Department of Plant Sciences
Annual Report
January 1, 2012 – December 31, 2012

Elias M. Elias
Named a University Distinguished Professor

Photo courtesy of NDSU
Department of Plant Sciences

ANNUAL REPORT
January 1, 2012 to December 31, 2012

A. Department/Unit/College Goals and Priorities for the Past Year.

Complete the reviews of the department’s undergraduate programs. The reviews have been completed for the Crop and Weed Sciences (CWS), Horticulture (HORT), and Sports and Urban Turfgrass Management (SUTM) programs in the department. Based on preliminary information from the reviews, possible outcomes include suspension of teaching PLSC 350 ‘Sugarbeet Production’ until the department has additional faculty, merging of the science and biotechnology options of HORT into one option, creation of a landscape management option for HORT, and rolling the SUTM program into HORT as an option.

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 programs set an all-time high with 244 students (197 in CWS, 29 in HORT, and 18 in SUTM). The CWS program has more than doubled in four years, from 98 students in 2008 to 197 in Fall Semester 2012. 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 in the Plant Sciences MS and PhD programs and the HORT MS program is also strong, with over 70 total students in all degree programs.

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’ are bustling at the seams and students often are unable to enroll in these courses when they wish because they are full. Another factor that impacts the CWS program is the loss of the position formerly occupied by Dr. Shane Friesen. This position was swept by interim President Hanson to help in covering the University’s budget shortfall and urgently needs to be returned.

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. By the end of 2013 plans and diagrams for the two labs are to be ready so they can be submitted to the University for approval. Dr. Hatterman-Valenti has been asked to lead this effort.

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 will be offered in Spring semesters of odd years, beginning in 2013.
b. Research/Scholarly/Creative Activities

Major research accomplishments or recognitions
- Dr. Mike McMullen released Jury oat, which will provide growers with a high yielding and quality disease resistant cultivar.
- Dr. Mohamed Mergoum was named a Fellow in the American Society of Agronomy and also released Elgin hard red spring wheat.
- Dr. Elias Elias was named a NDSU Distinguished Professor and also released Carpio durum.

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<th>Total</th>
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<tbody>
<tr>
<td>Peer Reviewed Publications (published or accepted)</td>
<td>123</td>
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<tr>
<td>National or International Invited Presentations</td>
<td>150</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

c1. Extension/Outreach10

The Dragon Fly Garden at the United Tribes Technical College is a new research and demonstration site for gardeners in the region. Designed and established by NDSU under Dr. Tom Kalb’s leadership, the garden displays the state’s most diverse collection of hardy trees, fruits, and roses. The garden has already had regional and international impact and been visited by Tribal leaders and groups ranging from Canada to Kosovo.

c2. Service
- Dr. Marisol Berti is the Editor-Chief of the Industrial Crops Journal.
- Dr. Xiwen Cai was the local organizer for International Triticeae Mapping Initiative and National Wheat Genomics Committee Joint Workshop.
- Dr. Rod Lym organized the annual meeting of the Weed Science Society of America and became the Society President.

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

Begin reviews of the department’s graduate programs. The Department does not have any programs of emphasis in the graduate curriculum. Logical programs of emphasis would be in plant breeding and genetics and possibly weed science. In 2013 the curriculum in the areas of plant breeding and genetics will reviewed to determine if any areas should be designated as programs of emphasis.

Consolidate the Cereal Science graduate program into Plant Sciences. If this program is consolidated into Plant Sciences, a faculty member will be appointed as the director of the graduate program and a curriculum committee specific to this graduate program will be established. Under advisement from current and former faculty, the Industrial Agriculture Advisory Board comprised of stakeholders will be reinstated. This will be done to increase awareness of the program and learn how our graduate program can serve the needs of stakeholders.