MEMORANDUM

TO: Dr. Fred Hartmeister, Dean of the Graduate School
    Dr. Robert Smith, Provost

FROM: Tom Thompson, Chair
       Eric Hequet, Graduate Program Leader

DATE: 16 June, 2010

SUBJECT: Graduate Program Review for Plant and Soil Science

We wish to express our appreciation to the review committee for their thoughtful comments regarding graduate programs in Plant and Soil Science. We also wish to clarify a few points that were raised in the committee and outside reviewer report. Finally, we have provided responses to the committee and outside reviewer recommendations.

Program Overview and Vision
1. We appreciate that the committee acknowledged the significant growth in our graduate programs since 2008.

Faculty Productivity
1. The number of refereed publications cited in the committee report and reported verbally by the committee at the review meeting, is incorrect. In fact, during 2006-2008 (3 yr), our faculty published 206 refereed journal articles, or about 3.7 articles/FTE/yr. We believe this is more than ‘reasonable’. While the report notes correctly that the department currently has nearly 100 graduate students, approximately one-third are ‘distance, non-thesis’ students and should not be expected to publish.

2. During FYs 2006-2008 (3 yr), PSS faculty generated $3.12 million/year in sponsored funding, or about $175,000/FTE/yr. This compares with $47,000>FTE during 2008 for tenure-track faculty at TTU. Plant and Soil Science routinely ranks within the top five academic departments in TTU in sponsored funding (and was #1 in 2006).

3. Comparison of enrollment and degrees awarded at other universities, included in the review document, provides another telling indicator of PSS faculty productivity. During 2003-2008, PSS graduated 81 students with graduate degrees with <18 faculty FTE. During this same period, Soil and Crop Sciences at Texas A&M produced 105 graduate degrees with 46 on-campus faculty. Soil and Crop Sciences at Colorado State produced 32 graduates with 26 faculty. Note that both TAM and CSU are land-grant universities.

*Taken together, these facts show that PSS faculty productivity is very high.*
4. The ‘h-index’ noted in the report was not available in the review document, nor are we aware of how this was calculated (Publish or Perish freeware, Scopus, Web of Knowledge?). We would appreciate an explanation of how this was calculated (complete career or 2003-2008 period), and the basis for the ‘target value’ of 18. Comparisons with other departments, which were not provided, would also be helpful.

Graduate Students and Graduates: Quality and Quantity

1. The committee noted a ‘...drop in GRE scores since 2007 in every discipline in the Department’. Data on p. 41 of the report show a more complicated picture. There are few if any trends from 2003-2008. Overall, GRE Quantitative scores have increased since 2003. Average GRE scores of Ph.D. students (PSS) were 975 in 2003 and 1010 in 2008. Unofficially, the average GRE scores of students admitted for summer and fall of 2010 is 1066. Thus, the overall trend is positive, and compares favorably with the TTU average GRE of 1076 (2008).

2. The committee noted that “Graduate student involvement in scientific publications is relatively low.” As noted in the table below, an upward trend is occurring. Our faculty will carefully consider ways to increase this number.

<table>
<thead>
<tr>
<th>Calendar Year</th>
<th>Number of refereed publications with PSS graduate student co-authors</th>
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<tbody>
<tr>
<td>2003</td>
<td>4</td>
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<td>2004</td>
<td>12</td>
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<td>2008</td>
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<td>2009</td>
<td>18</td>
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Nevertheless, it should be noted that this table does not take into account non-PSS graduate students. Our faculty publish with colleagues and graduate students from the College of Engineering at TTU, College of Art and Sciences, etc. Also, the joint appointees with AgriLife publish with colleagues and graduate students from Texas A&M.

Facilities and Resources

1. We fully agree with the committee that having our faculty and students spread across five buildings on campus hinders departmental cohesiveness. The weak graduate seminar may be the most obvious outcome of this situation.

2. The committee noted that “…graduate students on research assistantships are recruited to participate in teaching lab sections. This may negatively impact their research productivity and time to graduate.” It should be pointed out that no more than 5-7 PSS graduate students participate in teaching each semester, thus few students are affected.

An EEO/Affirmative Action Institution
The department appreciates the thoughtful suggestions of the review committee. Several of these suggestions will be used for program improvement.

**Recommendation: Establish a better graduate seminar**

Response: Re-invigorating the graduate seminar will be a point of emphasis for program improvements. Beginning this fall, the Department will sponsor a Distinguished Lecture Series featuring invited speakers of national and international stature in the plant and soil sciences. Each year, five invited speakers will be brought to the TTU campus for invited lectures. Faculty and students from PSS and other TTU departments will have opportunities to meet and interact with the distinguished lecturers. The Plant and Soil Science Distinguished Lecture series is made possible by support from the Rockwell Chair for Plant Genetics, Thornton Distinguished Chair for Forages, B.L. Allen Chair for Pedology, J.A. Love Chair for Sustainable Agriculture, Department of Plant and Soil Science, and the newly-formed Plant and Soil Science Graduate Student Council.

In addition, The Department is instituting an Outstanding Dissertation Award ($5,000 once a year) with very strict criteria for eligibility. This competition should logically enhance the quality of the presentations for the graduate seminar.

**Recommendation: Improve graduate advising**

Response: Faculty advising of on-campus students by our faculty has always been exemplary, as shown by high rates of satisfaction in the graduate survey and in graduate exit interviews. Advising duties for distance students has recently been reorganized for better results.

**Recommendation: Incentivize faculty to generate high impact publications and seek competitive federal funding. Link that to tenure and promotion.**

Response: This has always been done in PSS, and will continue to be.

**Recommendation: Increase the competitiveness of graduate applicants and the percentage of graduate students from other universities.**

Response: Within the past two years, the department has begun to emphasize recruiting of potential graduate students at professional meetings to increase the number of outside applicants. 19/22 (86%) of new graduate students admitted by PSS for summer-fall 2010 are not graduates of TTU.

**Recommendation: Increase the number of publications authored by graduate students to a minimum of one for every two years of study.**

Response: We agree that this should be a point of emphasis. The number of refereed manuscripts with graduate student authors was 22 in 2008 and 18 in 2009. Thus, the trend is positive. Nevertheless, more effort is needed. Faculty will be strongly encouraged to help graduate students to publish during their annual evaluation.

**Recommendation: Offering more graduate-only courses.**

Response: This will be difficult to do without adverse effects on our undergraduate programs. We will evaluate whether this can be done for selected courses.

**Recommendation: Pursue the construction of a new building for Plant and Soil Science**

Response: Agreed!