Two Assistantships for Oat Breeding Project

Two Ph.D. assistantships available at Iowa State University, Ames. A research and education team is being assembled for association mapping of β-glucan in oat germplasm for food and nutritional function. Cutting-edge marker technologies and statistical analyses will be applied. Educational materials on plant breeding and marker-assisted selection will be developed. An M.S. degree in plant breeding, genetics, or closely related field with a strong background in math is preferred. A demonstrated interest in working on educational projects is desired. For more information, please contact Dr. Lance Gibson, Department of Agronomy, lgibson@iastate.edu.

Description of the training opportunity. Students participating in this research and education program will work in partnership with scientists in genetics, plant breeding, food science and human nutrition, resident and distance education. They will have access to excellent field, greenhouse, laboratory, and teaching facilities through the Departments of Agronomy and Food Science and Human Nutrition. The project will involve significant interaction with USDA research geneticists at Iowa State University and the US Nutrition Lab at Cornell University. The students will interact with a diverse set of faculty in a multi-disciplinary environment. Skills will be developed in areas crucial to future success in research and academic settings. Taken as a whole, the plant breeding, genetics, human nutrition, and educational components of this program will provide all the necessary elements to prepare students to excel as scientists and educators.

Benefits. Students selected for these assistantships will receive full tuition from Spring of 2008 to Fall of 2011. In addition, students will be paid a stipend (currently $17,850 per year) for work associated in participating in research projects and developing and presenting educational materials. Graduate assistants also receive medical benefits. A higher stipend is available through the Agronomy Research and Training Fellowship program for highly qualified students. Visit the following web site for more details on the RTF program. http://www.agron.iastate.edu/academic/graduate/endowmentfellow.aspx

Desired skill set. Proven aptitude in the biological and physical sciences, including biology, genetics, chemistry, agronomy, food science and/or human nutrition. Excellent written communication skills and the capacity to work both independently and within a team environment are essential. Demonstrated skill in problem solving, data collection, hypothesis testing, and data analysis is preferred.

One Assistantship for Corn Breeding Project

One M.S. or Ph.D. assistantship available at Iowa State University, Ames. A research team is being assembled to study methods to enhance the development of corn-stover for ethanol production. The team will explore the interactions between corn and living mulches in order to enhance soil quality. The project will 1) identify living mulch systems compatible with maize production, 2) study the management and upkeep of living mulch plantings, and 3) develop corn germplasm compatible with living mulches. An M.S. or B.S. degree in plant breeding, genetics, agronomy, or the biological sciences with a strong background in basic sciences is preferred. The assistantship begins Fall 2008. Application deadline is December 31, 2007. Contact Dr. Kendall Lamkey, Department of Agronomy, krlamkey@iastate.edu.

Description of the training opportunity. The student participating in this research opportunity will work in partnership with scientists in plant breeding, weed science, and soil science. He/she will have access to excellent field, greenhouse, and laboratory facilities through the Department of Agronomy. The student will develop genetic designs to determine gene effects on corn field trials and develop experimental designs to understand the interactions of corn with living mulch systems. The student will interact with a diverse set of faculty in a multi-disciplinary environment. Skills will be developed in areas crucial to future success in research and academic settings.

Benefits. The student selected for this assistantship will receive full tuition beginning the Fall of 2008 to the completion of their degree (within a reasonable time). In addition, the student will be paid a stipend for work associated in participating in research projects. Graduate assistants also receive medical benefits.

Desired skill set. Proven aptitude in the biological and physical sciences, including biology, genetics, chemistry, agronomy, and mathematics is required. GRE scores must be submitted for evaluation. Excellent written communication skills and capacity to work both independently and within a team environment are essential. Demonstrated skill in problem solving, data collection, hypothesis testing, and data analysis is preferred.