

**PROGRAM REVIEW IMPLEMENTATION PLAN
PROGRESS REPORT
Department of Plant and Soil Sciences
2016 - 2017**

This is the final report for this implementation plan. The report will describe the activities for 2016-2017 and for the full period.

Recommendation 1 - The department should develop a strategic planning process that would foster engagement with larger, longer-term issues in order to have guidelines for making the more immediate decisions on where to invest their resources.

Assessment method: Determine whether planning has begun

Results: In 2016-2017 our planning focused on our 2017-2018 periodic program review. The review team visited in September 2017. In writing the self-study, multiple discussions occurred within the department. We created a list of longer-term questions to guide the review as well as our recommendations for departmental improvement. The review report will guide future planning and inform our next strategic plan.

Early in the period of this implementation plan the advisory committee suggested metrics to use for measuring department progress and also suggested potential targets for the next strategic plan. The metrics plan was fully discussed by the faculty and returned to the advisory committee for re-evaluation.

Analysis of results and reflection: Most of our metrics were focused on defining our department in light of a strict metrics based budget model. As the budget model changed away from a strict metrics based model, the department rethought those metrics and will need to create accomplishment based metrics that fit our department goals.

Ongoing improvement actions: We have written our self-study document for our 2017-2018 periodic program review including our big questions and our recommendations for department improvement.

Recommendation 2 - The entire Department needs to discuss and resolve several major issues facing the Department. The College of Agriculture and the Department of PSS are getting smaller – what areas and/or responsibilities will be given up? Examples of the long-range type of issues that need to be discussed include the undergraduate HPLS curriculum, research foci within the Department given reduced number of faculty, and extension foci given reduction in Extension FTEs. The review committee suggests that the new IPSS graduate program might serve as a mechanism to integrate the various sub-disciplines (crops, soils, and plant biology) within the Department.

Assessment method: Create the next five-year strategic plan

Results: Our previous strategic plan ran through 2014. With changing university and

college administrations, departmental strategic plans are no longer required. Instead we now report to these implementation plans. We chose to focus on our periodic review before writing a strategic plan. Previously we addressed several of the long-range issues mentioned in the recommendation. The HPLS program has been much discussed. A Modern Agronomic Crop Production individualized curriculum has been established. A recruiting position was created and filled to recruit HPLS students. These efforts have not increased enrollment. The department, influenced by state stakeholder groups, will maintain as broad an array of extension specialist programs as possible. At least annually the department discussed potential faculty focus areas.

Analysis of results and reflection: Our faculty has not gotten smaller during this six-year period, but significant changes have occurred. Some faculty changes resulted from faculty returning to the department and other changes resulted from faculty accepting partial administrative appointments. So faculty focus areas were not always open for discussion and departmental direction. Enrollment in the HPLS undergraduate program remains under discussion as our previous efforts have been ineffective.

Ongoing improvement actions: Department discussions will focus on exploring new or continued faculty hiring needs. These were discussed at the January and August 2016 faculty meetings which guided our recruitment of two faculty positions in 2017. This continues our discussions of research foci in the department. It was recommended that we concentrate on our next periodic review (2017-2018) before returning to writing a strategic plan.

Recommendation 3 - As part of the above process and discussions (1 and 2 above), the department should develop interdisciplinary research clusters encompassing both research and extension faculty focused on strengths, and informally or formally designate these clusters as areas of research foci that can be used to recruit graduate students.

Assessment method: Count research clusters which recruit graduate students. Analyze GRE scores of students accepted for assistantships.

Results: A forage interest group and a rhizosphere interest group meet monthly. A grain crops interest group meets weekly. Two graduate students have been/are being co-advised by a grain crops extension specialist at Princeton and two soil science researchers at Lexington. One of these is funded by an external grant. One graduate student is being co-advised by the tobacco extension specialist at Princeton. This student received a graduate fellowship. Two students conducting research on industrial hemp are co-advised by a crop scientist and a plant biochemist. GRE scores of students in the IPSS program have increased steadily through fall 2017.

Mean percentile rank of IPSS students with GRE scores						
	Fall 2012 n=13	Fall 2013 n=17	Fall 2014 n=16	Fall 2015 n=19	Fall 2016 n=14	Fall 2017 n=13 In prog.
GRE verbal rank	42	45	50	56	59	67
GRE	39	43	47	57	51	55

quantitative rank						
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Analysis of results and reflection: We are trying to enhance graduate student quality by providing departmental funding for assistantships to those applicants with the highest GRE scores. As we turnover about 25% of our students each year, the scores of our applicants have changed slightly.

Ongoing improvement actions: The Department is now encouraging specific recruiting of graduate students by promising assistantships to a program one year ahead of enrollment and charging the faculty member with recruiting a high quality student. Five graduate students have been recruited under this plan; two are Ph.D. candidates, two are M.S. students, and one M.S. student has withdrawn. We were recruiting a student with an NSF graduate fellowship; she chose to attend graduate school elsewhere.

Recommendation 4 - The department should establish a committee to examine combining all seminar series into one departmental seminar series to enhance integration within the Department.

Assessment method: Count the activities established to enhance the graduate program.

Results: The seminar committee was established, one departmental seminar series was established, a graduate student symposium has been held three times each year, and \$5,000 was allocated to fund external seminar speakers. The Department continues to fund the Graduate Program Outstanding Alumnus program and award and to select the Peaslee Outstanding Graduate Student Award each year.

Analysis of results and reflection: This recommendation has been successfully implemented. Attendance at departmental seminars has increased, particularly among graduate students. Graduate student participation in the Graduate Student Symposia is strong; however, the more times it has been repeated attendance has decreased. The symposia have promoted camaraderie among graduate students with different research interests. Graduate students have assumed responsibility for identifying, inviting, and hosting seminar speakers during 2014-2017.

Ongoing improvement actions: Continue promoting and improving the graduate student symposia. We are discussing creating a 3MT thesis presentation for students and faculty.

Recommendation 5 - The faculty and staff should discuss and develop departmental guidelines to facilitate professional development for staff, and to recognize contributions of technical staff to patents and publications.

Assessment method: Note the number of times staff development is on the agenda for our semi-annual staff meetings.

Results: Staff development was discussed once in 2013-14 and was not discussed since. The department created a staff recognition plaque for awards going back to 1998. The department shows a staff service award power point slide show each year at a staff meeting and at a faculty meeting to recognize staff receiving service awards.

Analysis of results and reflection: This item did not receive action. Future action would result from expressed interest. If it is to move back to active consideration, that will need to come from the department chair.

Ongoing improvement actions: None current

Recommendation 6 - The review committee strongly recommends that the graduate students re-establish the graduate student organization and include faculty advisors in this organization.

Assessment method: Note leadership of the graduate student organization

Results: David Van Sanford was appointed faculty advisor for the group. The group has been active since 2012-2013. In 2016-2017 the group was led by William Serson and Jarrod Gollihue.

Analysis of results and reflection: Participation depends on the interests of the graduate students. The department has provided resources for student activities, including a trip in 2016 to visit Monsanto and a trip in 2017 to visit Syngenta and BASF, and promotes graduate student activities on the department's Facebook page.

Ongoing improvement actions: Encourage the PSS GSA to choose leaders during each fall semester. Support requests from the PSS GSA while encouraging graduate student contributions to general science support such as judging elementary and high school science fair contests.