Kingdom of Saudi Arabia

The National Commission for Academic Accreditation & Assessment

REPORT ON PERIODIC PROGRAM SELF STUDY

DEPARTMENT OF PLANT PRODUCTION

COLLEGE OF FOOD AND AGRICULTURE SCIENCES (CFAS)

2013/ 2014

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Introductory Comments

A program self-study is a thorough examination of the quality of a program. The mission and objectives of the program and the extent to which they are being achieved are thoroughly analyzed according to the standards for quality assurance and accreditation defined by the NCAAA.

A Self Study Report for Programs (SSRP) should be considered as a research report on the quality of the program. It should include sufficient information to inform a reader who is unfamiliar with the program about the process of investigation and the evidence on which conclusions are based to have reasonable confidence that those conclusions are sound.

Conclusions should be supported by evidence, with verification of analysis and advice from others able to offer informed and independent comments.

This SSRP should include all the necessary information for it to be read as a complete self contained report on the quality of the program.

The main branch/location campus must complete the entire SSRP together with the required information from all branch/location campuses that offer the program.

Each branch/location campus must complete an abridged, short version, of the SSRP; including the *Periodic Program Profile*, Profile sections (A-H) and standards 3, 4, and 11. After analysis and inclusion of required information, the main branch campus will submit the complete SSRP with the abridged versions to NCAAA.

The Self Study Report for Programs template is for an Undergraduate Program. For guidance on the completion of this template, please refer to the *Handbook for Quality Assurance and Accreditation* and to the *Guidelines for Using the Template for a Program Self-Study*.

A General Information

Institution**: King Saud University**
Title of College and Department in which the program is offered College of Food and Agriculture Sciences (CFAS), Department of Plant Production
Title of Program: Plant Production Sciences (PPS)
Date of Report: 2013
Name and Contact details for Dean Professor Dr. Fahad Nasser Al-Barakah King Saud University College of Food and Agriculture Sciences P.O. Box 2460 Riyadh, Saudi Arabia 11451 Phone:+966-11-467-8107 Fax: +966-11-467-8366 barakah@ksu.edu.sa
Name of Person Responsible for Preparation of Report (Head of Department) Professor Dr. Nasser Abdulrahman Al-Suhaibani **Contact details:** King Saud University College of Food and Agriculture Sciences Department of Plant Production, P.O. Box 2460 Riyadh, Saudi Arabia 11451 Office phone: 966-11-467-8468 Fax: 966-11-467-8467 e-mail: nsuhaib@ksu.edu.sa **Name and contact details for person to contact for further information about matters discussed in the report and for arrangements for an external review visit. (if different from above)** Same as above

B. General Program Profile Information

1. Program title and code Plant Production Sciences (PPS)
2. Credit hours required for completion of the program 135 credit hours
3. Award (s) granted on completion of the program Bachelor of Science (B.Sc.)
4. Major tracks/pathways within the program None
5. Professional occupations for which graduates are prepared in the program • Teaching Assistant • Agricultural Research Assistants • Lab. Technicians • Plant Production Specialist (Private Sector)
6. Name of program chair/coordinator. If a program coordinator or manager has been appointed for a female section as well as a male section, include names of both. N/A
7. Branches/locations of the program. If offered on several campuses or by distance education as well as on-campus including details. King Saud University main campus
8. Date of approval of program specification within the institution 2006 (please refer to the department history below).
9. Date of approval by authorized body (Ministry of Higher Education "MoHE" for private institutions) and Council of Higher Education for public institutions. N/A
10. Date of most recent self-study (if any): 2012

11. Provide Institutional and Program level administrative flowchart

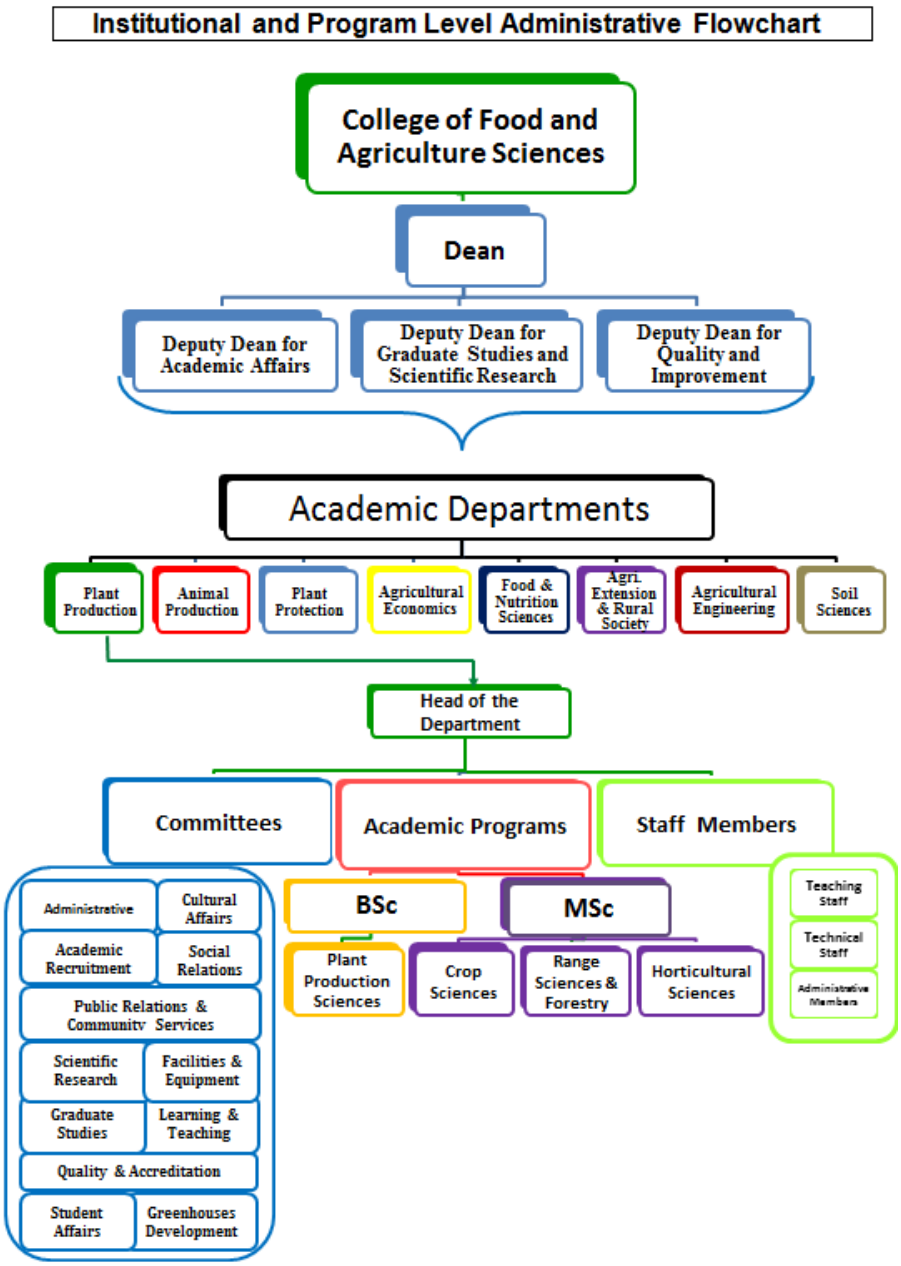

Figure 1. Institutional and program level administrative flowchart.

Note that a number of other documents giving general information about the program should be provided in addition to the program report. See list at the end of this template.

C. Periodic Program Profile Template B: College Data

College: Food and Agriculture Sciences Program: Plant Production Sciences

***(On Campus Programs, Distance Learning)**

The total teaching staff and faculty members of the Department of Plant Production is 45. They are distributed as 20 Faculty Staff (Table 1a and Annex C.), 23 Lecturers (16 PhD and 7 M.Sc. holders) and 2 Demonstrators (Saudi Teaching Assistants) with BSc. degrees who are currently registered as M.Sc. students and will join department faculty members once they are granted PhD degrees (Table 1b).

Table 1a. The Faculty Members of Plant Production Department.

No.	Faculty/ Teaching Staff Names			Nationality	Academic Rank	General Specialty	Specific Specialty	Institution Graduated From	Degree	*Study Mode	List Courses Taught This Academic Year	Full or Part Time	
	Name	M	F									F/T	P/T
1	Dr. Nasser A. Al-Suhaibani	✓		Saudi	Professor	Crop Science	Crop Management	University of Sheffield (UK)	Ph.D.	On Campus	PPS 340, PPS 347, PPS 348, PPS 590, PPS 595	✓	
2	Dr. Fahed A. Al-Mana	✓		Saudi	Professor	Horticulture	Ornamental Plants	Kansas State University (USA)	Ph.D.	On Campus	PPS 576 PPS 571, PPS 590	✓	
3	Dr. Abdullah A. Alsadon	✓		Saudi	Professor	Horticulture	Vegetable Crops	Colorado State University (USA)	Ph.D.	On Campus	PPS 403, PPS 531, PPS 532, PPS 533, PPS 534, PPS 535	✓	
4	Dr. Abdulaziz M. Assaeed	✓		Saudi	Professor	Range Science	Range Ecology	University of Nottingham (UK)	Ph.D.	On Campus	PPS 360, PPS 241, PPS 590, PPS 600	✓	

5	Dr. Abdulaziz R. Alharbi	✓		Saudi	Professor	Horticulture	Vegetable Production	University of London (UK)	Ph.D.	On Campus	PPS 401, PPS 510	✓	
6	Dr. Abdullah A. Aldoss	✓		Saudi	Professor	Crop Science	Plant Breeding	University of Arizona (USA)	Ph.D.	On Campus	PPS 404, PPS 547, PPS 507	✓	
7	Dr. Ibrahim M. Aref	✓		Saudi	Professor	Forestry	Silviculture	University of Edinburgh (UK)	Ph.D.	On Campus	PPS 353, PPS 504, PPS 583	✓	
8	Dr. Salem S. Alghamdi	✓		Saudi	Professor	Crop Science	Plant Breeding	South Dakota State Univ. (USA)	Ph.D.	On Campus	PPS 310 PPS 552	✓	
9	Dr. Yahya A. Refay	✓		Saudi	Professor	Crop Science	Crop Production	University of Arizona (USA)	Ph.D.	On Campus	PPS 201, PPS 340	✓	
10	Dr. Ali A. Alderfasi	✓		Saudi	Professor	Crop Science	Stress Physiology	Colorado State University (USA)	PhD	On Campus	PPS 500, PPS 501	✓	
11	Dr. Abdulwasea A. Asrar	✓		Saudi	Professor	Horticulture	Floriculture Ornamental landscape Hort.	Washington State University (USA)	PhD	On Campus	PPS 405, PPS 570, PPS 577, PPS 600	✓	
12	Dr. Hassan Kassem	✓		Egyptian	Professor	Horticulture	Physiology	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 100, PPS 201, PPS 511, PPS 512	✓	

13	Dr. Saud L. Al-Rowaily	✓		Saudi	Assoc. Prof.	Range Science	Range Management	Utah State University (USA)	Ph.D.	On Campus	PPS 360, PPS 241, PPS 590, PPS 600	✓	
14	Dr. Rashid S. Al-Obeed	✓		Saudi	Assoc. Prof.	Horticulture	Pomology	University of Sheffield (UK)	PhD	On Campus	PPS 321, PPS 301	✓	
15	Dr. Abdulaziz A. Alqarawi	✓		Saudi	Assoc. Prof.	Range Science	Rangeland Improvement	Colorado State University (USA)	Ph.D.	On Campus	PPS 201, PPS 363, PPS 460, PPS 600	✓	
16	Dr. Hamad A. Al-Mefarrej	✓		Saudi	Assoc. Prof.	Forestry	Wood Science	Imperial College (UK)	Ph.D.	On Campus	PPS 201, PPS 553, PPS 555	✓	
17	Dr. Thobayet S. Alshahrani	✓		Saudi	Assoc. Prof.	Forestry	Forest Ecology	West Virginia University (USA)	Ph.D.	On Campus	PPS 351, PPS 553, PPS 557	✓	
18	Dr. Alaa El-din Omar	✓		Egyptian	Assoc. Prof.	Horticulture	Date Palm	Tanta Univ. (Egypt)	Ph.D.	On Campus	PPS 324 PPS 201	✓	
19	Dr. Salah El-Hendawy	✓		Egyptian	Assoc. Prof.	Crop Science	Crop Physiology	Technische Universität München (Germany)	Ph.D.	On Campus	PPS 201, PPS 409, PPS 543, PPS 547	✓	
20	Dr. Sulaeman A. Alfaifi	✓		Saudi	Assist. Prof.	Horticulture	Plant Breeding & Biotechnology	University of Wisconsin (USA)	Ph.D.	On Campus	PPS 206 PPS 201	✓	

Annex C.0.0 Curriculum vita of faculty members of Plant Production Department.

Table 1b. The Staff members of Plant Production Department.

No.	Faculty/ Teaching Staff Names			*Nationality*	Academic Rank	General Specialty	Specific Specialty	Institution Graduated From	Degree	*Study Mode	List Courses Taught This Academic Year	Full or Part Time	
	Name	M	F									F/T	P/T
1	Dr. Khaled A. Moustafa	✓		Egyptian	Assoc. Prof.	Crop Science	Plant Breeding	Gottingen University (Germany)	Ph.D.	On Campus	PPS 206, PPS 310, PPS 404, PPS 405	✓	
2	Dr. Khalid M. Elhindi	✓		Egyptian	Assoc. Prof.	Horticulture	Ornamental landscape	Mansoura University (Egypt)	Ph.D.	On Campus	PPS 374, PPS 381,PPS 405,PPS 476	✓	
3	Dr. Moustafa M. Selim	✓		Egyptian	Assist. Prof.	Crop Science	Stress Physiology	Cairo University (Egypt)	Ph.D.	On Campus	PPS309, PPS 380, PPS 405, PPS 446,	✓	
4	Dr. Mahmoud A. Wahb-Allah	✓		Egyptian	Assist Prof.	Horticulture	Vegetable crops	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 310, PPS 331, PPS 403, PPS 405	✓	
5	Dr. Said S. Soliman	✓		Egyptian	Assist Prof.	Horticulture	Physiology	Assiut University (Egypt)	Ph.D.	On Campus	, PPS 205, PPS 324,PPS 381, PPS 405,	✓	
6	Dr. Ramadan A. Nasser	✓		Egyptian	Assist. Prof.	Forestry	Wood Science	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 231, PPS 352, PPS 405	✓	
7	Dr. Yeahia A. Ahmed	✓		Egyptian	Assist. Prof.	Horticulture	Ornamental landscape	University of Bologne (Italy)	Ph.D.	On Campus	PPS 205, PPS 373, PPS 374, PPS 381	✓	
8	Dr. Hesham	✓		Egyptian	Lecturer	Horticulture	Vegetable	Tokyo	Ph.D.	On Campus	PPS 201, PPS	✓	

	S. Abdel-Razzak						Production	University (Japan)			401, PPS 402, PPS 381		
9	Dr. Ihab F. Elharty	✓		Egyptian	Lecturer	Crop Science	Plant Breeding	Cairo Univ. (Egypt)	Ph.D.	On Campus	PPS 201,PPS 310 PPS 404, PPS 409	✓	
10	Dr. Mahmoud A. Ahmed	✓		Egyptian	Lecturer	Horticulture	Pomology	Assuit University (Egypt)	Ph.D.	On Campus	PPS 321, PPS 324, PPS 381, PPS 401,	✓	
11	Dr. Elsaid F. Abdalah	✓		Egyptian	Lecturer	Microbiology	Microbiology	Cairo University (Egypt)	Ph.D.	On Campus	PPS 201, PPS 241, PPS 381, PPS405	✓	
12	Dr. Mohamed A.Abdel-Aal	✓		Egyptian	Lecturer	Forestry	Wood Science	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 201, PPS 231, PPS405	✓	
13	Dr. Nader D. Shetta	✓		Egyptian	Lecturer	Forestry	Forest Ecology	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 201, PPS 381, PPS 405	✓	
14	Dr. Abd ElAzeem M. Salem	✓		Egyptian	Lecturer	Crop Science	Crop Management	Tanta University (Egypt)	Ph.D.	On Campus	PPS 201, PPS 348, PPS 380	✓	
15	Dr. Yasser A. El- Nashar	✓		Egyptian	Lecturer	Horticulture	Ornamental Plants	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 374, PPS 476, PPS 381	✓	
16	Dr. Abdulhalim Ghazi	✓		Egyptian	Lecturer	Crop Science	Biotechnology	Alexandria University (Egypt)	Ph.D.	On Campus	PPS 206, PPS 405, PPS 505	✓	

17	Kamel A. Abdelaa	✓		Egyptian	Lecturer	Crop Science	Crop Production	Alexandria University (Egypt)	M.Sc.	On Campus	PPS 340,PPS 347, PPS348, PPS 409	✓	
18	Yousef I. Aldlaigan	✓		Saudi	Lecturer	Horticulture	Plant Tissue Culture	King Saud University	M.Sc.	On Campus	PhD candidate	✓	
19	Mohaidib S. Mohaidib	✓		Saudi	Lecturer	Horticulture	Plant Tissue Culture	King Saud University	M.Sc.	On Campus	PhD candidate	✓	
20	Mekhled M. Alenazi	✓		Saudi	Lecturer	Horticulture	Vegetable Physiology	King Saud University	M.Sc.	On Campus	PhD candidate	✓	
21	Adel M. AL-Saif	✓		Saudi	Lecturer	Horticulture	Pomology	King Saud University	M.Sc.	On Campus	PhD candidate	✓	
22	Abdullah I. Alebidi	✓		Saudi	Lecturer	Horticulture	Pomology	King Saud University	M.Sc.	On Campus	PhD candidate	✓	
23	Majid A. Al-Otaibi	✓		Saudi	Lecturer	Crop Science	Crop Science	King Saud University	M.Sc.	On Campus	PhD candidate	✓	
24	Rashad K. Algamdi	✓		Saudi	Demonstrator	Horticulture	Ornamental plants	King Saud University	B. Sc.	On Campus	M.Sc. Student	✓	
25	Abduljabbar A. Algafur	✓		Saudi	Demonstrator	Horticulture	Ornamental plants	King Saud University	B. Sc.	On Campus	M.Sc Student	✓	

Table 2. Number of Graduates in the Most Recent Year (2012)

	Undergraduate Students*	Post Graduate Masters Students	Post Graduate Ph.D. Students
Male	4	7	NA
Female	NA	NA	NA
Totals	4	7	NA

*** With academic number starting with 428**

Table 3. Apparent Student Completion Rate: The number of students who graduated in the most recent year as a percentage of those who commenced those programs in that cohort four, five, or six years previously (e.g. for a four year program the number of students who graduated as a percentage who commenced the program four years previously).

Students	Undergraduate Programs			Postgraduate Programs	
	Four Years	Five Years	Six Years	Master	Doctor
Male	57%	NA	NA	100%	NA
Female	NA	NA	NA	NA	NA
Totals	57%	NA	NA	100%	NA

Table 4. Mode of Instruction – Student Enrolment (excluding preparatory program)

Students	On Campus Programs			Distance Education Programs		
	Full time	Part time	FTE	Full time	Part time	FTE
Male	18	NA	NA	NA	NA	NA
Female	NA	NA	NA	NA	NA	NA
Totals	18	NA	NA	NA	NA	NA

Note: FTE (full time equivalent) for part time students assume a full time load is 15 credit hours and divide the number of credit hours taken by each student by 15 (use this formula only for part time students).

Table 5. Mode of Instruction – Teaching Staff (excluding preparatory program)

Number of Teaching Staff	On Campus Programs			Distance Education Programs		
	Full time	Part time	FTE	Full time	Part time	FTE
Male	23	NA	NA	NA	NA	NA
Female	NA	NA	NA	NA	NA	NA
Totals	23	NA	NA	NA	NA	NA

Note: Teaching staff includes tutors, lectures, and assistant, associate and full professors. This does not include research, teaching, or laboratory assistants. Academic staff who oversee the planning and delivery of teaching programs are included (e.g. head of department, dean for a college, rector and vice rectors).

D. Program Profile Data

Historical Summary

Provide a brief historical summary of the program including such things as:

King Saud University (KSU) was established in 1957. The establishment of this Kingdom's first institute of higher education came as a response to the educational and professional needs of the country. King Saud University was founded to promote and disseminate scientific knowledge in the Kingdom. Prior to 2009, KSU was the largest university in Saudi Arabia in terms of students' enrolment. The university was comprised of more than 75 colleges scattered in several campuses in Riyadh city and outside the city with more than 400 programs. In 2009, over 50 colleges consisting of approximately 250 programs were separated from KSU to form three new universities (Salman bin Abdul-Aziz, Almajmaah and Shagra Universities). This restructuring was undertaken to achieve a more efficient organization and effective management in accordance with country's educational strategic goals. In 2009, the total number of enrolment was 35,893 male and 25,222 female students registering for Bachelor, Master's, and Doctoral programs.

The College of Food and Agriculture Sciences (CFAS) was established in 1965. The college prepares students for the provision of agriculture, food and environmental management. It was the first agricultural educational institute established in the Arabian Peninsula and Arabian Gulf area. The college is comprised of eight departments offering 7 B.Sc., and 13 M.Sc. programs and 3 Ph.D. programs, in addition to 2 joint programs in biological diversity and environmental studies. Educational and research facilities include Educational Farm, Agricultural Research and Experimental Station, Agriculture Research Center and Agricultural Extension Center. The first graduates in 1969 were 18 students of

whom 14 were Saudi citizens. By the year 2010, the number of graduating students reached 7347.

The College's mission is to contribute significantly to the development of agriculture and food production, human nutrition, conservation and development of natural resources. This is accomplished through the qualification of proficient graduates, innovative research, dissemination and enrichment of knowledge and service to the community.

The College's objectives are: 1) To provide modern undergraduate and post-graduate programs for preparing proficient graduates within the fields of food and agricultural sciences, environmental management and sustainable development of natural resources. 2) To foster novel research and technological innovations as well as applied studies aimed at increasing production, developing resources, conserving the environment and promoting scientific knowledge. 3) To serve the community through extension activities, training courses, workshops, conferences and symposia, and advisory services to the public, private and philanthropic sectors. 4) To find technical and practical solutions for water conservation and rationalization of water usage in agriculture. 5) To enhance the role of the College as a center for technological advances and modifications dictated by local and global changes.

The Department of Plant Production was found in the same year when CFAS was established, to provide national leadership and support for teaching programs, research, and community services in the field of plant production sciences. The average number of enrolled students in the department is 70. Within the last 5 years more than 45 students were awarded BSc. in Plant Production Sciences. The Department also offers MSc. Degrees in Field Crops, Horticulture and Range Science and Forestry. The Department is now in the process of initiating a Ph.D. program in Field Crops, Horticulture and Range Science and Forestry.

The department maintains good relations with agricultural sector. Through arrangement by CFAS, students can enroll in cooperative training in SAG members. The department delivers yearly workshop on different aspects of urban afforestation in partnership with the Arab Urban Development Institute (AUDI). The department maintains close relation with Ministry of Agriculture (MoA) by providing consultation and training courses to MoA employee.

Several former graduates of PPS occupied top professional positions in both public and private sectors. No records are available on employment history of the department graduates, but unofficial information indicates that the majority of graduates work in governmental sector followed by private sector. High number of former students continued their post graduate studies and few are self-employed.

The Department contributed in collaboration with other departments in offering the BSc. degree in general agricultural sciences since the establishment of the College of Agriculture (now, CFAS) in 1965. In 1976, the Department in collaboration with the Department of Plant Protection jointly offered the BSc. degree in Agricultural Sciences (with emphasis on plant production and protection). In the beginning of 1980, a study

plan was developed to offer BSc. degree in Agricultural Sciences (in two majors; Field crops and Horticulture). By 1998, the department started offering BSc. degree in Range Science and Forestry in addition to Field crops and Horticulture. Due to restructuring the college, in 2011 the three bachelor programs (Field crops, Horticulture and Range Science and Forestry) were merged into one program; Plant Production Sciences (PPS). (Annexes D.1.a and D.1.b).

Main strengths and accomplishments of PPS include the diversity of faculty members with different backgrounds and experiences from all over the globe. The outstanding position of research results represents strength of PPS. Faculty members publish high quality research disseminated through the leading academic journals. The PPS offers M.Sc. in Crop Science, Horticulture (Pomology, vegetables and Floriculture and Landscaping) and Range Science and Forestry. PPS have also submitted a proposal to DGS for establishing Ph.D. programs in the three mentioned disciplines.

Annexes

Annex D.1.a University decision to reconstruct the CFAS.

Annex D.1.b Approval of improved PPS program.

Preparatory or Foundation Program

Do you offer a preparatory program **Yes** ☑ **No** ☐

If yes, is the preparatory program is offered is it out-sourced? **Yes** ☐ **No** ☑

If a preparatory or foundation year program is provided prior to entry to this program, are all students required to take that program? **Yes** ☑ **No** ☐

If yes, how many Academic credits are granted into the program and included in the * GPA: 31 credit hours.

What is the total number of credits required by the program? 135 credit hours

NOTE: * Credits granted into the program must be included in the GPA

List the courses that are granted into the program.

The total credit hours required for completion of the PPS program is 135 credit hours. These are categorized as; 31 credit hours to be granted into the program from the PY, 8 credit hours as general KSU courses, 14 credit hours as basic scientific courses, 58 credit hours required major courses, 6 credit hours elective major courses from outside the department, 12 credit hours elective major courses from the department and 6 credit hours free courses (Table 6).

Table 6. Lists of PPS program courses showing PY courses, general KSU courses, basic science courses and required and elective along with their prerequisites.

Course Code	Course Title	Credit Hours	Category	Prerequisite
Preparatory Year (31 Credit Hours)				
ENGL 140	English Language Skills (1)	8	Required	-
MATH 140	Introduction to Mathematics	2	Required	-
CT 140	Computer Skills	3	Required	-
MC 140	Communication Skills	2	Required	-
ENGL 150	English Language Skills (2)	8	Required	-
MATH 150	Mathematics (2) Calculus	3	Required	-
CI 140	Learning, Thinking and Research Skills	3	Required	-
ENT 101	Entrepreneurship	1	Required	-
CHS 150	Health and Fitness	1	Required	-
General University Courses (8 Credit Hours)				
IC 100	Biography of the Prophet	2	Required	-
IC 101	Fundamentals of Islamic Culture	2	Required	-
IC 102	Family in Islam	2	Required	-
IC 103	The Islamic Economics	2	Required	-
IC 104	Political System in Islam	2	Required	-
IC 105	Human Rights in Islam	2	Required	-
IC 106	Medical Jurisprudence	2	Required	-
IC 107	Professional Ethics	2	Required	-
IC 108	Contemporary Issues	2	Required	-
IC 109	Women Role in Development	2	Required	-
Basic Science Courses (14 Credit Hours)				
BOT 102	Botany	3	Required	-
BCH 101	General Biochemistry	4	Required	-
CHEM 103	General Chemistry -1	3	Required	-
CHEM 104	General Chemistry Lab. - 1	1	Required	-
STAT 122	Applied Statistics -1	3	Required	-
Free Elective Courses (6 Credit Hours)				
Students take any number of courses equivalent to 6 credit hours in total from any KSU program				
Required Major Courses (58 Credit Hours)				
SOSC 201	Fundamental of Soil Sciences	3	Required	CHEM 103
AGEC 205	Principles of Agricultural Economics	3	Required	-
PLPT 201	Principles of Plant Protection	3	Required	BOT 102
PLPT 225	Field Crop and Horticulture Diseases	3	Required	PLPT 201
AGENG 230	Water and Irrigation Systems	2	Required	-
SOSC 331	Soil Fertility and Plant Nutrition	3	Required	SOSC 201

PPS 201	Principles of Plant Production	3	Required	BOT 102
PPS 203	Crop Ecology	2	Required	-
PPS 205	Nurseries and Methods of Plant Propagation	2	Required	PPS 201
PPS 206	Applied Agriculture Genetics	3	Required	PPS 201
PPS 308	Plant Tissue Culture	2	Required	PPS 201
PPS 309	Crop Physiology	3	Required	PPS 201
PPS 310	Principles of Plant Breeding	2	Required	PPS 201
PPS 321	Production of Fruit Trees	2	Required	PPS 201
PPS 324	Production of Date Palm and Dates	2	Required	PPS 201
PPS 331	Vegetable Production	2	Required	PPS 201
PPS 342	Field Crops	2	Required	PPS 201
PPS 347	Weed Control	2	Required	PPS 201
PPS 372	Production of Ornamental Plants and flowers	2	Required	PPS 201
PPS 380	Practical Training in Field Crops	2	Required	PPS 342, 347
PPS 381	Practical Training in Horticultural Crops	2	Required	PPS 321, 331, 372
PPS 403	Protected Cultivation	2	Required	PPS 201
PPS 404	Principles of Field Experiments	2	Required	PPS 201
PPS 405	Practical Plant Biotechnology	2	Required	PPS 201
PPS 498	Graduation Project	2	Required	PPS 201
Elective Courses from outside the PPS Program (6 Credit Hours)				
ANS 106	Introduction to Animal Production Systems	2	Elective	-
AGENG 220	Agricultural Machinery	2	Elective	-
PLPT 211	Agricultural Microbiology	3	Elective	PLPT 201
PLPT 242	Insects of Field and Horticultural Crops	3	Elective	PLPT 201
AGEXT 301	Applications in Agricultural Extension	2	Elective	-
SOSC 362	Soil, Plant and Water Relations	3	Elective	-
Elective Courses from inside the PPS Program (12 Credit Hours)				
PPS 231	Forestry	2	Elective	PPS 201
PPS 241	Range Science	2	Elective	PPS 201
PPS 348	Forage Crop Production	2	Elective	PPS 201
PPS 352	A forestation of Dry Areas	2	Elective	PPS 201
PPS 373	Turf Grasses	2	Elective	PPS 201
PPS 374	Indoor Plants and Interiorscaping	2	Elective	PPS 201
PPS 400	Cooperative Training (Independent semester)	12	Elective	PPS 201
PPS 401	Post-harvests Physiology	2	Elective	PPS 201
PPS 402	Organic Farming	2	Elective	PPS 201
PPS 409	Seed Production and testing	2	Elective	PPS 201
PPS 410	Crop Breeding	2	Elective	PPS 206, 310
PPS 421	Fruit Trees Physiology	2	Elective	PPS 201
PPS 446	Production of Field Crops under Stress	2	Elective	PPS 201

PPS 476	Landscape of Gardens and Parks	2	Elective	PPS 201

Statistical Summary

NOTE: FOR ALL TABLES IN THIS SECTION A SEPARATE TABLE MUST BE USED FOR EACH BRANCH/LOCATION CAMPUS.

Table 7. Student Enrolment (Not including preparatory) (2011/2012)

Students	On Campus Programs			e-Learning Education Programs		
	Full time	Part time	*FTE	Full time	Part time	*FTE
Male	18	NA	NA	NA	NA	NA
Female	NA	NA	NA	NA	NA	NA
Total	18	NA	NA	NA	NA	NA

NOTE: To calculate effective full time equivalents (FTE) for part time students assume a notional full time load is 15 credit hours and divide the number of credit hours taken by each student by 15. (Use this formula only for part time students)

Table 8. Confirmed enrolment at the beginning of the current academic year (2011/2012)

Level/Year of Study	Male	Female	Total
First Year (levels 1-2)	NA (preparatory year)	**NA**	NA (preparatory year)
Second Year (levels 3-4)	2	NA	2
Third Year (levels 5-6)	5	NA	5
Fourth Year (levels 7-8)	11	NA	11
Fifth Year (if applicable)	NA	NA	NA
Sixth Year (if applicable)	NA	NA	NA
Total	18	NA	18

Faculty: FTE is calculated as 12 credit hours. The number should not include research, teaching or laboratory assistants.

Table 9. Number of full-time faculty members and teaching staff on campus

No. of Staff	On Campus			eLearning Education		
	Full time	Part time	FTE	Full time	Part time	FTE
Faculty	20	NA	NA	NA	NA	NA
Teaching staff	25	NA	NA	NA	NA	NA
Total	45*	NA	NA	NA	NA	NA

* For more details, please refer to section C above.

NOTE: The number of faculty and teaching academic staff should include:

- Faculty: Assistant, Associate and Full Professors whether involved with teaching, research or both teaching and research.
- Teaching staff: Lecturers, Teaching Assistants, Practical Preceptors
- The number should not include Technicians and Laboratory Assistants.

Table 10. Faculty and Teaching Staff Highest Qualifications

	Ph.D.		Masters		Others (BSc.)		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Male	36	80	7	16	2	4	45	100
Female	NA	NA	NA	NA	NA	NA	NA	NA
Total	36	80	7	16	2	4	45	100

A. Calculate the average number of credit hours taught by the **full-time faculty** for the past year and calculate the average number of students enrolled per class taught.

Table 11. Average number of credit hours taught by the full-time faculty for the past year and the average number of students enrolled per class taught (2010/2011)

Full-time Faculty	Average Credit Workload 1st Semester	Average Credit Workload 2nd Semester	Average Class Enrolment 1st Semester	Average Class Enrolment 2nd Semester
Male	8.1	7.6	5	3
Female	NA	NA	NA	NA
Average.	8.1	7.6	5	3

Provide Analysis – Analyse the entire table and provide detailed class Enrolment analysis of the different instructional levels.

1. Workload Analysis:

   The average credit workload represents both graduate and undergraduate courses in addition to courses taught for joint-biodiversity MSc program.

2. Class Enrolment Analysis:

   The number of students per class is low due to the overlapping between the two curricula; first in (2006-2009) and the second in (2010-current)

3. Class Enrolment Level Analysis (Level means post or under graduate levels and year to year levels):

   The average students enrolled per class in the second semester had decreased because of the increased number of taught courses.

Average Credit Workload – Add the total number of credit hours taught by each individual teaching faculty member, add them all together, and divide by the full-time or part-time number of faculty members.

Average Class Enrolment – Add the total number of students enrolled in all of the classes taught by each individual teaching faculty member and divide the total by the number of classes taught. Add all the totals together and divide by the total number of faculty members.

B. Calculate the average number of credit hours taught by the **part-time faculty** for the past year and calculate the average number of students enrolled per class taught.

Table 12. Average number of credit hours taught by the part-time faculty for the past year and calculate the average number of students enrolled per class taught (2010/2011)

Part-time Faculty	Average Credit Workload 1st Semester	Average Credit Workload 2nd Semester	Average Class Enrolment 1st Semester	Average Class Enrolment 2nd Semester
Male	NA	NA	NA	NA
Female	NA	NA	NA	NA
Average	NA	NA	NA	NA

Provide Analysis – Analyse the entire table and provide detailed class Enrolment analysis of the different instructional levels.

1. Workload Analysis: NA
2. Class Enrolment Analysis: NA
3. Class Enrolment Level Analysis (Level means post or under graduate levels and year to year levels): NA

C. Calculate the average number of credit hours taught by the **full-time teaching staff** for the past year and calculate the average number of students enrolled per class taught.

Table 13. Average number of credit hours taught by the full-time teaching staff for the past year and calculate the average number of students enrolled per class taught (2011/2012).

Full-time Teaching Staff	Average Credit Workload 1st Semester	Average Credit Workload 2nd Semester	Average Class Enrolment 1st Semester	Average Class Enrolment 2nd Semester
Male	6	5.8	5.2	3.2
Female	NA	NA	NA	NA
Average	6	5.8	5.2	3.2

Provide Analysis – Analyse the entire table and provide detailed class enrolment analysis of the different instructional levels.

1. Workload Analysis:

The average credit workload represents the number of students to the number of PPS practical courses.

2. Class Enrolment Analysis:

The number of students per class is low due to the overlapping between the two curriculums; first in (2006-2009) and the second in (2010-current).

3. Class Enrolment Level Analysis (Level means post or under graduate levels and year to

year levels):

The average students enrolled per class in the second semester had decreased because the number of taught courses increased in the second semester.

D. Calculate the average number of credit hours taught by the **part-time teaching staff** for the past year and calculate the average number of students enrolled per class taught.

Table 14. Average number of credit hours taught by the part-time teaching staff for the past year and calculate the average number of students enrolled per class taught (2011/2012).

Part-time Teaching Staff	Average Credit Workload 1st Semester	Average Credit Workload 2nd Semester	Average Class Enrolment 1st Semester	Average Class Enrolment 2nd Semester
Male	NA	NA	NA	NA
Female	NA	NA	NA	NA
Total	NA	NA	NA	NA

Provide Analysis – Analyse the entire table and provide detailed class Enrolment analysis of the different instructional levels.

1. Workload Analysis: NA
2. Class Enrolment Analysis: NA
3. Class Enrolment Level Analysis (Level means post or under graduate levels and year to year levels): NA

E. Self-Study Process

Provide the following:

- Provide a summary description of the procedures followed and administrative arrangements for the self- study.
- Provide a quality assurance organization flowchart.
- Describe membership and terms of reference for committees and /or working parties.

The previous self-study (2009) was prepared by Quality Assurance and Accreditation committee (QAA) that was officially appointed by the Department Head to prepare the Plant Production Program for international accreditation by the Agricultural Institute of Canada (AIC).

For current self-study (2011-2012), Quality and Development Committee was also appointed and headed by the Department Head under the supervision of Vice Dean for Quality and Development of the CFAS (Annex D.E). Multiple meetings were held (4-8 hrs/week) for reviewing gathered information, statistics, surveys and documents related to the program and the NCAAA standards.

The present self-study incorporated changes and developments that took place in the Department in the period during the last two years. Several team groups were formed to prepare the documented evidences for this self-study. Multiple interviews were held with academic and non-academic staff members to set the areas that require improvement and to establish priorities of action.

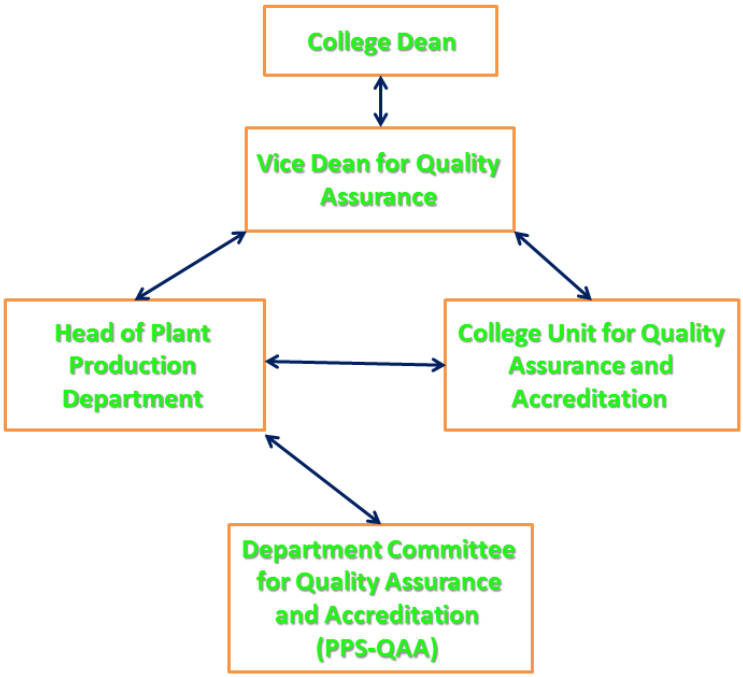

Figure 2. Quality Assurance and Accreditation Organization Flowchart

The below table summarizes roles and tasks of Quality Assurance and Accreditation committee members of PPS program.

Table 15. Quality Assurance and Accreditation committee of Plant Production Department

Name	Role	Tasks
Prof. Nasser A. Al-Suhaibani	Chief and Coordinator of the program	- General supervision and direction of the PPS-QAA committee. - Representative of PPS-QAA in the QAA council of CFAS. - Assuring the implementation of the strategy plan. - Evaluation of the feedback of the faculty members and students about the program courses. - Responsible for evaluating student

		administrating and support services. (Standard 5).
Prof. Yahya A. Refay	Committee Secretary	- Arrangement of the committee meetings. - Documentation of the QAA minutes. - Participating and reviewing the SSR. - Responsible for evaluating facilities and equipment (standard 7).
Prof. Abdulaziz M. Assaeed	Member	- Evaluation of SSR. - Program survey. - Participating in writing and reviewing the SSR. - Responsible for evaluating program administration (standard 2) and employment processes (standard 9).
Prof. Khaled A. Moustafa	Member	- In charge of evaluating the mission and objectives of PPS program. (Standard 1). - Organizing the curriculum vita of faculty members. - Conducting current and graduated students experience survey.
Prof. Gamal M. Abdel-Fattah	Member	- Responsible for management of program quality assurance and accreditation (standard 3). - In charge of PPS annual program reports. - Participating in writing and reviewing the SSR. - Analysis of learning outcomes.
Dr. Thobayet S. Alshahrani	Member	- Responsible for learning and teaching (standard 4) and learning resources (standard 6). - Survey and analysis of data concerning enrolled and graduated PPS students. - Participating in writing and reviewing the SSR.
Dr. Magdy I. Elbana	Member	- Responsible for research documentation (standard 10).

		- Participating in writing and reviewing the SSR. - Managing the curriculum vita of faculty and staff members.
Dr. Yousef I. Al-Dlaigan	Member	- Evaluation of faculty members about the improvement of their courses. - Cooperative training course.

Table 16. QAA Subcommittee members

Dr. Rashed S. Al-Obeed Dr. Yahya A. Ali Prof. Salem S. Al-Ghamdi	Assistants	- Collecting information about financial planning and management (standard 8). - Collecting information about relationship with the community (standard 11).

Annexes

Annex D.E Department committees including the committee for quality and development.

E. Mission, Goals and Objectives

1. Mission Statement of the Program (Insert the Mission Statement).

To be leading and innovative in the development of agricultural production through excellence in education, scientific research, new knowledge and techniques locally and globally. (See the following URL: http://cfas.ksu.edu.sa/ar/planet-production)

Use the following table and write clear, measurable goals and objectives of the program and align each one with quality performance indicators and the target benchmark.

NOTE: A SEPARATE TABLE MUST BE USED FOR EACH BRANCH/LOCATION CAMPUS (This table is not referring to NCAAA KPIs or the program KPIs).

Table.17. Goals and objectives of the PPS program aligned with quality performance indicators and the target benchmark.

2. Goals	3. Objectives for each goal	4. Performance Indicators*	5. Target Benchmarks
Achieve high quality teaching and knowledge of PPS.	To teach students diverse courses in all PPS disciplines through excellent teaching by professional academic staff.	1. The average satisfaction rate of faculty and students to the mission statement (4.75 out of 5). 2. Proportion of courses in which student evaluation were conducted during the year (100% out of 100%). 3. Students' overall evaluation on the quality of their courses (Average rating of students on	To provide 50 professional graduates through excellent teaching in PPS over five years.

		a five-point scale on overall evaluation of courses) (4.5 out of 5). 4. Proportion of teaching staff participating in professional development activities during the past year (45% out of 50%). 5. Percentage of students entering program who successfully complete first year (80% out of 100%). 6. Proportion of students entering post-graduate programs who complete those programs in specified time (44.4%/100%). 7. Proportion of teaching staff with verified doctoral qualifications (85%/100%). 8. Student evaluation of library and learning resources services (80%/100%). 9. Number of accessible computer terminals per student (1/1). 10. Ratio of students to teaching staff (Based on full time equivalents) (8:1/8:1) 11. Proportion of teaching staff leaving the department for reasons other than age recruitment (0/0).	
	To provide students with applied experience through internships and cooperative learning.	12. Students' overall evaluation on the quality of their learning experience (Average rating of the overall quality of their program on a five point scale) (5/5). 13. Proportion of graduates from undergraduate programs who within six months of graduation are enrolled in further study (30%/35%). 14. Student evaluation of academic and career	To ensure that graduated students are highly competitive and experienced in the field of plant production.

		counselling (Average rating on the adequacy of academic and career counselling on a five point scale) (4.5/5). 15. Average overall rating of adequacy of facilities and equipment in a survey of teaching staff (4.75/5).	
Conduct firm applied research	To conduct high quality research related to local agricultural problems in the field of plant production.	16. Number of citations in refereed journals in the previous year per full time equivalent teaching staff (12.5/15). 17. Number of refereed publications in the previous three years per full time members of teaching staff (2.5/3). 18. Proportion of full time members of teaching staff with at least one referred publication in the previous year (85%/100%). 19. Number of papers or reports presented at academic conferences during the last year per full time member teaching staff (1.5/2).	To maintain at least 30 ISI publications per year.
	To provide graduate students with experience in conducting applied research.	20. Number of research article published by graduate students or recent graduate based on their thesis research as a percentage of the number of post-graduate students (25%/30%).	To ensure that a graduate student participates in funded project and publish at least one paper.
	To obtain internal and external fund to conduct national research projects.	21. Research income from external sources in the past year as proportion of the number of full time teaching staff members (5.5%/7%).	To maintain at least 25 funded research projects.
Provide excellent community services	To provide consultation, workshops, training courses to governmental agencies	22. Proportion of full time teaching and other staff actively engaged in community service activities (25%/25%).	- Arrange at least two public lectures, visiting professors and training session

	and private sector, and disseminate research outputs to the community.		activities per year. - Provide at least three consultation services for public and private sectors per year.
			- Maintain at least two workshops per year - Offer two training courses and lectures by academic staff related to agricultural sectors.
			- Provide at least two pamphlets and booklets related to plant production sciences.

* Internal and/or external benchmarks may not be available for analysis of PPS achievement for chosen KPIs.

Provide a list of the strengths and recommendations for improvement based on an assessment of this data.

List of strengths:

1- A ratio of 7:1students to teaching staff has been achieved.

2- Nearly 65% of the benchmark target on overall rating of graduates to the quality of the program (based on graduates' questionnaire on their experience with the program) is achieved.

3- Over 66% of the benchmark target on overall rating of adequacy of facilities and equipment in a survey of teaching staff.

4- 60% of the benchmark target on the number of referred publications in the previous three years per full time members of teaching staff was achieved.

5- 70% of the benchmark target was achieved on the proportion of teaching staff participated in professional development activities during the past year arranged by the department, college and the university.

6- Nearly 70% of the benchmark on the feedback of the public and private sectors toward

our PPS graduated students was positive.

List of Recommendations:

1- Planning to achieve a ratio of 8:1students to teaching staff as future target.

2- Continuous evaluation of the quality of program by the Department Committee for Education and Teaching is recommended to achieve higher score of this target.

3- Improving the maintenance system of the equipment and facilities is recommended to use equipment economically and safely for the benefit of students' education and research.

4- Encourage teaching staff to publish their research outcomes in ISI and/ or high impact factor journals.

5- Enhancement of the cooperation with public and private sectors to solve agricultural problems.

6- Increase the number of students enrolling in the cooperative training course to be prepared for future profession.

GOALS refer to the major program aims, ambitions, and purposes (**What** the program is attempting to accomplish?)

OBJECTIVES refer to specific action points the program has in place to achieve each goal (How is the program attempting to accomplish the goals).

PERFORMANCE INDICATORS refer to the measurement criteria used to evaluate each objective.

TARGET BENCHMARK refers to the intended or desired outcome that is anticipated when each goal is complete.

SUMMARY ANALYSIS refers to a study comparing all the target benchmarks with the actual outcomes determined by the performance indicators (Examine all the goals together and compare and contrast the expected target results with the actual results provided by the performance indicators.). The summary analysis is an overall assessment of the success that the program in achieving its goals.

2. Program Evaluation in Relation to Goals and Objectives for Development of the Program

NOTE:

I. Reports on these items should be expanded as necessary to include tables, charts or other appropriate forms of evidence, including trends and comparisons with past performance, or with other institutions where relevant.)

II. Information should be provided on performance indicators that relate directly in alignment with the mission, goals and objectives

1. State goal/objective

Achieve high quality teaching and knowledge of PPS through attaining the following objectives:

1- To teach students diverse courses in all PPS disciplines through excellent teaching by

professional academic staff.

2- To provide diversity courses of all PPS disciplines through excellent teaching by professional academic staff.

3- To provide students with applied experience through internships and cooperative learning.

Target benchmark or standard of performance

1- To provide 50 professional graduates through excellent teaching in PPS over five years.

2- To ensure that graduated students are highly competitive and experienced in the field of plant production.

Result achieved or actual benchmark

1- Ratio of students to teaching staff until 2012 was 7:1.

2- The overall satisfaction rating of graduates on the quality of their program (3.7)

3- The overall student evaluation of quality of the program (85%, see Figure 3).

4- The overall rating of graduates on the quality of their program concerning the availability of learning sources (3.6)

5- The overall rating of graduates on the quality of their program in terms of appropriate academic guidance (3.3).

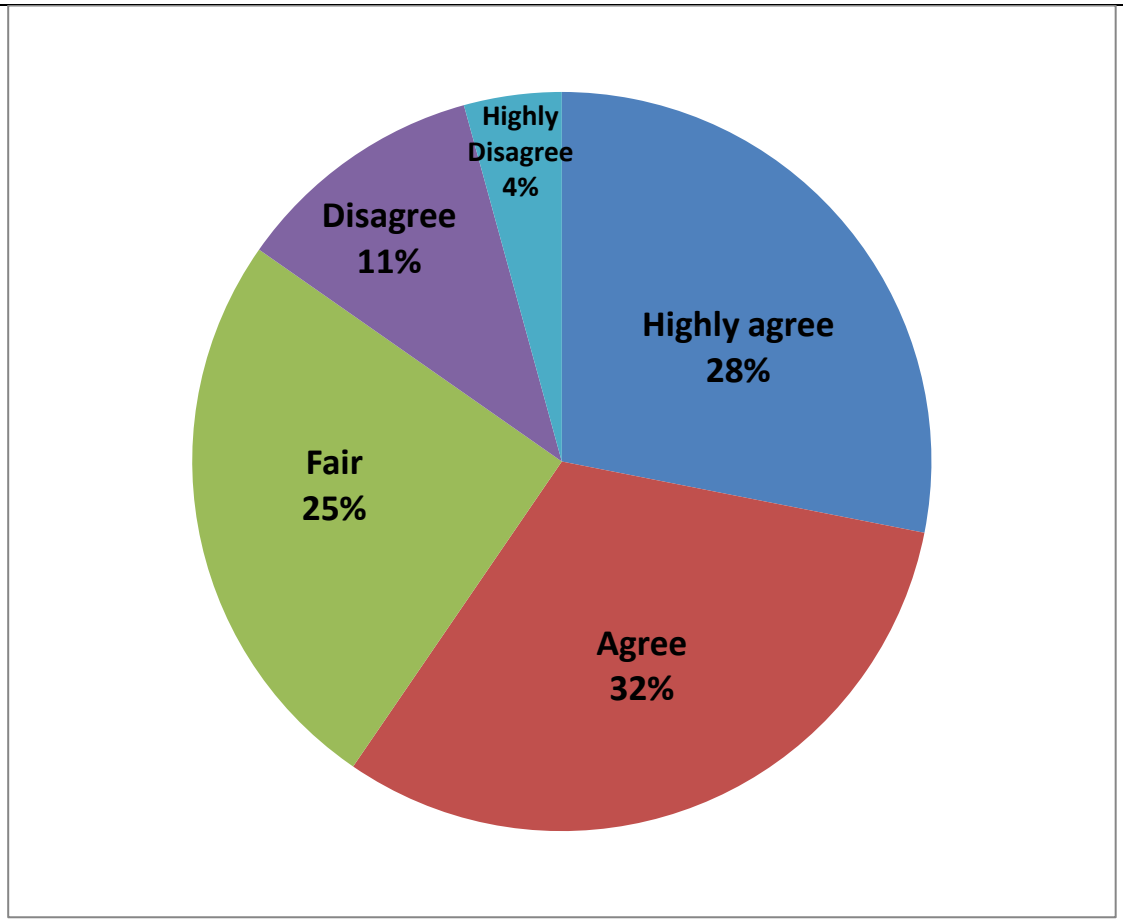

Figure 3. Student overall evaluation of PPS program.

Comments and analysis

Prior to the introduction of the PY system, students are admitted directly into CFAS and the college manages students' allocation into programs internally. Currently, as a result of raising KSU standards for admission, a minimum of 3/5 GPA at the PY is required for admission into all CFAS programs. Because admission process may affect a student's future career trajectory considerably and entrance into KSU is becoming more competitive as the number of vacancies is limited, student admission into the college in general and PPS program in particular has declined.

To address this issue, PPS program along with other two programs; Plant Protection and Animal Production has proposed to the CFAS council two solutions to sustain student enrollment. I) Impose alternate yearly admission among programs whereby admission into three programs is put on hold for one year while admission is made available the other three programs for that year and vice versa. II) Limit program quotas to 50 students yearly. The two proposals were evaluated, discussed, approved and submitted to the Deanship of Admission and Registration.

2. State goal/objective

Conduct firm applied research through achieving the following objectives:

1- To conduct high quality research related to local agricultural problems in the field of plant production.

2- To provide graduate students with experience in conducting applied research.

3- To obtain internal and external fund to conduct national research projects.

Target benchmark or standard of performance

1- To maintain at least 30 ISI publications per year.

2- To ensure that a graduate student participates in funded project and publish at least one paper.

3- To maintain at least 25 funded research projects.

Result achieved or actual benchmark (2012)

1- The total number of publications (48).

2- The total number of ISI publications (38)

3- The proportion of ISI papers per faculty member (1.9)

4- The funded projects per faculty member (1.52).

Comments and analysis

During 2012, actual benchmark of publication rate per faculty member was very good (80% of target benchmark). This achievement can be attributed to taking advantage of KSU established program to attract outstanding professors and researchers to strengthen research program in all fields of PPS interests as well as the ability to attract research funding from external sources (see Standard 10).

3. State goal/objective

Provide excellent community services, through achieving the following objectives:

1- To provide consultation services.

2- To offer workshops and training courses in all fields of plant production to governmental agencies and private sector.

3- To disseminate research outcomes to the community.

Target benchmark or standard of performance

1- Provide at least three consultation services for public and private sectors per year.

2- Organize workshops by the Plant Production Department.

3- Arrange at least two public lectures, visiting professors and training session activities per year.

4- Offer at least two training courses and/ or lectures by academic staff related to agricultural sectors.

5- Issue at least two pamphlets and/or booklets related to plant production sciences.

Result achieved or actual benchmark

1- The percentage of the consultant faculty members in governmental agencies was 23.8%.
2- The number of workshops and training courses arranged by the department staff was seven in 2012.
3- Four public lectures were presented in 2012.
4- Three pamphlets and booklets were issued in 2012.

Comments and analysis

The contribution of the faculty members as consultants strengthens the cooperation of the department with governmental and private sectors. This cooperation creates training and job opportunities for students.

The department has fulfilled all of the objectives concerning the community services that was planned to be achieved by 2012 with the exception of visiting professors to the department as shown in the list above. For example, 200% was achieved in terms of lectures and pamphlets and booklets, in addition to 100% in workshops and training sessions.

F. Program Context

NOTE: A SEPARATE TABLE MUST BE USED FOR EACH BRANCH/LOCATION CAMPUS.

1. Describe the significant elements in the external environment (including any important recent changes)

Student enrollment into the PPS program tended to decrease during the past few years as a result of external factors including (1) governmental policies to reconstruct the agricultural production to conserve irrigation water, (2) abroad agricultural investment, which resulted in lower employment demand, (3) presence of local institutes providing similar programs (*e.g.* King Faisal University, Qassim University) located in rural agricultural regions, booming of business, services and industries that created higher-income jobs. Therefore, KSU has directed the CFAS in 2006, to reconstruct its programs. Consequently, the three PPS bachelor programs (Field crops, Horticulture and Range Science and Forestry) were merged into one program of Plant Production Sciences.

In 2009, the program curriculum was modified to accommodate and fulfill the introduction of the Preparatory Year Program (PY) at the university. The current curriculum was built to fit the application of hour-credit system. With the introduction of PY program, direct admission into the CFAS was ceased and hence low PPS student enrolment was substantiated (Annex F.1).

Unfortunately, all these measures were not fruitful in terms of sustaining student enrollment. We anticipate that job opportunities for PPS graduates to remain low in the private agricultural sector as a result of recruitment of low-paid agricultural specialists from other countries. However, governmental sector will remain dependent on employment of graduating citizens for the continuity of recruitment to replace retired employees.

2. Enrolment Management and Cohort Analysis (complete tables on the following pages)

Cohort Analysis refers to tracking a specific group of students who begin a given year in a program and following them until they graduate (How many students actually start a program and stay in the program until completion).

A **cohort** refers to the total number of students enrolled in the program at the beginning of each academic year, immediately after the preparatory year. No new students may be added or transfer into a given cohort. Any students that withdraw from a cohort may not return or be added again to the cohort.

Cohort Analysis Table 1 provides complete tracking information for the most recent cohort to complete the program, beginning with their first year and tracking them until graduation (students that withdraw are subtracted and no new students are added).

Cohort of the Academic Year tables refers to current cohort tracking that is in progress. A separate cohort tracking table should be provided for each year.

Table 18. Enrolment Management and Cohort Analysis

Student Category	2007/08	2008/09*	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Total cohort enrolment	8	8	7	7	7	3	1	1
Retained till year end	8	7	6	6	3	1	1	0
Withdrawn during the year and re-enrolled the following year	0	1	1	1	0	0	0	0
Withdrawn for good	0	0	1	0	0	0	0	0
Graduated successfully	0	0	0	0	4	2	0	1

* CFAS joined PYP in the academic year 2008-2009.

Provide a Cohort Analysis of the Academic Years (for the last 5 years).

No student enrolment took place in years 2008/2009 and 2010/2011. In 2009/2010, three students were enrolled in the PPS program. In that year one student withdrew completely from the program while another took a year off. The cohorts of years 2009/2010, 2011/ 2012 and 2012/ 2013 were all transfers from other programs within the college or the university. The main reasons for the relatively low program enrollment are:

1. Following restructuring of CFAS programs, the Deanship of Admissions and Registration (DAR) put the PPS program on hold as it was not officially approved.
2. Starting from the 2010/2011, the DAR has adopted a new enrollment policy, by which the minimum size for all new cohorts passing the PYP should be 15 students. As a result, students of small size cohort (< 15) are allocated to other programs of their choice.

Despite the above analysis, the PPS program maintained fair student enrolment rate. During the academic years 2007/2008 – 2011-2012, the average enrolment was 39 students. Thirty students graduated during the same period while only 13 students withdrew from the PPS program either due to low GPA dismissal, transfer to other programs or any other unspecified reason.

It is needless to say that PPS program offers some courses specifically required and/or tailored for other CFAS programs. These include PPS 201, PPS 206, PPS 347, PPS 348, PPS 340 and

PPS 403.

In addition to what has been stated in last section (F.1), PPS program has declared an action plan to increase student enrolment. This action involves the following measures:

1- Prepare and distribute booklets and brochures that describe the PPS program profile activities and potential career for PPS students.

2- Update the department web page.

3- Continue communicating the PPS message at the PY program.

4- Arrange for visits to high schools in cities and villages surrounding Riyadh.

5- Invite high school students to field days at the Agricultural Research and Experimental Station in Dirab.

6- Participate in non-academic activities of high schools.

Table 19. Cohort of the Academic Year: 2008 – 2009

Total student enrolment at the beginning of year	PYP	0	0	0	0	0
Progressed through the year		0	0	0	0	0
Withdrawn during the year and re-enrolled the following year		0	0	0	0	0
Withdrawn for good		0	0	0	0	0
Graduated successfully		0	0	0	0	0
Provide Analysis No student enrolment took place in the year 2008/2009.						

Table 20. Cohort of the Academic Year: 2009 – 2010

Total student enrolment at the beginning of year		PYP	3	2	1	1
Progressed through the year			3	1	1	1
Withdrawn during the year and re-enrolled the following year			0	2	0	0
Withdrawn for good			0	0	2	0
Graduated successfully			0	0	0	0
Provide Analysis Total enrolment for this academic year was 3 students. All progressed through the year. However, two students took the second year off then withdrew for good the next year. The reason for student withdrawal was not specified. The remaining student is expected to graduate in the first semester next year (20014/2015).						

Table 21. Cohort of the Academic Year: 2010 – 2011

Total student enrolment at the beginning of year			PYP	0	0	0
Progressed through the year				0	0	0
Withdrawn during the year and re-enrolled the following year				0	0	0
Withdrawn for good				0	0	0
Graduated successfully				0	0	0
Provide Analysis No student enrolment took place in year 2010/2011.						

Table 22. Cohort of the Academic Year: 2011 – 2012

Total student enrolment at the beginning of year				PYP	1	1
Progressed through the year					1	1
Withdrawn during the year and re-enrolled the following year					0	0
Withdrawn for good					0	0
Graduated successfully					0	0
Provide Analysis Only one student enrolled for this academic year. He progressed through the year and the year after.						

Table 23. Cohort of the Academic Year: 2012 – 2013

Total student enrolment at the beginning of year					PYP	3
Progressed through the year						3
Withdrawn during the year and re-enrolled the following year						0
Withdrawn for good						0
Graduated successfully						0
Provide Analysis Total enrolment for this academic year was 3 students. All progressed through the year.						

3. Analyze the mission, goals, content, and methods of delivery of the program and describe any implications for changes that may be required in as a result of changes noted under 1 and 2.

Mission and goals of PPS program were not changed. Some existing course contents were modified to fit the new changes in the program. All students enrolled in the year 2007 /2008 were settled to the new curriculum. However, the old curriculum continued to be delivered for students continuing from previous years. Apart from the above mentioned modifications, no

other alterations were required as a result of changes noted under 1 and 2.
Annex F.1 Curricula of PPS program.

G. Program Developments

1. Provide a list of changes made in the program in the period since the previous self-study or since the program was introduced. This should include such things as courses added or deleted or significant changes in their content, changes in approaches to teaching or student assessment, or program evaluation processes etc.

With the introduction of the Preparatory Year program (PY) in 2009, the PPS program curriculum was modified. This modification was mandatory to accommodate and fulfill the requirements to join the PY. The Department of Plant Production was not consulted in the PY course preparation. Therefore, PPS program was forced to maintain the core course requirements (e.g. Bot 101, Chem 101) while at the same time keep the total credit hours of PPS program at 135 credit hours of which 31 were allocated to PY. Four new courses were introduced (Organic Agriculture, Lab Applications in Field Crops, Lab Applications in Horticultural Crops and Graduation Project). Credit hours of five courses were reduced from 3 to 2. These included Vegetable Crop Production, Principles of Plant Breeding, Production of Fruit Trees, Controlled Environment Agriculture and Production of Ornamental Plants and Flowers. One course; Principles of Plant Production was increased from 2 to 3 credit hours. These changes were officially approved by KSU in 2011 (see Annex D.1.b).

3. **Comparison of planned and actual Enrolments table**.

Table 24. Comparison of planned and actual Enrolments.

Year	Planned Enrolment	Actual Enrolment*
2008 - 2009	50	47
2009 - 2010	50	43
2010 - 2011	50	36
2011 - 2012	50	18

Provide analysis and an explanation report if there are significant differences between planned and actual numbers.

* Student actual enrolment from 2008-2012 refers to total number of currently registered students including the newly admitted PPS students at that particular year and does not represent specific cohorts.

There was a difference between planned enrolment and actual number of enrolled students. The reasons for the apparent differences were discussed earlier (section F.1)

and include:

- The negative impact of the preparatory year.
- The impact of country agricultural policy to invest abroad.
- Governmental policy to reduce crop production to conserve water resources.
- Existence of other institutes providing similar programs.

Based on the reasons mentioned above, PPS program expects that the total enrollment of student over the next five years will be 75.

H. Evaluation in Relation to Quality Standards (Refer to *Standards for Quality Assurance and Accreditation of Higher Education Programs*)

NOTE FOR SECTION H

Response reports should be provided under each of the quality sub-standards set out in the ***Standards for Quality Assurance and Accreditation of Higher Education Programs***.

- To ensure a full understanding of the SSRP, explanatory reports are included in order to give background information or explanations of processes relevant to the standard or sub-standard concerned.
- The reports should summarize the process followed in investigating the performance in relation to each standard and sub-standard.
- A vital element of the SSRP is to provide specific data, show trends, support conclusions, and make appropriate comparisons with other programs selected to provide benchmarks for evaluation of performance. This data may include key performance indicators, other statistical information, figures derived from survey results, student results or anything that provides clear evidence about the matter being evaluated. A simple assertion that something is good, or needs improvement, is not sufficient without evidence to back it up.
- Integrated into this SSRP are KPI tables for measurement of quality. Each KPI table is placed at a specific point where quality assurance must be demonstrated. Programs may use NCAAA KPIs or develop their own KPIs to complete them.

NOTE: Programs are required to use 50% or more of the suggested NCAAA KPI's.

Standard 1. Mission and Objectives (Overall Rating 3.33 **Stars)**

The mission of the program must be consistent with that for the institution and apply that mission to the particular goals and requirements of the program concerned. It must clearly and appropriately define the program's principal purposes and priorities and be influential in guiding planning and action.

Provide an explanatory report about the development and use of the mission for each of the following sub-standards:

1.1 Appropriateness of the Mission

The mission is clear and addresses the functions of the program. It meets with the needs of the agricultural community. The mission and vision are strongly related to those of the University (see the following URL: http://ksu.edu.sa/en/about-ksu/mission-vision). The mission and objectives are displayed and visible around the Department. They are also posted on the department website. This mission was thought to be highly acceptable and appropriate (93%) among staff and students with only 7% of respondents expressed fair satisfaction as evident from the results of related questionnaires. (Figure 4).

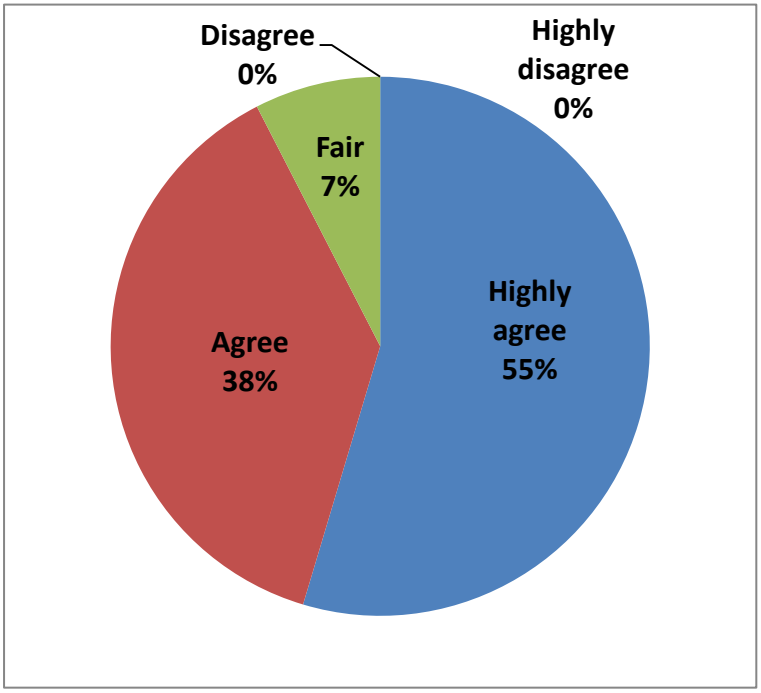

Figure 4. Satisfaction rate of faculty and students to the mission statement.

1.2 Usefulness of the Mission Statement

The mission provides an effective guide to decision-making. It guides all staff and students to the three main University objectives that the department offers, namely education, research, and community services. The mission offers clear criteria for continuous evaluation of progress towards the goals and objectives of the program.

1.3 Development and Review of the Mission

The following steps were taken to develop and review the mission statement:

1- PPS QA committee members formulated the mission statement.

2- The mission statement was distributed among staff members for feedback review.

3- PPS QA committee revised the mission statement accordingly and submitted the statement to the council.

4- The Plant Production council reviewed and approved the mission statement.

5- The mission statement was declared and publicized.

6- The mission will be periodically reaffirmed every 5 years.

1.4 Use Made of the Mission

The mission statement is used as a basis for the strategic plan to develop the program. Further, the mission statement is widely supported by staff and faculty members. Fifty five percent of the department staff and students expressed high satisfaction, while 38% expressed their satisfaction about the mission statement (Figure 4).

1.5 Relationship Between Mission, Goals, and Objectives

The three PPS program goals (Achievement of high quality teaching and knowledge, Conduction of firm applied research and provision of excellent community services) emerged from the core of the mission statement. Goals were clearly stated and consistent with the mission statement. Further, the mission statement was basis for the development of objectives. Main objective were clearly stated, very specific, measurable, achievable and time-bound. Strategy plan to achieve goals and objectives was clearly assembled in alignment with the mission statement.

Provide a description of the process for investigation and preparation of report on this standard.

The following actions were taken to prepare this standard:

1- Questionnaires were developed and administered to investigate knowledge and awareness of staff members on the mission and objectives of the Department.
2- The faculty and staff members, including the committee for Quality and Development have participated in the evaluation survey about the mission and objectives.
3- The mission and vision were clearly presented in the department website.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: The average satisfaction rate of faculty and students of the mission statement.	
Target Benchmark	5

Actual Benchmark	4.65
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	4.75

Analysis: Actual benchmark result is highly acceptable (4.65) which is equivalent to 93% of the target benchmark. Lack of internal or external benchmarks prevented comparison with peer programs. PPS mission is highly publicized more among students and faculty members. Despite the above result, there is a need for feedback from stakeholders about appropriateness of the mission. The PPS new target benchmark is 4.75. Internal benchmarks are not readily available to the department as academic accreditation is relatively new to the country. Meanwhile, the department does not have the authority to acquire international external benchmarking. However, the Department of Plant Production has an action plan to tackle this problem through CFAS deputy dean for quality assurance and development (see section K1 of this report).

Overall Evaluation of Quality of Mission, Goals and Objectives. Refer to evidence obtained and ***provide a report*** based on that evidence; including a list of particular strengths, recommendations for improvement, and priorities for action.

Overall achievement on the quality of PPS mission was 67% of the targeted benchmark. The mission statement is concise and provides framework guidance for goal and achievable and measurable objectives. Strategic plan to achieve PPS goals and objective was made flexible for periodical review so as to respond appropriately to changes that occur in both internal and external environment. The program's ambition is to publicize the mission more effectively among stakeholders and students.

Strengths

1- The mission and objectives are clear and appropriate.
2- The mission covers the main functions of the department.
3- The mission is in harmony with the college mission. The mission is well known among staff, students and employees.
4- The development of the mission was referred to international universities as benchmarking.

Recommendations for Improvement

1- Mission statement should be effectively publicized among stakeholders.

Priorities for action

1- Encouragement of the staff members to express the PPS mission in their academic activities.

Standard 2. Program Administration (Overall Rating 3.59 Stars)

Program administration must provide effective leadership and reflect an appropriate balance between accountability to senior management and the governing board of the institution within which the program is offered, and flexibility to meet the specific requirements of the program concerned. Planning processes must involve stakeholders (e.g. students, professional bodies, industry representatives, teaching staff) in establishing goals and objectives and reviewing and responding to results achieved. If a program is offered in sections for male and female students resources for the program must be comparable in both sections, there must be effective communication between them, and full involvement in planning and decision making processes. The quality of delivery of courses and the program as a whole must be regularly monitored with adjustments made promptly in response to this feedback and to developments in the external environment affecting the program.

Provide an explanatory report about the development and use of the program administration for each of the following sub-standards

2.1 Leadership

The Skills Development Deanship of the University organizes several Leadership Development Programs. Head of the Department and other academic members including the new staff members are encouraged to attend these programs.

The nomination of the Department head is carried out by a committee appointed by the College Dean (Annex 2.1). The committee organizes the election among the candidates from the faculty members and recommends the names of high scores candidates to the Dean. The Dean nominates the Department Head who is then approved by the University Rector. The responsibilities of the Department head are clear and listed in a detailed guidebook (see the following URL:

http://ksu.edu.sa/sites/KSUArabic/aboutUs/regulations/doctors.pdf

2.2 Planning Processes

The Head of the Department has appointed a special strategic planning committee that developed a comprehensive strategic plan (Annex 2.2). The PPS program planning processes were managed effectively to achieve the mission goals and objectives of the program through collective team effort. The strategic plan was made flexible to adapt to results achieved and any change in internal or external environment. The PPS strategic plan incorporated priorities for development in both education and applied research and was combined of appropriate series of actions to achieve effective time-bound outcomes. Realistic consideration was taken for external environments that might affect demand for graduates and their required skills. The strategic plan was formulated on the basis of CFAS strategic plan. A formal SWOT analysis was performed. Several meetings and interviews and consultation with PPS former students, staff, employees, faculty and stakeholders (i.e. CFAS-AB) were undertaken.

In particular, PPS strategic plan focused on intended learning outcomes for students

coupled with assessment strategies. Implementation of plans and their outcomes are monitored and evaluated against short and medium term targets. The Department council reviews and revises such initiatives every three years, with the examination of key indicators which permits the PPS program to assess its own performance compared to similar programs, helping to identify internal strengths and weaknesses and external opportunities and threats.

Relationship Between Sections for Male and Female Students

Not Applicable

2.3 Integrity

The PPS program integrity is maintained through KSU code of ethics. This code defines faculty-students relationships. At the departmental level, students are ensured that they are provided with a course syllabus witch outlines the course expectations and grading procedures. The Department also ensures that faculty members understand academic policies (see the following URL: (http://ksu.edu.sa/sites/KSUArabic/aboutUs/Pages/RulesandRegulationss.aspx)

Students' integrity is maintained through KSU Student code of conduct. The CFAS has a permanent committee for student rights of which the department is represented by a student. Furthermore, the Department Head has a periodic meeting with the students who can express their problems and ideas. In addition, he organizes meetings with all staff and employees to discuss ideas, concerns or problems.

Research carried out by the faculty should conform to the KSU policies for the ethical conduct of research. This also applies to research carried out by staff and undergraduate and postgraduate students.

2.4 Internal Policies and Regulations

Policies and procedures of King Saud University outline rules and regulations controlling all matters of conduct of educational activities. These policies and regulations are available on the University web site. They are categorized as students' affairs, financial affairs, faculty, research, postgraduate studies and legations regulations. To deal with the inspiration and ambition of the University, regular updating and reviewing of policies and regulations are done.

Provide a description of the process for investigation and preparation of the report.

The Department Committee of Academic Accreditation and Quality has carried out the following actions:

1. Examining the records and reports for related events and committees, including Department Annual Reports 2007- 2011 and job descriptions.
2. Reviewing strategic plans of the Department, the College and the University.
3. Observing samples of documents from department (committee minutes, decisions, mission and goals, plans, etc.) and data available at the Department

website.

4. Referring to the previous department report for the self-evaluation 2009 for comparison and awareness for continuous improvement.
5. Make use of the report of the external reviewers (AIC), and action plan in response to their recommendations.

Evaluation of Program administration: Refer to evidence obtained and provide a report based on that evidence; including a list of particular strengths, recommendations for improvement, and priorities for action.

Reasonably high achievement (72% of its targeted benchmark) was attained in terms of program administration. Although some administrative issues are not controlled by the PPS program, program managers are satisfied by the regulations of KSU and adhere to them in all activities of faculty and students.

Strengths:

1. The Department maintains its integrity by following the laws and regulations of the KSU, the Ministry of Higher Education's policies, the Civil Service Laws, Financial Bylaws, Student Academic Regulations, and other governing and regulating bodies and guidelines.
2. The regular meetings of the Head Department with staff, employees and students have a positive feedback on teaching and research.
3. Policies and procedures of the University outline categories of rules and regulations currently in. All these policies are easily accessible on the University website.
4. The Skills Development Deanship offers several Leadership Development Programs for the Department Heads, faculty members, new staff and other academic administrators.

Recommendations for Improvement

None

Priorities for Action

None

Annexes

Annex 2.1 College committee for nominating department heads.

Annex 2.2 Department strategic plan.

Standard 3. Management of Program Quality Assurance (Overall Rating: 3.63 **Stars)**

Teaching and other staff involved in the program must be committed to improving both their own performance and the quality of the program as a whole. Regular evaluations of quality must be undertaken within each course based on valid evidence and appropriate benchmarks, and plans for improvement made and implemented. Central importance must be attached to student learning outcomes with each course contributing to the achievement of overall program objectives.

Provide an explanatory report that describes and analyzes the quality assurance processes used in the program, particularly relating to indicators and benchmarks of performance and verification of standards for each of the following sub-standards.

3.1 Commitment to Quality Improvement in the Program

In the development of QMS, KSU proposed a two level approach; (i) exploring the requirements aspects of the internal quality assurance (IQA) and external quality assurance (EQA) and (ii) proposing the methodology to be used in the development of its IQA to balance the EQA. The first level tackles the standards, criteria or KPI, and assessment methodology as required by the EQA. In the second level and in conformance to EQA, KSU developed its IQA to equal EQA. By complying with the IQA = EQA equation, KSU applied the NCAAA Standards and Criteria as the blueprint of its IQA Standards and Criteria. QMS ensures that education is of high quality and responsive to students' needs and is in compliance with NCAAA standards. The basic activities of a QMS is comprised of:

1- Description of processes - i.e. documented policies and procedures.

2- Monitoring of processes - i.e. regular checks on the effectiveness of policies and procedures through the selected KPIs.

3- Self evaluation - a process to collect information and data from a range of sources, including students, staff, and stakeholders which will contribute to a realistic evaluation of the program.

4- Governance structures – which is the responsibility of PPS-QAA led by the Department head.

Faculty members are involved in the quality improvement processes (Annex 3.1). Weaknesses are acknowledged by the department faculty for continuous improvement and innovations. The implementation of the University Quality Management System (KSU- QMS) will ensure quality improvement by continued monitoring and evaluation of the program. PPS program has been reviewed externally to ensure the success of SLOs. In addition, the department has allocated internal Learning and Teaching committee to evaluate PLOs. One of the duties of this committee is to investigate, review and analyze course reports at the end of each semester. Furthermore, a set of KPIs are provided for program assessment (see also sub-standard 4.1 and the following URL). http://q.ksu.edu.sa/

Scope of Quality Assurance Processes

Department staff, employers, graduates and alumni participate in the program evaluation to take advantage of their feedback. Learning outcomes for students are considered a priority in the evaluation processes. The field and cooperative trainings in the program are actively encouraging the creativity and innovation of the graduated students.

The advisory board of the college (CFAS-AB) which is comprised of some stakeholders is actively involved in the quality assurance processes. For example CFAS-AB expressed their suggestion to improve English language skills of the graduates despite their overall high performance.

With the field experience being part of PPS curriculum (i.e. PPS 400, Cooperative Training) the Plant Production Department program had greater chance to improve quality assure of the PPS program through assessment from both graduates and stakeholders. For example, the positive results achieved by cooperative training, the CFAS-AB recommended PPS 400 to be an obligate course.

3.2 Administration of Quality Assurance Processes

The head of the department who is also the leader of the PPS-QAA takes the leadership of the management of quality assurance processes under the supervision of the Vice dean for Quality and Development. PPS-QAA (see table 14) member as well as other staff members were involved in planning and carrying out the quality assurance processes. The PPS program used standard forms prepared by the NCAAA to gather data for quality assessment. The PPS program made sure that processes for evaluation of quality were transparent and the criteria for judgments and evidence considered were clear.

3.3 Use of Performance Indicators and Benchmarks

The success of the program was evaluated using 22 KPIs of which 15 were selected to assess the success of PPS program in delivering high quality of teaching, 6 for the assessment of research quality conducted by faculty members and one to assess the quality of services provided to the community (see section E1). Internal benchmarks were used to compare actual PPS program achievement against peer programs. As external benchmarking involves institutional commitments through KSU administration, it is still unavailable. Data were collected from several relevant resources including questionnaires addressed to students, staff, PPS graduate stakeholders, or Department records on students' affairs. Collected data were analyzed and interpreted.

3.4 Independent Verification of Evaluations

The University has taken positive steps in the independent verification of the standards. In this context, the program was reviewed and verified by the AIC (Annex 3.4.a).

In 2010, PPS was granted "Substantial Equivalency" by the Agriculture Institute of Canada (AIC). According to AIC, substantial equivalency, which applies to evaluation outside Canada, "means comparable in program content and educational experience

and implies reasonable confidence that the graduates possess the academic requirement for acceptance into the profession of agrology in Canada. Further, the AIC recommends that the provincial regulatory bodies treat graduates of programs evaluated as substantially equivalent to graduates of Canadian accredited programs for the period that substantial equivalence is in effect."

See the link: http://www.aic.ca/accreditation/international_accreditation.cfm

The AIC stressed that all CFAS programs need to find ways to ensure that students attain and maintain a high level of English competency so necessary in the modern world. In the case of PPS program, AIC praised the recent changes in the curriculum as it consists of fewer required courses and more electives. The AIC suggested that PPS program may wish to consider streaming in this option probably along the lines of the M.Sc. offerings; e.g., horticulture, agronomy, range and forestry. The Plant Production Department agrees with AIC regarding students' competency in English and is introducing scientific terminology in English as a first step to expose students to the English language in their professional life. As for the specific AIC recommendation, students are encouraged through their supervisors to select a menu of electives to give depth in one of these areas.

Feedback from CFAS-AB and stakeholders towards PPS program was generally positive compared to similar institutions. However, like the AIC they feel that English competency among graduates needs more attention.

The Head of Plant Production assures fair grading to all PPS students in all courses. Double marking of courses is not practiced at the PPS program. However, the KSU rules permits for course remarking upon request.

Provide a description of the process for investigation and preparation of report.

The "PPS-QAA Committee" and the "Academic Quality Unit" reviewed program report, departmental course reports for emphasis and methods of continuous quality management. Similarly, the students' course evaluation surveys (Questioners) were examined. All statistical data relating to the general and specific KPIs identified by the specified staff in Department for quality and development plans were reviewed.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Students' overall evaluation on the quality of their learning experience (Average rating of the overall quality of their program on a five point scale).	
Target Benchmark	5
Actual Benchmark	4.5
Internal Benchmark	3.27 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	5
Analysis: The evaluation by the student on the quality of their learning experience indicated high performance (90% of targeted benchmark). Compared to the internal benchmark (Agricultural Engineering Program, CFAS) the PPS actual target is higher. The ambition is to maintain or improve the quality of students learning experience.	

KPI: Proportion of courses in which student evaluation were conducted during the year.	
Target Benchmark	100%
Actual Benchmark	100%
Internal Benchmark	100% (Agricultural Engineering Program, CFAS)
External Benchmark	N/A
New Target Benchmark	100%
Analysis: Student evaluations are intended to reflect course design, teaching skills, student interaction and departmental expectations. Therefore, PPS requires that student evaluation for all courses should be conducted at the end of each semester. Results are used to pinpoint needs (if any) for improvement. In this regard, excellent actual benchmark has been achieved.	

Evaluation of Management of Program Quality Assurance: Refer to evidence obtained and ***provide a report*** based on that evidence; including a list of particular strengths, recommendations for improvement, and priorities for action.

Quality assurance is a cornerstone in all educational and research activities of PPS program. The Department of Plant Production has established a QAA committee

comprised of senior faculty members with long academic experience. The QAA committee assures high performance of all PPS academic activities as evidenced from the overall score (73%) on the quality of program management.

Strengths:

1. The establishment and support for the Committee of Quality and Development by the College within the quality unit.
2. A strategic and quality plan was developed together with indicators and benchmarks.
3. Course and program reports are regularly submitted to the Department Head.
4. Program, courses, staff evaluation surveys are continuously conducted by students and graduates.
5. Department members' are periodically evaluated by the Department Head (see Annex 9.2)
6. Feedback of field and cooperative training in the program (Annex 3.4.b)

Recommendations for Improvement

1. Regional and international benchmarks should be included to improve the quality of the program.

Priorities for Action:

Through CFAS deputy dean for QAA, the department will arrange cooperation with peer institutes as local, regional and international benchmarks in accordance with KSU policies.

Annexes

Annex 3.1 Training courses attended by faculty members

Annex 3.4.a Substantial Equivalency certificate granted by the Agricultural Institute of Canada (AIC)

Annex 3.4.b Feedback of field and cooperative training in the program.

Standard 4. Learning and Teaching. (Overall Rating: 3.49 Stars)

Student learning outcomes must be clearly specified, consistent with the National Qualifications Framework and requirements for employment or professional practice. Standards of learning must be assessed and verified through appropriate processes and benchmarked against demanding and relevant external reference points. Teaching staff must be appropriately qualified and experienced for their particular teaching responsibilities, use teaching strategies suitable for different kinds of learning outcomes and participate in activities to improve their teaching effectiveness. Teaching quality and the effectiveness of programs must be evaluated through student assessments and graduate and employer surveys with evidence from these sources used as a basis for plans for improvement.

Provide an explanatory report about the organizational framework and process arrangements followed to demonstrate that the sub-standards are met (For example, use information provided in reports of survey summaries, KPIs and benchmarking analysis, indirect and direct learning outcome assessments or in annual program reports).

Plant Production Department (PPD) allocates the Learning and Teaching Committee (LTC) to be responsible for monitoring and assuring the compliance of the learning and teaching process and outcomes in the department. LTC tasks include monitoring teaching staff qualification and updating the knowledge in their fields, appropriate way of teaching, training and assessments and the student learning outcomes as clearly specified in the mission and objectives -including the standards, KPIs and benchmarks- of Plant Production Sciences (PPS) program. The efficiency of the teaching process and the effectiveness of the program's outcomes are evaluated through questionnaires and panel discussions by teaching staff, students, alumni and public and private sectors to improve and fulfill any lack of the PPS program outcomes.

After the evaluation and analysis by LTC, a report is then submitted to the head of PPD to be discussed within the department council.

Provide a description of the quality assurance response processes used to verify the organizational framework and processes for learning and teaching are valid (For example if steps were taken to check the standards of student achievement against appropriate external benchmarks, what was done, and what conclusions were reached?).

The Quality Assurance and Accreditation Committee is one of the main acting committees in the PPD. The administration of this committee assures that the quality of every specific criteria in the department is implemented and achieved according to the standards, KPIs and benchmarks (internal and external), which are recommended by the Deanship of Quality and Assurance at KSU. Figure 5 below illustrates the organizational framework of learning and teaching quality assurance.

QAA assesses the department processes about the quality of all means, by various ways. For instance, evaluating the learning incomes of PPS program follows several mechanisms, of which discussion within PPD members, graduating student surveys,

employment outcome data, employer feedback and performance of graduates are conducted. For example, QAA reviewed the following documents:

1- Course specifications (Annex 4.a).
2- Course reports (Annex 4.b).
3- Independent evaluation of the program (Annex 4.c).
4- Program specific learning outcomes.
5- Policies and procedures of KSU.

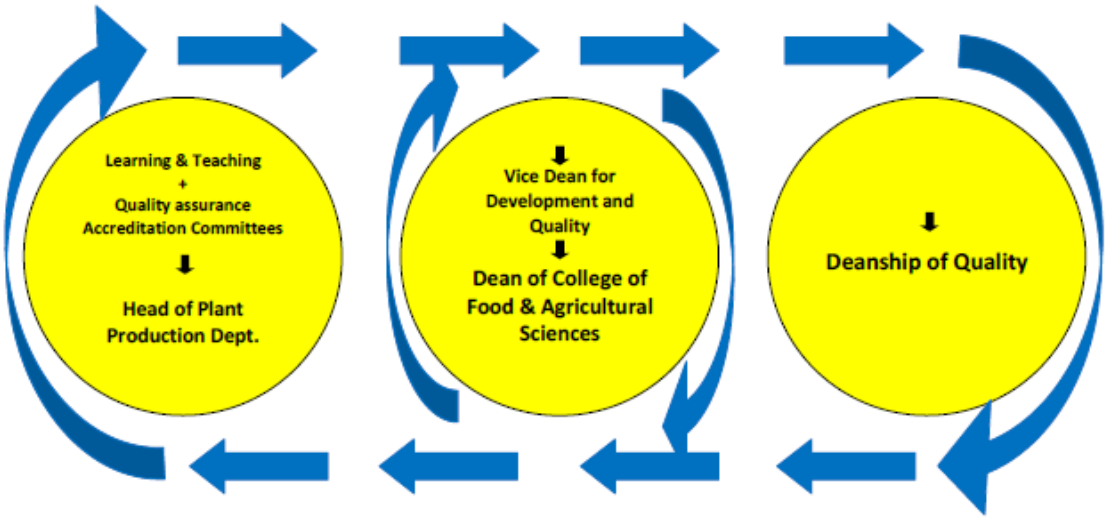

Figure 5. A loop diagram illustrating the organizational framework for Quality Assurance and Accreditation committee (QAA) of learning and teaching.

Subsection 4.1 Student Learning Outcomes (Overall Rating: 3.20 **Stars)**

Describe the processes used for ensuring the appropriateness and adequacy of intended student learning outcomes from the program. Include action taken to ensure consistency of the intended student learning outcomes with professional or occupational employment requirements as indicated by expert advice or requirements of professional bodies or relevant accrediting agencies with the National Qualifications Framework. (Note that evidence on the standards of student achievement of these intended learning outcomes should be considered in sub-standard 4.4 below)

The PPS Program was developed within the National Qualifications Framework (NQF) for Higher Education in the Kingdom of Saudi Arabia. Four domains (I. Knowledge, II. Cognitive Skills, III. Interpersonal Skills and Responsibility and IV. Communication, IT and Numerical Skills) were selected as student learning outcomes (SLOs). Students should pass 135 credit hours to earn a BSc degree in Plant Production Sciences (PPS). While PPS curriculum was developed to be comparable to leading international counterparts, emphases were also put to include knowledge of regulations and practices in Saudi Arabia, and ability of students to apply concepts to issues and problems of national significance. In this context, intended SLOs are consistent with requirements for professional practices in agriculture sector in Saudi Arabia and fulfill NCAAA accreditation requirements.

To ensure appropriateness and adequacy of SLOs, PPS program periodical assessment is conducted. Assessment of program PLOs is practiced through direct evaluation of course learning outcomes as well as indirect surveys conducted on graduating student, employment outcome data, and feedback from stakeholders. Subsequent performance of graduates is used to provide evidence about the appropriateness of intended SLOs and the extent to which they are achieved.

Use the below table to ***provide all the program learning outcomes*** required for graduation with the appropriate assessment methods and teaching strategies in alignment. Use the learning outcomes in the NQF domains of learning, assessment methods, and teaching strategies identified in the Program Specifications. If there are no learning outcomes required for the psychomotor domain then omit the fifth learning domain.

Table 25. Program learning outcomes

	NQF Learning Domains and Learning Outcomes	Teaching Strategies	Related Courses	Assessment Methods
1.0	**Knowledge - Upon completion of the PPS program, students are expected to:**			
1.1	Recognize the principle concepts of various aspects in the field of plant production.	Lectures - discussion	PPS 201 Principles of Plant Production	Written Test

1.2	Recognize scientific theories related to plant production aspects.	Lectures - discussion	PPS 203 Crop Ecology PPS 206 Applied Agriculture Genetics PPS 309 Crop Physiology	Written Test/ report
1.3	Describe obstacles facing plant production in Saudi Arabia.	Lectures - discussion	PPS 201 Principles of Plant Production	Written Test/ report
1.4	Outline reasonable measures and procedures to improve agricultural productivity.	Lectures - discussion	PPS 342 Field Crops PPS 347 Weed Control	Written Test/ report/case study
2.0	**Cognitive Skills- Upon completion of the PPS program, students are expected to:**			
2.1	Reorganize certain aspects pertaining to particular areas of plant production.	Lectures - discussion	PPS 308 Plant Tissue Culture PPS 403 Protected Agriculture PPS 409 Seed Production and Testing	Written Test/ report
2.2	Evaluate environmental factors affecting plant production.	Lectures - Group discussion	PPS 403 Protected Agriculture PPS 446 Field Crop Production under Stress PPS 347 Weed Control	Written Test/ report/ Oral Presentation/ Report Case Study
2.3	Develop approaches to manage and maintain efficient plant production potential.	Lectures - discussion	PPS 205 Nurseries and Methods of Plant Propagation PPS 310 Principles of Plant Breeding PPS 321 Fruit	Written Test/ report/ Oral Presentation/ Report

			Production PPS 324 Date Palm Production PPS 372 Production of Ornamental Plants and flowers	
2.4	Reorganize and explain practical actions to manage plant production.	Lectures - Group discussion	PPS 321 Production of Fruit Trees. PPS 331 Vegetable Production. PPS 342 Field Crops. PPS 372 Production of Ornamental Plants and flowers.	Written Test/ report/ Oral Presentation/ Report
3.0	**Interpersonal Skills and Responsibility - Upon completion of the PPS program, students are expected to:**			
3.1	Demonstrate interpersonal skills to identify factors and/or problems facing plant growth and production.	Group discussion	PPS 380 Practical Training in Field Crops PPS 381 Practical Training in Horticultural Crops PPS 400 Cooperative course training.	Written Test/ report/ Oral Presentation/ Report
3.2	Use scientific approaches to solve problems related to plant production.	Group discussion	PPS 347 Weed Control PPS 400 Cooperative course training PPS 446 Field Crop Production under Stress	Written Test/ report/ Oral Presentation/ Report Case Study
4.0	**Communication, Information Technology, Numerical**			
4.1	Demonstrate ability to integrate principles, concepts, facts and research in order to actively participate in a wide variety of situations and	Small Group discussion	PPS 400 Cooperative course training PPS 403 protected Agriculture	Written Test/ report/ Oral Presentation/

	activities in plant production.		PPS 498 Graduation Project	Report
4.2	Show abilities to use technology tools and information in the plant production field.	Group discussion	PPS 308 Plant Tissue Culture PPS 404 Principles of Field Experiments PPS 405 Practical Plant Biotechnology	Written Test/ report/ Oral Presentation/ Report

Describe the general performance of the program learning outcomes; including external KPIs with benchmarks and analysis assessments from students and employer surveys and a summary of the direct assessment of student learning achievements (How well are the students learning?).

A. Indirect PLOs assessments:

The PPS Learning and Teaching Committee (LTC) and PPS-QAA (see Annex D.E) selected the following KPIs as a measurement to assess Student Learning Outcomes (SLOs):

1- Students' overall evaluation on the quality of their courses (Average rating of students on a five-point scale on overall evaluation of courses)

2- Percentage of students entering programs who successfully complete first year.

3- Proportion of students entering undergraduate programs who complete those programs in specified time.

4- Proportion of graduates from undergraduate programs who within six months of graduation are enrolled in further study.

The PPS-QAA committee has conducted a survey among stakeholders and graduating students to assess student learning achievements. Results showed that 73.8% of surveyed stakeholders praised the learning outcomes of PPS graduating students (Figure 6). Graduating students' survey indicated that nearly 90% showed satisfaction about program that they have completed, including their attitudes towards the skills they have acquired and the quality of teaching provided to them, while 23% responded with fair satisfaction (Figure 6).

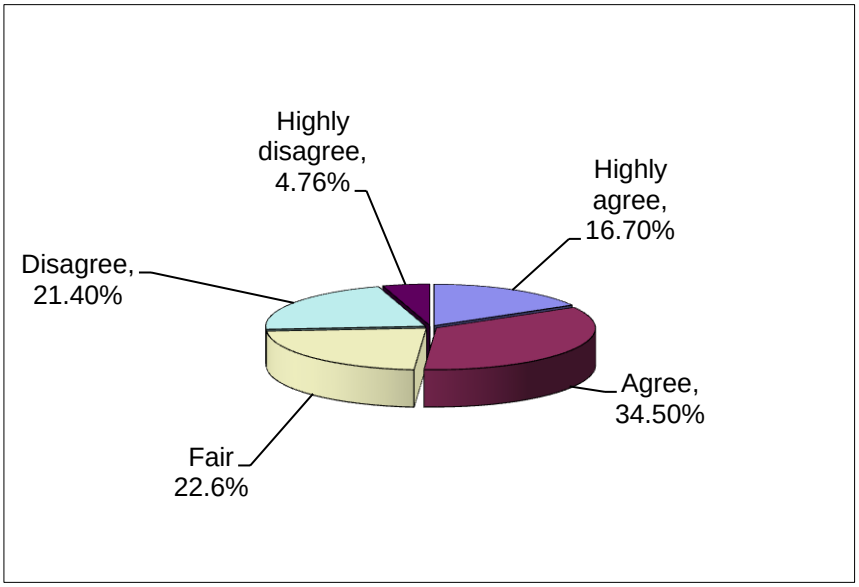

Figure 6. Program Evaluation by Stakeholders.

Describe the program learning outcome assessment system (What is it?); including the results and analysis for the last four years, a description of the leaders, faculty, committees and responsibilities and the names people who serve on each committee.

All courses have goals and objectives included in the course specification. As shown in table 24, the students' learning outcomes assessment system is based on the continual student's assessment which includes written exams (quizzes, midterm and final exams) and group discussions. Other outcome assessment methods include oral presentation, rubric assessment, case study, written essay test and paper-pencil self-evaluation.

A survey conducted to assess students' PLOs indicated that for the last four years, 46-69% of surveyed students expressed their satisfaction about program learning experience, 21-28% of students stated that they got fair learning experience while only 10-21% of students were not satisfied with the leaning experience gained from the program (see figure 7. below).

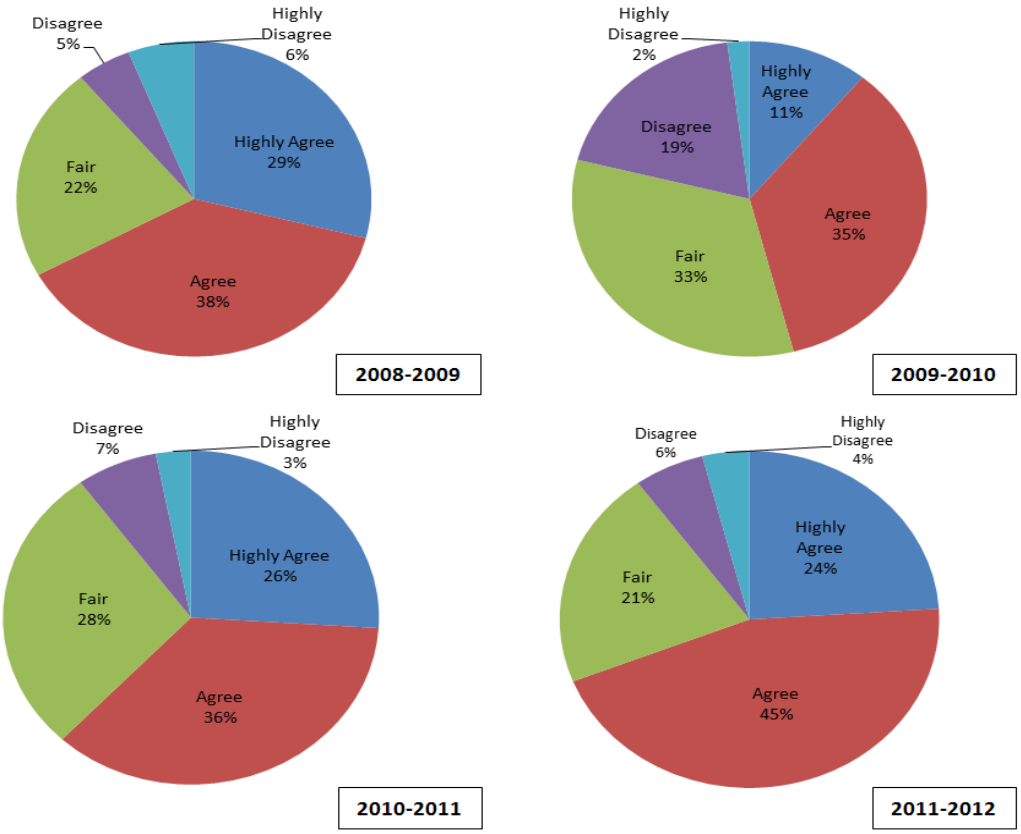

Figure 7. Student evaluation of program learning outcomes.

The two department committees (QAA and LTC) are involved in the assessment of PLOs. In this context, the two committees work in parallel to assure that the intended PLOs are achieved. The below table describes the organization of the two committees.

Table 26. Organization and responsibilities of the department committees of Quality Assurance and Accreditation and Learning and Teaching.

	QAA	LTC
Responsibilities	- Define scope of quality assurance and accreditation committee processes. - Management of quality assurance and accreditation processes. - Use of Indicators and Benchmarks. - Assure commitment to quality standards in all program activities. - Assure independent verification of standards.	- Conduct surveys to assess students PLOs and evaluate teaching process as base for planning for program improvement. - Support for student learning. - Support teaching quality and improvement. - Monitor qualifications of teaching staff and encourage updating the knowledge in their fields. - Verify that the efficiency of the teaching process and the effectiveness of the program's outcomes are evaluated appropriately.
Leaders	- Prof. N.A. Al-Suhaibani	- Prof. A.A. Al-Sadon
Members	- Prof. A.M. Assaeed - Prof. K.A. Moustafa - Prof. G.M. Abdel-Fattah - Dr. T.S. Alshahrani - Dr. Magdy I. Elbana - Mr. Yousef I. Al-Dlaigan	- Prof. F.A. Al-Mana - Prof. I.M. Aref - Prof. A.A. Al-Doss - Prof. A.A. Alderfasi - Dr. A.A. Alqarawi - Dr. M.M. Alenazi - Mr. Yousef I. Al-Dlaigan

Describe the process and steps utilized for the complete assessment for all program learning outcomes (How does the system or process work?).

The PPS-QAA adopts the following steps for complete assessment for all program learning outcomes.

1- Within the PPS educational goal, two objectives were identified: I. To teach students diverse courses in all PPS disciplines through excellent teaching. II. To provide students with applied experience through internships and cooperative learning.

2- Appropriate approaches were selected to assess how well students are

meeting the objectives as described in table 24.

3- Select appropriate measures that can be administered, analyzed, and interpreted for evidence of student learning outcomes. For example, students in cooperative training course (PPS 400) are assessed through report writing, oral presentation and scientific discussion.

4- Assessment findings are communicated by department head, if needed, to PPS-LT committee to get their feedback.

5- PPS council uses feedback to make changes, if needed, and describe any curricular decisions and reevaluate the assessment process with the intent to continuously improve the quality of student learning.

List the strengths and recommendations for improvement of the learning outcome assessment (Based on the student performance results, how can the program improve?) (See *Annual Program Reports* for detailed data).

All course objectives and intended learning outcomes are clearly known to staff and students. Course specifications include assessment method(s) suitable and true to evaluate learning outcomes by the Department Committee for Teaching and Learning. Governmental and private sectors offer jobs that need high qualification to meet job requirements. Therefore, it is necessary to insure that learning outcomes are sufficient and adequate to meet employer needs. In addition to practical section for some courses, there is an adequate practice in cooperative training to maximize learning outcomes by integrating the theoretical with practical learning.

Strengths:

1- The integration between theoretical and practical aspects for some courses enhances learning outcomes.

2- The incorporation of human resources and facilities supports student learning outcomes.

Recommendations for Improvement:

1- To reflect learning outcomes, evaluation methods stated in course specification should be annually reviewed to guarantee that they are efficiently used.

Priorities for action:

None

Evaluation of intended student learning outcomes. Refer to evidence about the appropriateness and adequacy of the intended learning outcomes for students in this program and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

The PPS program defined the intended student learning outcomes within the NQF for Higher Education in the Kingdom of Saudi Arabia. Major teaching and learning methods were described as mentioned above. PPS-QAA committee assured that they are conducive to the attainment of intended outcomes. Similarly, major assessment methods with justified to be suitable for assessing the intended outcomes were described.

Strengths:

1- The integration between theoretical and practical aspects for most courses enhances learning outcomes.

2- Intended learning outcomes are appropriate and adequate as 73.8% of stakeholders and 90% of students have valued PLOs.

Recommendations for Improvement:

1- To reflect learning outcomes, evaluation methods stated in course specification should be annually reviewed to guarantee that they are efficiently used.

Priorities for action:

None

B. Direct PLOs assessments:

The direct assessments of the PLOs are based on the evaluation of the learning outcomes of the courses indicated in each KPI below.

KPI: Students ability to recognize 100% of the principle concepts of various aspects in the field of plant production.	
Target Benchmark	100%
Actual Benchmark	73.2%
Internal Benchmark	71.5
External Benchmark	NA
New Target Benchmark	75%
Analysis: Grade results of sophomore students who completed the PPS 201 course	

(Principles of Plant Production) were evaluated. Evaluation covered the period 2011-2013. Their comprehension of basic science concepts related to the field of plant production was 73.2%. Compared to earlier results of 2010 (used here as internal benchmark), there is a slight improvement (nearly 2% increase). Our future target is to improve student performance in this particular learning outcome to 75%. This could be achieved through diversifying teaching strategies and/or methods of assessment. In particular, field trips bring students into contact with what they learned in lectures. Occasional open-book quizzes and homework assignment (as assessment methods) will motivate students to utilize different learning resources.

KPI: Students ability to recognize 100% of the scientific theories related to plant production aspects.	
Target Benchmark	100%
Actual Benchmark	73.3%
Internal Benchmark	64.8
External Benchmark	NA
New Target Benchmark	75%
Analysis: Grade results of sophomore students who completed the "PPS 203 Crop Ecology", "PPS 206 Applied Agriculture Genetics" and "PPS 309 Crop Physiology" courses were used to evaluate this program learning outcome. Evaluation covered the period 2011-2013. Students' knowledge of the scientific theories related to plant production aspects was 73.3%. Compared to available earlier results of 2010 (used here as internal benchmark), there was noticeable improvement (nearly 9% increase). Our future target is to improve student performance in this particular learning outcome to 75%. This could be achieved through encouraging students to link theories to practical cases. Assessment methods may involve students to identify practical examples related to theories learned in the class in order to constitute this knowledge.	

KPI: Students ability to demonstrate interpersonal skills to identify factors and/or problems facing plant growth and production.	
Target Benchmark	100%

Actual Benchmark	100%
Internal Benchmark	95%
External Benchmark	NA
New Target Benchmark	100%

Analysis: Grade results of students who completed the "Cooperative Training; PPS 400" course, which include on site evaluation, written report and presentation, were used to assess this program learning outcome. Evaluation covered the 2010 class. Students' were fully able (100%) to demonstrate excellent interpersonal skills to identify factors and/or problems facing plant growth and production. Compared to 2009 class (used here as internal benchmark), there was significant improvement (5% increase). Our future target is to maintain student performance in this particular learning outcome.

We also intend to use two more courses (PPS 380, Practical Training in Field Crops and PPS 381, Practical Training in Horticultural Crops) in our next evaluation of this particular program learning outcome. These two practical courses are not yet taken by students.

Subsection 4.2 Program Development Processes (Overall Rating: 3.57 **Stars)**

Describe the processes followed for developing the program and implementing changes that might be needed.

The need for development of the curriculum is in response to job requirements that value high qualification skills. Curriculum development was also necessary to cope with recent advances in agricultural sciences. For instance, PPS 405; "Practical Plant Biotechnology" was introduced to the curriculum in response to the increasingly leading role of biotechnology in the development of plant production. Also, curriculum improvement is essential in competition for attraction with similar programs in the country.

Stakeholders and graduated students were indirectly involved in curriculum development through their participation in responding to PPS questionnaires. Their opinions are analyzed and taken into consideration. For example, inclusion of cooperative training course into the recent curriculum was, in part, as a response to a comment from stakeholders on PPS graduates being week in field planning.

Major changes in the program have been implemented recently to enhance learning quality as follows:

1- Plant Production Department was offering three B.Sc. programs (Horticulture, Crop Production, and Range Sciences and Forestry).

2- In 2006, the three programs were merged into one new program (B.Sc. in Plant Production Sciences). This program includes "Cooperative Training"

which is equal to 12 credits.

3- The program of 2006 was approved by the University Academic Committee.

4- In 2009, due to the establishment of the Preparatory Year by KSU, the department council modified and approved the program.

5- The programs (2006 and 2009) were granted substantial equivalency by Agriculture Institute of Canada (AIC) in 2010.

Evaluation of program development processes. Refer to evidence and provide a report including a list of strengths, recommendations for improvement, and priorities for action.

On the basis of collected evidences (e.g. program evaluation by stakeholders), we believe that program development processes are sufficient (3.57/5.00). The developed PPS curriculum equivalent to peer programs and respond to changes in job opportunities and meets NCAAA criteria. Moreover, as a result of the PPS program development, the interaction with stakeholders was enhanced.

Strengths

1- Cooperative training course was included as main part of the new curriculum which was designed to acquire more knowledge and field experience.

2- Satisfactory feedback from the stakeholders (Figure 6).

3- Qualified teaching staff graduated from different international universities (e.g. USA, UK and Germany) enhanced the quality of the program development

Recommendations for Improvement

1- International consultants should be involved in the curriculum design and development.

Priorities for action

None

Subsection 4.3 Program Evaluation and Review Processes (Overall Rating: 3.5 **Stars)**

Describe the processes followed for program evaluation and review.

Course and program evaluation are kept consistent with KSU policies. The following procedures were adopts for PPS program evaluation and review:

1- Internally, the Quality Assurance and Accreditation & Teaching and Learning committees constantly discuss ideas for improvement.

2- Course reports are prepared by instructors at the end of each semester.

3- The PPS-QAA evaluates course reports and prepares annual program report and consults the department head for any changes to be done. All reports and students records are kept at the department for review and analysis.

4- Performance indicators concerning learning outcomes are identified, evaluated and analyzed. These include, for example (a) students' overall evaluation on the quality of their courses, (b) percentage of students entering program and successfully completed their first year, (c) proportion of students entering graduate programs and successfully completed programs in specified time.

5- Externally, the program was evaluated and granted substantial equivalency by the Agricultural Institute of Canada (AIC).

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Students' overall evaluation on the quality of their courses (Average rating of students on a five-point scale on overall evaluation of courses)	
Target Benchmark	5
Actual Benchmark	4.25
Internal Benchmark	3.87 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	4.5
Analysis: Students highly valued the quality of their courses (85%) compared to the internal benchmark (77.4%) of Agricultural Engineering Program, CFAS. Lack of any equivalent external benchmark did not permit complete comparison. PPS will continue to improve course quality through evaluation of course and program reports to achieve the new target of 90%.	

Evaluation of program evaluation and review processes. Refer to evidence and ***provide a report*** including a list of strengths, areas recommendations for improvement, and priorities for action.

The PPS program goes through rigorous evaluation processes. Continuous evaluation takes place at several levels. For instance, course reports are done every semester and program is done annually. These reports are reviewed and analyzed. In 2010, the program was internationally reviewed and granted substantial equivalency by AIC. The PPS-QAA will plan for the preparation of first periodical review report for AIC by 2015.

Strengths:

1- Presence of internal program evaluation by the students and staff members.

2- The program is internationally reviewed and granted substantial equivalency

by AIC.

Recommendations

None

Priorities for action

None

List the conclusions that were reached about the quality of the program as a result of using the program evaluation and review processes. Reference should be made to data on indicators and survey results as appropriate.

Using the program evaluation and review processes, the following conclusions can be reached about the quality of the PPS program:

3- Survey indicated that 90% of the students expressed their satisfaction about the learning outcomes.

4- Records show that for the year 2012, the completion rate was 57%.

5- A sample of course reports indicated course completion was over 90%.

Subsection 4.4 Student Assessment (Overall Rating: 3.2 **Stars)**

Describe the strategies for student assessment in the program and the processes used to verify standards of student achievement.

The Department implements strategies of assessment known as 'tried and true methods' and globally used [written examination, oral examination, essays, reports, presentation, short answer questions: True/False/ Multiple Choice Questions (paper-based or computer)]. These strategies are clearly communicated to students at the beginning of courses semester in course syllabus. Courses vary in adoption of parts of these strategies.

Table 26 shows course mapping with corresponding assessment method of SLOs. Courses vary in adoption of certain PLOs. Introductory courses put more emphasis on knowledge domain, in proficient courses PLOs tend to be more balanced. In advanced courses, more emphasis is put on interpersonal skills and responsibility and communication, information technology, numerical. Certain courses, especially those having laboratory or field sessions use rubric assessments. Examples, PPS 201, PPS 310, PPS 380 and PPS 381.

The common practice used in KSU, is that final exams (which are usually composed of written tests), are given relatively high emphasis (40%). This implies that the remaining 60% of SLOs assessment is distributed among other assessment methods including written exams for all PLOs. Table 24 shows the four domains of PLO (knowledge, cognitive skills, interpersonal skills and responsibility, communication, information technology, numerical) along with corresponding assessment methods of SLOs of PPS program courses.

Table 27. Course Assessment Map; [Written Test (WT), Essay Test (ET), Cases Study (CS), Oral Presentation (OP), Paper and Pencil Self Evaluation (SE), Rubric Assessment (RA).

Knowledge Cognitive Skills Interpersonal Skills & Responsibility Communication, Information Technology, Numerical																				
Course	Knowledge					Cognitive Skills						Interpersonal Skills & Responsibility					Communication, Information Technology, Numerical				
	WT	ET	CS	OP	RA	WT	ET	CS	SE	OP	RA	WT	ET	SE	OP	RA	WT	ET	SE	OP	RA
PPS 201	✓					✓	✓					✓	✓				✓				
PPS 203	✓	✓				✓						✓	✓				✓	✓			
PPS 205	✓	✓				✓	✓					✓	✓				✓	✓			
PPS 206	✓	✓				✓	✓					✓					✓				
PPS 231	✓					✓						✓					✓				
PPS 241	✓					✓											✓				
PPS 301	✓	✓				✓						✓	✓				✓				
PPS 308	✓					✓	✓					✓	✓				✓				
PPS 309	✓	✓					✓					✓	✓				✓				
PPS 310	✓	✓				✓	✓					✓	✓				✓	✓			
PPS 321	✓					✓	✓					✓	✓				✓	✓			
PPS 324	✓					✓	✓					✓	✓		✓		✓	✓			
PPS 331	✓	✓				✓	✓					✓	✓				✓				
PPS 340	✓					✓	✓					✓	✓				✓				
PPS 342	✓					✓	✓					✓					✓				
PPS 347	✓	✓					✓	✓				✓			✓		✓				
PPS 348	✓	✓					✓					✓			✓		✓				
PPS 352	✓					✓	✓					✓	✓				✓				
PPS 372	✓	✓				✓	✓					✓	✓				✓				
PPS 373	✓	✓		✓			✓			✓		✓	✓		✓		✓				
PPS 374	✓	✓		✓			✓			✓		✓	✓		✓		✓				
PPS 380	✓	✓				✓	✓					✓	✓		✓		✓				
PPS 381	✓	✓				✓	✓					✓	✓		✓		✓				
PPS 400		✓		✓			✓			✓			✓		✓					✓	
PPS 401	✓	✓				✓	✓					✓	✓		✓		✓				
PPS 402	✓	✓				✓	✓					✓	✓		✓		✓				

PPS 403	✓					✓					✓	✓				✓	✓			
PPS 404	✓					✓	✓				✓	✓				✓	✓			
PPS 405	✓	✓				✓	✓				✓	✓				✓				
PPS 409	✓	✓				✓	✓				✓	✓				✓	✓			
PPS 410	✓	✓				✓	✓				✓	✓				✓	✓			
PPS 421	✓	✓					✓				✓	✓							✓	
PPS 446	✓	✓				✓	✓				✓	✓				✓				
PPS 476	✓	✓		✓			✓			✓		✓	✓		✓		✓			
PPS 498		✓		✓			✓			✓		✓		✓			✓		✓	

Evaluation of student assessment processes. Refer to evidence about effectiveness of student assessment processes. ***Provide an evaluation report*** of the processes followed for this sub-standard; include evidence about the standards of student learning outcomes achieved in comparison with appropriate benchmarks. The report on this sub-standard should include a list of strengths, recommendations for improvement, and priorities for action.

Feedback on performance and results of assessments are given promptly to students. In addition, oral exams are sometimes performed to ensure that the submitted work by students is actually done by the concerned students. Course instructor is required to keep the original sheet of the evaluation. In the case of written exams, the student handwriting sheets should be available to be accessed if needed. The keys of exam answers are also available.

Strengths

1- The student assessment processes are diverse, true and globally used.

2- Assessment strategies are clear to both students and instructors.

Recommendations for improvement

1- The standards of the achieved student learning outcomes should be compared to external benchmarks.

2- Encouraging the use of new technology partly to assess students' performance.

3- Training of teaching staff in the theory and practice of student assessment.

Priorities for Action:

1- Questions Bank should be available to enable students to perform exams by computer and that will minimize errors and student get immediate score.

Subsection 4.5 Educational Assistance for Students (Overall Rating: 3.37 **Stars)**

Provide a summary report of what assistance is provided in relation to the matters listed in this sub-standard (e.g. orientation programs, office hours, identification and assistance for

students in need, referrals to support services etc.).

Once a student is admitted to King Saud University, he is given an orientation session explaining all facilities and service available for him during his association with the University. He is also provided with a portfolio for his records. The university provides free e-mail account for faculty and students to facilitate effective communication. PC labs with new PC models are provided where a student can write assignments or print materials related to his courses. Also, the university offers a web page for every faculty member to upload academic materials (Course syllabus, lectures, links, videos, images, office hours and announcements).

Housing, catering and medicinal services are provided to students by KSU at very low costs. Xeroxing, banking, bookshops and postal services are also provided.

Assisting student learning is achieved through academic advices, study facilities, and monitoring student progress. Teaching staff are available for at least three hours per week to consult and advise the students. Furthermore, students can contact faculty members by telephones that are presented on their web-pages and the university directory. The priority is given to students facing difficulties, e.g. low GPA, where their course loads are monitored by the academic advisor.

Students facing academic difficulties are referred to the PPS committee of students' affairs (SA). The SA committee discusses with the students causes underlying academic difficulties and formulates a plan for those students (individually) to overcome these difficulties. Students having personal difficulties are referred to the unit of students' rights at CFAS. All students' consultations are treated as strictly confidential.

Provide an evaluation report of processes for educational assistance for students. Refer to evidence about the appropriateness and effectiveness of processes for assistance of students in this program (e.g. Is the assistance what is needed for these students, is it actually provided as planned, and how is it evaluated by students?). The report should include a list of strengths, recommendations for improvement, and priorities for action.

Consultation provided to PPS students can be classified into two levels; ordinary educational assistance whereby at least three hours per week are available for students to seek general advice, inquire about certain academic information, seek answers about certain course requirements. The second level of consultation is given to students facing difficulties which are treated through the SA committee. Evidences (for example, the very low proportion (3.27%) of student academic dismissal for cohorts 2005/2006 – 2011/2012; indicate that processes of educational assistance given to students is appropriate and effective.

Strengths

1- All faculty members are full time employee and available at sufficient scheduled times to enhance educational assistance for students.

2- The integration between human resources and facilities provide good quality of education.

3- Student Affairs Committee, at the department level, consists of faculty members who can focus more on student needs and listen to their suggestions about effective ways to maximize educational assistance.

Recommendations for Improvement

1- Increasing contact time between faculty members and students. This can be achieved by using for example MeeBo system, where students using mobile computing may stay in touch with the faculty members.

(see the following URL: http://icochise.com/faculty/SevenContact.html)

Priority for actions

None

Subsection 4.6 Quality of Teaching (Overall Rating: 3.5 **Stars)**

Provide information about the planning of teaching strategies to develop the intended learning outcomes of the program, for evaluating quality of teaching, and processes for preparation and consideration of course and program reports. This section should include a table indicating the proportion of teaching staff whose teaching is regularly assessed in student surveys (or by other mechanisms).

The strategies of teaching, assessment, and set out in the program and course specifications are followed by teaching staff to develop the proposed learning outcomes of the program. Course reports are prepared every semester by teaching staff. Program report is also prepared annually by the PPS-QAA based on course reports. Students are required to assess all their teaching staff and courses as at the end of each semester (Figure 8). Student evaluations are taken into consideration. In order to improve the quality of teaching, KSU has established the Deanship of Skills Development (DSD), to develop the professional skills of faculty members. In this context, the DSD offers many training programs such as:

1- Personal, technical and professional skills of the faculty.

2- General academic teaching and research skills.

3- Teaching skills specifically designed for newly joined faculty members.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Percentage of students entering programs who successfully complete first year.

Target Benchmark	100%
Actual Benchmark	67%
Internal Benchmark	70 % (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	80%

Analysis: Over the past 5 years, the average percentage of students who successfully completed their first year was acceptable (67%). It is noticed that few students temporarily withdrew from the University for personal reasons. This may have substantiated the number of students who did not complete the first year in their PPS program. Actual benchmark is comparable to internal benchmark (Agricultural Engineering Program, CFAS).

KPI: Proportion of students entering undergraduate programs who complete those programs in specified time.

Target Benchmark	100%
Actual Benchmark	44.4%
Internal Benchmark	33.3 % (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	50%

Analysis: In the PPS program, students should normally complete their studies in 4 years. During the past 4 years (2009-2012), 5.6% of students graduated within 3.5 years. Those students took advantage of taking core courses offered by other University programs during summer time. Acceptable proportion (44.4%) of PPS students graduated in the specified time (4 years). When combined with those who graduated in three and a half years, the achievement raised up to 50%. An average of 33% of students graduated within 5 years while the rest of students (17%) graduated within 6 years.

The main cause behind the extended period of graduation of belatedly students is the failure to pass the basic courses such as general chemistry, math and physics from the first time. Furthermore, due to the individual variations among students, any student who fails to pass any course is not allowed to register for more than the designated credit hours in the curricula. Moreover, CFAS does not offer summer courses to help those students catch up with their cohort. Actual benchmark is relatively higher than

the internal benchmark.

KPI: Proportion of graduates from undergraduate programs who within six months of graduation are enrolled in further study.	
Target Benchmark	35%
Actual Benchmark	25%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	30%
Analysis: In 2012, it was found that 25% of graduates from PPS program were enrolled in MSc program. Sixty four percent of the graduated students were employed within six months. Although no internal or benchmarks were available, program managers expect this value to be good reflection of student performance in PPS program both in terms of seeking jobs and qualification for postgraduate studies.	

Evaluation of quality of teaching. Refer to evidence about teaching quality and provide a report including a list of strengths, recommendations for improvement, and priorities for action. The report should include a summary of data from student surveys used for course and overall program evaluations, with information provided about sample size and response rates on those surveys. Comparative data from other similar surveys should be included.

- Teaching quality is the integration of many components such as class started on time, instructor always present, materials well prepared, the availability of resources, using technology to support learning; and grading tests and other courses requirements were fair and reasonable. Course evaluation survey by students demonstrated high satisfaction about the quality of courses (82%). Also, reports of most courses provide good information about the quality of teaching.
- Program Evaluation Survey (PES) clarified that the program meet learning objectives of intended students (Figure 3).
- The Student Experience Survey showed high satisfaction (90%) about course work program that they have completed, including their attitudes towards the skills they have acquired, and the quality of teaching provided to them (Figure 9).

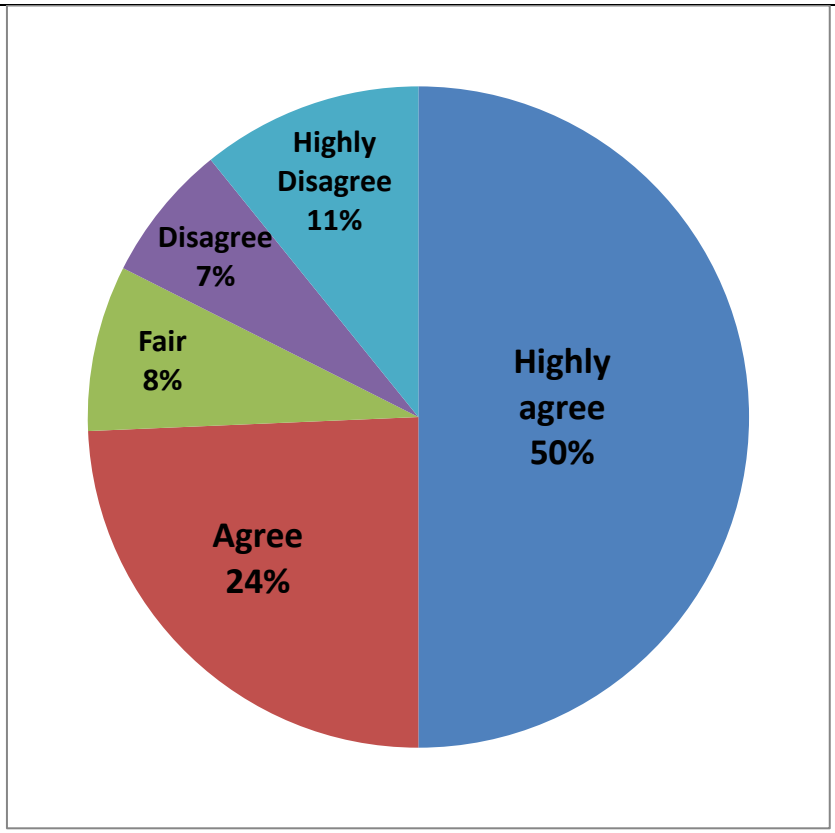

Figure 8. Student overall evaluation on the quality of their courses in 2012.

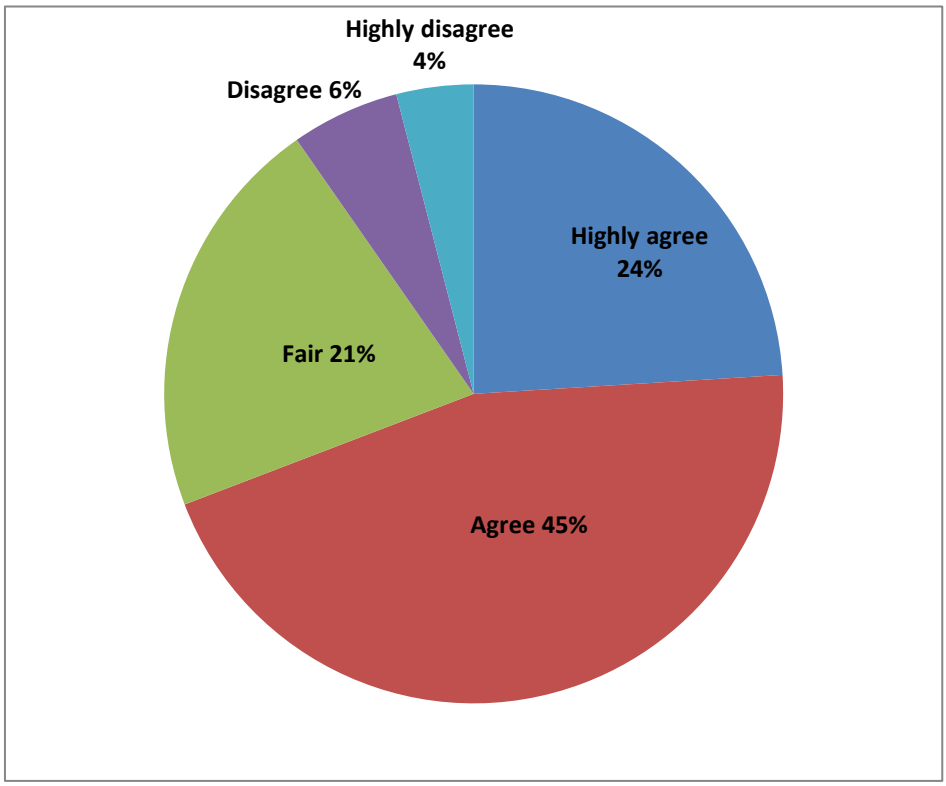

Figure 9. Overall Student Experience Survey in 2012.

Strengths

1- Satisfaction indicated high quality of teaching.
2- DSD training programs are reflected in the quality of teaching.
3- The use of smart blackboards improved the quality and efficiency of teaching.
4- Policy and procedure for students' evaluations are applied.

Recommendations for Improvement

1- Course reports should be analyzed yearly to monitor the academic quality.
2- E-learning courses should be introduced.

Priorities of action:

None

Subsection 4.7 Support for Improvements in Quality of Teaching (Overall Rating: 3.86 **Stars)**

Provide a report that describes the strategies for the improvement of teaching. Include a table showing staff participation in training and/or other activities designed for the improvement of teaching and other related professional development activities. The description should include processes used for investigating and dealing with situations where

evidence suggests there may be problems in teaching quality, and arrangements for recognizing outstanding teaching performance.

Deanship of Skills Development provides workshops to improve the skills of all KSU staff to achieve excellence and creativity in learning and teaching. Some of these workshops are designed to improve the abilities of faculty to design and develop courses portfolios and transform them to electronic contents and how to use the latest technology and instructional techniques. Attendance of the workshops by faculty members is voluntary. However, new faculty members are required to attend orientation workshops specifically designed for them at their first year of employment. Workshops topics include curriculum design, evaluation, and statistical software. To insure high quality of teaching,

King Saud University rewards faculty member for excellence in teaching performance. The excellence reward unit (of the Deanship of Quality Assurance) is in charge of setting criteria for the University reward for excellence in teaching. These criteria are in accord with the KSU mission (see the flowing URL):

http://ksu.edu.sa/sites/KSUArabic/Deanships/quality/Pages/discrimnate.aspx

Evaluation of arrangements for supporting improvements in quality of teaching. Refer to evidence about the effectiveness of strategies used and provide a report including a list of strengths, recommendations for improvement, and priorities for action. This evidence could include matters, such as, trend data and analysis from student course evaluations and survey responses from staff participating in programs offered.

For any academic program to be effective, continuous skill improvement of faculty members is necessity. The PPS program is keen to maintain high quality support for teaching improvement. In this regard, 80% of faculty members attended quality improvement workshops in the year 2012. This is an evidence of effectiveness of strategy to continuously improve the quality of educational delivery.

Strengths

1- Continuous faculty development programs provided by DSD.

2- The diversity of backgrounds of faculty members.

Recommendations for Improvement

1- Faculty member should continue developing his skills throughout his academic career.

2- Faculty member skills that have been developed need a periodic analysis.

Priorities of Action:

None

Subsection 4.8 Qualifications and Experience of Teaching Staff (Overall Rating: 4.0 **Stars**)

Provide an analysis report on the qualifications and experience of teaching staff relating to program requirements (Refer to the *Periodic Program Profile Template B*).

Most faculty members in Plant Production Department have their postgraduate training at international universities in Europe and the United States of America. All teaching faculty members hold PhD degrees. Staff members are well qualified. Fifteen staff members hold PhD degrees, 7 hold M.Sc. degrees (6 Saudi citizens and 1 none Saudi citizen), while 3 are holding B.Sc. (all Saudi citizens) Degrees (see Table 1b). Saudi staff members with are expected to finish their PhD degrees by 2017.

To keep faculty members in contact with the last findings in their fields, they are supported by KSU to participate in local and international conferences and workshops where they can orally present their findings. Such activities strongly enhance the experience of teaching staff by meeting with scientist and researchers from different countries. Many faculty members in the department received local and regional awards.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Proportion of teaching staff with verified doctoral qualification.	
Target Benchmark	100%
Actual Benchmark	60%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	75%
Analysis: Teaching staff members holding PhD degrees compose 60% of total staff. Thirty percent (30%) of teaching staff are qualified with at least master degree. Our anticipation is that Saudi staff will be awarded PhD degrees by 2017. Thus PPS expects to achieve our new target (75%) within 5 years.	

Evaluation of qualifications and experience of teaching staff. Refer to evidence and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

Teaching faculty members are well qualified and experienced Ph.D. holders from diversified educational background (see Table 1a). Ninety percent of them graduated

from US or European universities. They are supported by 25 well qualified staff members mostly with Ph.D. or M.Sc. degrees. With support of well qualified and experienced faculty members, PPS program delivery is expected to be of high quality.

Strengths

1- Qualified faculty members.

2- All faculty members are full time employees.

3- Unlimited support by the University for All Faculty Members.

Recommendations for Improvement

Encouraging the faculty members to spend a sabbatical leave and participate in cultural exchange with international universities.

Priorities of Action:

None

Subsection 4.9 Field Experience Activities (if used in the program) (Overall Rating: 3.45 **Stars)**

Describe the processes for planning field experience activities and planning for improvement.

Field experience is important to plant production students and consequently the department council established the "Cooperative Training Course" whereby students spend six months (one semester plus summer time) in one company of Saudi Agriculture Group (SAG).

As a result of signing an agreement between the CFAS and SAG, Cooperative field training takes place in any SAG agricultural company member during the whole semester plus a summer before or after the semester in which the student is registering for. Arrangements for trainee take place in advance with companies through CFAS. Continuous communication with company field officials and onsite visits take place during the period of training to assure that students get proper field training experience. This course is intended to prepare students for agricultural professional life. During training, students perform the following activities:

1. Participate in planning for crop cultural practices of field and horticultural crops.
2. Participate in crop management and maintenance.
3. Participate in planning and implementation of crop harvesting.
4. Record data and observation notes in a daily basis required for report writing.

Provide an evaluation report of field experience activities including evaluation of processes for planning and managing them. Refer to evidence and provide a report including a list of strengths, recommendations for improvement, and priorities for action.

During the cooperative training course, teaching staff of the program consult the

students through periodic on site visits. In addition, on site supervisors are responsible for guiding the students during the training course. After completing cooperative training, students are required to submit reports and present seminars about their acquired experiences and difficulties that they may have faced. (Annexes 4.9.a and 4.9.b).

Strengths

1- The cooperative training equals to 12 credit hours which encourage the student to acquire learning skills and perform well.

2- Both on site and faculty member supervisors are involved in the evaluation of the training performance.

3- The cooperative training course serves as a pre-job acquisition.

Recommendations for improvement

The college signed an agreement with the Saudi Agriculture Group (SAG) related to the cooperative training course. There is a necessity to activate rules related to trainee students during their participation in cooperative training including monthly allowance, risk assessment, health insurance and transportation.

Priorities for improvements

None

Subsection 4.10 Partnership Arrangements With Other Institutions (it these exist) (Overall Rating NA **Stars)**

If partnerships have been established with other institutions to assist with the planning and or delivery of the program, ***describe what is done*** through those partnerships and explain what has been done to evaluate the effectiveness of those activities.

At the institutional level, KSU has established a post-graduate joint-supervision program. KSU has established partnerships with some leading international universities such as the University of Illinois, Harvard School of Public Health, Indian Institute of Technology and National University of Singapore.

At the PPS program level, no partnership in teaching is established. However, the PPS is active in research partnership with the University of Antwerp in Belgium and The University of Adelaide and The University of Western Australia – Perth- in Australia, L'INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) and CENTRE DE RECHERCHES INFORMATIQUE ET DROIT (CRID) in France, CYMMIT in Mexico and ICARDA in Syria.

Evaluation of partnership arrangements (if any). Refer to evidence and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

NA

Annexes

Annex 4.a Course specifications.

Annex 4.b Course reports.

Annex 4.c Independent evaluation of the program.

Annex 4.9.a. A sample of students' reports on cooperative training.

Annex 4.9.b. Cooperative training course specification.

Standard 5. Student Administration and Support Services (Overall Rating 3.79 **Stars)**

Admission processes must be efficient, fair, and responsive to the needs of students entering the program. Clear information about program requirements and criteria for admission and program completion must be readily available for prospective students and when required at later stages during the program. Mechanisms for student appeals and dispute resolution must be clearly described, made known, and fairly administered. Career advice must be provided in relation to occupations related to the fields of study dealt with in the program.

Much of the responsibility for this standard may be institutional rather than program administration. However, the program is responsible to assessing the quality of this standard. In this standard analysis should be made not only on what is done within the department or program, but also on how the services provided elsewhere in the institution affect the quality of the program and the learning outcomes of students.

Provide an explanatory report about the student administration arrangements and support services for each of the following sub-standards:

The university (KSU) supports students through two Deanships namely DAR and the Deanship of Student Affairs (DSA). The DAR is responsible for student admissions, which are handled through the electronic Edugate and E-register systems. Allocation of students to colleges is also administered through DAR. The DSA is responsible for all student activities and services, such as housing, catering, sports, academic and social counseling, cultural activities, health services and many other services. The College Registration Office handles students' schedules in terms of addition and/or deletion of courses or changing sections as well as other educational services. The two Deanships regulate these responsibilities to the colleges through the Vice Dean for Academic Affairs.

5.1 Student Admissions

Student admissions are clear and accessible through the website of the Deanship of Admission and Registration (DAR). All required information is available in well-organized bulletins. Also, student admission at KSU is processed electronically. The electronic admission system is aimed at facilitating the administrative procedures associated with the admission students to the university and ensures equal opportunities for all applicants. It helps them to identify the suitable alternatives among the available programs, and thus saves time and efforts of students without the need to come to the university campus or its affiliates. The required documents are sent by express mail to the university and the university bears the cost of the express mail.

For additional information on student admission, (see the following URL):

http://www.ksu.edu.sa/Deanships/Registrationandadmission/Pages/default.aspx

5.2 Student Records

All enrolled students at KSU have confidential academic records. In these records, the DAR monitors and handles all student academic actions. The CFAS maintains a registrations office supervised by the Vice-Dean of the Academic Affairs. The office provides the departments with information on registration, progress and achievement of students. Students can electronically view their records.

5.3 Student Management

King Saud University has established clear regulations and policies for fair and consistent processes of student management. These policies and regulations are posted in the website of the university and presented in distributed bulletins (see the DAR website).

5.4 Student Advising and Counselling Services

Academic counseling is provided within the college and the department. Each student is supervised by a faculty member to ensure and maintain an effective follow-up. King Saud University provides students with monthly allowance, medical services, accommodation, sporting and counseling services.

At the college level Student Right Unit has been established to inform students about their rights, receive complains and tries to solve students' difficulties.

King Saud University sets regulations and codes of conduct which give support to protect the confidentiality of academic or personal issues discussed with teaching or other staff. Mechanisms are also established by KSU for follow up to ensure student welfare and to evaluate quality of service provided to students. Students are provided with proper help in all personal, academic, financial, family, psychological and health problems.

At the PPS program level, academic counselling and for career planning is provided to students. The PPS program adheres strictly to regulations and codes of conduct set by KSU to protect the confidentiality of students' academic or personal issues.

Describe the processes used to evaluate performance in relation to this standard.

The evaluation was carried out using different measures:

1- Using students' questionnaires.
2- Evaluation for courses and faculty members by students.
3- Direct contact between students and the student affairs committee.
4- Meeting with head of the department.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Student evaluation of academic and career counseling (Average rating on the adequacy of academic and career counseling on a five point scale).	
Target Benchmark	5
Actual Benchmark	4.3
Internal Benchmark	3.66 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	4.5

Analysis: The PPS program has achieved very high performance (86%) in providing academic and career counseling to students compared to the internal benchmark (73.2%) of Agricultural Engineering Program, CFAS. The program is committed to improve and/or maintain student counseling.

Lack of any equivalent external benchmark did not permit complete comparison. PPS will continue to improve the provision of high quality academic and career counseling through acquiring and analyzing students' evaluation reports to achieve the new target of 90%.

Evaluation of student administration arrangements and support services for students in the program. Refer to evidence about the standard and sub-standards within it and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

The PPS program provides proper academic and career counseling to students and strictly adheres to KSU to regulations and codes of conduct. Evidences from students' evaluation of academic and career counseling (86% of targeted benchmark) and low proportion of students' academic dismissal for the past 6 cohorts (3.27%) shows that support services for students in the PPS program are appropriate and effective.

Strengths

1- The existence of high quality academic, financial and social services.
2- The establishment of student rights protection unit.
3- The availability of electronic services on and off campus.
4- Meetings of faculty members with students.

Recommendations for Improvement

1- Continuous monitoring and revision of the academic guidance system.
2- Students should be oriented about the importance of course and staff evaluations.

Priorities for Action

1- Use SMS and direct mobile call to follow up the slow and belatedly students.

Standard 6. Learning Resources (Overall Rating 3.19 **Stars)**

Learning resource materials and associated services must be adequate for the requirements of the program and the courses offered within it and accessible when required for students in the program. Information about requirements must be made available by teaching staff in sufficient time for necessary provisions to be made for resources required, and staff and students must be involved in evaluations of what is provided. Specific requirements for reference material and on-line data sources and for computer terminals and assistance in using this equipment will vary according to the nature of the program and the approach to teaching.

Provide an explanatory report about processes for provision of learning resources for the program, including opportunities provided for teaching staff or program administrators to arrange for necessary resources to be made available, information about services provided and times available, equivalence of provisions for different sections, etc. Complete this section using the following sub-standards:

a. Planning and Evaluation

To ensure appropriateness and adequacy of resource materials and services needed for effective learning, PPS program adopts the following process:

1- At the beginning of each semester, the PPS committee for Teaching and Learning (CTL) evaluates feedback from teaching staff and faculty to plan for acquisition and/or availability of materials (seeds, seedlings, fruits specimens etc.) to support student learning for all PPS courses.

2- Materials are usually supplied through the Agricultural Research and Experimental and station or through direct purchase by the department.

3- Teaching staff as well as students participate in surveys dealing with adequacy of resources and services, extent of usage and consistency with course requirements and teaching and learning process as whole.

4- Data on learning resources for the program are used to evaluate and analyze of learning and teaching in the program.

b. Organization

The Deanship of Library Affairs (DLA) is responsible for the provision of learning resources and services that meets the requirements of the program and manages students' access to resources and services through the university library (Prince Salman Library). The library opens daily for 16 hours (8:00 am to 12:00 pm). Library online databases can be accessed on-campus or off-campus from its homepage. Academic staff and students can borrow books for one semester and get access to reserved materials.

The Department of Plant Production does not keep a library of its own. The main KSU library named Prince Salman Library (PSL) is responsible for meeting the requirements of all KSU programs and provides access and availability of resources

and services to all university students. The Department of Plant Production arranges with PSL to put heavy demand and/or required reading materials needed for PPS program students on hold at the reserve disk. Moreover, access to on-line data-bases and research and journal materials are available to staff and graduate students. To name few, these include data basis from Elsevier Science Direct, Wiley Online Library and Springer Link. The PPS also communicates with the PSL to provide any source of learning that might not be available in the library.

c. Support for Users

User support is provided through highly qualified librarians. Furthermore, electronic system is developed to help users for searching and allocating library collections. The library has many study rooms, PCs, printers and copy machines to facilitate the learning resources.

Adequate support is provided by the PSL to assist students and teaching staff to make effective use of library services and resources. As part of orientation given to newly admitted students, PLS provides orientation to groups of students visiting the library at KSU campus. Orientation is also electronically available (http://library.ksu.edu.sa/en/) to all users to access library facilities and services including conducting searches and locating and using information. Information desk is available at PSL to answer users' questions by qualified librarians. Electronic system with search facilities is available to assist in locating resources within the library or other locations. Teaching staff in the program are kept informed of library developments and activities such as acquisition of new materials, or changes in services or opening hours.

d. Resources and Facilities

King Saud University has access to several types of learning resources including e-journals, e-books and online databases. The college provides computer labs with technicians where students can use and access internet for learning materials. Also, the Deanship of Student Affairs has a bookstore where students can purchase text books with half price in order to help students obtaining the books.

Available reference materials and facilities in the library are adequate and appropriate for the needs of the PPS program. Materials include paper books and journals as well as other online references. Up to date computer equipment and software for electronic access are available at PSL. They are appropriate and adequate for meeting the PPS program requirements. Books and some journals and other materials are available in Arabic and English languages to meet the needs of PPS program. Prince Salman Library occupies a modern building at KSU main campus with sufficient facilities for individuals and small study groups.

Describe the processes followed to investigate this standard and summarize the evidence obtained.

Data have been obtained through questionnaires distributed among students and staff members. As part of the course experience survey, the adequacy of library support was evaluated and analyzed. Also, faculty members evaluated the availability of learning

resources that fulfill course requirements as described in course specification.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Student evaluation of library and learning resources services.	
Target Benchmark	100%
Actual Benchmark	77%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	80%
Analysis: Although the Plant Production doesn't have a library for its own, the role of the PPS program is to recommend and request the deanship of libraries to provide the necessary and latest academic learning resources for PPS students. Students are satisfied with library and learning resources services.	

Evaluation of learning resources for students in the program. Refer to evidence about the standard and sub-standards within it and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

Although the Department of Plant Production does not have its own library to support the PPS program, KSU provides adequate learning resources for students. The high satisfaction rate by students towards appropriateness and adequacy of learning resources and services provided by PSL indicates that PPS program is meeting the NCAAA standards of learning resources.

Strengths

1- The availability and accessibility of wide ranges of learning resources.
2- Adequate budget allocated to develop learning resources.
3- The foundation of the Deanship of e-Learning and communication.

Recommendations

1- Encourage the translation of textbooks into native language to help students and community.

Priorities for action

None

Standard 7. Facilities and Equipment (Overall Rating 3.32 Stars)

Adequate facilities and equipment must be available for the teaching and learning requirements of the program. Use of facilities and equipment should be monitored and regular assessments of adequacy made through consultations with teaching and other staff and students.

Much of the responsibility for this standard may be institutional rather than program administration. However, the program is responsible to assessing the quality of this standard. In this standard analysis should be made on matters that impact on the quality of delivery of the program. These matters would include, for example, adequacy of classroom and laboratory facilities, availability and maintenance of equipment, appropriateness for the program of scheduling arrangements, and availability, maintenance, and technical support for IT equipment in meeting program needs.

Provide an explanatory report about arrangements for provision of facilities and equipment for the following sub-standards:

7.1 Policy and Planning

The PPS Committee for Facilities and Equipment (CFE) discusses the department requirements for new equipment and facilities for the coming year along with clear and accurate specifications. The department head submits the requested equipment and/or facilities for approval by the dean of CFAS. The General Department of Maintenance is charge all KSU facilities. Requests for facility maintenance are submitted through CFAS administration.

The department through CFE committee ensures that equipment acquisitions meet PPS program requirements and are in consistent with KSU policies to achieve compatibility of equipment and software systems. The CFE consults faculty and staff members when planning for major equipment acquisitions to ensure that current and anticipated emerging needs are met. Planning for equipment acquisition normally includes servicing and parts replacement. However, KSU rules don't require maintenance services in the side of equipment suppliers.

7.2 Quality and Adequacy of Facilities and Equipment

The safety and security of KSU students, faculty and staff are of primary concern. New students and employees are briefed on University security measures. The CFE assures that facilities meet safety KSU standards and that personal security of faculty, staff and students are adequately provided through the followings:

1- Feedback on quality assessment processes from users (students, faculty and staff) about the adequacy and quality of facilities. These feedbacks are taken into consideration in planning to provide high quality and adequacy of facilities.

2- Assure that all facilities and equipment required for teaching, laboratories and researches are of high standards. Comparison with other equivalent

institutions is a usual practice to maintain adequacy and quality of facilities.

3- Faculty members are provided with adequate facilities and services to maintain confidentially on consultation provision for students.

7.3 Management and Administration of Facilities and Equipment

To ensure that facilities and equipment are fully and effectively utilized, lab manager reports to Committee of Facilities and Equipment any required services. Periodical inventory (usually every two years) is conducted of equipment used in the department. Laboratory managers carry the responsibility of several equipment services such as cleaning, waste disposal, minor maintenance, safety, and environmental management. They also required providing regular assessment of needed equipment maintenance and part replacement. The department sticks to KSU rules to provide security for specialized facilities and equipment for teaching and research, as well as ensuring personal security of faculty, staff and students and their personal properties. To utilize facilities and equipment safely and economically, arrangements are made for shared use of underutilized facilities by staff from different laboratories.

7.4 Information Technology

Deanship of e-Transactions and Communications (DTC) is totally responsible for all electronic services required for faculty, teaching staff and students. The DTC staff provides technical support for teaching staff and students using information and communications technology. The DTC provides security systems to protect personal and academic information against external malware and computer viruses. DTC offers software for teaching and research. Moreover, Deanship of Skills Development (DSD) in collaboration with DTC offers training programs for faculty and staff to ensure effective use of computing equipment and appropriate software for teaching, and research.

The CFE complies with KSU policies governing the use of IT systems and makes sure that computing equipment is adequately available and accessible for faculty, staff and students. Acquisition and replacement of IT equipment is done through college administration. Assessment of the adequacy of this provision is regularly performed.

Describe the processes used to evaluate the quality of provision of facilities and equipment for the program.

The QAA in collaboration with CFE, prepared forms to evaluate the quality of provision of facilities and equipment for the program through:

(1) Students, staff and faculty evaluation of the adequacy of available facilities and equipment (Annex 7.a).

(2) Handbook materials of CFE which include a list of facilities and equipment available at the department (Annex 7.b).

KPI: Number of accessible computer terminals per student.	
Target Benchmark	1
Actual Benchmark	1
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	1
Analysis: The CFAS provides two computer labs with 20 computer terminals in each. These terminals are available to all students including the PPS program students. A computer technician expert supervises the two labs and provides technical assistance to students. Also, most of the department laboratories are equipped with computer terminals normally used by post graduate students.	

KPI: Average overall rating of adequacy of facilities and equipment in a survey of teaching staff.	
Target Benchmark	5
Actual Benchmark	4.45
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	4.75
Analysis: Excellent actual benchmark (89%) was achieved in terms of adequacy and efficiency of facilities and equipment. Due to the lack of the internal and external benchmarks, it is not possible to compare our actual benchmark achievement with peer programs. Continuous improvement of handling maintenance of equipment is needed to achieve the new target benchmark (95%).	

Evaluation of facilities and equipment for the program. Refer to evidence about the standard and sub-standards within it and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

Facilities and equipment are the cornerstones for the delivery of any applied educational program. Thus, PPS program ensures strict evaluation for provision of

proper and adequate facilities and equipment as well as proper management of their maintenance utilization. Evaluation of adequacy of equipment (e.g. number of computer terminals per student) and overall rating of adequacy of facilities and equipment indicate that PPS program meets the requirement of this standard.

Strengths

1- The existence of up-to-date documents and electronic systems for equipment.
2- The presence of Educational Farm, Agricultural Research and Experimental Station in Dirab, Greenhouses and growth rooms.
3- The department has several well-equipped labs for researches.
4- The availability of IT systems, hardware and wireless network.
5- All class rooms are equipped with smart boards.
6- Efficient maintenance system of equipment and facilities.

Recommendations for Improvement

1- Offer more training programs for staff and technicians.

Priorities for actions

None

Annexes

Annex 7.a Students, staff and faculty evaluation of the adequacy of available facilities and equipment.

Annex 7.b Handbook materials of CFE which include a list of facilities and equipment available at the department.

Standard 8. Financial Planning and Management (Overall Rating: 3.0 Stars)

Financial resources must be sufficient for the effective delivery of the program. Program requirements must be made known sufficiently far in advance to be considered in institutional budgeting. Budgetary processes should allow for long term planning over at least a three year period. Sufficient flexibility must be provided for effective management and responses to unexpected events and this flexibility must be combined with appropriate accountability and reporting mechanisms.

Much of the responsibility for this standard may be institutional rather than program administration. However, the program is responsible to assessing the quality of this standard. In this standard the effect of financial planning and management arrangements on the program should be analyzed, as well as matters that are carried out by program administrators themselves.

Provide an explanatory report about financial planning and management for the following sub-standards:

The university is totally in charge of all financial support. Financial support is dealt with according to rules and regulations of the Ministry of Finance. The university strictly adheres to policies and governmental rules in all aspects of accounting processes to ensure quality of financial spending. These policies include 1) well organized financial budgeting along with strict monitoring, 2) consistent processes of spending including systems for invoice follow up and 3) strict accounting for all confirmed budget items.

8.1 Financial Planning and Budgeting

According to the executive rules for financial affairs, the University revenues consist of the following:

1- The budget allocated from the government.
2- Funds, grants and endowments.
3- Return on assets owned by the University.
4- Research grants, contractual and income from the academic services offered by the University.

The largest source of financial support comes from governmental budget. According to financial bylaws of the university, the budget is spent in four categories:

1- Salaries, wages and allowances.
2- Operating expenses.
3- Contracts for cleaning, maintenance and security programs.
4- Projects related to infrastructures.

The university allocates an overall budget to the colleges under items 1, 3 and 4, which is in turn spent as required among departments and units. The university has offered independence to colleges in some decision-making under item 2 related to

laboratory equipment, chemicals, office furniture, teaching and raw materials that required for maintenance and spare parts. Detailed explanation of anticipated and maintenance costs of any proposed project are submitted to the university administration which evaluates and analyzes the costs and benefits for reliability and then amends or approves it. (see the following URL: http://ksu.edu.sa/sites/KSUArabic/aboutUs/regulations/financial.pdf

8.2 Financial Management

Although financial responsibility is totally dealt with at the university level (http://hec.mohe.gov.sa/BOOKvIEW.aspx, Pages 49-51 [in Arabic]), the program is responsible to assessing the quality of this standard. PPS program involvement in financial management is of minor level. Spending authority, if delegated to the department head, is accompanied by appropriate accountability and reporting processes. Normally, head of department is not involved in the budget planning process, but he submits cost estimates of spending to the dean of CFAS on yearly basis. The common management practice at CFAS is that the college dean applies for advanced instalments for spending on programs. Spending is reported with proper invoice documents from request of new instalment. Thus, department head is responsible for providing accurate and continuing monitoring of expenditure and commitments against budgets.

Describe the processes used to consider quality of performance in relation to this standard.

Plant Production Department follows the financial regulation of KSU. In reviewing quality of performance of financial planning and management, the PPS-QAA committee has reviewed the following relates to this standard:

1- Sample minutes of CFE on planning equipment and facility acquisition.
2- Samples of forms documenting deposition of equipment into university properties.
3- Sample report of instalment payment with official invoices.

Evaluation of financial planning and management for the program. Refer to evidence about the standard and sub-standards within it and **provide a report** including a list of strengths, recommendations for improvement, and priorities for action.

Although financial responsibility is totally dealt with at the university administration level, the role of the Plant Production Department is to evaluate appropriateness and adequacy of financial planning and managements for the department. Although there are no measurable means available to evaluate this standard, the department is satisfied with KSU financial support.

Strengths

1- The ability to generate income from non-governmental sources by establishing development programs, such as research chairs, endowments, donations, and financed research and projects.
2- The University financial affairs executive rules are comprehensive and written in

clear and practical terms.

Recommendations for improvement

Budgeting system can be improved effectively by giving the opportunity to the departments to share in planning their own budgets. Such a change requires a restructuring of the current budgeting system at the university.

Priorities for actions

None

Standard 9. Employment Processes (Overall Rating: 3.79 **Stars)**

Teaching and other staff must have the knowledge and experience needed for their particular teaching or other responsibilities and their qualifications and experience must be verified before appointment. New teaching staff must be thoroughly briefed about the program and their teaching responsibilities before they begin. Performance of all teaching and other staff must be periodically evaluated, with outstanding performance recognized and support provided for professional development and improvement in teaching skills.

Much of the responsibility for this standard may be institutional rather than program administration. However, the program is responsible to assessing the quality of this standard. In this standard analysis should be made on employment matters that affect the quality of the program. These matters include the appointment of appropriately qualified faculty, their participation in relevant professional development and scholarly activities, and their preparation for participation in the program.

Provide an explanatory report about recruitment and other employment activities for the following sub-standards:

The majority of faculty and staff employment processes are centrally managed by the Deanship of Faculty and Personnel Affairs. The University has made noticeable progress in both quantity and quality of staff. The university has launched several programs related to human resources. These include attraction and recruitment of distinguished faculty members. It also provides opportunities for staff professional development through regular training programs by DSD. In addition, faculty members are encouraged to attend international conferences or training workshops.

9.1 Recruitment

The Department participates in recruitment processes which deal with the employment of Saudi, non-Saudi and non-academic staff. The department committee for recruitment examines documents, make interviews and recommend candidate/s for appointment. In the case of Saudi Teaching Assistants, the Department council approves recommendations and reports to the College Committee of Teaching Assistants and Lecturers headed by the Vice Dean for Academic Affairs. All positions are publicly advertised at local newspapers and University website. The advertisements include job title and means to apply. Detailed description of job,

indicators and process of performance, and evaluations are not consistently included in the advertisements. However, they can be looked up in the regulations of the Ministry of Higher Education or the regulations of the Ministry of Civil Service on the University website (see URL below). Final decisions at the faculty level appointments are made by the Scientific Council. There are specialized unit and a number of programs to recruit internationally distinguished scholars and researchers. Each year, the new faculty members are required to attend orientation programs that are organized by the Deanship of Skills Development.

(http://hec.mohe.gov.sa/BOOKvIEW.aspx)

9.2 Personal and Career Development

The Deanship of Skills Development organizes training courses targeted to a wide-range of skills. These include personal, technical and professional skills. The University has established support unit for lecturers and teaching assistants. This unit is responsible for facilitating the admission and the other requirements to join the international universities. Evaluation of performance is conducted through clear criteria which are posted on the website of the Deanship of Faculty and Personnel Affairs (see the following URL below):

http://dfpa.ksu.edu.sa/

The evaluation of performance is done by the department head annually. The purpose of this evaluation is to inform employee about their weakness points that need to be improved. Employees have the right to view and sign their performance evaluation report. In the case of dissatisfaction, they have the right for petition (Annex 9.2).

To enhance the performance at the academic and administrative levels, the university has launched several reward programs such excellence in teaching and publication in ISI journals.

http://pubaward.ksu.edu.sa/

Describe the processes used to consider quality of performance in relation to this standard.

Information has been gathered through review of university documents, council minutes and meetings with Department Committee for Recruitments.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Ratio of students to teaching staff (Based on full time equivalents)	
Target Benchmark	8:1
Actual Benchmark	7:1

Internal Benchmark	9.03:1 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	8:1
Analysis: Ratio of students to teaching staff in the PPS program is acceptable. Compared to the internal benchmark (Agricultural Engineering Program, CFAS), PPS is not far from achieving the target benchmark. However, PPS program has to work hard to maintain this ratio through recruitment of new students.	

KPI: Proportion of teaching staff leaving the department for reasons other than age recruitment.	
Target Benchmark	0
Actual Benchmark	0
Internal Benchmark	0 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	0
Analysis: The PPS program has achieved its target benchmark. During the last two years, no single teaching staff left the department for reasons other than age recruitment.	

KPI: Proportion of teaching staff participating in professional development activities during the year 2012.	
Target Benchmark	50%
Actual Benchmark	40%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	45%
Analysis: High performance of PPS program was achieved (80% of target benchmark) in terms of teaching staff participation in professional development activities.	

Professional development activities provided to the faculty include training workshops on new advancement in teaching methodologies, use of modern teaching resources etc. To monitor faculty participation in professional development activities, copies of certificates of participation are kept as records in the department. Participation activities are also documented officially and presented in the annual report of teaching staff. Lack of any equivalent internal or external benchmark did not permit complete comparison of PPS performance on faculty participation in professional development activities.

Evaluation of employment processes for the program. Refer to evidence about the standard and sub-standards within it and ***provide a report*** including a list of strengths, recommendations for improvement, and priorities for action.

Recruitment of faculty members is processed upon the recommendation of Plant Production Department. It is the responsibility of the department committee for recruitment to examine documents, make interviews and recommend well qualified candidate(s) for appointment. Relatively high proportion of faculty members participates in relevant professional development. The Department of Plant Production provides attractive working environment as no staff members left the department for reasons other than age recruitment. Therefore, we believe that PPS program meets the standard of employment processes**.**

Strengths

1- New faculty members are required to attend orientation programs designed and conducted by the Deanship of Skills Development.

2- Newly appointed teaching assistants are provided with scholarships for studying abroad.

3- Recruitment policies are clear and documented.

Recommendations for Improvement

There is a need for plans to overcome some restrictions imposed by the government employment policies.

Priorities of Actions

None

Annexes

Annex 9.2 Performance evaluation forms of employees.

Standard 10. Research (Overall Rating: 3.0 **Stars)**

All staff teaching higher education programs must be involved in sufficient appropriate scholarly activities to ensure they remain up to date with developments in their field, and those developments should be reflected in their teaching. Staff teaching in post graduate programs or supervising higher degree research students must be actively involved in research in their field. Adequate facilities and equipment must be available to support the research activities of teaching staff and post graduate students to meet these requirements in areas relevant to the program. Staff research contributions must be recognized and reflected in evaluation and promotion criteria.

Expectations for research vary according to the mission of the institution and the level of the program (e.g. college or university, undergraduate or postgraduate program). In this standard an analysis should be made on the extent and quality of research activities of faculty teaching in the program, and on how their research and other current research in the field is reflected in teaching.

Provide an explanatory report about nature and extent of research activities associated with the program or carried out by staff teaching in it for the following sub-standards:

10.1 Teaching Staff and Student Involvement in Research

Most faculty members of the department had their postgraduate training from top USA and European universities, and consequently have a rich and diverse mix of international scientific backgrounds. Several faculty members are involved in funded research projects which serve teaching processes through providing opportunities for students' training.

- Faculty members of the department have obtained many funded projects from Science and Technology National Program related to King Abdulaziz City for Science and Technology over the last four years. The department includes many unique features that have positive impact on education and research. In this respect, there are several research groups with highly qualified members and equipped labs in the following fields:
  - Crop production
  - Horticulture
  - Biotechnology
  - Rangeland Ecology and Biodiversity
  - Forest and Wood technology
- Graduate students conduct research to fulfill the requirements of their degrees. They are also largely involved in the NPST funded projects to acquire skills in research and publication. They are encouraged to present and publish the output of their research in the regional conferences and ISI journals.

10.2 Research Facilities and Equipment

Many state-of-the-art facilities and equipment resources are available to support Plant Production researches. These include:

1- Agricultural Research and Experimental Station (in Dirab, 50 km south of Riyadh).

2- Educational farm in the university campus.

3- Green houses located on and out of campus.

4- Growth chambers and labs.

Describe the processes used to evaluate performance in relation to this standard:

1- Documentation and analysis of the research projects funded by KACST, NPST and CFAS research center.

2- Documentation and analysis of the articles published in ISI journals.

3- Documentation and analysis of articles published by graduate students from their theses projects.

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Number of citations in refereed journals in the previous year per full time equivalent teaching staff.	
Target Benchmark	15
Actual Benchmark	10
Internal Benchmark	9.6 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	12.5
Analysis: The number of citations in refereed journals in the previous year per full time teaching staff is about 67% of target benchmark. Actual target is slightly higher than internal benchmark indicating the good research quality of staff members (see Annex 10.2.b).	

KPI: Number of refereed publications in the year 2012 per full time equivalent member of teaching staff.	
Target Benchmark	3
Actual Benchmark	2.4
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	2.5
Analysis: The average number of publications per full time member of teaching staff is highly acceptable. The reason behind this high number was that more emphasis was directed to research due to the relatively low teaching load. The department took advantage of KSU established program to attract outstanding professors and researchers to strengthen its research program in all fields of PPS interests.	

KPI: Proportion of full time members of teaching staff with at least one refereed publication in the previous year.	
Target Benchmark	100 %
Actual Benchmark	80 %
Internal Benchmark	76 % (Agricultural Engineering Program, CFAS)
External Benchmark	N/A
New Target Benchmark	85 %
Analysis: A very good result (80 %) of the targeted benchmark was achieved. This result is slightly better than the internal benchmark (Agricultural Engineering Program, CFAS).	

KPI: Number of papers or reports presented at academic conferences during the last year (2011-2012) per full time member teaching staff.	
Target Benchmark	2
Actual Benchmark	1.1
Internal Benchmark	0.8 (Agricultural Engineering Program, CFAS)
External Benchmark	NA
New Target Benchmark	1.5
Analysis: The academic participation of staff members in conferences is good. 55% of the target benchmark was achieved. The actual benchmark is higher than the internal benchmark. Like other chosen KPIs, it was difficult to measure the performance of PPS program against external benchmarks as there are no official agreement between CFAS and other international counterparts.	

KPI: Number of research article published (2011-2012) by graduate students or recent graduate based on their thesis research as a percentage of the number of post-graduate students.	
Target Benchmark	30%
Actual Benchmark	22%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	25%
Analysis: The percentage (22%) of graduate students published articles based on their thesis is acceptable. Despite that, the university roles do not obligate post graduate students (for MSc) to publish articles from their thesis. Nevertheless, the Plant Production Department encourages post graduate students to publish their findings.	

KPI: Research income from external sources in the past year (2011-2012) as proportion of the number of full time teaching staff members.	
Target Benchmark	7%
Actual Benchmark	5%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	5.5 %
Analysis: Seventy one percent of targeted benchmark was achieved in terms of research income from external sources (KACST, NPST, SABIC, MoHE and DSR) per full time teaching staff members. Although no internal or external benchmarks are available, teaching staff members are encouraged to seek more research income from external sources through opening new channels with stakeholders.	

Evaluation of research activities associated with the program and of staff teaching in it.

Provide a report about the standard and sub-standards within it. Tables should be provided indicating the amount of research activity and other participation in scholarly activity and comparisons with appropriate benchmarks. The report should include a list of strengths, recommendations for improvement, and priorities for action.

During the last three years (2010, 2011 and 2012), the faculty members of the department have published an average of 44 manuscripts per year in ISI journals. The ratio of ISI publication per fulltime faculty member is 1.91 (Annex 10.2.a).

The faculty staff give more attention to research activities compared to teaching and services as shown in the following table:

The funds of the research for the faculty members during the last five years are as follows:

Table 28. Funding sources and number of Granted projects.

Source of funding	Number of projects
Grants from National Plan for Science and Technology (NPST) of King Abdul-Aziz City for Science and Technology (KASCT)	18
Grants from the Deanship of Scientific Research (DSR)	14
Grants from the Ministry of Higher Education (MoHE) through the Center of Excellence program	3

Strengths

1- The department has well experienced researches as well as outstanding young researchers who have a diverse international background.

2- The department has a highly equipped laboratories and a well-structured and developed experimental research station.

3- The department has many joint research projects with many relevant national and international institutions.

4- The members of the department are able to attract research funds from public and private institutional sectors.

5- The high number of ISI publication relative to the faculty members.

Recommendations

1- Initiate a Ph.D. program in the department.

2- The research supporting infrastructure such as rooms for equipment does not support the strategic plan of the department.

3- Activate the Department strategic plan for applying and marketing the research outputs.

4- Priority in research should be synchronized with the sustainable development plan of the country.

Priorities of actions

1- Establish a departmental central laboratory equipped with state-of-the-art facilities and equipment.

Program Research Information

(For all individual branch/location campuses)

Complete the ***Program Research Information Table*** for each branch/location campus that offers the specific program. FTE (full-time equivalent) is calculated as 12 credit hours and should not include research, teaching or laboratory assistants.

Table 29. Program Research Information

Program Branch Location Campus (City)	Annual Research Budget Total Amount (Million SR)	Annual Research Budget Actual Expenditure (Million SR)	Publication Per FTE Faculty Member Per Year (male)	Publication Per FTE Faculty Member Per Year (female)	Research Conference Presentation Per FTE Faculty Per Year (male)	Research Conference Presentations Per FET Faculty Per Year (female)	Describe Research Activity (past 2 years)
Main Campus	20.5	20.5	2.66	NA	1.1	NA	During the last two years (2010-2011 and 2011-2012), 35 funded projects were conducted and the outcome published articles were 135. Most faculties attended national and international conferences to present their findings.
Branch Location1	NA	NA	NA	NA	NA	NA	NA
Branch/ Location 2	NA	NA	NA	NA	NA	NA	NA
Program Totals	20.5	20.5	2.66	NA	1.1	NA	NA

1. Attach the research approval flowchart.
2. Attach the program research strategic plan.
3. Attach the research policy manual.

The department does not have funds allocated for research. Thus, the program research funding budget comes from external sources (e.g. KACST, NPST, SABIC and DSR).

Annex 10.2.a List of publications of faculty members in 2011 and 2012.
Annex 10.2.b Samples of papers citation.

Standard 11. Relationships with the Community (Overall Rating: 3.54 **Stars)**

Significant and appropriate contributions must be made to the community in which the institution is established drawing on the knowledge and experience of staff and the needs of the community for that expertise. Community contributions should include both activities initiated and carried out by individuals and more formal programs of assistance arranged by the institution or by program administrators. Activities should be documented and made known in the institution and the community and staff contributions appropriately recognized within the institution.

Provide an explanatory report about community activities carried out in connection with the program for the following sub-standards.

The university encourages the interaction with the community. In this context, the department provides several services to the community. These include consultations, workshops and training programs to many governmental sectors. In this regard, the department contributes to scientific knowledge through periodic pamphlets and extension booklets. Furthermore, the department organizes the annual workshop in cooperation with Arab Urban Development Institute (AUDI).

11.1 Policies on Community Relationships

One of KSU principle goals is to provide services to the community. In this regard, the faculty members are required to participate in community services as partial condition for promotion. Moreover, the community services are considered in the annual evaluation of activities of the faculty members. The participation of each faculty member is documented in the department annual report.

The department Committee for Public Relations and Community Services arranges the community services through the CFAS Community Service Center or through King Abdullah Institute for Research and Consulting Studies at KSU. Consultations provided to governmental agencies are approved by department and college councils. All community services conducted by the faculty members are documented at the department.

11.2 Interactions with the Community (Report description should include reference to interactions with the community by faculty)

Provision of community services are the integral part of the department. Community responsiveness is a major goal of the department as a commitment to work with other organizations at programmatic and individual levels to develop common goals. The objective of the community service at Department of Plant Production is to provide consultation, workshops, training courses to governmental agencies and private sector, and disseminate research outputs to the community. Faculty members are actively

engaged in community enhancement in an array of activities. Activities also include lectures and presentations. The CFAS advisory board (AB) has been instrumental in developing community relations. The AB is composed of representatives from the regional community. The aim of AB is to serve as a channel for the exchanges of ideas and information between the department as major part of CFAS and the public and private sectors employing or needing the services of the department. The interactions and consultations with the community are officially arranged through King Abdullah Institute for Research and Consulting Studies at KSU upon approval by the department and CFAS councils. For further information (see the following URL):

http://kai.ksu.edu.sa/en/Pages/default.aspx

Describe the processes used to evaluate performance in relation to this standard and summarize the evidence obtained.

The PPS-QAA committee has reviewed and analyzed documents on the following activities:

1- The annual reports of the department and the college.
2- The pervious SSR prepared for accreditation by AIC.
3- Number of faculty members serving as consultants in governmental sectors.
4- Number of training workshops offered by the department in different agricultural sectors.
5- Number of training workshops in which faculty members participated in.
6- Number of annual workshops held in cooperation with Arabian Institute for Cities Development.
7- The contribution of the department in organizing the annual "tree week" activities.
8- Department documents and council minutes.
9- The participation of faculty members in the media related to agricultural topics. (also see the URL below)

http://colleges.ksu.edu.sa/Arabic%20Colleges/CollegeOfAgriculture/Pages/ServicesSoc.aspx (in Arabic).

Choose **ONE OR MORE** KPIs that best supports that the program meets this standard. Each KPI should use a separate KPI table. Insert the KPI in the table below, add the actual KPI benchmark with the other benchmarks, and provide an analytical interpretation that describes the outcome (most benchmarks are numerical and others may be descriptions that verify quality using a rubric).

KPI: Proportion of full time teaching and other staff actively engaged in community service activities.	
Target Benchmark	25%
Actual Benchmark	23.8%
Internal Benchmark	NA
External Benchmark	NA
New Target Benchmark	25%
Analysis: High performance was achieved (95%) in terms of engagement of faculty and other staff in community service activities. The department will continue to improve community-related activities or at least maintain this level. Bearing in mind that 75% of duties of a faculty member is allocated to teaching and research, the department is performing very well in provision of services to the community. Lack of any equivalent internal or external benchmark did not permit comparison with peer programs.	

Evaluation of the extent and quality of community activities associated with the program and of staff teaching in it. ***Provide a report*** about the standard and sub-standards within it including tables showing the extent of community activities and a list of strengths, recommendations for improvement, and priorities for action

The Department of Plant Production considers provision of service activities to the needing community sectors as part of its mission. Community services provided by faculty and staff members are well processed, documented and monitored by the Department. Available evidences indicate that the extent and quality of community activities associated with the program are sufficient and appropriate. Thus, the PPS program fulfills the standard of relationships with the community.

Strengths

1- Faculty members contribute to community services.

2- Community service is considered in the promotion of teaching staff.

Recommendations for Improvement

None

Priorities of action

None

H. Review of Courses

1. **Describe the processes** followed in reviewing courses (e.g. Surveys of graduates, faculty, or members of the profession, analysis of student course evaluations, review of course and program reports, interviews with faculty, comparison with similar programs elsewhere, consultancy advice, etc.).

1- Course review

Course specifications were articulated for each PPS course according to NCAAA template. Course specification documents includes the course content, general and specific objectives, methods of teaching and assessment, learning resources, facilities required and finally evaluation and improvement processes. These documents are written by the course instructor or coordinator. At the end of each semester, student surveys are carried out by the students. Results are evaluated and analysed by the PPS-QAA. (see Figure 10 as an example).

Course instructors prepare the course reports at the end of each semester (see annex 4.b). Reports are prepared according to NCAAA template and contain the course delivery, effectiveness of planned teaching strategies for intended learning outcomes, students' result, any difficulties in resources availability, course evaluation and finally planning for course improvement. All course reports are evaluated and analysed by the PPS-QAA and TL committee. Any major changes in the course must be reflected in the course specifications again. All assessment methods are monitored by QAA. Surveys and course evaluation statistics for 2012 show that:

1- Percentage of course specifications prepared was 100%.

2- Percentage of course reports received was 90%.

3- Course evaluation electronic surveys through the Edugate were 100% (see Annex H.1).

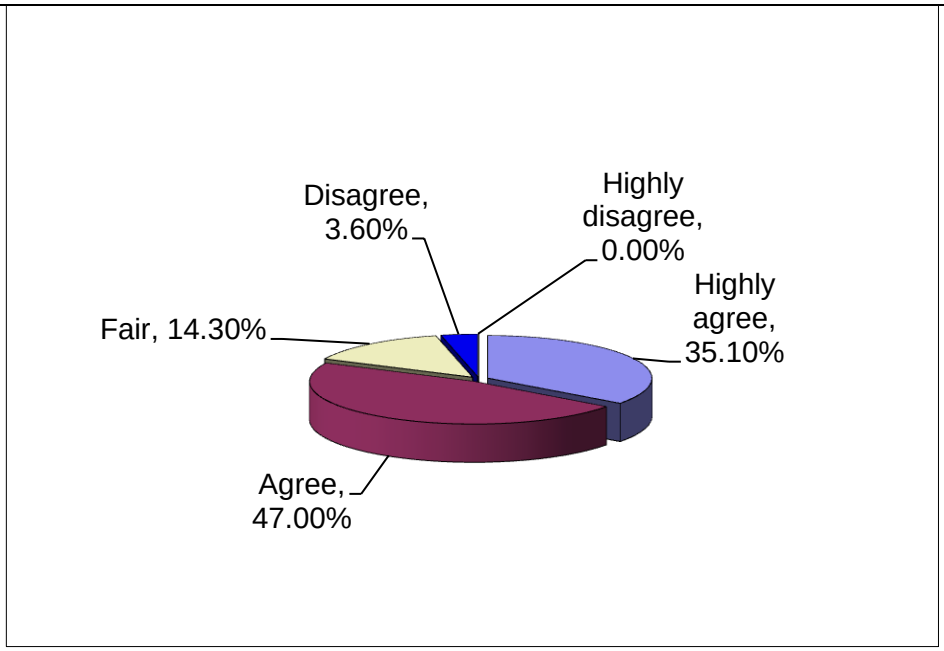

Figure 10. An example (PPS 340) of course evaluation by students.

2. Course Evaluations

Provide a list report on the strengths and recommendations for improvement in courses and any other conclusions from the processes described directly above.

Based on the course evaluation questionnaires, students highly praised the:

1- Clarity of course objectives.
2- Performance of faculty members.
3- Relevance and diversity of course contents.
4- Developed and well equipped classrooms.
5- Enhancement of positive learning and self-independence skills.
6- Availability of academic and social resources.
7- Fairness in student assessment.

Recommendations for Improvement

None

Priorities of action

None

Annex

Annex H.1 Sample electronic courses evaluation.

I. Independent Evaluations

1. Describe the process used to obtain independent analysis on the quality of the program and the reliability and validity of analyses carried out in the report. Processes may include a review of documentation by an experienced and independent person familiar with similar programs at other institutions and who could comment on relative standards, consultancy advice or a report by a review panel, or even the results of an accreditation review by an independent agency. An independent evaluation may be conducted in relation to the total self-study, or involve a number of separate comments by different people on different issues.

Like other departments in the College of Food and Agriculture Sciences (CFAS), a consultant from a local university who is very familiar with the NCAAA system of accreditation was invited to provide an independent evaluation of PPS program. Through the Office of the Vice Dean for Development and Quality of CFAS, the consultant provided an independent opinion regarding the Self Evaluation Scales (SES) of the Plant Production Program. Arrangements have been made to delineate the consulting activity. In addition, the consultant also conducted the following activities:

1- Review of existing manuals, brochures and handbooks available at the department.

2- Visit the laboratories and other learning facilities of the department.

3- Review the quality assurance and accreditation QAA documents (ex: program and course specifications, annual reports, strategic plan, KPIs and other relevant documents) and statistics related to the accreditations standards of the NCAAA.

4- Visit the web-site of the Plant Production Department.

2. Summary of matters raised by independent evaluator(s). ***Provide a response report*** to each of the recommendations provided by the independent evaluators

The following is a summary of matters raised by the independent evaluator regarding the program:

Strengths

1- There are sufficient facilities, equipment and other learning resources provided by the College to support quality of teaching and learning.

2- Although the College gets financial support from the government budget, the department is able to generate income from various non-governmental sources such as research chairs, endowments, and donations and financed research to support teaching, and research activities of the faculty and students.

3- The department has well experienced researchers with high number of ISI

publications, joint projects with national and international institutions and with highly equipped laboratories and well-structured Experimental Research Stations. Classroom facilities and equipment are sufficiently provided to support quality teaching and learning. There is also sufficient number of laboratories to meet teaching and research requirements including newly installed smart boards, upgraded bandwidth and licensed software.

Limitations and Suggestions for Improvement:

1. Information seems to be limited in some sections of the report particularly in Section G – (Evaluation in Relation to Quality Standard), Standards 3, 4, 5 and 6. These sections need further articulation and discussion.
2. There is very limited presentation on trend analysis and benchmarking of key performance indicators mentioned in the report.
3. Although student learning outcomes are appropriately specified in the program and course specifications, there is a need to directly measure learning outcomes other than the tradition forms of assessment such as the use of rubrics.
4. There is a substantial decrease in the number of student enrollees the last 3 years from (AY 2010- onwards). Program managers have to address this issue very seriously.
5. Percentage of students who complete the program in minimum time is apparently low (27.3%) considering that students commencing in years 1 to 3 and going to year 4 is 100% as indicated in the report. No explanation is provided regarding this data.

3. **Provide an analysis report** on matters raised by independent evaluator(s) (Agree, disagree, further consideration required, action proposed, etc.).

The PPS-QAA appreciates the comments raised by the independent evaluator. PPS agrees with him concerning the very brief presentation of some information on the evaluation in relation to quality standards 3, 4, 5 and 6. This comment was taken into consideration by adding more information and/or analysis as relevant.

Also, PPS agree with the independent evaluator regarding using rubrics as a means to measure learning outcomes. More emphasis will be put into rubrics as supporting measure for student learning outcomes. This comment will be directed to course instructors for consideration.

The PPS also agrees with the independent evaluator concerning the low student enrolment. The Department has a plan to attract more students into the PPS program. The plan will be reviewed for possible modifications if needed.

The percentage of students who complete the program in specified time (4 years) was miscalculated. The correct figure is (44.4%) and when the percentage of students who completed the program requirements within 3.5 years (5.6%), the total percentage was 50%.

Attach or hyperlink the independent evaluation report and CVs

(See attached independent evaluation report (see Annex 4.c)

By assistant Professer Dr. Jose Punzalan Catapang

CV: **http://info.psu.edu.sa/psu/viewfacprofile.asp?fid=115**

J. Conclusions

1. **List and briefly describe** aspects of the program that are particularly successful or that demonstrate high quality.

The main strength of the PPS program are briefly summarized as follows:

1- The mission of the program is clear and appropriate.
2- The mission is expressed in a clear strategic plan
3- The program has a high international and national reputation
4- The teaching methods are consistent with international standards
5- The facilities and equipment are well established.
6- The academic and social activities of students are good.
7- The presence of high qualified staff in the program.
8- An adequate quality system supports the program.
9- Learning resources are adequate and updated.
10- Community services are highly activated with different governmental sectors.

2. **List and briefly describe** aspects of the program that are less than satisfactory and that need to be **improved**.

The major aspects that need attention for PPS program are as follows:

1- Setting external benchmarking by means of developing twining program with distinguished peer institutes. Although, this issue is beyond the control of the department, it has been communicated to KSU administration.
2- Perhaps the major aspect that needs careful attention is the decreasing trend in student enrolment. For example the cohort size of the years 2005/2006, 2006/2007 and 2007/2008 was 17, 9 and 8 students respectively.

K1. Action Proposals

Action proposal should be based on the matters identified in sections F, G, H, and I and indicate recommendations for improvement proposed to deal with the most important priorities for action identified in those sections.

Based on the matters identified in sections F, G, H, and I of PPS-SSR, the followings are the major recommendations for improvement proposed to deal with the most important priorities for action.

1. Strengthening students' enrollment.
2. Seek external benchmarks.
3. Encourage staff members to express PPS mission in their academic activities.
4. Build question bank.
5. Use SMS and direct mobile calls to follow up the slow and belatedly students.
6. Establish a departmental central laboratory equipped with state-of-the-arts facilities and equipment.

1. **Changes in Course Requirements (if any)**

None

List and briefly state reasons for any changes recommended in course requirements, e.g.

- Courses no longer needed;
- New courses required;
- Courses merged together or subdivided;
- Required courses made optional or elective courses made compulsory;
- Changes in pre-requisites or co-requisites
- Changes in the allocation of responsibility for learning outcomes as shown in the course planning matrix.

2. **Action Recommendations**.

Recommendations for improvement are made for action to be taken to overcome problems or weaknesses identified. The actions recommended should be expressed in specific, measurable for terms for assessment, rather than as general statements. Each action recommendation should indicate who should be responsible for the action, timelines, and any necessary resources.

Action Recommendation 1

Strengthening students' enrollment

Students are a great resource for the PPS program, as the quality and size of the student body affects institutional prestige, financial resources and helps to attract other top students and faculty to the department. Over the past few years, student enrolment decreased. Therefore, we seek to recruit a minimum of 10 students per year. As indicated in section F.2, the following measures will be taken.

1- Update the department web page to introduce the program to potential students and address potentially available career for PPS program graduates.

2- Continue communicating the PPS message at the PY program.

3- Prepare and distribute booklets and brochures that describe the PPS program profile activities and potential career for PPS students.

4- Arrange for visits to high schools in cities and villages surrounding Riyadh.

5- Invite high school students to field days at the Agricultural Research and Experimental Station in Dirab.

6- Participate in non-academic activities of high schools.

Person (s) responsible

Department's committees for Administration, Learning and Teaching and

Committee for Public Relations and Community Services.
Timelines (For total initiative and for major stages of development) The timeline required for this action spans over five years starting from 2012. The first two items have been addressed this year (2012) and will continue until the end of 2017. The rest of measures have similar attributes and will start in 2014 for three years.
Resources Required None

Action Recommendation 2. **Seek external benchmarks.** Benchmarks are important references to measure levels of performance or outcomes against which students PPS program are quantified. The lack of external and sometimes internal benchmarking prevented complete comparison of PPS achievements against peer programs. PPS plans to address this issue by communication with respected local, regional and international peer institutes through the CFAS deputy Dean for Quality and Development.
Person(s) responsible The department Committee for Quality Assurance and Accreditation and the department head will be in charge of following this issue.
Timelines Due to the nature of communication with various local and international institutes, the timeline required for this action may spans over three years starting from 2012. This action does not require stages for implementation.
Resources Required No cost estimate is available. However, financial issues will be covered by KSU.

Action Recommendation 3. **Encourage staff members to express PPS mission in their academic activities.**

To enhance the spread of PPS mission and consequently student attraction and research funding, PPS stresses the expression of the mission in all faculty academic activities.
Person(s) responsible The department Committee for Quality Assurance and Accreditation will be in charge of implementing this issue.
Timelines The timeline required to implement this action will spans over three years starting from 2012. During this time, publicity of the mission will be monitored yearly.
Resources Required None

Action Recommendation 4. **Build question bank.** Question bank is an application used to help create and manage quizzes and tests for preparation of teaching by faculties. We intend to establish a question bank for all PPS courses. It should be an electronic, secure and available for all faculties.
Person(s) responsible The department Committee for Learning and Teaching will be in charge of implementing this issue.
Timelines The timeline required to implement this action will take over four years starting from 2012. It will be comprised of two stages. In the first stage, hard copies of questions will be collected. This will take one year effort. The second stage will involve converting hard-copy files into soft copies and uploading them into the KSU web page. This is estimated to extent for three years ending in 2016.
Resources Required Question bank requires special software. No cost estimate is available. However, financial issues will be handled by KSU.

Action Recommendation 5. **Use SMS and direct mobile calls to follow up the slow and belatedly students.** Free SMS service is available at KSU web. We plan to promote the use of this service to communicate with to follow up counselling of the slow and belatedly students.
Person(s) responsible The department Committee of Student Affairs and department secretary will be in charge of implementing this issue. The department secretary task will be limited to handling the messages.
Timelines The overall timeline for this action is expected to last three years starting in 2013. This action will be composed of two stages. The first stage will last one year and involves building database of all PPS program students. Database will cover students' names, university ID number, academic status, mobile phone number and e-mail. The second stage will involve monitoring individual students' performances electronically and provide the appropriate counselling and communication.
Resources Required None

Action Recommendation 6. **Establish a departmental central laboratory equipped with state-of-the-arts facilities and equipment.** To utilize laboratory facilities and equipment effectively and economically, the Plant Production Department intend to establish a departmental analytical laboratory.
Person(s) responsible The department Committee for Facilities and Equipment will be in charge of implementing this action under the supervision of the department head.

Timelines The overall timeline for this action is expected to last four years starting from 2012. Work on this action will be composed of three stages; locating a suitable place, purchasing and/or collecting common analytical instruments that are widely used by teaching staff and students and training technicians and staff to operate the laboratory. The first two stages will be completed within two years while training will last two years.
Resources Required It is estimated that the cost involved in establishing departmental central laboratory will be around SAR 2,000,000. This budget will be required to prepare lab to accommodate equipment, acquire unavailable equipment and train employees. Support will come from KSU.

K2. Program KPI and Assessment

Table 30. List of program KPIs and assessment.

KPI #	List of Program KPIs Approved by the Institution	KPI Target Benchmark	KPI Actual Benchmark	KPI Internal Benchmarks	KPI External Benchmarks	KPI Analysis	KPI New Target Benchmark
1	The average satisfaction rate of faculty and students to the mission statement.	5	4.65	NA	NA	Actual benchmark result is acceptable (3.12) which is equivalent to 62% of the target benchmark. Although no internal benchmark was available for comparison, PPS mission needs to be publicized more among students, faculty members and stakeholders. Despite the above result, the new PPS target benchmark is 4.	4
2	Students' overall evaluation on the quality of their learning experience (Average rating of the overall quality of their program on a five point scale).	5	4.5	3.27	NA	Overall student evaluation on the quality of their learning experience was highly acceptable. Compared to the internal benchmark (Agricultural Engineering Program, CFAS) our actual target is higher. Our ambition is to maintain or improve the quality of students learning experience.	5
3	Proportion of courses in which student evaluation were conducted during the year.	100%	100%	100%	NA	Student evaluations are intended to reflect course design, teaching skills, student interaction and departmental expectations. Therefore, PPS requires that student evaluation for all courses should be	100%

						conducted at the end of each semester. Results are used to pinpoint needs (if any) for improvement. In this regard, excellent actual benchmark has been achieved.	
4	Students' overall evaluation on the quality of their courses (Average rating of students on a five-point scale on overall evaluation of courses)	5	4.25	3.87	NA	Students highly valued the quality of their courses compared to the internal benchmark (Agricultural Engineering Program, CFAS). PPS will continue to improve course quality through evaluation of course and program reports.	4.5
5	Percentage of students entering programs who successfully complete first year.	100%	67%	70%		Over the past 5 years, the average percentage of students who successfully completed their first year was acceptable (67%). It is noticed that few students temporarily withdrew from the University for personal reasons. This may have substantiated the number of students who did not complete the first year in their PPS program. Actual benchmark is comparable to internal benchmark (Agricultural Engineering Program, CFAS).	80%
6	Proportion of students entering undergraduate programs who complete those	100%	44.4%	33.3 %	NA	In PPS program, students should normally complete their studies in 4 years. The main cause behind the extended period of graduation of belatedly students is the failure to	50%

	programs in specified time.					pass the basic courses such as general chemistry, math and physics from the first time. Furthermore, due to the individual variations among students, any student who fails to pass any course is not allowed to register for more than the designated credit hours in the curricula. Moreover, CFAS does not offer summer courses to help those students catch up with their cohort. Actual benchmark is relatively higher than the internal benchmark.	
7	Proportion of graduates from undergraduate programs who within six months of graduation are enrolled in further study.	35%	25%	NA	NA	In 2012, it was found that 25% of graduates from PPS program were enrolled in MSc program. Although no internal or benchmarks were available, we expect this value to be good reflection of student performance in PPS program both in terms of seeking jobs and qualification for postgraduate studies.	30%
8	Proportion of teaching staff with verified doctoral qualifications.	100%	80%	NA	NA	The percentage (80%) of teaching staff are qualified with doctoral degree is highly acceptable. The remaining teaching staffs (78%) are qualified with at least master degree.	90%
9	Student evaluation of academic and career counselling	5	4.3	3.66	NA	The PPS program has achieved good result in providing academic and career counselling to students	4.5

	(Average rating on the adequacy of academic and career counselling on a five point scale).					compared to the internal benchmark (Agricultural Engineering Program, CFAS). The program is committed to improve and/or maintain student counselling.	
10	Student evaluation of library and learning resources services.	100%	77%	NA	NA	Although the Plant Production doesn't have a library for its own, the role of the PPS program is to recommend and request the deanship of libraries to provide the necessary and latest academic learning resources for PPS students. Students are satisfied with library and learning resources services.	80%
11	Number of accessible computer terminals per student.	1	1.0	NA	NA	The CFAS provides two computer labs with 20 computer terminals in each. These terminals are available to all students including the PPS program students. A computer technician expert supervises the two labs and provides technical assistance to students. Also, most of the department laboratories are equipped with computer terminals normally used by post graduate students.	1
12	Average overall rating of adequacy of facilities and equipment in a survey of teaching staff.	5	4.45	NA	NA	Excellent actual benchmark was achieved in terms of adequacy of facilities and equipment. As with some other KPIs, it is not possible to compare this achievement with neither internal nor external	4.5

						benchmarks.	
13	Ratio of students to teaching staff (Based on full time equivalents)	8:1	7:1	9:1	NA	Ratio of students to teaching staff in the PPS program is acceptable. Compared to the internal benchmark (Agricultural Engineering Program, CFAS), PPS is not far from achieving the target benchmark. However, PPS program has to work hard to maintain this ratio through recruitment of new students.	8:1
14	Proportion of teaching staff leaving the department for reasons other than age recruitment.	0	0	0	NA	The PPS program has achieved its target benchmark. During the last two years, no single teaching staff left the department for reasons other than age recruitment.	0
15	Proportion of teaching staff participating in professional development activities during the past year.	50%	40%	NA	NA	The PPS program is approaching its target benchmark regarding teaching staff participation in professional development activities.	45%
16	Number of citations in refereed journals in the previous year per full time equivalent teaching staff.	15	10	9.6	NA	The number of citations in refereed journals in the previous year per full time teaching staff is about 67% of target benchmark. Actual target is slightly higher than internal benchmark indicating the good research quality of staff members.	12.5

17	Number of refereed publications in the previous three years per full time members of teaching staff.	3	2.66	NA	NA	The average number of publications per full time member of teaching staff is highly acceptable. The reason behind this high number was that more emphasis was directed to research due to the relatively low teaching load. The department took advantage of KSU established program to attract outstanding professors and researchers to strengthen its research program in all fields of PPS interests.	2.75
18	Proportion of full time members of teaching staff with at least one refereed publication in the previous year.	100%	80 %	76%	NA	A very good result (80 %) of the targeted benchmark was achieved. This result is slightly better than the internal benchmark (Agricultural Engineering Program, CFAS).	85%
19	Number of papers or reports presented at academic conferences during the last year per full time member teaching staff.	2	1.1	0.8	NA	The academic participation of staff members in conferences is good. 55% of the target benchmark was achieved. The actual benchmark is higher than the internal benchmark. Like other chosen KPIs, it was difficult to measure the performance of PPS program against external benchmarks as there are no official agreement between CFAS and other international counterparts.	1.5
20	Number of research article	30%	22 %	NA	NA	The percentage (22%) of graduate students published articles based on	25%

	published (2011-2012) by graduate students or recent graduate based on their thesis research as a percentage of the number of post-graduate students.					their thesis is acceptable. Despite that, the university roles do not obligate post graduate students (for MSc) to publish articles from their thesis. Nevertheless, the Plant Production Department encourages post graduate students to publish their findings.	
21	Research income from external sources in the past year as proportion of the number of full time teaching staff members.	7%	5 %	NA	NA	Seventy one percent of targeted benchmark was achieved in terms of research income from external sources (KACST, NPST, SABIC, MoHE and DSR) per full time teaching staff members. Although no internal or external benchmarks are available, teaching staff members are encouraged to seek more research income from external sources through opening new channels with stakeholders.	5.5%
22	Proportion of full time teaching and other staff actively engaged in community service activities.	25%	23.8%	NA	NA	Ninety five percentages (95%) of the targeted benchmark was achieved. The department will continue to maintain this level.	25%

Analysis of KPIs and Benchmarks:

Twenty two identified KPIs were used to evaluate and compare the PPS program performance with target benchmark for the academic year 2011- 2012. The performance was highly satisfactory in most chosen KPIs with a distinguished performance in research. Out of twenty two KPIs, 86.4% were accomplished with high performance (ranging between 71- 100% achievement). Only 4.5% of KPIs were achieved with fair performance (76%) and two KPIs were achieved with a performance between 50-

60%. Fourteen internal benchmarks were used, while no external benchmarks were available for comparison of PPS quality performance with a peer program.

NOTE The following definitions are provided to guide the completion of the above table for Program KPI and Assessment.

KPI refers to the key performance indicators the program used in the SSR and approved by the institution (if applicable at this time). This includes both the NCAAA suggested KPIs chosen and all additional KPIs determined by the program (including 50% of the NCAAA suggested KPIs and all others).
Target Benchmark refers to the anticipated or desired outcome (goal or aim) for each KPI.
Actual Benchmark refers to the actual outcome determined when the KPI is measured or calculated.
Internal Benchmarks refer to comparable benchmarks (actual benchmarks) from inside the program (like data results from previous years or data results from other departments within the same college).
External Benchmarks refer to comparable benchmarks (actual benchmarks) from similar programs that are outside the program (like from similar programs that are national or international).
KPI Analysis refers to a comparison and contrast of the benchmarks to determine strengths and recommendations for improvement.
New Target Benchmark refers to the establishment of a new anticipated or desired outcome for the KPI that is based on the KPI analysis.

Student Learning Outcome Assessment

Use the rating scale with 5 reflecting the higher value and 1 the lowest value

Table 31. Assessment of student learning outcome.

	Learning Domains for Learning Outcomes Rating Scale	1	2	3	4	5
1.0	Knowledge Content – Assessment					
	Do the knowledge content requirements align with the requirements normally expected by a professional society or employers?			3.2		
1.1	Define the concepts of various aspects of plant production.				✓	
1.2	Describe theoretical and practical backgrounds related to plant production.			✓		
1.3	Recognize obstacles facing plant production in Saudi Arabia.			✓		
1.4	Outline feasible measures to maintain agricultural sustainability.			✓		
2.0	Cognitive Skills – Assessment					
	Do the cognitive skill requirements align with the requirements normally expected by a professional society or employers?			3.29		
2.1	Recognize certain aspects pertaining to particular areas of plant production.			✓		
2.2	Comparative theoretical approaches to the management of plant production field.				✓	

2.3	Critical evaluation of factors involved in plant production.			✓		
2.4	Compose practical actions for the sustainability of agriculture.			✓		
3.0	Interpersonal Skills and Responsibility – Assessment					
	Do the interpersonal skills and responsibility requirements align with the requirements normally expected by a professional society or employers?			3.50		
3.1	Demonstrate personal skills to identify factors hindering agricultural plant production.				✓	
3.2	Show personal ability to solve problems pertaining to plant production.			✓		
4.0	Communication, Information Technology, Numerical - Assessment					
	Do the communication, information technology, and numerical requirements align with the requirements normally expected by a professional society or employers?			3.58		
4.1	Demonstrate good experiences related to plant production aspects.				✓	
4.2	Illustrate abilities to use technology tools and information in the plant production field.			✓		

5.0	Psychomotor Skills -- Assessment					
	Do the psychomotor skills requirements align with the requirements normally expected by a professional society or employers?	NA				
	Total Scores			13.57		
	Composite Score			3.39		

Analysis of Student Learning Outcomes (Provide strengths and recommendations for improvement):

Sixty eight percent (68%) of the performance was achieved on SLOs. The incorporation of human resources and facilities supports student learning outcomes. One of the major strengths of the program is having highly qualified and experienced teaching staff. Largely, all teaching staff are involved on a continuing basis in scholarly activities that ensure they keep abreast of the latest knowledge and skill in their respective academic discipline.

Strengths:

1- The integration between theoretical and practical aspects for most courses enhances students learning outcomes.

2- The incorporation of human resources and facilities supports student learning outcomes.

Recommendations for Improvement:

To reflect learning outcomes, evaluation methods stated in course specification should be annually reviewed to guarantee that they are efficiently used.

ADDITIONAL DETAILS AND IMPORTANT NOTES

The following documents should be provided as **ONE** hard copy and also in an electronic format using a USB or CD. This information must be submitted to the NCAAA at least four months prior to the date of the review.

The SSRP should be on A4 paper, unbound, printed on one side, page numbered, and with a table of contents for reference. A list of acronyms used in the report should be included as an attachment.

ATTACHMENTS – IMPORTANT NOTES

Where evidence is provided for each section of the SSRP, such as attachments, it is recommended that these documents be contained in the NCAAA portal and hyperlinked to the relevant section in the document.

ENSURE THAT THE ATTACHMENTS PROVIDED ARE RELEVANT AND RELATED TO THE SSRP.

- ***Attachments must be current and not less than 2 years old***
- ***Use a short descriptive file names to identify the contents of each attachment.***
- ***Photos, excessive letters, emails, notes, memos, surveys etc and numbers of files are not encouraged. These types of documents can be shown when the review team arrives at the institution.***

It is important that the following documents are submitted as a minimum with the SSRP.

I. **Completed *Self-Evaluation Scales* template for programs.** The completed scales should include star ratings, independent comments, and indications of priorities for improvement as requested in the document, and should be accompanied by a description of the processes used in investigating and making evaluations.

II. ***Program Specifications***

III. ***Annual Program Report* –** provide two reports for the last two years

IV. A brief summary of the outcomes of **previous accreditation processes or Mach Review** (if any) including program accreditations and any special issues or recommendations emerging from them.

V. A copy of the program description from the **bulletin** or **handbook,** including descriptions of courses, program requirements and regulations.

VI. Three samples of ***Course Specifications*** for each level; three for each year or twelve altogether.

VII. A completed ***Periodic Program Profile***.

DURING THE REVIEW

The following documents should be available for the review panel during the visit. Members of the panel may ask for some of it to be sent to them in advance.

VIII. All ***Course Specifications***, ***Field Experience Specifications***, ***Annual Course Reports*** and ***Annual Program Reports***.

IX. Faculty handbook or similar document with information about faculty and staffing policies, professional development policies and procedures and related information.

X. CVs for faculty and staff teaching in the program and a listing of courses for which they are responsible.

XI. Copies of survey responses from students and other sources of information about quality such as employers, other faculty, etc.

XII. Statistical data summarizing responses to these surveys for several years to indicate trends in evaluations.

XIII. Statistical data on employment of graduates from the program.

XIV. Representative samples of student work and assessments of that work.

If the program is one that is offered by a private institution and that has provisional accreditation a supplementary report should be attached listing requirements of the Ministry or other organization to which it is responsible for special accreditation, and providing details of the extent to which those requirements have been met.

N. List of Annexes: Attached in a separate file.

Authorized Signatures

Dean / Program Chair	Name	Title	Signature	Date
Program Dean or Chair of the Board of Trustees Main Campus	Dr. Fahad Nasser Al-Barakah	Professor		
Vice Rector				

Acronyms

AIC	Agricultural Institute of Canada
B.Sc.	Bachelor of Science
CFAS	College of Food and Agriculture Sciences
DAR	The Deanship of Admissions and Registration
DSD	Deanship of Skills and Development
GPA	Grade Point Average
ISI	Institute for Scientific Information
KPI	Key Performance Indicators
KSU	King Saud University
MSc	Master of Science
NCAAA	The National Commission for Academic Accreditation and Assessment
PES	Program Evaluation Survey
PhD	Doctor of Philosophy
PPS	Plant Production Sciences
QMS	Quality Management System
SAG	Saudi Agricultural Companies Groups
SES	Student Experience Survey
SMS	Short Message Service
SSR	Self-Study Report
SWOT	Strengths, Weaknesses, Opportunities and Threats
URL	Uniform Resource Locator

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