March 9-10, 2017

ITEM 174-2003-R0317

Request authorization to confer the title of Emeritus of Plant Genetics on Norman F. Weeden

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THAT

Upon the occasion of the retirement of Norman F. Weeden from Montana State University, the Board of Regents wishes to express its appreciation for his service to the University, the Montana University System and the people of the State of Montana.

EXPLANATION

Dr. Weeden came to Montana State University in September 1999 to serve as the first Head of the newly created Department of Plant Sciences and Plant Pathology. The new department represented a combination of plant breeders, plant pathologists, more basic plant biologists, and a strong teaching component in horticulture and landscape design. Dr. Weeden's broad experience and collaborations while at Cornell University allowed him to interact with all faculty included in the new department. During his three-year tenure as department head, Dr. Weeden guided the department through the development of a strategic plan and an outside review, hired several new assistant professors, gently but successfully encouraged one assistant professor who was not performing at an acceptable level to find employment elsewhere before the tenure process began, and developed a process for allotting raises for faculty based on merit and other factors that was agreed upon by the department faculty.

Upon resuming a teaching/research faculty position in 2002, Dr. Weeden focused his instructional activities on the undergraduate biology program and improving communication skills of the undergraduates. He taught the University Seminar course on four different occasions and served on a committee for improvement of undergraduate writing skills. He developed a new course, Practical Genetics, in which a term paper was required. He also resurrected a botany course that had lapsed due to faculty retirements and introduced a term paper requirement in that course. His graduate course served to introduce graduate students to the current literature in plant biology and genetics. It also had a heavy concentration on writing, requiring papers reviewing certain research topics on a biweekly basis. From 2002 until his retirement he served as chair of the department undergraduate curriculum committee.

Dr. Weeden is a world-renowned expert on pea genetics. Since arriving at Montana State he has authored or co-authored 45 articles in refereed journals and 4 book chapters, nearly all of which involve genetic analysis of pea. In 2014 he was an invited speaker at the International Society for Legume Genetics and Genomics, in 2015 he was an invited speaker at a conference in Brno, Czech Republic celebrating 150 years of plant genetics since Mendel, and most recently he was the featured speaker at a conference in Rehovot, Israel on plant domestication. One of his particular interests involves the study of the genes in pea that provide resistance to various diseases. Initially he identified DNA sequences that were located very close to these genes on the pea chromosomes, allowing breeders to use the DNA sequences to indirectly select for disease resistance. More recently, he has been trying to identify the coding sequence for the resistance genes themselves. He has been able to identify the major gene providing tolerance to root rot in pea, as well as candidate genes for resistance to enation virus and Fusarium wilt. During a 10-year period that overlapped his time at Montana State, Dr. Weeden served as chair of the Pisum Genetics Association, an international association of pea breeders and geneticists that publishes the journal Pisum Genetics. In addition, He has had a long-term affiliation with the American Genetic Association, and for

the last 15 years has served on its Executive Committee, first as secretary (3 years), then treasurer (10 years), and finally as investment liaison.

At Montana State University Dr. Weeden's research program focused primarily on the genetics and breeding of the garden pea. The dry pea, formerly grown for export and animal feed, has become an important crop in Montana. The state now produces more dry peas than the combined production of the second and third most productive states. Dry peas are now being used as a source of high protein flour for human consumption in the U.S. Dr. Weeden played a role in this developing market by breeding novel 'high-amylose' dry pea varieties that are particularly suitable for people with diabetes. Flour from these varieties possesses a starch that digests more slowly, thus releasing sugar into the blood at a slower rate. Food products made from this flour are therefore sought after by those who have to worry about blood glucose levels. Dr. Weeden has released three such dry pea varieties adapted to Montana's agricultural practices and expects to release a fourth in collaboration with the new pulse breeder at Montana State University after yield trials have been completed in 2017.

Finally, outside his work on peas and certain other legumes, Dr. Weeden is widely known for his expertise on plant identification. His book, *A Sierra Nevada Flora*, has been the most popular plant identification guide to that region of California for over 30 years. Recently, he co-authored a book on the yellow-flowered members of the sunflower family in Montana. This group consists of over 300 species, including most species of sagebrush and many other common Montana natives, is directed to the amateur botanist who often feels overwhelmed by this difficult group. Dr. Weeden is a member of the Montana Native Plant Society and plans to continue to be active in this organization. Dr. Weeden is also currently involved in a project that deals with apple orchards in Montana. His role is to identify the variety of apple growing in old and mostly non-commercial orchards scattered around the state. His expertise in this subject dates back to his time at Cornell University, but his technique (based on DNA fingerprint) has permitted the successful identification of numerous trees that were planted 80-100 years ago and have survived the extremes of Montana's climate and pests. This project appears to be very popular with potential apple growers and Montana's Department of Agriculture.

In summary, Dr. Norman Weeden has served Montana State University well by combining his excellent knowledge of Plant Genetics with his skills in research, teaching and outreach to increase understanding of critical issues facing Agriculture. His work has encompassed issues ranging from the local to the national and international, and he continues to be actively involved in his profession to our benefit.

For these and other contributions, the Board of Regents of Higher Education is pleased to confer upon Norman F. Weeden the rank of Professor Emeritus of Plant Genetics at Montana State University and wishes him well for many years in the future.

ATTACHMENTS

None