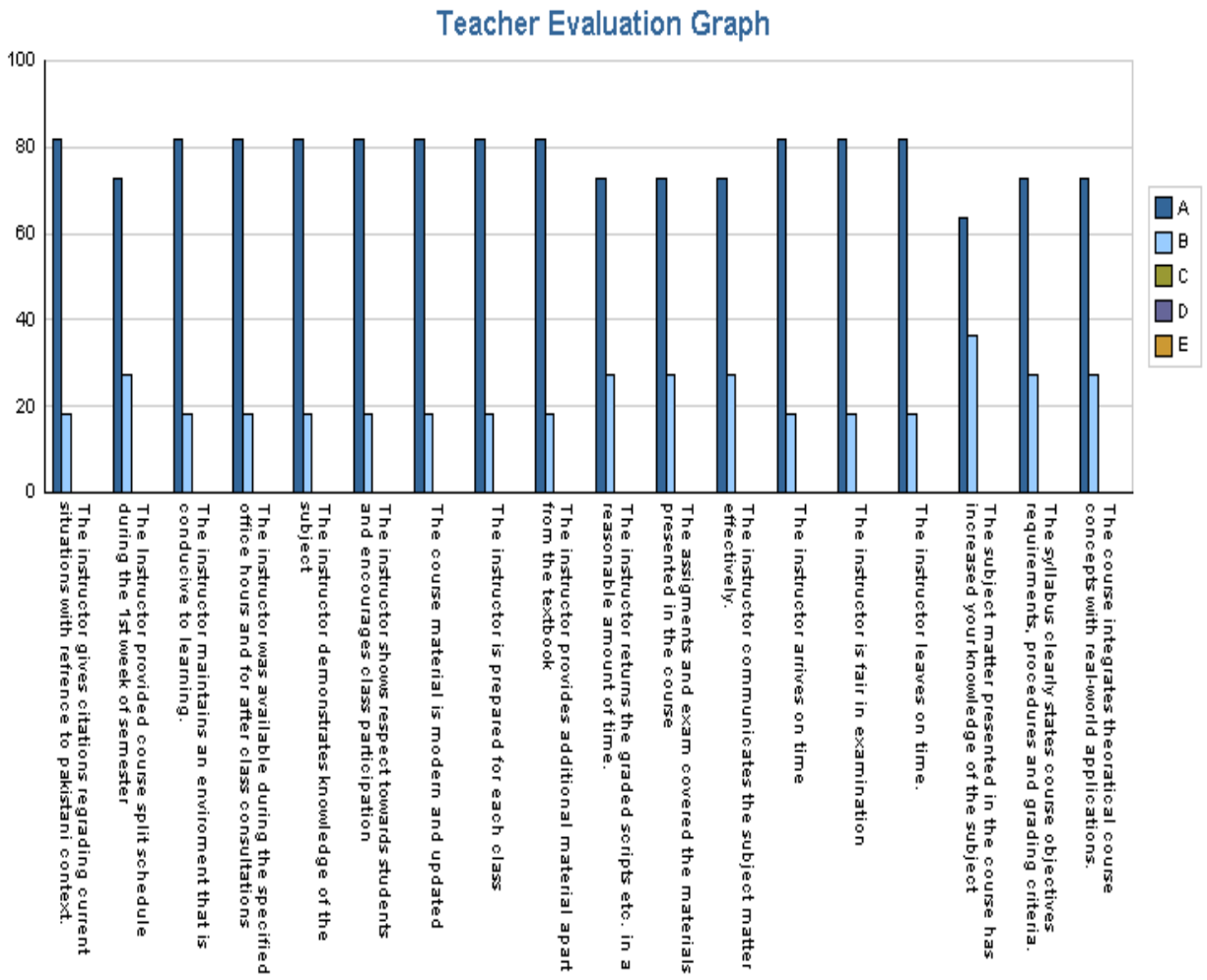
i. Teacher Evaluation

Data were collected from 24 M. Sc. Students.Comparative graph of teacher evaluation showed that the course (AGR-718) taught by Dr. Mukhtar Ahmad had a performance value of 100 %.

The evaluation criteria parameters showed that the 82% of the students strongly agreed and 18% agreed that the instructor was prepared for each class. The data of other parameters inferred that major proportion of the students are agreed that the teacher is fair in examination, the instructor came with good preparation. ,instructor demonstrates knowledge of the subject, instructor had completed the whole course, the Instructor provided additional material apart from the textbook, the Instructor gave citations regarding current situations with reference to Pakistani context, the Instructor communicates the subject matter, the Instructor shows respect towards students and encourages class participation effectively, the Instructor maintained an environment that was conducive to learning, the Instructor arrived on time, the Instructor returned the graded scripts etc. in a reasonable amount of time, the Instructor was available during the specified office hours after class for consultations, the Subject matter presented in the course has increased their knowledge of the subject, the syllabus clearly states course objectives requirements, procedures and grading criteria, the course integrates theoretical course concepts with real-world applications, and the assignments and exams covered the materials presented in the course, the course material is modern and updated.

Comments/Suggestions:

- For proper understanding of the students ,the teacher always believes the principle of learning by association.
- The instructor was well planned and prepared.
- The teacher's attitude was amicable with the students even class hours.
- The teacher showed the uniformity in covering the course as per teaching schedule.



ii. Course Evaluation

AGR-718 Semester - Spring 2014	Crop Modeling	3(2-2)	Dr. Mukhtar Ahmed

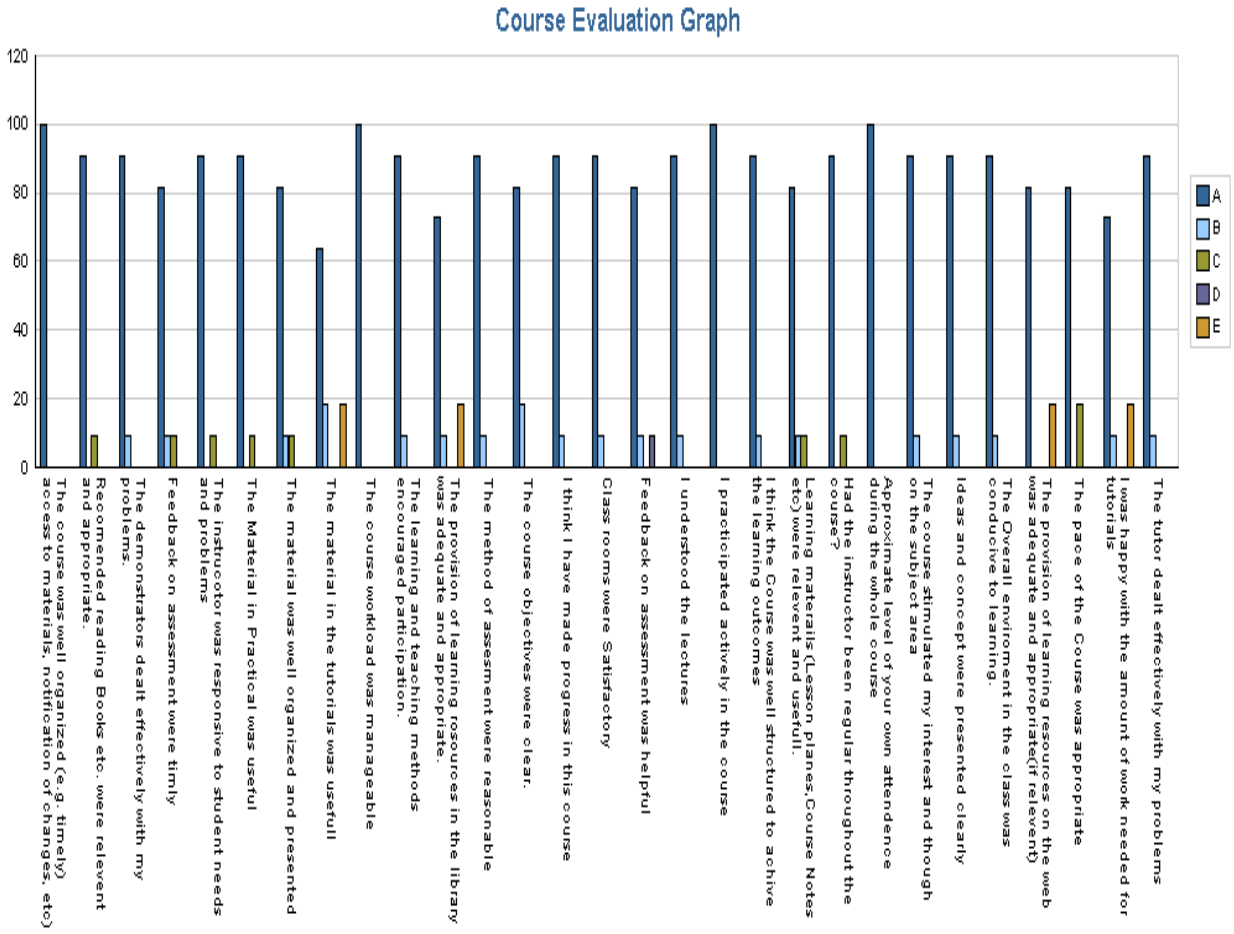
Data were collected from 24 M.Sc. students. Comparative graph of course evaluation showed, that the course (AGR-718) taught by Dr. Mukhtar Ahmed had an impact value of 94.41.

The individual parameter showed that 82%of the students strongly agreed and 18% agreed that the course objectives were clear. Data regarding other parameters showed that major proportion of the students agreed that the course workload was manageable, well organized ,the approximate level of student's attendance during the whole course was higher;

students participated actively in the course and have made progress in this course, the course was well structured to achieve the learning outcomes ,the learning and teaching methods encouraged participation, the overall environment in the class was conductive to learning, and classrooms were satisfactory, learning materials (Lesson Plans, Course Notes etc.) were relevant and useful, recommended reading books etc. were relevant and appropriate. They described that the provision of learning resources in the library was adequate and the course stimulated their interest and thought on the subject area. According to most of the students, the pace of the Course was appropriate, ideas and concepts were presented clearly, the method of assessment were reasonable.

Comments / Suggestions

- More practicals will make the course better.
- For lab experiments Lab equipments should be increased.
- There is need for the use of Projector and multimedia for the smooth learning
- Practical part/ demonstrations needs improvement.


Course Evaluation Graph
120
100
80
60
40
20
0
A
B
C
D
E
The tutor dealt effectively with my problems
I was happy with the amount of work needed for tutorials
The pace of the Course was appropriate
The provision of learning resources on the web was adequate and appropriate(if relevent)
The Overall enviroment in the class was conducive to learning.
Ideas and concept were presented clearly
The course stimulated my interest and though on the subject area
Approximate level of your own attendence during the whole course
Had the instructor been regular throughout the course?
Learning materails (Lesson planes,Course Notes etc) were relevent and usefull.
I think the Course was well structured to achive the learning outcomes
I practicipated actively in the course
I understood the lectures
Feedback on assessment was helpful
Class rooms were Satisfactory
I think I have made progress in this course
The course objectives were clear.
The method of assesment were reasonable
The provision of learning resources in the library was adequate and appropriate.
The learning and teaching methods encouraged participation.
The course workload was manageable
The material in the tutorials was usefull
The material was well organized and presented
The Material in Practical was useful
The instrucotor was responsive to student needs and problems
Feedback on assessment were timly
The demonstrators dealt effectively with my problems.
Recomended reading Books etc. were relevent and appropriate.
The course was well organized (e.g. timely) access to materials, notification of changes, etc)

Proforma 2: Faculty Course Review Report

The evaluation revealed that the faculty is satisfied with curricula. Proformas for evaluation has been filled and analyzed. .The internal evaluation was done through semestoral examinations for all courses offered by department. Faculty course review report is evident from the table as under:

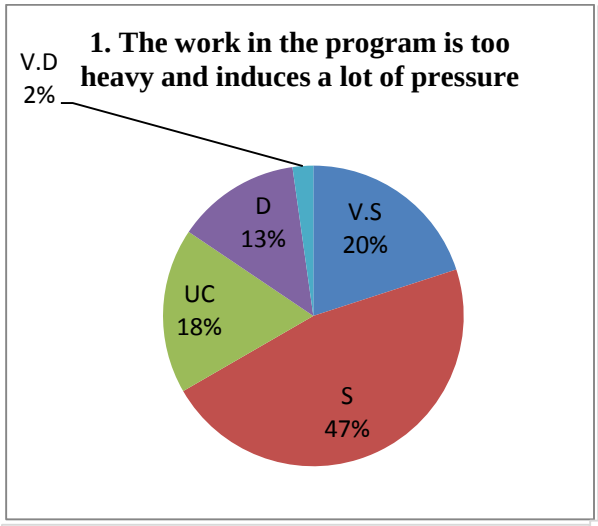
Course Code	Title	Credit Value	Assessment Methods/ Exams	No. of Students	Comments on Curriculum	Any Changes for Future in Course	Semester	% Grade						Course Instructor
								A	B	C	D	E	F	
AGR-707	Field crop experimentation	4(3-2)	Mid term & Final	24	Good prepared	No	Fall	62	22	06	08	02	0	Dr. Zammurad Iqbal Ahmed
AGR-708	Advanced seed technology	4(3-2)	Mid term & Final	24	Well prepared	No	Spring	48	30	14	06	02	0	Dr. Fayyaz ul Hassan
AGR-703	Dryland Agro-management	3(3-0)	Mid term & Final	24	Good but lengthy	Should be divided	Fall	20	48	15	11	01		Dr. M. Azim Malik
AGR-706	Weed management	4(3-2)	Mid term & Final	24	Very good	No	Spring	22	48	15	09	05	0	Dr. M. Azim Malik
AGR-713	seed physiology	3(3-0)	Mid term & Final	24	Well prepared	No	Fall	56	22	12	00	02	06	Dr. A. Razzaq

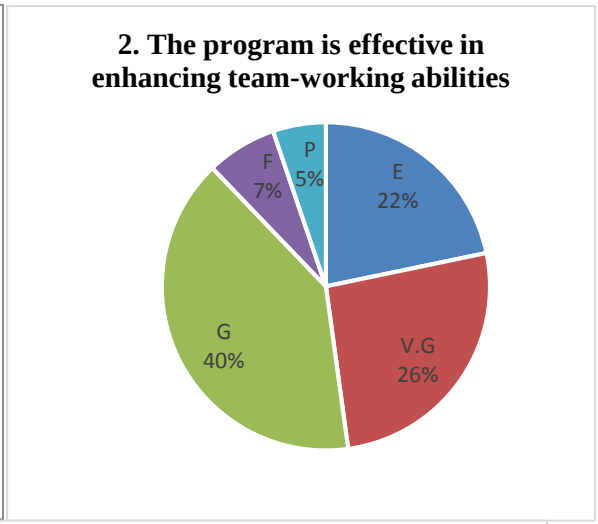
AGR-715	Seed production & management	3(2-2)	Mid term & Final	24	Well prepared	No	Fall	53	31	14	02	0	0	Dr. Ghulam Qadir
AGR-704	Crop environment	3(2-2)	Mid term & Final	24	Excellent but lengthy	Should be divided	Spring	65	04	25	08	0	0	Dr. Mukhtar Ahmad
AGR-718	Crop Modeling	3(2-2)	Mid term & Final	24	Excellent but lengthy	No	Spring	68	20	24	08	00	0	Dr. Mukhtar Ahmad

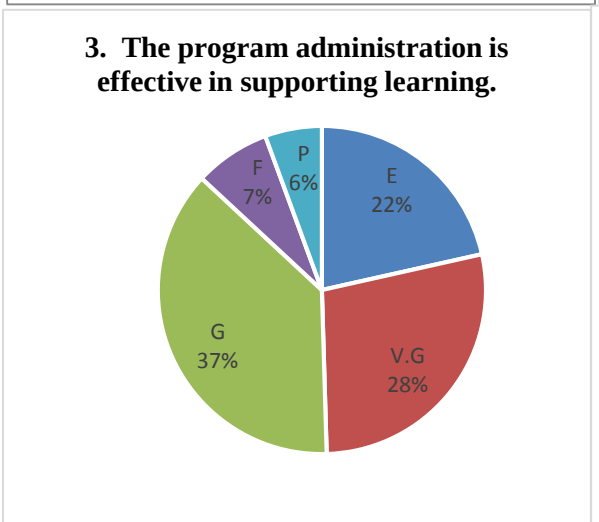
Proforma 3: Survey of Graduating Students

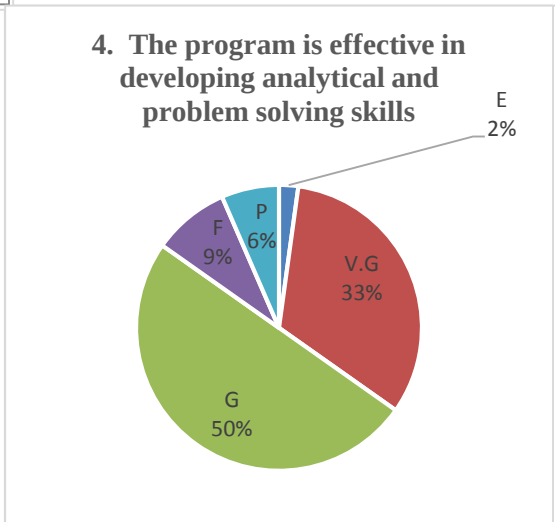
A total of 30 students were included in the survey. The data showed that 20% of the students were very satisfied (V.S), 47% satisfied, 18% uncertain, 13% dissatisfied and 2% very dissatisfied for the work in the program is too heavy and induces a lot of pressure.

Moreover, most of the students were very satisfied with program administration, development of analytical and problem solving skills, the program is effective in developing independent thinking, written communication skills and planning abilities, the contents of curriculum are advanced and meet program objectives, faculty was able to meet the program objectives and the environment was conducive for learning.

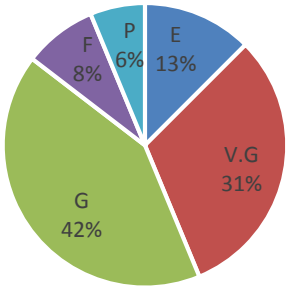




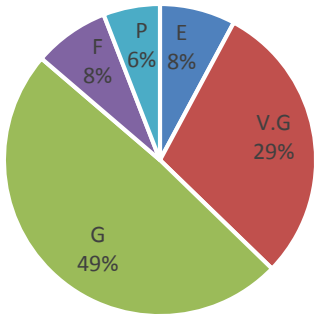




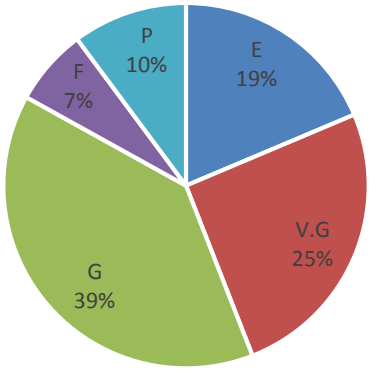
5. The program is effective in developing independent thinking



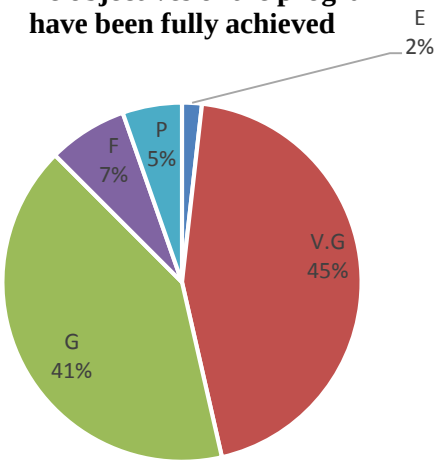
6. The program is effective in developing written communication skills



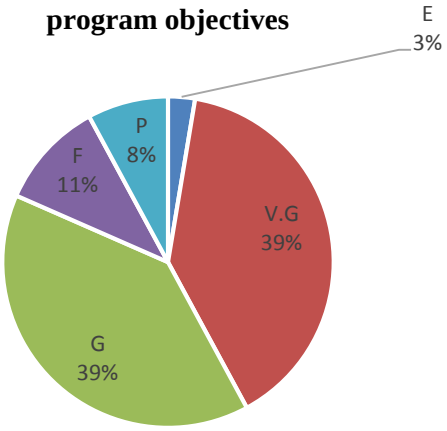
7. The program is effective in developing planning abilities



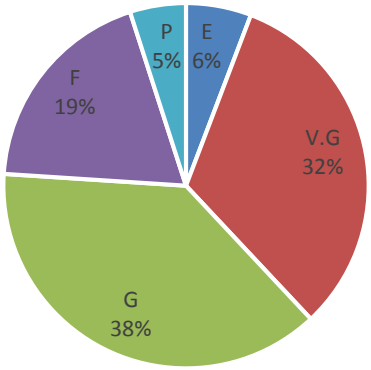
8. The objectives of the program have been fully achieved



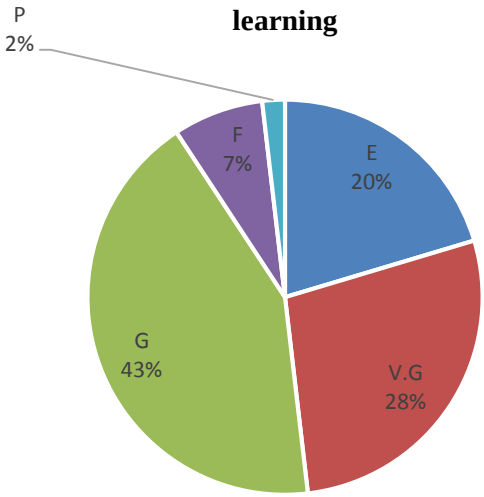
9. Whether the contents of curriculum are advanced and meet program objectives



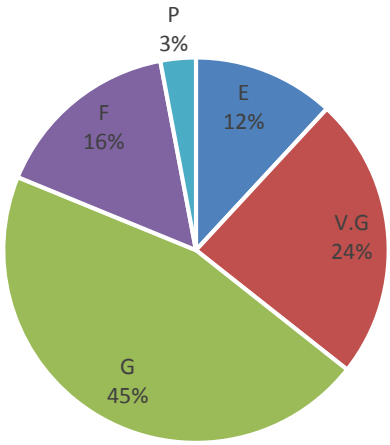
10. Faculty was able to meet the program objectives



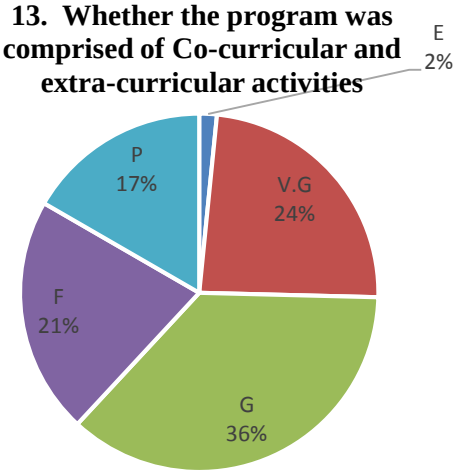
11. Environment was conducive for learning



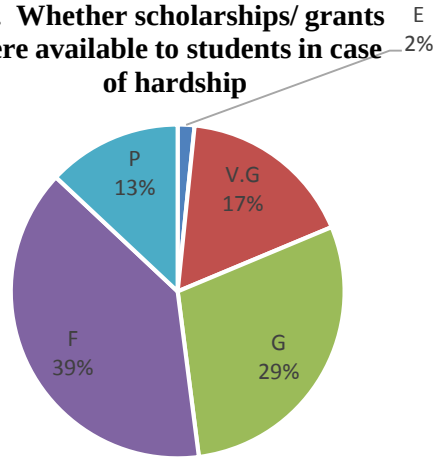
12. Whether the Infrastructure of the department was good



13. Whether the program was comprised of Co-curricular and extra-curricular activities



14. Whether scholarships/ grants were available to students in case of hardship



Proforma 4 :Research Student Progress Review Form

A total of 20 students of M.Sc. (Hons.) were surveyed. Most of the students of the Masters are interested in laboratory work and eager to operate modern equipments. They pointed out the problems of poor space availability in the department. However, the facility of labtops and internet access in each department.

Skills and capabilities reflected in performance as agronomist

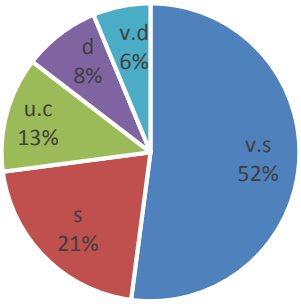
- To develop abilities of effective writing, oral presentations and demonstration.
- Students will be able to work in the field of Agronomy with confidence.
- Use of latest/ innovative equipements /techniques in research studies

Performa 5: Results of Faculty Survey

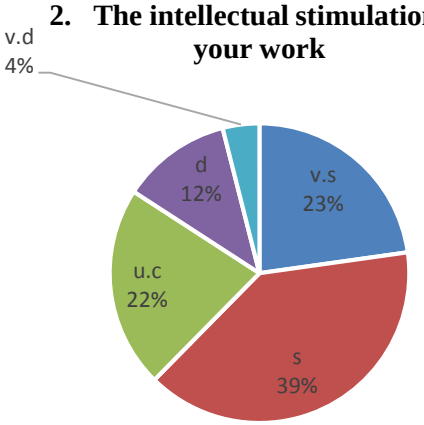
The data generated as a result of faculty survey, showed that 19% of faculty members were very satisfied , 29% satisfied, 23% uncertain, 12% dissatisfied and 17% very dissatisfied with their job clarity about promotion process.

Most of the faculty themselves reported as very satisfied mentoring and administrative support, job security, support from the department, their progress through ranks. The least time availability to faculty to interact with their family is due to extra load on present teachers .

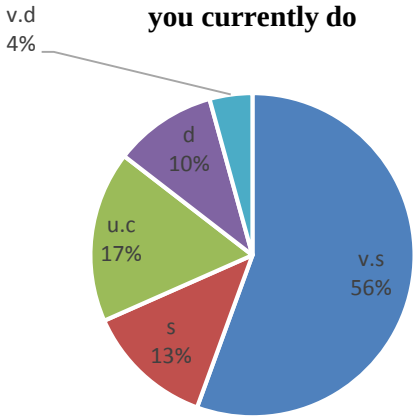
1. Your mix of research, teaching and community service



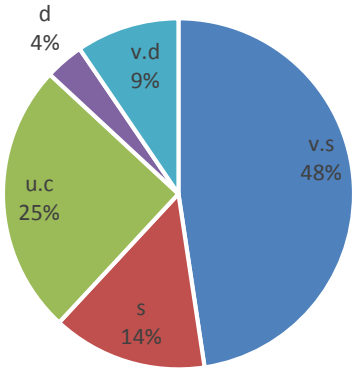
2. The intellectual stimulation of your work



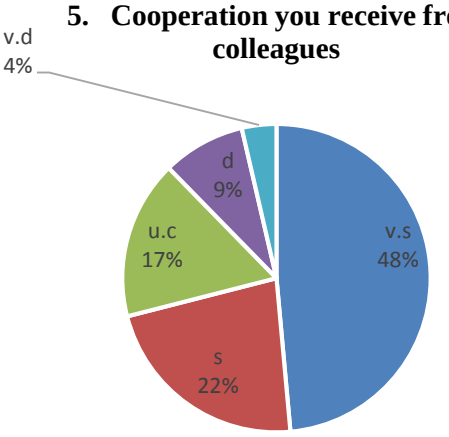
3. Type of teaching / research you currently do



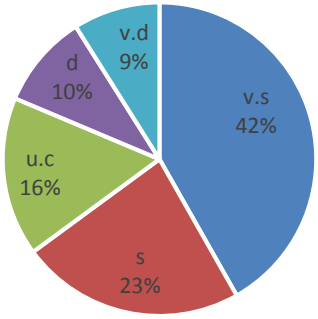
4. Your interaction with students



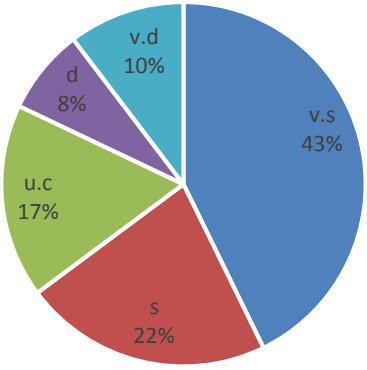
5. Cooperation you receive from colleagues



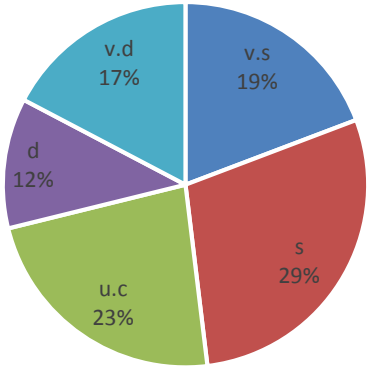
6. The mentoring available to you



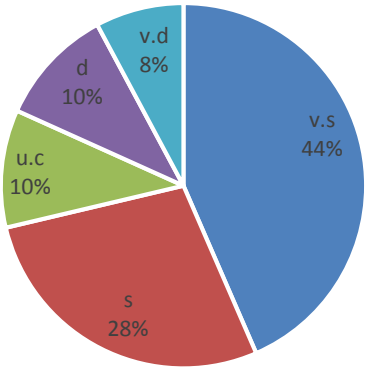
7. Administrative support from the department



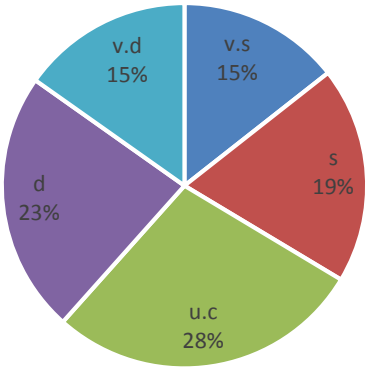
8. Providing clarity about the faculty promotion process



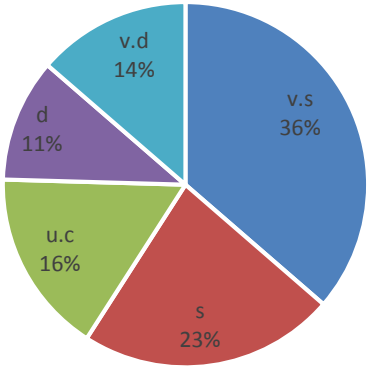
9. Your prospects for advancem ent and progress through ranks



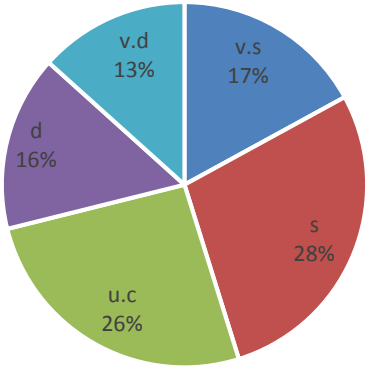
10. Salary and compensation package

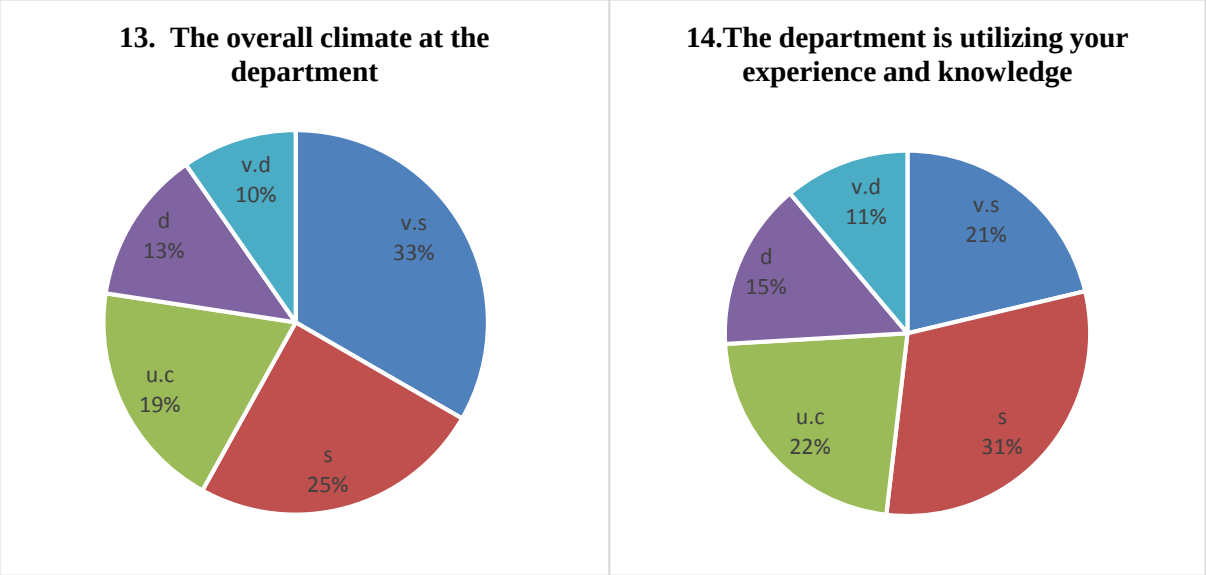


11. Job security and stability at the department



12. Amount of time you have for yourself and family





Performa 6: Survey of department offering M.Sc. (Hons.) programs

Department of Agronomy started its M.Sc. (Hons.) program during 1997 and 18 students have completed M.Sc.(Hons.)from the department while 17students are currently enrolled in department. Admission in M.Sc. (Hons.) requies B. Sc.(Hons.)agriculture in Agronomy with a minimum CGPA of 2.5. M.Sc. (Hons.) student has to complete minimum 35-40 credit hour in addition to research thesis with minimum time duration of 2 years. Comprehensive examination is pre requisite to qualify as candidate for M.Sc. (Hons.) degree and is taken at the end of the course work. A research paper is must to publish from M.Sc. (Hons.) thesis. All the faculty members (12) possess Doctorate degrees. Out of 12 faculty members 9 are HEC approved supervisors. Faculty members are running 04 research projects in the department funded by different organizations.

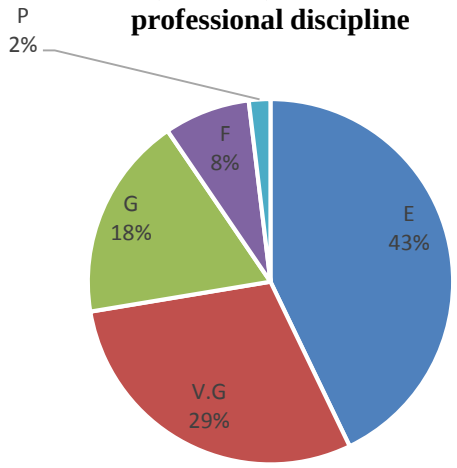
Proforma 7: Alumni Survey

The purpose of this survey was to obtain alumni input on the quality of education and research they received and the level of preparation they had at University. A total of 36 alumni

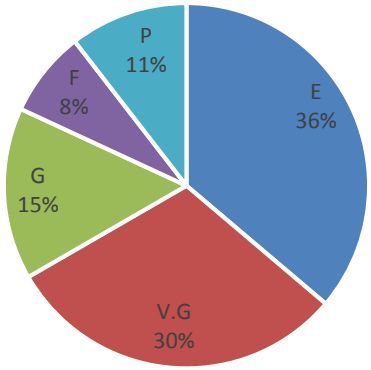
were surveyed. The data showed that the alumni reported 43% excellent, 29% very good, 18% good, 8% fair and 2% poor knowledge of Math, Science, Humanities and professional discipline.

Most of the Alumni reported departmental training as excellent about the interpersonal skills such as team work,, training of oral communication, IT knowledge, report writing and management skills, department has excellent infrastructure and repute, working in difficult conditions and independent philosophy, learnt excellent administration of resource and time, learnt excellent power of judgment.

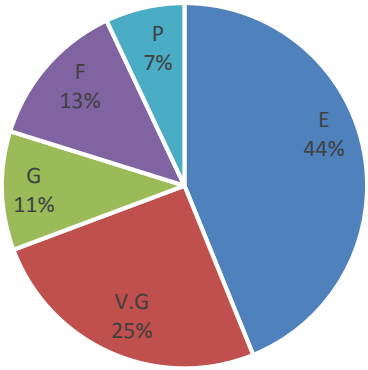
1. Math, Science, Humanities and professional discipline



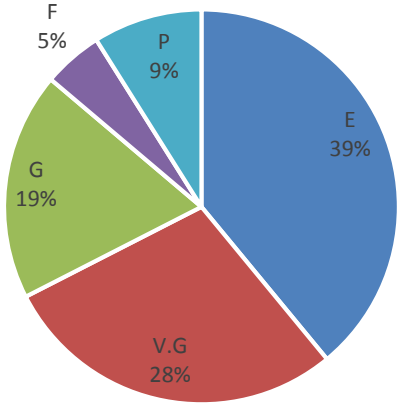
2. Problem formulation and solving skills



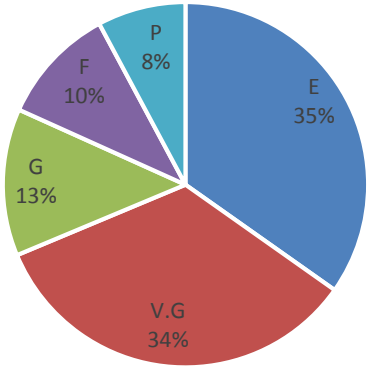
3. Collecting and analyzing appropriate data



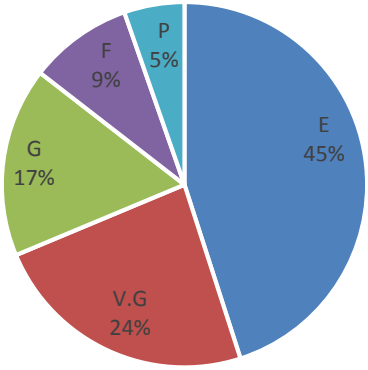
4. Ability to link theory to practice

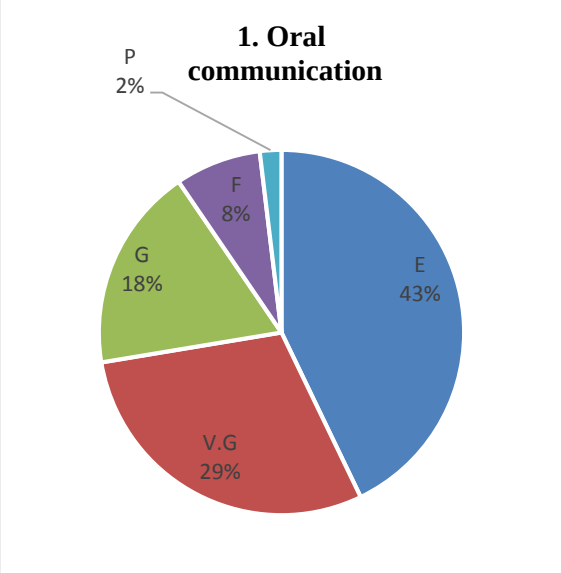


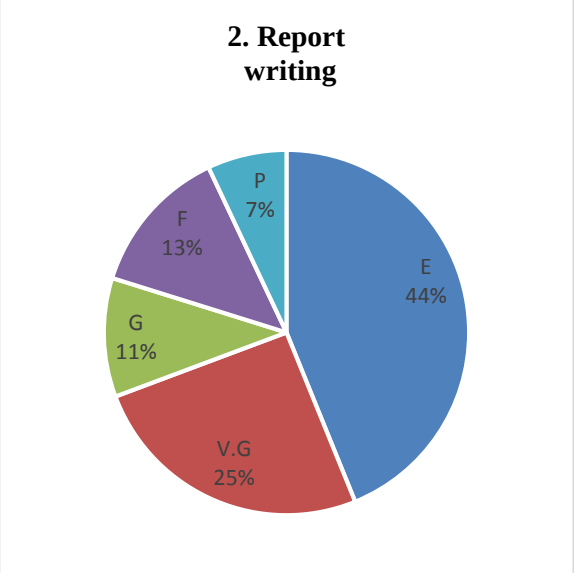
5. Ability to design a system component or process

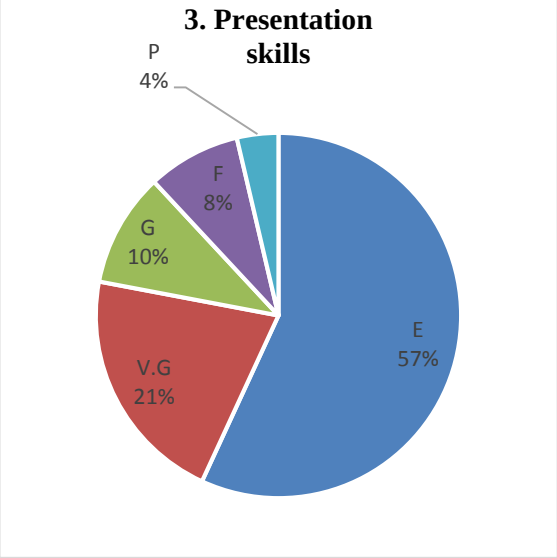


6. IT knowledge

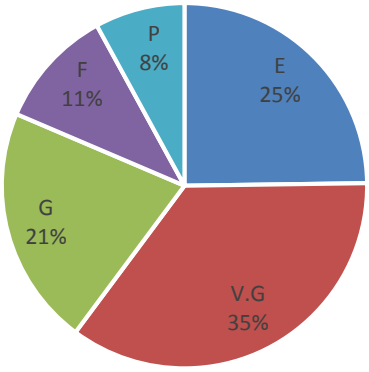



1. Oral communication
P 2%
F 8%
G 18%
E 43%
V.G 29%

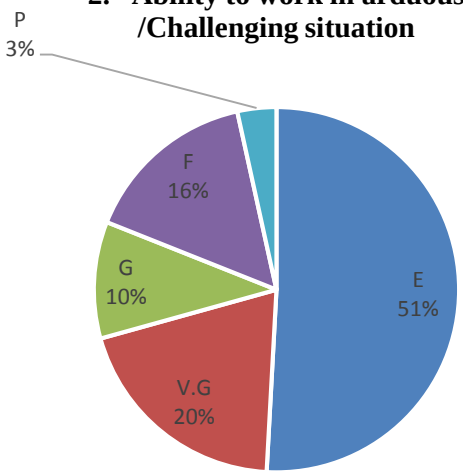

2. Report writing
P 7%
F 13%
E 44%
G 11%
V.G 25%


3. Presentation skills
P 4%
F 8%
G 10%
E 57%
V.G 21%

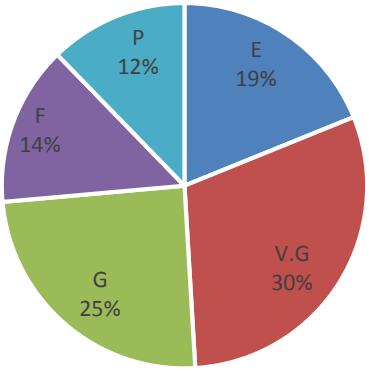
1. Ability to work in teams.



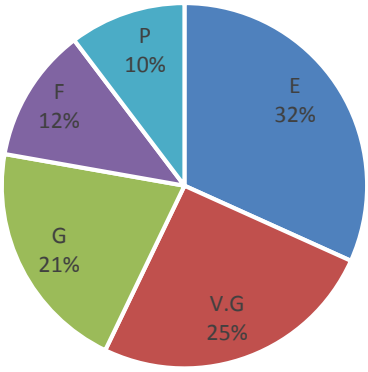
2. Ability to work in arduous /Challenging situation



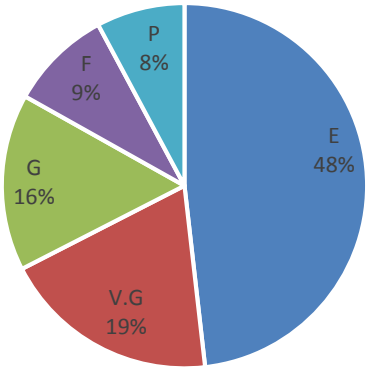
3. Independent thinking



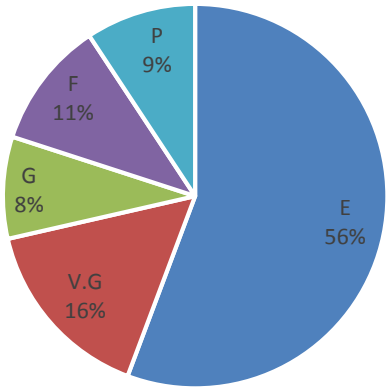
4. Appreciation of ethical Values



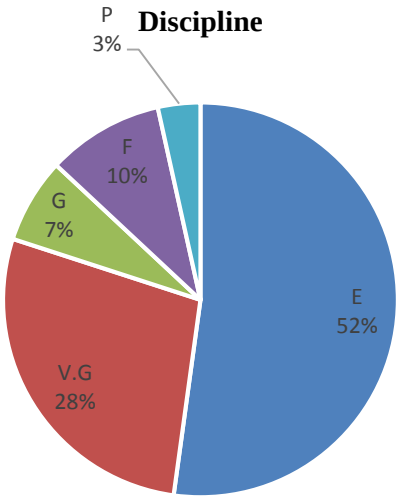
Resource and Time management skills



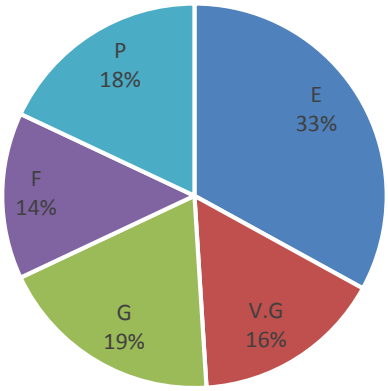
Judgment

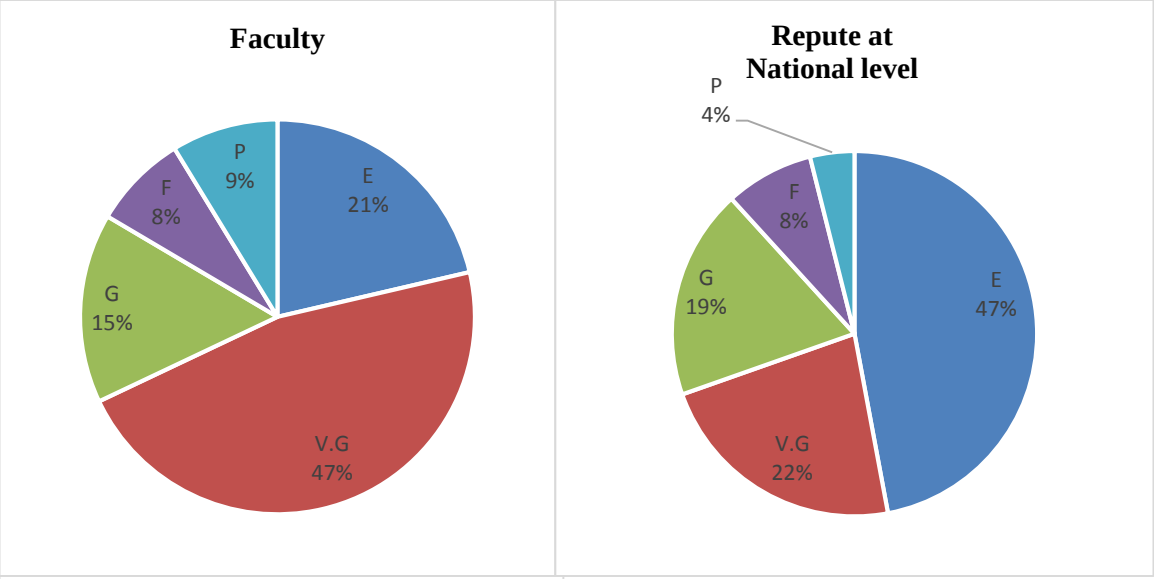


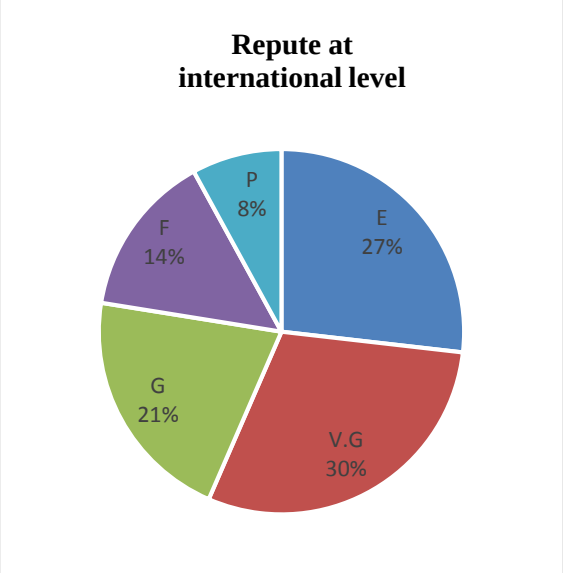
Discipline



Infrastructure





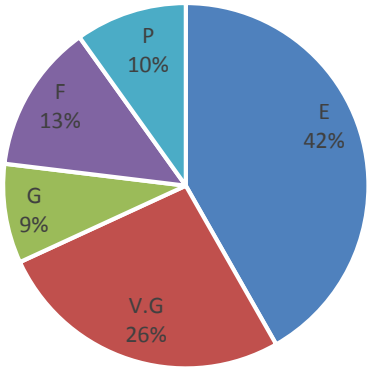


Proforma 8:Employer Survey

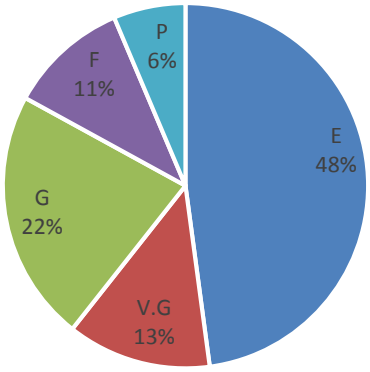
The rationale of this survey is to obtain employers input on the quality of education, the department is providing and to assess the quality of the academic program. The survey included University graduates employed in different organizations. A total of 8 employers provided the data. The generated data showed the report of the employers about the Math, Science, Humanities and professional discipline was as 42% excellent, 26% very good, 9% good, 13% fair and 10% poor.

All the employers significantly favoured the excellent performance of the candidates as regards different aspects of the professional life like power of problem formulation and solving skills, and have great ability of oral communication and are reliable and morally sound. Employers showed a little apprehension about computer skills of the students.

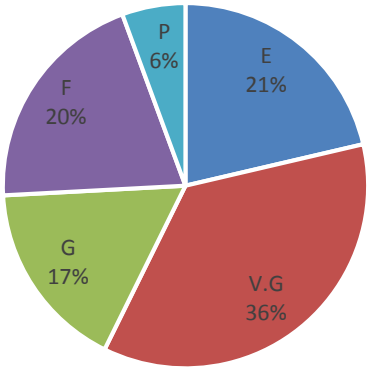
1. **Math, Science, Humanities and professional discipline**



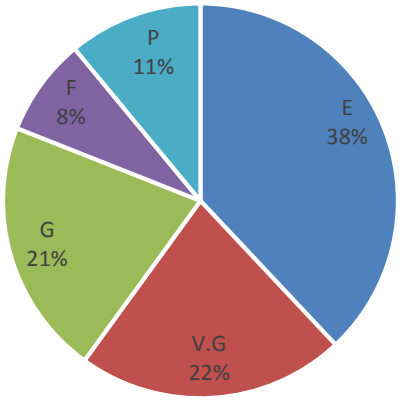
2. **Problem formulation and solving skills**



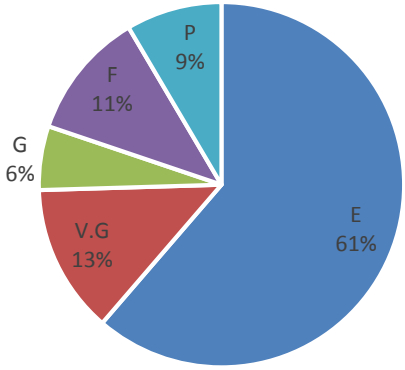
3. **Collecting and analyzing appropriate data**



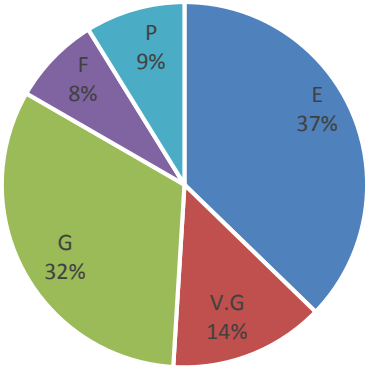
4. **Ability to link theory to practice**



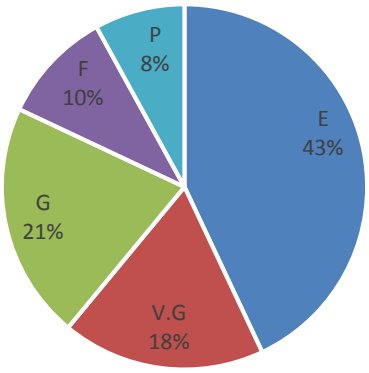
5. **Ability to design a system component or process**



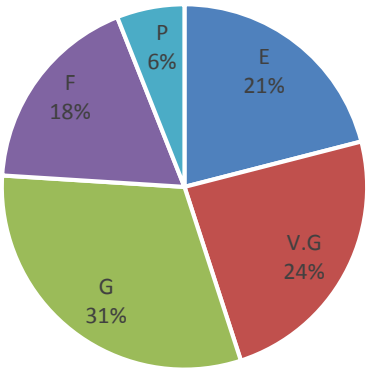
6. **Computer knowledge**



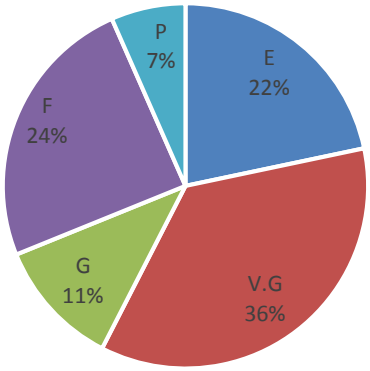
1. Oral communication



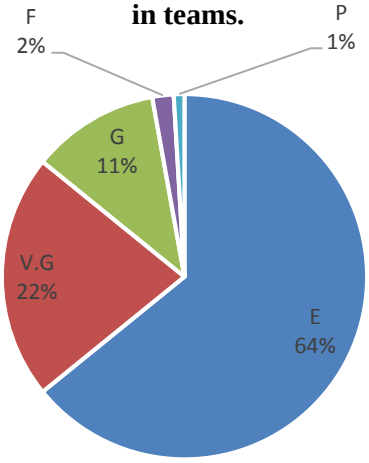
2. Report writing



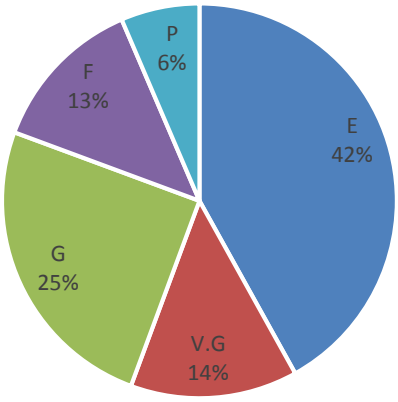
3. Presentation skills



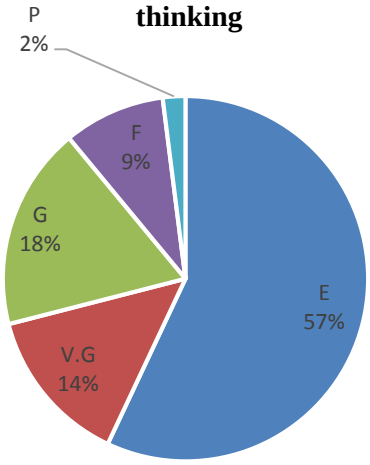
1. Ability to work in teams.



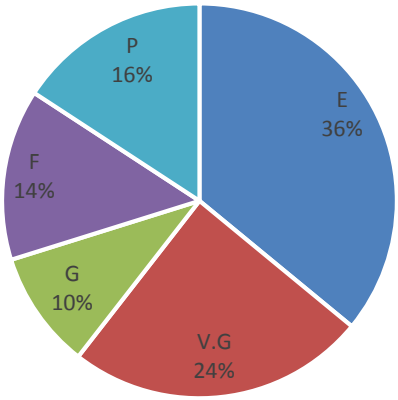
2. Leadership



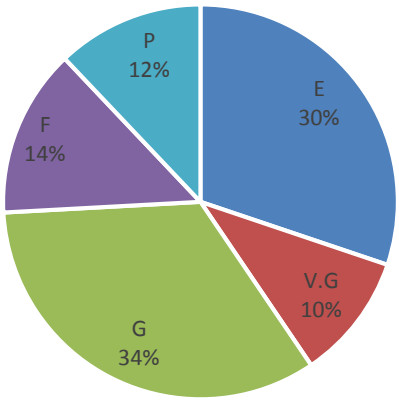
3. Independent thinking



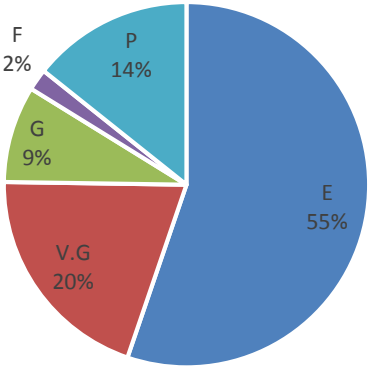
4. Motivation

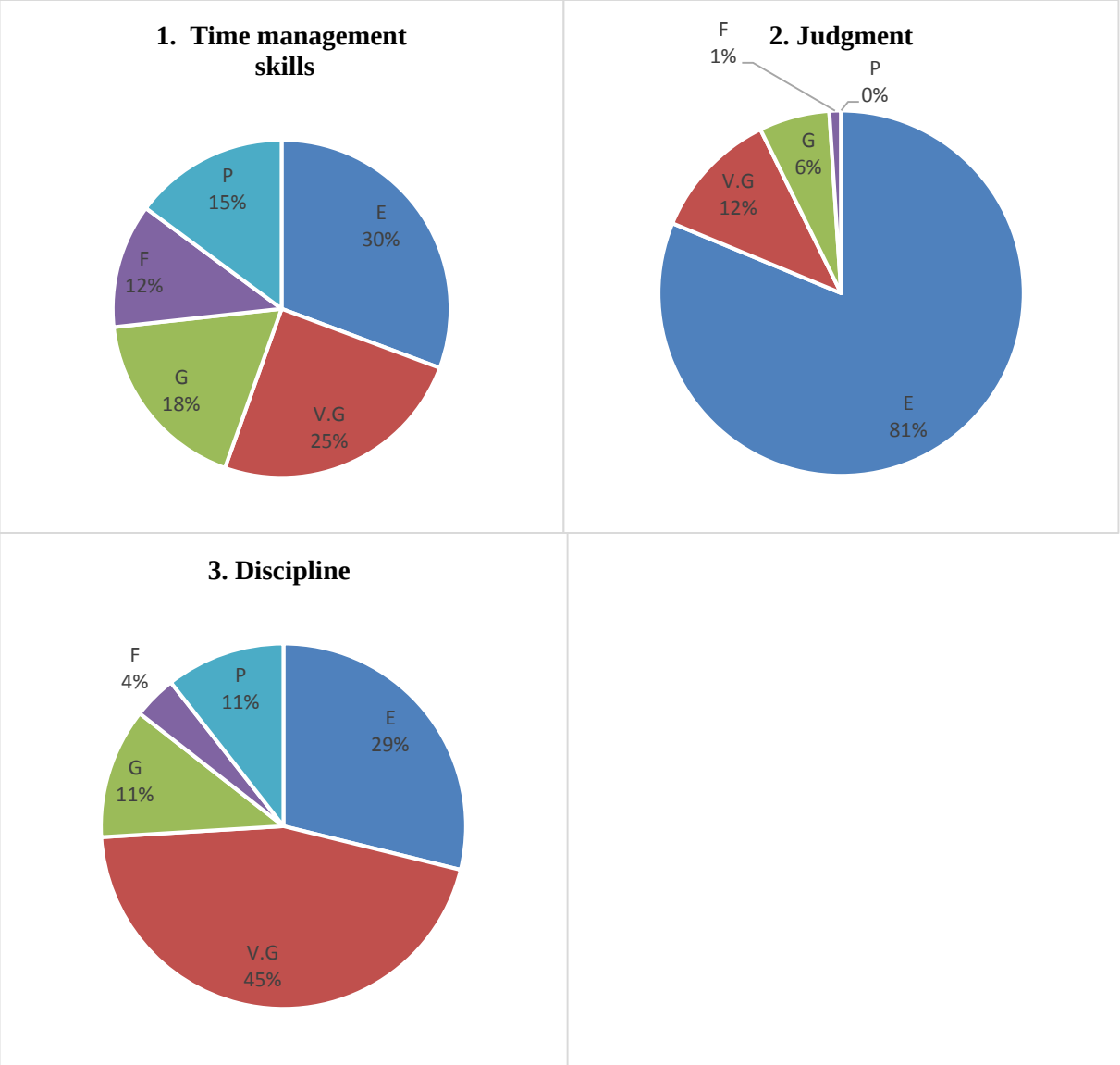


5. Reliability



6. Appreciation of ethical values





Standard 1.3: Strength of the Department

The results are being to The concerned Chairman of the department through the Dean/Director is communicated abouts the results whenever, it is considered inevitable for the remedial measures .

Strength of the department

The main strength of the department is the availability of highly qualified teachers and their full acquaintance with respective subjects. Majority of the faculty members are foreign qualified and are conversant in their area of specialization.

Weakness Identified in the Program:

There is Lack of Infrastructure and Technology Transfer Unit for extending the recommendations and technology to the farmers .Foreign trainings oppertunity for the young faculty is poor.

Major Feature of Improvement Plans

The augmentation of knowledge and skills of faculty members to keep them up in pace with the latest global advancements in the discipline t is being practiced through faculty exchange programs(FEP), short training and collaborative research project(CRP) within and outside Pakistan.

Quality education in the department is met partially through audio visual aids and use of modern equipments along with provision of latest literature, journals, books, reviews and access to internet.

Program out comes:

Table 3: Quantitative Assessment of the Department

Sr. #	Particular	No	Remarks
1.	M.Sc (Hons.) Degree awarded	97	A few of the students joined Ph.D. Degree program and rest of the students got jobs in public and private institutes/organizations.

The evaluation process indicated high efficiency of system and satisfactory impact of outcomes. Almost all the graduates students got jobs in various organizations viz provincial agricultural department, universities, research organizations, banks and private firms.

Skills and capabilities reflected in performance as Agronomy:

Students build up potential to apply information of Agronomy and to work as professionals to build self-confidence and communicate successfully in writing and oral skills. Students are able to make obvious use of modern research tools, techniques and skills for building their proficient career. To make them be aware of how to formulate and design the experiments and to work efficiently in a research groups.

Table 4: Present Performance Measures for Research Activities

Sr. Nos.	Name of faculty member	Research Papers	Projects Completed
1.	Dr. Muhammad Azim Malik	06	Nil
3.	Dr. Fayyaz-ul-Hassan	21	1 (ALP)
4.	Dr. Zammurad Iqbal Ahmad	4	-Nil
5.	Dr.Abdul Razzaq	10	1(HEC)
6.	Mr. Irfan Aziz	2	Nil
7.	Dr. Muhammad Ansar	5	Nil
8.	Dr. Muhammad Rasheed	6	Nil
9.	Mr. Ghulam Qadir	04	Nil
11.	Mr. Mukhtar Ahmad	2	Nil
12.	Dr. Abdul Manuaf	2	Nil
13.	Mr. Safdar Ali	1	Nil
14	D. M. Naveed tahirr		Nil
15	Dr. Ghulam Abbas shah		Nil
16	Fauzia Kanawal		Nil
Total		45 international as well as national	02

Faculty Satisfaction Regarding the Administrative Services

- The department upholds a percentage 4:1 for the academic (technical) and administrative non-technical staff which fulfils the standard set by HEC.
- Administrative meeting (departmental, university, academic council and syndicates) are attended as and when required.
- Regular disposal of office works is practised without reminder from higher authorities .
- Proper records of the following is maintained;
  - Enrolment
  - Research Reports
  - Entry test
  - Assignments
  - Tour reports
  - Attendance report
  - Evaluation report

Table No: 5 : Degree Requirements

Degree	Pre-requisites
M.Sc. (Hons.)	Academic minimum score of 2.5 CGPA, 45 credit hours comprising 35 credits of course work and 10 credits of research thesis, comprehensive examination and thesis writing.

Major future improvement plans

- Establishment of Crop Seed Production ,Research and Training Centre
- Execution of research projects funded by different donor agencies.
- Further Strengthening of Linkages with National/ International organizations. Participatory research activities.
- Establishment of demonstration plots on farmers fields.
- Arranging faculty trainings in advanced countries to equip them with latesdevelopments and research skills.

CRITERION 2:

CURRICULUM DESIGN AND ORGANIZATION

SECTION: 2

Criterion 2: Curriculum Design and organization:

Curriculum design and update is initiated by the faculty members of the Department after the approval of Board of Studies which comprises of senior faculty members and subject specialist who is taken from other faculties or from other Universities or research Institutions. It is headed by the Chairman of the Department. The approved curriculum is then sent to Board of Faculty, headed by the Dean, Faculty of Crop and Food Sciences. This Board consists of senior faculty members from all the Departments of the faculty and subject specialists. Finally the curriculum is presented before the Academic Council which is comprised of the Professors, Associate Professors, Faculty Representatives and nominated experts.

Definition of Credit Hour

A student must complete a definite number of credit hours. One credit hour is one theory lecture or two hours practical work per week. One credit hour carries 20 marks. The semester is of 18 weeks.

Degree Plan

M. Sc (Hons.) in Agronomy

The M.Sc (Hons.) degree program consists of 2 academic years / 4 semesters. As a whole a student has to study 35credit hours with 10 credit hours (research work and thesis writing) consisting of total 45 credit hours. Degrees are awarded after completing course work, one year research work, thesis writing and comprehensive examination are mandatory for the M.Sc (Hons.) degree. For Each course 10% marks are reserved for the assignments, 30% marks are for mid-term examination while 60% marks for final examination as per university rules

Pre-requisites

Academic Requirements:

The process of admission well established and followed as per rules and criteria set by HEC. For this purpose an advertisement is given in the National Newspapers by the Registrar office.

Table 6 : Admission requirements for different academic Programme

Degree	Pre-requisites
M.Sc. (Hons.)	B.Sc. (Hons.) Agriculture in Agronomy with minimum CGPA 2.50

Degree Requirements:

Degrees are awarded after completing the required number of credit hours (courses). Minimum Grade Point Average for obtaining the degree is 2.50. To remain on the roll of the university, a student shall be required to maintain the following minimum GPA/CGPA in each semester.

Table 7: Degree Requirements

Degree	Pre-requisites
M.Sc. (Hons.)	Academic minimum score of 2.5 CGPA, 45 credit hours comprising 35 credits of course work and 10 credits of research thesis, comprehensive examination and thesis writing.

Examination Weightage

In course work, student's evaluation is done by mid-term examination, assignments/presentations/quizzes and final examination. A student, who misses the mid-term examination, is not allowed a make-up examination and is awarded zero marks in that examination. In case a student does not appear in the final examination of a course, he shall be deemed to have failed in that course. In theory, weightage to each component of examination is as prescribed here under:

Mid Examination	30%
Assignments	10%
Final Examination	60%

For practical examination (if applicable) 100% Weightage is given to practical as scored in the final examination. A student is eligible to sit for the examination provided that he/she has attended not less than 75% of the classes in theory and practical, separately. The minimum pass marks for each course are 40 % for B.Sc.

Standard 2.1: Curriculum must be consistent & support the program's documented objectives

Table 8: Courses vs Program objectives

Courses	**Program objectives**		
	1	2	3
AGR-701, AGR- 702, AGR-703, AGR-704, AGR-716	+++	, ++	++++
AGR-705, AGR- 706, AGR-708, AGR-709, AGR-717	++	+++	++
AGR-710, AGR- 711, AGR-712, AGR-713, AGR-715	+++	+++	++++
AGR-714, and AGR- 718	+++	++++	++

+ = Relative, ++ = Relative and satisfactory , +++ = Very relevant & very satisfactory, ++++ = Highly relevant & highly satisfactory.

Standard 2.2:

Elements vs courses:
Table 9: Elements vs courses

Elements	Agronomy Courses
Theoretical background	AGR-701, AGR-702,AGR-703, AGR-704, AGR-705, AGR-706, AGR-708, AGR-709, AGR-710, AGR-711, AGR-712, AGR-713, AGR-714, AGR-715, AGR-716, AGR-717 and AGR-718
Problem analysis/ Solution Design	AGR-707 (Field Crop Experimentation)

Standard 2.3:

Credit hours distribution

Table 10: Credit hours distribution

Elements	Credit hours/ semester	Total credit hours	Course Work	Research and thesis
M. Sc. (Hons.) Agriculture	Minimum 12 Maximum 32	45	35	10

Standard 2.4:

Credit hours and HEC requirement

The courses offered by the department meet the minimum criteria as laid down by Higher Education Commission.

Standard 2.5:

Attendance requirement

Attendance required in each course is 75%, below which the student is not allowed to sit in the examination.

Standard 2.6:

Need for IT courses:

Information technology component of the curriculum must be integrated throughout the program.There is deficiency of information technology related courses but some activities and courses in program are useful to give basic training of IT especially of computer programs.

Standard 2.7:

Enhancement of communication skills

Two seminars included in the course work and presentation of special problem of 1credit hour in addition to the M.Sc.(Hons.) research activities enhances oral and written communication skills of the students .

CRITERION 3
LABORATORIES AND COMPUTER FACILITIES

Laboratory Facilities:

Laboratory titles:

1. Allelopathic Research lab
2. General research lab
3. Stress physiology lab
4. Nutrient efficacy lab

Location and Area:

Faculty of crop and food sciences, Ground floor, Agronomy Department

Objectives:

- Laboratories are used for:
- Practical exercise and demonstrations to students in their major courses
- Research work for the master,s students
- Used for implementing the funded projects by the University, HEC, PSF, PARC and other agencies.
- Laboratories are well spacious and adequate and efforts are being made to update these more advanced and sophisticated research in future.

List of instruments:

S/No.	Name of Equipment	Quantity/No.
1.	Heating Drying Cabinet	Three
2.	Water Distillery apparatus	One
3.	Over Head Projector	Two
4.	Computer with Laser Printer	Two
5.	Freezer	One
6.	pH Meter	Two

7.	EC Meter	One
8.	Centrifuge 14000 Rpm	One
9.	Top Loading Balance	Two
10.	Vacuum Pump	One
11.	Water Potential Appratus	One
12.	Water Bath	One
13.	Spectrophotometer	One
14.	Leaf Area Meter	Two
15.	Growth Chamber	Two
16.	Flame Photometer	One
17.	Analytical Balance	Two
18.	Osmometer	One
19.	Chiller	One
20.	Digestion Block	One
21.	Mechanical shaker	One
22.	Electric fan heater	One
23.	Gas heater	One
24.	Book Shelves	One
25.	Spring balance	Two
26.	Tripple beem balance	One
27.	Aquarium pump	Two
28.	Balance electronic	One
29.	Adjustable pippette	Four
30.	Vernier caliper	Six
31.	Seed counter	One
32.	Seed moisture tester	One
33.	Lux meter	One
34.	Balance open pan	One
35.	Drying oven	One
36.	Hot plate	One
37.	Micro kieldah distillation appratus	One
38.	Power sprayer	One
39.	Refrigerator	One
40.	Seed cleaner	One
41.	Seed dispensor machine	One
42.	Bio microscope	One
43.	Laminar flow	One
44.	Growth rack	Two
45.	Incubator	One
46.	Grinding machine	One
47.	Plant cutter	One

Shortcoming in Laboratory facilities:

- For faculty member and Master,s students equipments for growth analysis/physiological parameters are lacking viz. IRGA, chlorophyll meter, moisture monitoring, Neutron probe, tensiometers, water potential measurement devices. etc
- The department lacks lecture rooms so the research labs are being used for classes.
- A green/glass house is direly needed for controlled experiments.

Safety arrangements:

- There is no proper safety arrangement and no security plans are in the case of emergency.
- There is no emergency exit for the lab and classroom.
- No fire extinguishers have been installed in any laboratory.
- No first aid kits/ facilities provided in the laboratory/department.

Standard 3.1:

Laboratory Manuals

Laboratory manuals of each subject are not available. However,the department has its library having books on different areas of Agronomy..

Standard 3.2:

Laboratory Personalsfor Maintenance of Laboratory

There are Lab Assistants (02), and Laboratory Attendants(02)for themaintenance of Laboratories.

Standard 3.3: Computing Infrastructure and Facilities

Computer facilities are available to all faculty members and the master's students.

SECTION 4

CRITERION 4

STUDENT SUPPORT AND ADVISING

University organizes support programs and provides information regarding admission, scholarship schemes, etc. Department in its own capacity arranges orientation and guides various cultural activities and solve the student's problems, however currently there is no parent teacher association.

Standard 4.1:

Frequency of courses

- Courses are taught as per policy of HEC.
- At master,s level course subjects are offered as per scheme of study provided by HEC and approved.
- Courses are offered according to scheme of study.
- Elective courses are offered as per strategy of HEC and the university.
- For M. Sc. (Hons.), a variety of courses are offered according to demand of the profession.

Standard 4.2:

Structure of the courses

- To ensure effective interaction between students and faculty during course formulation both theoretical and practical aspects are focused.
- Theoretical problems are explained and assignment is also given to the students whereas practical are carried out both in the laboratory as well as in the field
- Courses are structured and decided in the board of study meetings.
- Emphasis is always given for an effective interaction between each section.

Standard 4.3:

Guidance to the Students

- Several steps have been taken to provide guidance to the students such as:

- Students are informed about the program requirement through the office of the head of the department.
- Through the personal communication of the teachers with the students.
- Students can also consult their relevant teachers whenever they face any professional problems.
- In case of some problems, Director, Student Affairs is available who is ready to help the students.
- Student can interact with the teachers in university, whenever they need.
- Realizing the need for exploring job opportunities for the university graduates, Directorate of placement bureau has been established at PMAS-AAUR.

CRITERION 5

PROCESS CONTROL

It includes student admission, registration, faculty recruitment activities which are dealt by various statutory bodies and the university administration.

Standard 5.1:

Program admission criteria

The process of admission is well established and followed as per rules and criteria set by HEC. For this purpose an advertisement is given in the National Newspapers by the Registrar office.

Table 11: Admission requirements

Degree	Pre-requisites
M.Sc. (Hons.)	B.Sc. (Hons.) Agriculture in Agronomy with minimum CGPA 2.50 and entry test is compulsory for admission in the degree

Standard 5.2:

Process of registration

- The student name, after completion of the admission process, are forwarded to the registrar office for proper registration in the specific program and registration numbers are issued to the students
- Registration is done for one time for each degree but evaluation is done through the result of each semester, if the students fulfill criteria of the university, they are promoted to the next semester.
- In general, the students are registered on merit basis keeping in view the academic and research standards.

Standards 5.3:

Recruiting Process for Faculty

- Recruitment policy followed the university is recommended by HEC for induction of new faculty is done as per rules:
- Vacant and newly created positions are advertised in the National Newspapers, applications are received by the registrar office and call letters are issued to the short listed candidates on the basis of their experiences, qualifications, publications and other qualities / activities as fixed by the university.
- The candidates are interviewed by the university selection Board. Principal and alternate candidate are selected.
- Selection of candidates is approved by the syndicate for issuing orders to join within a specified period.
- Induction of new candidates depends upon the number of sanctioned posts.
- Standard set by HEC are followed.
- At present, no procedure exists for retaining highly qualified faculty members, however, the revised pay scales of structures is quite attractive.
- HEC also supports appointment of highly qualified members as foreign faculty professors, National Professors and place them in various departments of the university.

Standard 5.4:

Teaching and Delivery of Course Material

- To help providing high quality teaching, Department periodically revises the curriculum depending upon requirements, innovations and new technology
- With the emergence of new fields, new courses are set and included in the curriculum
- Lecture notes are also prepared by the teachers and given the students.
- Most of the lectures are also supplemented by overheads, slides, pictures.
- All-out efforts are made that the courses and knowledge imparted should meet the objectives and outcomes. The progress is regularly reviewed in the staff meetings.

Standard 5-5:

Completion of Program Requirements

The controller of examinations announces the date of commencement ofexamination. After ~20-30 days of the examinations, the controller office notifies the resultsof the students. The evaluation procedure consists of mid and final examinations, practicalformulas, assignments and reports, oral and technical presentations. Candidates whosecure 80% or more marks are awarded grade A. Gold medals are awarded to the studentswho secure highest marks. Degrees are awarded to the students on the annual convocation that is held every year.

Examination Weightage

Grading Policy

A grade = 80 % and above

B grade = 65-79 %

C grade = 50-64 %

D grade = 40-49 %

F grade = below 40 %

CRITERION 6

FACULTY
Standard 6.1:
Full Time Faculty
Table 12: Faculty qualification

S. No.	Name of faculty member	Designation	Qualification	Name of Country Awarding Highest Degree	Date of Birth	Email address
1.	Dr. Muhammad Azim Malik	Professor	Ph.D.	USA	20-06-1955	drazim61@gmail.com
2.	Dr. Fayyaz-ul-Hassan Sahi	Professor	Ph.D.	UK	15-05-1963	fayyaz.sahi@uaar.edu.pk
3.	Dr. Zammurad Iqbal Ahmed	Associate Professor	Ph.D.	PK	01-05-1960	azammurad@htomail.com
4.	Dr. Abdul Razzaq	Associate Professor	Ph.D.	China	01-08-1957	abdul.razzaq@uaar.edu.pk
5.	Mr. Irfan Aziz	Assistant Professor	Ph.D.	PK		dIrfan.aziz@uaar.edu.pk
6.	Dr. Muhammad Ansar	Assistant Professor	Ph.D.	UK	14-10-1964	Muhammad.ansar@uaar.edu.pk drmatarar@gmail.com
7.	Dr. Muhammad Rasheed	Assistant Professor	Ph.D.	PK	09-10-1962	drrasheed786@gmail.com
8.	Dr. Ghulam Qadir	Assistant Professor	Ph.D.	PK	01-12-1968	Qadir@uaar.edu.pk
9.	Dr. Mukhtar Ahmed	Lecturer	Ph.D.	PK	01-10-1979	mukhtarahmad@uaar.edu.pk
10.	Dr. Abdul Manaf	Lecturer	Ph.D.	PK	20-02-1970	munafawan@yahoo.com
11.	Mr. Safdar Ali	Lecturer	M. Sc. (Hons.)	PK	01-10-1974	safdaraliarid@yahoo.com
12.	D. M. Naveed tahir	Assistant Professor	Ph. D	China		

Table 13. Faculty Distribution by Program Areas in Agronomy

S. No.	Area of Specialization	Faculty members
1.	Integrated Weed Management, Zero-tillage, Allelopathy	Prof.Dr. Muhammad Azim Malik, Mr. Safdar Ali
2.	Oilseed Crops, Crop Water Management	Prof.Dr. Fayyaz-ul-Hassan, Dr. Ghulam Qadir Dr. Abdul Manaf
3.	Integrated Plant Nutrient Management, Drought Stress physiology,	Prof.Dr. Zammurad Iqbal Ahmed, Dr. Muhammad Rasheed
4.	Stress Physiology, Genetic Transformation of Crops.	Dr. Abdul Razzaq
5.	Fodder & Forage Production	Dr. Muhammad Ansar
6.	Plant Physiology, Crop Growth Modeling and climate change, NRM & GIS	Mr. Naveed Tahir Mr. Mukhtar Ahmed Mr Irfan Aziz

List of publications

1. Prof. Dr. Muhammad Azim Malik

i. Sher, A., M. Ansar, F.U. Hassan, G. Shabbir and M.A . Malik, 2012. Hydrocyanic acid contents variation amongst sorghum cultivars grown with varying seed rates and nitrogen levels. Int. J. Agric. Biol ., 14: 720-726

ii. Parvez Khaliq, Azim Malik, Nasir Mahmood Cheema and Muhammad Umair.2012 Economics of wheat based cropping systems in rainfedareas of PakistanPakistan J. Agric. Res. Vol. 25 No. 3, 2012

iii. Zahid, A.; A. Khanum; M. Ansar and M.A. Malik. 2012. Effect of cutting and post-cutting intervals on hydrogen cyanide in sorghum forage grown under rainfed conditions. Pak. J. Bot. 44(3):955-960

iv. Sher, A., M. Ansar, G. Shabbir, M. A. Malik, A. Wasaya and R. H. Qureshi. 2012. Variability of hydrocyanic acids in fresh leaves of forage sorghum (Sorghum Bicolor (L.) Moench) grown under different soil moisture regimes. Submitted in Archive De Science Journal. Invoice Number ETuBwUW.

v. **Malik, M.A**., F. Zahoor, M. R. Anser, M. Rasheed and S. H. Raza. 2012. Weed biomass and economic yield of wheat (Triticum aestivum) as influenced by chemical weed control under rainfed conditions. African J. Biotech. 11(7): 1567-1573. DOI: 10.5897/AJB11.154.

vi. Ahmad Sher, Lorenzo Barbanti, M. Ansar and **M A Malik,**2013. Growth response and plant water status in forage sorghum (sorghum bicolor **(L.)**Moench cultivars subjected

2. Prof.Dr. Fayyaz-ul-Hassan

i. **Fayyaz-ul-Hassan** & Shauib Kaleem, 2014. Influence of seasonal disparity on NPK uptake in Sunflower. J. Anim. & Plant Sci. 24:190-196. Publisher:*Pakistan Agriculture Scientists Forum, Lahore,* (Impact Factor: 0.539).

ii. Hussain S, ***Fayyaz- Ul- Hassan***, M. Rasheed, S. Ali and M. Ahmed.(2014). Effects of allelopathic crop water extracts and their combinations on weeds and yield of rainfed wheat. *J. of Food, Agric. & Environment 12 : 161 - 167* . **(IF:0.579).** Publisher: *WFL* Publisher, Helsinki, Finland

iii. Malik, M.A., K.S. Khan, ***Fayyaz-Ul-Hassan*** and A. Umair, 2014. Dynamics of phosphorus pools in subtropical alkaline soils. *Int. J. Agric. Biol*., 16: 293–299. Publisher:*Friends Science Publisher, Faisalabad*. (Impact Factor: 0.935).

iv. Rehman H. U., M. Q. Nawaz, S. M. A. Basra, I. Afzal, A. Yasmeen and ***Fayyaz ul-Hassan***. 2014. Seed priming influence on early crop growth, phenological development and yield performance of Linola (*Linum usitatissimum* L.). Journal of Integrative Agriculture,13(5):990-996. Publisher:*Elsevier,* (Impact Factor. 0.435).

v. Mukhtar Ahmed, M. Aqeel Aslam, ***Fayyaz-Ul-Hassan***, M. Asif and Riffat Hayat, 2014.Use of APSIM to model nitrogen use efficiency of rain-fed Wheat. Int. J. Agric. & Biol. 16:461-470. Publisher:*Friends Science Publisher, Faisalabad*. (Impact Factor: 0.935).

vi. M. Ahmad, L. K. Teong, S. Sultana, I. U. Khan, A. A. Zuhairi, M. Zafar &***Fayyaz–ul-Hassan***, 2014. Optimization of Biodiesel Production from *Carthamus tinctorius* L. Cv.Thori 78: A Novel Cultivar of Safflower Crop. International Journal of Green Energy. DOI:10.1080/15435075.2013.841165**.** Publisher: *Taylor & Francis*,(Impact Factor. 2.761).

vii. Zafar Abbas, M. Akmal, K. S. Khan and ***Fayyaz-ul-Hassan***. 2014. Effect of Buctril Super (Bromoxynil) Herbicide on Soil Microbial Biomass and Bacterial Population. Braz. Arch. Biol. Technol. 57:9-14. Publisher: *Technology Institute of Paraná – Tecpar, Brazil*(Impact Factor: 0.436)

viii. S. Sultana, A. Khalid, M. Ahmad, A. A. Zuhairi, L. K. Teong, M. Zafar &***Fayyaz ul Hassan*** (2013): Production, optimization and characterization of biodiesel from a novel source: *Sinapis alba* L. International Journal of Green Energy, 11:280-29**.** Publisher: *Taylor & Francis*,(Impact Factor. 2.761).

ix. Ahmad M., ***Fayyaz-ul-Hassan***& M. Asif. 2014. Amelioration of Drought in Sorghum (*Sorghum bicolor* L.) by Silicon. Comm. Soil Sci. & Pt. An. 45(4):470-486 Publisher: *Taylor & Francis*,(Impact Factor: 0.432)

x. Ahmad M. M. Asif &***Fayyaz-ul-Hassan*.** 2014**.** Augmenting drought tolerance in sorghum by silicon nutrition. Acta Physiol Plant.36:473-483**(IF 2.36).** Publisher: *Springer*, (Impact Factor: 1.524) .

xi. Qudsia Bano, Noshin Ilyas, Asghari Bano, Nadia Zafar, Abida Ikram &***Fayyaz-ulHassan.*** 2013. Effect of *AZOSPIRILLUM* inoculation on Maize (*Zea mays* L) under drought stress. Pak. J. Bot. 45:13-20. Publisher: *Pakistan Botanical Society*, (Impact Factor: 1.207).

xii. Malik, M.A., K.S. Khan, P. Marschner and ***Fayyaz-ul-Hassan***, 2013. Microbial biomass, nutrient availability and nutrient uptake by wheat in two soils with organic amendments.Jour. of Soil Science and Plant Nutr., 13 (4), 955-966. Publisher: *Chilean Society of Soil Science* (Impact Factor: 0.779).

xiii. A. Wasaya, R. Ahmad, ***Fayyaz-Ul-Hassan***, M. Ansar, A. Manaf and A. Sher. 2013.Enhancing crop productivity through wheat (*Triticum aestivum L)*-Fenugreek intercropping system. J. Anim. & Plant Sci. 23:210-215. Publisher:*Pakistan Agriculture Scientists Forum, Lahore*(Impact Factor: 0.539).

xiv. Shamim Akhtar, Armghan Shahzad, Muhammad Arashad &***Fayyaz-ul-Hassan***. 2013. Morpho-physiological evaluation of Groundnut (*Arachis hypogaea* L) genotypes for iron deficiency tolerance. Pak. Jour. Bot**.,**45(3): 893-899**.** Publisher: *Pakistan Botanical Society*, (Impact Factor: 0.94).

xv. ***Fayyaz-ul-Hassan*** and Muhammad Arif. 2012. Response of white Mustard (*SINAPIS ALBA* L) to spacing under rainfed conditions J. Anim. & Plant Sci. 22:137-141. Publisher:*Pakistan Agriculture Scientists Forum, Lahore*(Impact Factor:0.638).

xvi. Ahmad Sher, Muhammad Ansar, ***Fayyaz-ul-Hassan***, Ghulam Shabbir and Muhammad Azim Malik. 2012. Hydrocyanic Acid Content Variation amongst SorghumCultivars Grown with Varying Seed Rates and Nitrogen Levels. Int. J. Agric. &

Biol. 14:720-726.Publisher:Friends Science Publisher, Faisalabad. (Impact Factor: 0.808).

xvii. Mukhtar Ahmed, ***Fayyaz-Ul-Hassan***, M. Aslam and M.A. Aslam. 2012.Physiological Attributes Based Resilience of Wheat to Climate Change. Int. J. Agric. & Biol. 14:407-412. Publisher:Friends Science Publisher, Faisalabad. (Impact Factor: 0.808).

xviii. Muhammad Akmal, M.S. Altaf, R. Hayat, ***Fayyaz-ul-Hassan***, M. Islam. 2012. Temporal changes in soil urease, alkaline phosphatase and Dehydrogenase activity in rainfed wheat field of Pakistan. J. Anim. & Plant Sci. 22:457-462. Publisher:*Pakistan Agriculture Scientists Forum, Lahore*(Impact Factor: 0.638) .

xix. Mukhtar Ahmed, ***Fayyaz-ul Hassan*** and M. Asif. 2012. Physiological response of bread wheat (*Triticum aestivum* L.) to high temperature and moisture stresses. Aust. J Crop Sci. 6:749-755. Publisher: *Southern Cross Publishing Group*, Australia(Impact Factor:1.623).

xx. ***Fayyaz-ul-Hassan*** and Mukhtar Ahmed 2012. Oil and fatty acid composition of peanut cultivars grown in Pakistan. Pak. Jour. of Botany, 44(2):627-630. Publisher: *Pakistan Botanical Society,* (Impact Factor: 0.94).

xxi. Muhammad Islam, S. Ali, S. Mohsin, R. Khalid, ***Fayyaz-ul-Hassan***, A. Mehmood and S. Afzal. 2012. Relative efficiency of two sulfur sources regarding nitrogen fixation and yield of Chickpea. Communications in Soil Science and Plant Analysis, 43:811–820**,** Publisher: *Taylor & Francis,*(Impact Factor: 0.432).

3. Dr. Zammurad Iqbal Ahmed

i. Saleem, R., Z. I. Ahmed, M. Yousaf, H. I. Javed and H. Shah. 2012. Agro-Economic evaluation of fertility sources for higher maize productivity under rainfed conditions. J. Agri. Res. 50(3): 349-360.

ii. Ahmed, M., A. Kamran, M. Asif, U. Qadeer, Z. I. Ahmed and A. Goyal. 2013. Silicon priming: a potential source to impart abiotic stress tolerance in wheat: a review. Australian J. Crop Sci. 7(4):484-491.

iii. Baloach, N., M. Yousaf, W. P. Akhter, S. Fahad, B. Ullah, G. Qadir and Z. I. Ahmed. 2014. Integrated effect of phosphate solubilizing bacteria and humic acid on physiomorphic attributes of maize. Int. J. Curr. Microbiol. App. Sci. 3(6): 549-554.

iv. Syed, S., Z. I. Ahmed, M. I. A. Haq, A. Muhammad and Y. Fujii. 2014. The possible role of organic acids as allelochemicals in *Tamarindus indica* L. leaves. Acta Agric. Scand. Sect. B – Soil & Plant Sci. 64(6):511-517.

v. Syed, S., M. I. A. Haq,, Z. I. Ahmed, A. Razzaq and M. Akaml. 2014. Root exudates and leaf leachates of 19 medicinal plants of Pakistan exhibit allelopathic potential. Pak. J. Bot. 46(5):1693-1701.

vi. Ahmad, A., Z. I. Ahmed, I. Aziz and A. Ahmad. 2014. Optimiing organic and inorganic fertilizer recommendation in rainfed Pothowar region of Pakistan: a case study of barley sorghum and barley mungbean crop rotations.Int.J.Curr.Miicrobiol.App.Sci. 3(8):xx-xx.

4. Dr. Abdul Razzaq

i. **Razzaq, A**., Q. Ali, A. Qayyum, I. Mahmood, M. Ahmad and M. Rasheed. 2013. Physiological responses and drought resistance index of nine wheat (Triticum aestivum L.) cultivars under different moisture conditions. Pak. J. Bot., 45(SI): 151-155 (IF .0.937).

ii. Khalid M., M. Arshad, G. M. Ali and **A. Razzaq**. 2013. Tissue culture responses of some wheat (*Triticum aestivum* L.) cultivars grown in Pakistan. *Pak. J. Bot*., 45(SI): 545-549 (IF 0.937).

iii. Chaudhry, A. N., M. A. Naeem, G. Jilani, **A. Razzaq,** D. Zhang. M. Azeem and M. Ahmad. 2013. Influence of composting and poultry litter storage methods on mineralization and nutrient dynamics. J. Ani.Plant Sci. 23(2): 500-506 (IF 0.250)

iv. Rao, S.R., A. Qayyum, **A. Razzaq**, M. Ahmad, A. Sher. 2012. Role of foliar application of salicylic acid and L-trptophan in drought tolerance of maize. J. Ani.Plant Sci., 22 (3): 768-772 (IF 0.937).

v. Mahmood, I., A. Razzaq, Z. Khan, I.A. Hafiz, and S. Kaleem. 2012. Evaluation of tissue culture responses of promising wheat (Triticum aestivum L.) cultivars and development of efficient regeneration system. Pak. J. Bot. (Special Issue) 44: 277-284 (IF 0.937)

5. Dr. Ghulam Qadir

i. Riaz.A, jane Nicklin, Irfan-ul-Huq, Abdur Rauf, G.Qadir and F. Naz. 2013. Toxicity Induced by Solanapyronea in Chickpea shoots and its Metabolism through Glutathione/Glutathione-S-Transferase System.Pak. J. Botany. Vol.45 (1): 135-139.(Impact .Factor)

ii. Qadir.G., M.Ikram,F.Hassan and R. Hayat. 2014. Interactive effect of Humic Acid and plant growth promoting Rhizobacteria(PGPR)on growth and yield of maize under rainfed conditions. Ref. No Pass/UCA/305.(Accepted- Hec.Recognized).

iii. Ali.Amjid,Rabia Khalid,G.Qadir,S.Ali,Z.Akram and R.Hayat. 2014. Plant growth promoting characterization of Rhizosphere bacteria and re-inoculation response of Chickpea(Cicer arietinum L.) . Ref. No Pass/UCA/287.(Accepted-Hec.Recognized)

iv. Baloch.Nadir,M.Yousaf,W.P.Akhtar,Shah.F,B.Ullaha,G.Qadir and Z.IAhmad. 2014. Integrated Effect Of phosphate solubilizing bacteria and Humic acid on physiomorphic attributes of maize.Int J.of current microbiology and applied sciences, Internat.J. Agro Biol.) 3(6) (549-554) 2014.

6. Mukhtar Ahmad

i. **Mukhtar Ahmed**, Fayyaz Ul Hassan and F. F. Van Ogtrop. 2014. Can models help to forecast rainwater dynamics for rainfed ecosystem? *Weather and Climate Extremes* 5–6 (0):48-55 .

ii. S. Hussain, F.U. Hassan, M. Rasheed, S. Ali and **Mukhtar Ahmed**. (2014). Effects of allelopathic crop water extracts and their combinations on weeds and yield of rainfed wheat in Jornal of Food, Agriculture and Environment. *12 (3&4):161-167*

iii. F. K. Awan, M. Y. khurshid, O. Afzal, **Mukhtar Ahmed** and A. N. Chaudhry (2014). Agro-morphological evaluation of some exotic common bean (P*haseolus vulgaris* L.) genotypes under rainfed conditions of Islamabad, Pakistan. *Pak. J. Bot.,* 46(1): 259-264, 2014.

iv. **Mukhtar Ahmed**, M.Asif and F.U.Hassan (2013). Augmenting drought tolerance in sorghum by silicon nutrition. Acta Physiol Plant, 1-11.

v. **Mukhtar Ahmed** and S.Farooq. (2013). Growth and physiological responses of wheat cultivars under various planting windows. The Journal of Animal & Plant Sciences, 23(5): 1407-1414

vi. **Mukhtar Ahmed**, Fayyaz-ul-Hassan and Muhammad Asif. Amelioration of Drought In Sorghum (*Sorghum bicolor L.*) by silicon (2013) Communications in Soil Science and Plant Analysis

vii. Floris van Ogtrop, **Mukhtar Ahmed**, Carina Moeller. (2013). Principal components of sea surface temperatures as predictors of seasonal rainfall in rainfed wheat growing areas of Pakistan. *Meteorological Applications* DOI: 10.1002/met.1429

viii. Zohra Aslam, **Mukhtar Ahmed**, Muhammad Sajad, Muhammad Asif, Muhammad Akmal, Fahad Karim Awan, Waqas Ijaz, Raseela Ashraf, and Jabar Zaman Khan Khattak. (*2013).* **A Comparison of Statistical and Dynamic Modeling of Wheat (*Triticum aestivum* L.) Fungal Diseases under the Climate Change.** 11 (2): 1327-1332. Journal of Food Agriculture and Environment

ix. Mukhtar Ahmed, Muhammad Asif, Muhammad Sajad, Jabar Zaman Khan Khattak, Waqas Ijaz, Fayyaz-ul-Hassan, Allah Wasaya and Jong Ahn Chun. 2013. **Could agricultural system be adapted to climate change? A Review.**7(11):1642-1653 Australian Journal of Crop Sciences

x. **Mukhtar Ahmed**, Atif Kamran, Muhammad Asif, Ummara Qadeer, Zammurad Iqbal Ahmed, Aakash Goyal. Silicon priming: a potential source to impart abiotic stress tolerance in wheat: A review. (2013). Australian Journal of Crop Sciences. 7(4): 484-491

xi. Nazima Batool, Muhammad Asif, Muhammad Arshad, Fayyaz-ul-Hassan, **Mukhtar Ahmed** and Saikat Basu. Effects of siliqua position on physico-chemical composition of canola (*Brassica napus* L.) seed. (2013). Plant Knowledge Journal.2(1):51-55

xii. **Mukhtar Ahmed**, Arvind H. Hirani, Muhammad Asif, Muhammad Sajad. Modeling soil water dynamics under rainfed agriculture to mitigate climate change. (2013). Journal of Agriculture Science.5(3):90-104

xiii. Mukhtar S., Arshad M., Basu S., Hassan F.U., **Ahmed M**., Asif M. Influence of capsule position on seed traits and oil content of linseed (*Linum usitatissimum* L.). (2012). Plant Knowledge Journal. 1(2): 52-56.

xiv. **Ahmed M.**, Hassan F.U., Asif M "Physiological response of bread wheat (*Triticum aestivum* L.) to high temperature and moisture stresses" (2012) Australian Journal of Crop Sciences Vol:6(4) pp:749-755.

xv. **Ahmed M.**, Hassan F.U., Aslam M., Aslam M.A "Physiological Attributes Based Resilience of Wheat to Climate" (2012) International Journal of Agriculture & Biology Vol: 14(3) pp:407-412.

xvi. Hassan F.U., **Ahmad M** "Oil and Fatty Acid Composition of Peanut Cultivars Grown In Pakistan " (2012) Pakistan Journal of Botany Vol:44(2) pp:627-630.

Standard 6.2:

Effective Programs for Faculty Development.

- Professional training and availability of adequate research and academic facilities are provided to the faculty members according to the available resources.
- Currently one faculty member is abroad for Post-Doc on Fulbright scholarship.
- Incentives in the form of allowances to theses supervisors have been implemented for the promotion of high profile research.
- Existing facilities include mainly internet access, which is available through networking system in addition to library facility with latest books also available.
- Effective programs for faculty development have been introduced.

Standard 6.3:

Faculty member motivation

- Time to time provision of enthusiasm to the young faculty by the senior faculty members.

CRITERION 7
INSTITUTIONAL FACILITIES

Standard 7.1:
Infrastructure

- The department must have the infrastructure to support new trends in learning and research.
- Department has established new laboratory for research related to crop physiology and working on developing new more laboratories.
- Equipments are not suffiecient to meet the current requirement of research.

Lack of Institutional Facilities

- Insufficient facilities regarding the infrastructure to support new trends in learning or prevalent.
- Department library must be developed to provide support to graduate and post graduate students.
- Computer facilities should be provided to the staff and postgraduate students.
- Offices must be adequate to enable faculty to carry out their responsibility.

Standard 7.2:
Library Facilities

The university Central Library has very limited number of books, journals and periodicals. It's a small library in term of space and facilities with no catalogue systems. It does not meet the standards of a university library. Department itself does not have a library.

Standard 7.3:
Class Room and Faculty Offices

No class room available. Research laboratories are being used for teaching purpose also,which affect the working of research students. Two to three teachers are sharing rooms.

Unavailability of most modern and related books and internet affects the quality of teaching. Common room for students is also missing.

CRITERION 8

INSTITUTIONAL SUPPORT

- Institutional support is highly appreciated.
- The upgradation of existing teaching cadre also provided and added advantage in detaining the present faculty.
- Sufficient secretarial support, technical staff and office equipment.

Lack of Institutional support

- Due to unavailability of class rooms, classes are taken in the laboratories.
- Financial support should be raised and allocate funds for postgraduate research students.

Standard 8.1:

Support and financial resources

The department has limited funds and Individual research grants for students and faculty are mainly supporting the departmental research activities. There is a dire need for increasing the financial resources allocated to the department to establish a library, laboratories and computer facilities.

Standard 8.2:

High quality Research scholars

The intake is once in a year. A strict merit policy applies and University test/GAT is preferred.

Standard 8.3:

Financial resources

Total budget of the department of agronomy for the financialyears 2008-09 and 2009-10 was Rs. 24000 and 202000 respectively which does not fulfill the departmental needs particularly for the purchase of equipment, chemicals etc.

List of Enrolment for last few years

Around 18-20 students get admission in M.Sc. (Hons.) Agriculture in. Agronomy every year.

SUMMARY

Agronomy is a diverse profession that encompasses all aspects of crop production and soil management. The Mission of Agronomy department is to equip and impart training to M.Sc. (Hons.) students for high-quality education for their esteemed and productive living. The department started its M.Sc. (Hons.) degree program in 1996. The Department has well structured academic programme of M.Sc. (Hons) Agriculture. The courses aim to develop and strengthen students capacity to grasp principles and practices Agronomy based on scientific principles. The strong academics enables them to specialize in one or more areas reflecting the student's particular interest. Specialization in Agronomy have inputconsiderate of the current concepts of crop and edaphic practices. In addition they have sufficient specialist knowledge in selected areas to allow them to pursue a research degree in crop science. M.Sc. (Hons.) students acquire scientific background as well as having gained experience in problem solving and have developed the communication, numerical and computer skills required for a wide range of careers.

In order to evaluate whether department is fulfilling its objectives or not, surveys on various aspects such as course evaluation, teacher evaluation, alumni survey, research/graduating students surveys and faculty survey etc. have been conducted by the departmental members of the program team. The data were collected on prearranged proformas and later on analyzed and presented in the form of graphs and tables. The data revealed that students are satisfied with the subject approach of faculty members, their fairness in examination, and level of knowledge. However, the partial availability of lecture rooms and poor laboratories infrastructure were reported as major hurdles. Course evaluation survey showed that students are satisfied with workload and value of knowledge provided to them. According to research student survey, accessibility of internet and access to various scientific journals is limited. Similarly, the department has limited budget for research purposes which cannot maintain laboratories and research activities. According to employer survey, students are good at job but they have very basic knowledge of information technology and computer skills.

Faculty members are pleased with their salaries but they have severe concerns about the workload as most of them are agreed that they have very less time for themselves.

The faculty course review report tinted the need to divide the M.Sc. (Hons) Agriculture class into several section so that the teachers and students have conducive environment for teaching and learning. Some courses were rated as excellent but lengthy. Overall, the program of study was rated very good. The internship programme was reported as highly effective as majority of the internees were satisfied from the programme. However, the problems related to accommodation and research facilities and poor stipend were reported.

The Department has highly qualified and experienced faculty mostly having post doctorate research experience from universities of worldwiderenown. The faculty has produced 45 publications during the last five years in journals of national and international repute. Moreover, five research projects were completed during the reported period; lack of infrastructure to transfer the recommended practices and technology to farmers. Access to latest literature and availability of updated review is not up to the mark. There is a need for short foreign trainings of young faculty members.

The performance of the department may be further improved considering:

- Split class rooms are required to facilitate the post-graduate students to continue laboratory works without breaks.
- There is a shortage of personal computers and unavailability of Internet which creates many impediments. Improvement in this area will also speed up the level of research and teaching,
- Departmental Laboratories need intensification through new equipments.
- There is also need to recover mix of research and teaching proportion to fabricate professionally sound graduates,
- At present there are no planning for professional training of the staff. Such trainings will improve their abilities for attractive the quality of research and teaching. It would be worthy to point out here that proper man at proper place is not being practiced.
- The budget allocated to the department hardly meets the requirements of the research,

- At present there is no departmental library. Allocation of sufficient funds for this purpose will be helpful in subscribing reputed journals and purchase of books that will ultimately boost quality of learning, teaching and research.

Annexure-1

List of Courses offered by the Department of Agronomy for M.Sc. (Hons.) Agronomy.

S. No	Course No.	Title	Credit Hours
1.	AGR-701	Modern Crop Production	4(3-2)
2.	AGR-702	Advanced Agronomy	4(3-2)
3.	AGR-703	Dryland Agro Management	3(3-0)
4.	AGR-704	Crop Environment	3(2-2)
5.	AGR-705	Sustainable Agriculture	3(3-0)
6.	AGR-706	Weed Management	4(3-2)
7.	AGR-707	Field Crop Experimentation	4(3-2)
8.	AGR-708	Advanced Seed Techonology	4(3-2)
9.	AGR-709	Heribicides and Crop Production	4(3-2)
10.	AGR-710	Crop Nutrition	3(2-2)
11.	AGR-711	Recent Advances in Agronomy	3(3-0)
12.	AGR-712	Plant Water Relations	3(2-2)
13.	AGR-713	Seed Physiology	3(3-0)
14.	AGR-714	Agro-Environment Conservation	3(3-0)
15.	AGR-715	Seed Production and Management	3(2-2)
16.	AGR-716	Principles of Remote Sensing	3(2-2)
17.	AGR-717	Integrated Agriculture	3(3-0)
18.	AGR-718	Crop Modeling	3(2-2)
19.	AGR-719	Special problem	1(1-0)
20.	AGR-720	Seminar-I	1(1-0)
		Seminar-II	1(1-0)

Annexure-2

Proforma 9 **FACULTY RESUME**

Name	**Dr. Zammurad Iqbal Ahmed**
Personal	Father's Name: Ghulam Ahmed Date of Birth 1st May 1960 Phone : 051-9062256, Cell 0333-5101247 E-mail : azammurad@hotmail.com Address House # 11, University Colony # 2, Opposite Divisional Public School, Shamsabad,Rawalpindi, Pakistan Academic Qualification: I did my B.Sc. (Hons) and M.Sc. (Hons) degrees in Agronomy from University of Agriculture , Faisalabad in 1984 and 1984 respectively.Whereas,Ph.D in Agronomy with dissertation title as" Morpho. Genetic expression of sunflower under varied Temperature and Moisture regimes"in 1996 from Unversity of agriculture, Faisalabad.and MBA- Human Resource Management in 2004 from PMAS-AAUR.I did my Post doctorate from Zhejiang University ,China in 2008.
EXPERIENCE	I served as Lecturer in Agronomy (BPS 17) at NARC, Islamabad w.e.f. 28.4.1998 to 14-10-2006 and Assistant professor (BPS 18) from 14-10-2006 to May, 2010 and as Associate professor w.e.f. 19-05 2010 to Aug,2014 and promoted Professor Agronomy in Aug, 2014. at PMAS -AAUR . I am member of Academic Council and Faculty Board of Studies. I have also the charge of Head of the Department of Library for ten years. I had been Hall Warden for about two years and member of Central Purchase Committee of the University. Member of National Curriculum Revision Committee of Higher Education Commission. .
Publications	Impact factor- 25 HEC recognized-06 Non HEC recognized-00
Honor and Awards	Won the HEC Post Doctorate fellowship for one year during 2007-8
Supervised Students	Number of students who were supervised and completed their M.Sc (Hons) degree-06 Ph.D -05
Service Activity	Teaching and Research.
Research Grants and Contracts	Title: Promotion of Safflower through participatory approach in Pothwar. Value: Rs. 3.017 Million Agency: Agricultural Linkage Program, Pak. Agric. Res. Council, Islamabad. Duration: 2012-2015.

Proforma 9

<table>
<tr><td>Name</td><td>Prof. Dr. Fayyaz Ul Hassan</td></tr>
<tr><td>Personal</td><td>
Professor of Agronomy
Department of Agronomy
University of Arid Agriculture,
Rawalpindi
Phone Office: +92-51-9062217,
Cell: 0300-9514597
Fax Office: +92-51-9290160
E-mail:fayyaz.sahi@uaar.edu.pk
drsahi63@gmail.com
Phone Residence: +92-51-4848187

Name Fayyaz-ul-Hassan
Date of Birth 15-05-1963
Father’s Name Abdul Latif
Permanent Address Village & Post Office TOOR, Teh. & Distt JHELUM

EDUCATION

<table>
<tr><th>University/Board</th><th>Degree</th><th>Year</th></tr>
<tr><td>Curtin University of Technology, Perth, Australia</td><td>Post Doc</td><td>2007</td></tr>
<tr><td>University of Wales Aberystwyth (UK)</td><td>PhD</td><td>1995</td></tr>
<tr><td>University of Agriculture, Faisalabad (Pakistan)</td><td>M.Sc(Hons)</td><td>1988</td></tr>
<tr><td>University of Agriculture, Faisalabad (Pakistan)</td><td>B.Sc(Hons)</td><td>1986</td></tr>
<tr><td>Board of Intermediate & Secondary Education, Mirpur</td><td>F.Sc(Pre-med.)</td><td>1981</td></tr>
<tr><td>Board of Intermediate & Secondary Education, Rawalpindi</td><td>Matric(Sci.)</td><td>1979</td></tr>
</table>
</td></tr>
<tr><td>Experience</td><td>
As Professor 23-06-07 to date

Main Duties:
• Teaching postgraduate and undergraduate courses.
• Supervision of Ph.D and M.Sc student’s research.
• Planning & Management of University Research Farm.
• Planning & Execution of cropping pattern/ scheme at Research Farm.
• Writing, planning and execution of research projects.
• Financial and operational management of research projects & Farm.

As Associate Professor 29-05-04 to date 22-06-2007

Main Duties:
• Teaching postgraduate and undergraduate courses.
</td></tr>
</table>

	• Supervision of PhD and M.Sc student's research. • Writing, planning and execution of research projects. • Data recording, writing and compilation of annual reports of research projects. • Financial and operational management of projects. • Advisory service when and where needed. As Assistant Professor: From 22-1-1998 to 29-05-04 Main Duties: • Teaching postgraduate and undergraduate courses. • Supervision of student's research. • Planning, execution, data collection of research projects. • Management and maintenance of department laboratories. • Coordination amongst departments for timetable/date sheet etc. • Checking/review of student's thesis at University level. • As Assistant Agronomist (Water Management): From 15-1-1992 to 22-1-1998. Main Duties: • Supervision and guidance of field staff related to agronomic development activities. • Preparation of PC-1 of development schemes related to soil and water conservation. • Training of field staff and farmers for farm designing, layout and management. • Community mobilization and organization for water management activities. • Demonstration and layout of sprinkler and drip irrigation systems. • Preparation and presentation of monthly and annual reports. • Farm advisory service when and where needed. As Agricultural Officer (Water Management): From 16-11-1989 to 15-1-1992. Main Duties: • Supervision and guidance of field staff related to field activities. • Preparation of monthly, semi annul and annual reports. • Training of field staff and farmers for farm designing, layout and management. • Farmers mobilization and organization to benefit from development projects. • Office supervision and management. Assistant Research Officer: From 1-1-1989 to 15-11-1989. Main Duties:

	• Planning, layout and execution of research experiments. • Data recording/collection, analysis and writing results/reports. • Farm management including resource mobilization and utilization. • Farm inventory preparation/compilation. MANAGEMENT EXPERIENCE Assistant Warden, From July, 1993 to September, 1995,Cwrt Mawr student' Hall of Residence,University of Wales Aberystwyth (UK).
Honor and Awards	Ministry of Education Scholarship for PhD 1992. Overseas Research Students Award 1994-95(Awarded by CVCP UK). Endeavour Pakistan Research Award by Govt. of Australia, 2007
Graduate Students **Postdocs** **Undergraduate Students** **Honour Students**	Number of students who were supervised and completed their M.Sc (Hons) degree-08 Ph.D -01
Service Activity	Teaching and Research.
Research Grants and Contracts	Title: Promotion of Safflower through participatory approach in Pothwar. Value: Rs. 3.017 Million Agency: Agricultural Linkage Program, Pak. Agric. Res. Council, Islamabad. Duration: 2012-2015.

Brief Statement of Research Interest	• Crop production and Management. • Oilseed crop production and enhancement. • Water management and conservation.
Publications	Impact factor- 20.70 HEC recognized- 21 Non HEC recognized- 0
Supervised Students	Number of students who were supervised and completed their M.Sc (Hons) degree- Ph.D -
Service Activity	Teaching and research
Research Grants and Contracts	Nil

Proforma 9

Name	**Muhammad Azim Malik**
Personal	Date & Place of Birth: June 20, 1955, Mainwali, Present Position Chairman and Professor of Agronomy Qualifications

S/No.	***Name of Institution***	**Degree/Diploma**	**Year**	**Division**
1	University of Wyoming, Laramie, USA	Ph. D. Agronomy	1990	CGPA (3.54)
2	University of Agriculture, Faisalabad	M. Sc. (Hons.) Agronomy	1979	1st
3	University of Agriculture, Faisalabad	B. Sc. (Hons.)	1976	1st
4	University of Agriculture, Faisalabad	F. Sc.	1973	2nd
5	Govt. High School PiplanDistt. Mainwali	Matriculation	1971	1st

Experience	I served as Assistant Agronomist, w.e.f. 05-05-1979 to 11-30-1981

	at PARI, Faisalabad and Farm Manager from 24-02-1982 to 05-07-1985,Assistant Professor, 06-07-1985 to 04-04-1994,w.e.f 05-04-1994 to 15-08-2003 as Associate Professor and Professor of Agronomy, 16-08-2003 to to-date at PMAS-AAUR.
Honor and Awards	• Served for 3 years as member on National Curriculum Review Committee of Crop Physiology, University of Agriculture, Faisalabad • Served for 3 years as member on Finance & Planning Committee, University of Arid Agriculture, Rawalpindi • Serving since 1996 as member of academic council, University of Arid Agriculture, Rawalpindi • Serving since 1994 as member on several postgraduate supervisory committees of different disciplines in University of Arid Agriculture, Rawalpindi • Serving as Senior Tutor since April 1st, 2003 in University of Arid Agriculture, Rawalpindi
Publications	Impact factor- 01 HEC recognized- 01 Non HEC recognized- 04
Supervised Students	Number of students who were supervised and completed their M.Sc (Hons) degree-06 Ph.D -03
Service Activity	Teaching and research
Research Grants and Contracts	Nil

Proforma 9

<table>
<tr><td>Name</td><td colspan="5">Abdul Razzaq</td></tr>
<tr><td>Person</td><td colspan="5">Date & Place of Birth: August 1, 1957
Present Position: Associate Professor of Agronomy
Quaifications
<table>
<tr><th>S/No.</th><th>Name of Institution</th><th>Degree/Diploma</th><th>Year</th><th>Division</th></tr>
<tr><td>1</td><td>Agricultural University of Hebei Baoding PR China</td><td>Ph. D</td><td>2005</td><td>A (94%)</td></tr>
<tr><td>2</td><td>University of Agriculture, Faisalabad</td><td>B.Sc.(Hons)Agri.</td><td>1988</td><td>B (3.77 CGPA)</td></tr>
<tr><td>3</td><td>Barani Agri. College, University of Agri. Faisalabad</td><td>M.Sc.(Hons)Agri.</td><td>1986</td><td>B (3.96 CGPA)</td></tr>
<tr><td>4</td><td>Sir Syed Degree College Gujrat</td><td>F. Sc.</td><td>1976</td><td>First (Gold Medal)</td></tr>
<tr><td>5</td><td>Pak Islamia High School Shadiwal (Gujrat)</td><td>Matric</td><td>1973</td><td>First</td></tr>
</table></td></tr>
<tr><td>Experience</td><td colspan="5">I served as Lecturer from July-1988 to March-2005 at Arid Agriculture University Rawalpindi (Former Barani Agricultural College Rwp),from Mar-2005 to Sep-2007 as Assistant Professor and from Sept-2007 to date as Associate Professor of Agronomy at PMAS-AAUR.
More than 25 years experience of teaching introductory courses on Crop Production and Management, Stress Physiology, Supervision of Master & Ph. D students.</td></tr>
<tr><td>Honor and Awards</td><td colspan="5">• Academic Gold Medal for standing first in B.Sc. (Hons.) Agri. (1982-86)
• Certificate of Appreciation from Hebei Academy of Agriculture and Forestry Sciences, Shijiazhuang, PR China
• Honor Certificate from Hebei Education Department, Shijiazhuang PR China
• Member Syndicate, PMAS-Arid Agriculture University Rawalpindi for three years w.e.f. 2008 to 2011
• Member Planning and Finance Committee, PMAS-Arid Agriculture University Rawalpindi for three years w.e.f. 2008 to 2011
• Innovated a comprehensive method/protocol for in planta genetic transformation of wheat through apical meristem of imbibed seed
• Founded “Kisan Seed Bank” first time in Pothwar (one at Gujar Khan and one at Nara Mughlan Chakwal) in 2013
• Used chemically synthesized nano-particles to determine their crop growth</td></tr>
</table>

	first time in Pakistan • Worked on earth's planetary system and proved that it is not the earth that revolves around the sun it is otherwise as mentioned in Quran. Submitted first paper of this series to Monthly Notices of Royal Astronomical Society under the caption "Mathematical appraisal of earth's axial precession and its implications
Publications	Impact factor-07 HEC recognized-02 Non HEC recognized- 01
Supervised Students	Number of students who were supervised and completed their M.Sc (Hons) degree-06 Ph.D -03
Service Activity	Teaching and research
Research Grants and Contracts	**Ressearch Projects** One project entitled"Potential Applicationof Nanotechnology in Crop/Vegetable Growth, Nutrient Use Efficiency, Crop Tissue Culture and Tolerance to Osmotic Stress"Funds: Rs.4.785 million ,Funding Agency: HEC Islamabad with Duration: 3 years (January 2012 to December 2014)

Proforma 9

Name	**Dr. Ghulam Qadir**
Personal	Father name: Malik Umar Hayat Date of birth: December 1, 1968 Ph: 92-51-4426318,0333 5101301 Email: qadirakaira@hotmail.com Place of birth: Jhang (Pakistan) Nationality: Pakistani Mailing address: H#.20 colony #1, PMAS, Arid Agriculture, University, Murree Road Rawalpindi. Contact: 03335101301, 0514426318 Academic Qualification: I did my B.Sc. (Hons) and M.Sc. (Hons) degrees in Agronomy from University of Agriculture , Faisalabad in 1990 and 1993 respectively.Whereas, Ph.D in Agronomy with dissertation title as" Morpho. Genetic expression of sunflower under varied Temperature and Moisture regimes" in 2006 from PMAS – AAUR and Post doctorate from UK.
Experience	I served as Science Officer (BPS 17) at NARC, Islamabad w.e.f. 07.9.1993 to 28.4.1998. 2. Served as Lecturer in Agronomy (BPS 17) w.e.f. 28.4.1998 to 14-10-2006 and Assistant professor (BPS 18) from 14-10-2006 to May, 2010 and as Associate professor w.e.f. 19-05 2010 to onward at PMAS -AAUR

Honor and Awards	Won the indigenous PhD Scholarship sponsored by Ministry of Science & Technology under the supervision of HEC in the first batch in open competition in 2001.
Memberships	Pakistan Botanical Society Pakistan Agricultural Scientist Forum Pakistan Agronomy Society Pakistan Weed Science Society
Graduate Students **Postdocs** **Undergraduate Students** **Honour Students**	Number of students who were supervised and completed their M.Sc (Hons) degree-03 Ph.D - Nil
Service Activity	Teaching and Research.
Publications	i. Impact factor-01 ii. HEC recognized-02 iii. Non HEC recognized-01
Research Grants and Contracts.	Research projects:. Nil Project submitted: Nil

Proforma 9

<table>
<tr><td>Name</td><td colspan="7">Mukhtar Ahmed</td></tr>
<tr><td>Personal</td><td colspan="7">New Abadi Near Health Center Derbar Mushadi Village Hayal Shareef
P.O.Sadder G.P.O Tehsil & District Rawalpindi, Pakistan
Cell # Tel # (051) 5576675
E-mai- mukhtarahmedmalik@yahoo.com, ahmadmukhtar@uaar.edu.pk
Qualifications
<table>
<tr><th rowspan="2">Name of Institution</th><th rowspan="2">Place</th><th colspan="2">Period</th><th rowspan="2">Examination Passed</th><th rowspan="2">Division</th><th rowspan="2"></th></tr>
<tr><th>From</th><th>To</th></tr>
<tr><td>502 Model High School Lalazar Rawalpindi</td><td>Rawalpindi .</td><td>1984</td><td>1994</td><td>Matric</td><td>First</td><td></td></tr>
<tr><td>F.G Sir Syed College,the Mall Rawalpindi</td><td>Rawalpindi</td><td>1994</td><td>1996</td><td>F.Sc</td><td>First</td><td></td></tr>
<tr><td>PMAS-AAUR</td><td>Rawalpindi</td><td>1996</td><td>2000</td><td>B.Sc (Honours) Four Years (AGRICULTURE)</td><td>First</td><td></td></tr>
<tr><td>PMAS-AAUR</td><td>Rawalpindi</td><td>2000</td><td>2002</td><td>M.Sc (Honours)</td><td>First</td><td></td></tr>
</table></td></tr>
<tr><td>Experience</td><td colspan="7">Two-year experiences in conservation planning during study at NARC.I have conducted specialization studies on fatty acid composition in maize cultivars under drought conditions upto graduation level.Work experience with NGO (Human resource development).One year experience in agriculture extension and research as “Agricultural Officer”Worked as “Research Associate” in Agri link project (ALP)Working as “Lecturer” of Agronomy in PMAS-AAUR.</td></tr>
<tr><td>Memberships</td><td colspan="7">Nil</td></tr>
<tr><td>Graduate Students
Postdocs
Undergraduate Students
Honour Students</td><td colspan="7">Number of students who completed during the reporting period their
M.Sc (Hons) degree-
Ph.D degree-</td></tr>
<tr><td>Service Activity</td><td colspan="7">Teaching and Research.</td></tr>
<tr><td>Publications</td><td colspan="7">• Impact factor-12
• HEC recognized-12
• Non HEC recognized-04</td></tr>
<tr><td>Research Grants and Contracts.</td><td colspan="7">Nil</td></tr>
</table>