



AIC Report

Dr. Ishfaq Ahmad Hafiz

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**Department of Horticulture
University of Haripur**

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Department of Horticulture, University of Haripur, Haripur

Executive Summary

The Department of agricultural sciences was established in April, 2008 under the umbrella of Faculty of Sciences at Haripur Campus of Hazara University and classes of B.Sc (Hons) horticulture major were started. University act of University of Haripur was approved in July, 2012. The university is in its developing phase and has great potential to flourish in future particularly in the field of horticulture.

Haripur area has a lot of potential regarding the Horticultural crops. Horticulture department is included under the umbrella of department of agriculture. The Faculty members of the Department of Horticulture, University of Haripur are capable of teaching and conducting research of good quality and there are only two assistant professors and three lecturers. The number of faculty members is insufficient and they are overburdened with the credit hours. There is only one Ph.D faculty member while others are M.Sc., so there is deficiency of senior faculty members like professor and associate professor as per criteria of HEC. Lab facility, equipments and class rooms at Department of Horticulture are not sufficient.

Basic infrastructure facilities including laboratory and departmental library are also not up to date. So there must be well established faculty of agricultural sciences and the department of horticulture must be under umbrella of this faculty. Their accreditation should be deferred and time should be given to university management to make up their deficiencies.

Introduction

The Department of agricultural sciences was established in April, 2008 under the umbrella of Faculty of Sciences at Haripur Campus of Hazara University and classes of B.Sc (Hons) horticulture major were started. University act of University of Haripur was approved in July, 2012.

Presently the department leader and other related staff of the department are housed in the recently renovated building along with other departments. The department is engaged in research, production of expertise and training plus transfer information to the concerned stakeholders. Although department of Horticulture has been established recently, but it has capability and great potential to flourish in future.

Degree programs offered

- B.Sc (Hons) Agriculture with major Horticulture
- M.Sc (Hons)

Criterion Analysis

Strength and quality of Faculty

The Faculty members of the Department of Horticulture, University of Haripur are capable of teaching and conducting research of good quality. Most of the teachers are young and qualified. They are able to teach and train the students and to face challenges. Presently, there are two Assistant professors and three lecturers. One of them is Ph.D while remaining are M.Sc (Hons). Range of experience of faculty members; vary from 3-19 years. Department is running graduate and post graduate programs

and conducted few short trainings. Faculty members of the department are also rendering their services to the farmer community. There are only Assistant professors and lecturers working in the department. There is a need of permanent/regular appointment of assistant professors, associate professors and professor to justify the work load and to fulfill the HEC criteria. Participations of students in seminars and conferences are limited. Funds and facilities are not available for participation of students in seminars/conferences.

Faculty research publications in national and international journals are not adequate in number. Contribution toward publication of books, chapters and proceedings is also not encouraging and need improvement. Faculty perception about degree program is clear. The student teacher ratio is not good; however, teacher can focus the students in a better way due to low strength of students and giving more session to question answer and presentations etc.

Infrastructure and Learning Resources

There was no lab facility of the department, only two shared labs exist. Class rooms are not enough for teaching and working of students. There is need of fully equipped departmental labs and class rooms. Practical work and write up of practical note books is satisfactory.

Participatory SWOT Analysis:

Strengths:

- Hazara region has tremendous potential in relation to Horticulture Sector.
- The University has proximity to Horticulture based industry like Shezan Beverages, Qurshi Industries in Hattar Industrial Estate, Haripur.
- Department has experienced and young Qualified faculty.
- Student's trend towards the Agriculture is very promising especially to the Horticulture.

Weaknesses

- Shortage of separate Faculty of Agriculture Sciences including its relevant departments
- Shortage of permanent and senior/experienced Faculty members as professor and associate professors
- Separate Laboratory for Horticulture is not available.
- Access to the international Journal is needed.
- Relevant course books are short.
- Department has not sufficient PhD faculty.
- 05 publications in impact factor journal in the last two years.
- Limited and unskilled supporting staff of the laboratories
- Limited infra-structure as teaching facilities, Teacher offices, seminar room, staff rooms.
- Lack of periodicals and journals for faculty and students
- Lack of departmental library and internet facilities
- Limited research facilities
- Budget constraints

Actionable Recommendations

- Some of the immediate actionable points emerged from the discussion are as under:
- Establishment of separate Faculty of Agriculture Sciences including its well defined relevant departments like horticulture
- The department is at its initial stage of establishment and need financial grants for strengthening.
- Limited research facilities especially scientific equipments, instruments and chemical on share basis. Therefore, special funds may be arranged to strengthen the facilities at departmental level.
- Teaching staff is not enough and experienced. There is need to provide two associate professor and one professor.
- There is shortage of experienced supporting staff, especially laboratory staff (Lab Assistants and Lab Attendant). The department may be provided with enough trained laboratory staff.
- There is need of establishment of seminar room, staff rooms and Dept. library with computer/internet facilities
- Provision of more space (separate or shared office) for all teachers, labs and classrooms
- Need of budget for chemicals, glassware, books and other facilities.
- There is need for installation of own Green Houses at University campus.
- Library facilities may also be strengthened for purchase of books and Journals.

Final Recommendation

The team unanimously declared that there must be well established faculty of agricultural sciences and the department of horticulture must be under umbrella of that faculty. Their accreditation should be deferred and time should be given to university management to make up their deficiencies.

Annexure-i NAEAC Inspection Team

The Chairman, NAEAC approved an Accreditation Inspection Committee (AIC) for evaluation of the Department of Horticulture, University of Haripur. The committee comprised of the following members who undertook a visit to the said institution on 20-03-2014.

- 1. Prof. Dr. Safdar Ali (Convener)**
Dean FC&FS
University of Arid Agriculture Rawalpindi
- 2. Prof. Dr. Ishfaq A. Hafiz (Member)**
Professor, Department of Horticulture,
University of Arid Agriculture Rawalpindi
- 3. Mr. Naseer Alam Khan (Member)**
Secretary NAECC

The Accreditation Inspection Committee had the following TORs:

- To validate the self-assessment report (SAR) of the degree program B.Sc (Hons) Prepared by the Department of Horticulture, University of Haripur.
- To carry out external evaluation of the degree program in a transparent, neutral, holistic and participatory manner for accreditation and rating based on seven (7) evaluation criteria given in the Evaluation Manual.
- To submit a synthesized and concise analytical report (3-4 pages only) consisting of SWOT Analysis and actionable recommendations based on the interactions with the Dean, Chairman, Faculty members, Students and Support Staff and alumni as well as detailed visit of physical infrastructure, facilities and other teaching-learning resources available for the degree program.
- To submit clear, specific and justified degree program accreditation and rating recommendations to the Chairman NAEAC.

Annexure-ii Name, Qualification and experience of faculty and support staff Strength and quality of Faculty

Discipline	Faculty Strength	Faculty Qualification		Faculty Positions				Student-Teacher Ratio
		Ph. D	Non-Ph.D	Prof.	Associate Prof.	Assistant Prof.	Lecturer	
Horticulture	05	01	04	--	--	02	03	1/44

Teaching Experience

Full Time Faculty			Part Time Faculty		
Experience (Yrs)	Teachers	Percent	Experience(Yrs)	Teachers	Percent
< 1 year				NA	NA
1-2 years					
More than 2 years	05	100			
Total	05				

Annexure-iii List of Lab. Equipment's as per recommendations in the scheme of studies/curriculum

S. No.	Name	Model	Qty.	Remarks
1	Colorimeter AE-11M	AE-11M	1	In working condition
2	Spectrophotometer	721	1	In working condition
3	Safety cabinet	BSC-1 IOOii A2-X	1	In working condition
4	Microscope	CHINA	11	In working condition
5	Microscope	Labmed	1	In working condition

6	Sound level	SL-5826	1	In working condition
7	Dissolved Oxygen	820	1	In working condition
8	Noise Meter	1357	1	In working condition
9	Oven	DHG-9030	1	In working condition
10	Autoclave	LOCAL	1	In working condition
11	Autoclave	CHINA	1	In working condition
12	pH meter	PHEP new	3	In working condition
13	conductivity Meter	DIST3 new	2	In working condition
14	Water bath 4 holes	HHS-S4	3	In working condition
15	3 Beam Analytical Balance	CHINA	1	In working condition
16	Megnetic stirrer with hot plate		1	In working condition
17	Centrifuge	800	3	In working condition
18	Centrifuge 80-2	TGL-16	1	in working condition
19	Analytical Balance lg- 6kg		1	In working condition
20	Distillation Plant		1	Not optimize yet
21	Incubator	WP25A	1	In working condition
22	pH Meter (Bench Type)	PHS-3C	1	In working condition
23	Conductivity Meter(Bench type)	BANTE instruments	1	In working condition
24	Filtration Assembly		1	In working condition
25	Digital Balance 0.001 g-210g		1	In working condition
26	Muffle furnace	S-2546	1	In working condition
27	vertex MiXer		1	In working condition
28	Microscope with camera and LCD		1	In working condition
29	Micro pipettes 2-20ul	770080/Diamet. England	1	In working condition
30	Micro pipettes 5-50ul	770020/Diamet, England	1	In working condition
31	Micro pipette 10-100ul	770050/Diamet, England	1	In working condition
32	Micro pipette 100- 1000ul	770060/Diamet, England	1	In working condition
33	Sahli Meter		3	In working condition
34	Thermometer 110 c	china	6	In working condition
35	thermometer 360 c	china	6	In working condition
36	Thermometer zeal 110c	England	6	In working condition
37	Thermometer zeal 360 c	England	8	In working condition
38	Stop watch china	NA-613D	6	In working condition
39	Stop watch Q/Q		6	in working condition

Annexure-iv List of Books related to Horticulture

S#	Title	Author	Place & Publisher	No. of Copies	Edition	Section
334	Understanding Hydroponics :growing plants without soil	George Sullivan	Frederick Warne, New York	1		Agriculture
2596	The Secret Life of the Forest	Richard M. Ketchum	American Heritage Press New York	1		Agriculture
3103	Landscape Modeling (digital techniques for landscape visualization)	Stephen M.Ervin, Hope H. Hasbrouck	McGraw Hill Companay	1		Agriculture
3189	New Crops New Uses New Markets (1992 yearbook of agriculture)		office of publishing & Visual communication, U.S Agriculture	1		Agriculture
3438	The Book of Shrubs	Alfred Carl Hotters	A.T.DE LA Mare Company New York	1	6th	Agriculture
4097	Plant Cell Vacuoles An Introduction	Deepesh N. De	CSIRO Publishing Australia	1		Agriculture
4134	Trees, Shrubs & Grasses for Saltlands: an Annotated Bibliography	Nico Marcar, Shoaib Ismail, Afzal Hossain, Rafiq Ahmad	ACIAR Press	1		Agriculture
4135	Trees, Shrubs & Grasses for Saltlands: an Annotated Bibliography	Nico Marcar, Shoaib Ismail, Afzal Hossain, Rafiq Ahmad	ACIAR	1		Agriculture
4136	Trees, Shrubs & Grasses for Saltlands: an Annotated Bibliography	Nico Marcar, Shoaib Ismail, Afzal Hossain, Rafiq Ahmad	ACIAR Canberra			Agriculture
4137	Trees, Shrubs & Grasses for Saltlands: an Annotated Bibliography	Nico Marcar, Shoaib Ismail, Afzal Hossain, Rafiq Ahmad	Asian Center for International Agricultural Research Canberra	1		Agriculture
4138	Trees, Shrubs & Grasses for Saltlands: an Annotated Bibliography	Nico Marcar, Shoaib Ismail, Afzal Hossain, Rafiq Ahmad	Asian Center for International Agricultural Research Canberra	1		Agriculture
4141	Commercial Forest Plantations on Saline Lands	Marcia Lambert & John Turner	CSIRO Publishing Australia	1		Agriculture
4142	Commercial Forest Plantations on Saline Lands	Marcia Lambert & John Turner	CSIRO Publishing Australia	1		Agriculture
4143	Commercial Forest Plantations on Saline Lands	Marcia Lambert & John Turner	CSIRO Publishing Australia	1		Agriculture

4144	Commercial Forest Plantations on Saline Lands	Marcia Lambert & John Turner	CSIRO Publishing Australia	1		Agriculture
4145	Commercial Forest Plantations on Saline Lands	Marcia Lambert & John Turner	CSIRO Publishing Australia	1		Agriculture
4146	Commercial Forest Plantations on Saline Lands	Marcia Lambert & John Turner	CSIRO Publishing Australia	1		Agriculture
4184	Turfgrass Chemicals & Pesticides (a practitioner's guide)	Mattt Fagerness, Rodney Johns	Irwin McGraw-Hill	1		Agriculture
4185	Turfgrass Chemicals & Pesticides (a practitioner's guide)	Mattt Fagerness, Rodney Johns	Inwin McGraw-Hill	1		Agriculture
4198	Practical Conveyancing: Residential, Commercial & Agricultural	Ross M. Coates	Sweet & Maxwell London	1	13th	Agriculture
4219	Plant Genetic Resources: Horticultural Crops	B.S.Dhillon, R.K.Tyagi	Narosa Publishing House New Delhi	1		Agriculture
4221	Vegetable at a Glance	Dr.Mrs. Swati Barche, Dr. Kamal Singh Kirad	Kalyani Publishers New Delhi	1		Agriculture
4225	Reproductive Versatility in the Grasses	G.P. Chapman	Cambridge University Press	1		Agriculture
5076	Horticulture: Principles and Practices	Acquaah,G	PHI India	1	4th	Agriculture
6043	FRUIT GROWING (IND/ED)	BAL J S	Kalyani publication	1	2nd	Agriculture
6044	FRUITGROWING (IND/ED)	BAL J S	Kalyani publication	1	2nd	Agriculture
6045	FRUIT GROWING (IND/ED)	BAL J S	Kalyani publication	1	2nd	Agriculture
6056	HORTICULTURE AT A GLANCE (IND/ED)	SINGH B	Kalyani publication	1		Agriculture
6057	HORTICULTURE AT A GLANCE (IND/ED)	SINGH B	Kalyani publication	1		Agriculture
6058	HORTICULTURE AT A GLANCE (IND/ED)	SINGH B	Kalyani publication	1		Agriculture
6059	FLORICULTURE: FUNDAMENTALS AND PRACTICES	LAURIE A	Agrobios India	1		Agriculture

6060	FLORICULTURE: FUNDAMENTALS AND PRACTICES	LAURIE A	Agrobios India	1		Agriculture
6061	FLORICULTURE: FUNDAMENTALS AND PRACTICES	LAURIE A	Agrobios India	1		Agriculture
6062	POST HARVEST PHYSIOLOGY AND QUALITY MANAGEMENT OF FRUITS AND VEGETABLES (IND/E	KUMAR P S	Agrotech Publishing India	1		Agriculture
6064	MUSHROOM GROWING	DEYSC	Agrobios India	1		Agriculture
6065	ADVANCES IN PRESERVATION AND PROCESSING TECHNOLOGIES OF FRUIT AND VEGETABLES	RAJARATHNAM S	New India Publishing	1		Agriculture
6066	HANDBOOK OF AGRICULTURAL SCIENCE (IND/ED)	SINGH S S	Kalyani publication	1	3rd	Agriculture
6069	PLANT PHYSIOLOGY UNDER CHANGING ENVIRONMENT (IND/ED)	HEMANTARANJAN A	Scientific India	1		Agriculture
6092	SCIENTIFIC CULTIVATION OF VEGETABLES (IND/ED)	RANA M K	Kalyani publication	1		Agriculture
6106	GREENHOUSE MANAGEMENT FOR HORTICULTURE CROPS 2ND/ED (IND/ED)	PRASAD S	Agrobios India	1	2nd	Agriculture
6109	SPICES AND AROMATIC PLANTS: STATUS AND IMPROVEMENT (IND/ED)	SASTRY E V D	Pointer Publisher India	1		Agriculture
6112	MODERN CONCEPTS OF VEGETABLES PRODUCTION (IND/ED)	RANA M K	Biotech book india	1		Agriculture
6113	HANDBOOK OF ORGANIC FARMING	SHARMA A K	Agrobios India	1		Agriculture
6114	HANDBOOK OF VEGETABLE CROPS	DE L C	Pointer Publisher India	1		Agriculture
6115	HANDBOOK OF VEGETABLE CROPS	DELC	Pointer Publisher India	1		Agriculture

6122	PRINCIPLES AND PRACTICES OF POST HARVEST TECHNOLOGY (IND/ED)	PANDEY P H	Kalyani psublication	1	2nd	Agriculture
6123	PRINCIPLES AND PRACTICES OF POST HARVEST TECHNOLOGY (IND/ED)	PANDEY P H	Kalyani psublication	1	2nd	Agriculture
6124	PRINCIPLES AND PRACTICES OF POST HARVEST TECHNOLOGY (IND/ED)	PANDEY P H	Kalyani psublication	1	2nd	Agriculture
6136	POST HARVEST HANDLING OF VEGETABLES (IND/ED)	DHALL R K	Narendra Publisher India	1		Agriculture
6137	ORGANIC FARMING: THEORY AND PRACTICE (IND/ED)	PALANIAPPAN S P	Scientific India	1	3rd	Agriculture
6138	ORGANIC FARMING: THEORY AND PRACTICE (IND/ED)	PALANIAPPAN S P	Scientific India	1	3rd	Agriculture
6329	HARTMANN AND KESTER'S PLANT PROPAGATION PRINCIPLES AND PRACTICES 7/ED WITH-CD	HARTMANN	PHI	1	7th	Agriculture
6330	HARTMANN AND KESTER'S PLANT PROPAGATION PRINCIPLES AND PRACTICES 7/ED WITH-CD	HARTMANN	PHI	1	7th	Agriculture
6331	HARTMANN AND KESTER'S PLANT PROPAGATION PRINCIPLES AND PRACTICES 7/ED WITH-CD	HARTMANN	PHI	1	7th	Agriculture
6332	INTRODUCTION TO PLANT CELL, TISSUE AND ORGAN CULTURE	PUROHIT	PHI	1		Agriculture
6333	INTRODUCTION TO PLANT CELL, TISSUE AND ORGAN CULTURE	PUROHIT	PHI	1		Agriculture

Annexure-V Funded Research Projects

	<u>Number</u>	<u>Amount</u>
i. On-going project	2	1 m (Million)
ii. Underway Res. Project	0	0 m (Million)
Total:	2	1 m (Million)

Evaluated by:



Prof. Dr. Ishfaq Ahmed Hafiz
Department of Horticulture
PMAS- Arid Agriculture University
Rawalpindi

The Secretary NAEAC, HEC,

13-5-2014

Islamabad

Subject: Comments on Draft Reports of Six Disciplines of Department of Agriculture

Please refer to your email and telephonic conversation on the subject matter, find attached comments on draft reports of our six disciplines for onward submission to the experts.

Agronomy: Cordial thanks are extended to Prof. Dr. Fayyaz- ul- Hassan for such encouraging and positive remarks about accreditation of B.Sc (Hons) Agriculture degree program at the University of Haripur.

It is requested to the subject expert of Agronomy to please revise his view on the continuation of M.Sc (Hons) Agriculture degree program in Agronomy.

Horticulture: Kindly refer to the draft AIC accreditation report, received through email. The report is highly encouraging and we may jointly struggle and ensure that the deficiencies/weaknesses pointed out by the AIC program experts are addressed and rectified accordingly to achieve the required standards. Furthermore, it is submitted that Horticulture is the strongest department in terms of students enrollment and experienced faculty and it has a great potential to flourish in future. The AIC expert in Horticulture may be requested to reconsider the final recommendation in connivance to the recommendations given by experts of other Departments like Entomology, PBG, and Agronomy etc.

Soil Science: Comments and suggestion by the HEC experts are very much encouraging and hope that section of Soil and Environmental sciences will improve in the light of recommendation made. It is mentioned in the report that currently no lab facility is available, however there is a central lab with good space to accommodate current students and has all be basic equipments to conduct routine soil tests. Therefore it is requested modify this part of the statement.

In SWOT analysis, section **THREATS** it is mentioned that irrelevant faculty (i.e. one is Agri. Engineer & second is Water Engineer out of total four faculty members) has been hired. In fact, when the university of Haripur was a campus of Hazara University the nomenclature was as “Soil & Environmental Science and Water Management” and appointments were made on this basis. Since the inception of University of Haripur, the nomenclature was pruned to Soil and Environmental Sciences only. So it is requested to omit the statement from the report.

Kindly categorical recommend the B.Sc (Hons) and M.Sc (Hons) program for accreditation please.

Plant Breeding Genetics: The report of PBG is ok except the respected expert should recommend B.Sc (Hons) degree Program for accreditation please.

Food Science: The section of Food Science & Technology should be recommended for up gradation in to a Department of Food Science & Technology. Associate Professor/full professor should be recruited to meet minimum HEC criteria.

Entomology: The report of Entomology is ok and encouraging. Many thanks to subject experts

Dr. Sami Ullah Khan
HoD, Agriculture