Department of Plant Sciences
Annual Report

2013 Oat Harvest
A. Department/Unit/College Goals and Priorities for the Past Year.
Incorporate Faculty and Programs when the School of Food Systems is dissolved. In July 2013, the School of Food Systems was dissolved and its undergraduate program in Food Science and graduate program in Cereal Science were consolidated into Plant Sciences. Two tenured faculty in the former School, Drs. Deland Meyers and Cliff Hall, were also consolidated into Plant Sciences.

Begin reviews of the department’s graduate programs. A request was submitted to create a transcriptable Program of Emphasis in Plant Breeding and Genetics for the PhD degree in Plant Sciences. It does not appear at this time there that other sub-disciplines in Plant Sciences have an interest in having a Program of Emphasis.

B. Executive Summary of Accomplishments in Achieving the Goals and Priorities.

a. Teaching
The Department of Plant Sciences continues to be the largest department on campus, with over 40 faculty and nearly 130 full-time employees. The enrollment in Plant Sciences curriculum set an all-time high with 283 students (232 in CWS, 36 in HORT, and 15 in SUTM). The Food Science program had an additional 38 students. The CWS program has more than doubled in five years, from 98 students in 2008 to 232 in Fall Semester 2013. The increases in the CWS program are driven by strong employment opportunities in the region. Many of the CWS students have multiple job offers following graduation. The graduate student enrollment remains strong with 83 enrolled in the Plant Sciences MS and PhD and HORT MS programs and 20 MS and PhD students in the Cereal Sciences graduate program.

While the enrollment increases are exciting, they do cause challenges, including the need to add extra sections for courses such as PLSC 225 ‘Principles of Crop Production’ and PLSC 491 ‘Senior Seminar’ without additional funding. Also, courses with lab components, such as PLSC 110 ‘World Food Crops’, PLSC 315 ‘Genetics’, and PLSC 320 ‘Principles of Forage Production’ and students often are unable to enroll in these courses. For example, Dr. Burton Johnson added a fourth lab for PLSC 225 Principles of Crop Production and then increased the allowed enrollment from 18 to 21 students. However, 28 students (mostly juniors and sophomores) still could not get in the class.

New Teaching Labs Required. Because of the need to add lab sections to several courses in the Department there is an immediate need to find more space to teach these sections. There are plans to add two new teaching laboratories in Loftsgard Hall by remodeling the space where growth chambers are currently housed. Dr. Hatterman-Valenti has been leading this effort. By the end of 2013 plans and diagrams for the classrooms were prepared.

New and Deleted Courses. There is a great need for a graduate student crop physiology course in the College. Our plant sciences graduate students do not have any physiology courses available to them, and it is a sad commentary that students are graduating with MS or PhD degrees without this type of course. In response, Dr. Zhang has developed PLSC 750 ‘Crop Stress Physiology’ which 9 students took in the inaugural offering in 2013.
b. Research/Scholarly/Creative Activities

Major research accomplishments or recognitions
- Dr. Mohamed Mergoum released Elgin hard red spring wheat, which is high yielding and has high protein content.
- Dr. Juan Osorno released Rio Rojo red dry bean, which is extremely resistant to common bacterial blight.
- Dr. Senay Simsek was awarded the first Bert L. D’Appolonia endowed Associate Professorship in Cereal Science and Technology of Wheat

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<tr>
<th>Category</th>
<th>Total</th>
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<tbody>
<tr>
<td>Peer Reviewed Publications (published or accepted)</td>
<td>144</td>
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<tr>
<td>National or International Invited Presentations</td>
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<td>Juried presentations/performances/exhibitions</td>
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<td>Research Grants and Contracts (number that are active)</td>
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<td>Cumulative Amount (total value of active grants and contracts):</td>
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c. Service/Extension/Outreach

cl. Extension/Outreach
Dr. Todd West established and organized the NDSU Tree Campus USA Arbor Day Celebration.

c2. Service
- Dr. Marisol Berti initiated PLSC 379/799 Bioenergy of Crop – The European vies and led 8 undergraduate and 8 graduate students on a 16 day study abroad.
- Dr. Kirk Howatt received the Distinguished Achievement Award in Education from the North Central Weed Science Society for his innovative approaches to teaching.
- Dr. Harlene Hatterman-Valenti assumed the duties of President of NDSU Faculty Senate.

C. Department/Unit/College Goals and Priorities for the Coming Year

- **New teaching laboratories in Loftsgard Hall currently housing growth chambers.** Facilities Management will be asked to develop a cost estimate for completing the project.

- **Have a curriculum review done on the Cereal Science and Food Science programs.** This review should include the need for any changes for current courses, identification of courses needing an instructor, and identification of courses that could be added (e.g. Fermentation).

- **Work to reestablish the Industrial Agriculture Advisory Board.** This advisory board in the former Department of Cereal and Food Sciences has not been active for over a decade. Reestablishment of the board will be important to increase the visibility of the programs in the cereal and food sciences, identify short and long term research and education goals, and possibly increase the scholarship funds provided to these programs.

- **Continue to improve the visibility of the department’s accomplishments within the university, state, and nationally.** Facebook and Twitter social media accounts were established in 2013 and Karen Hertsgaard was hired to identify content. It is important that these social media pages and the department Web page are kept current. Additionally, new stories on current students, staff, faculty, and alumni should be included.