

## **J. Fielding Reed PPI Fellowships Awarded To Four Graduate Students**

**F**our outstanding graduate students have been announced as the 2006 winners of the J. Fielding Reed PPI Fellowships awarded by the Potash & Phosphate Institute (PPI). Grants of \$2,500 each are presented to the individuals. All are candidates for either the Master of Science (M.S.) or the Doctor of Philosophy (Ph.D.) degree in soil fertility and related fields. The winners for 2006 are:

- **Dennis W. Hancock**, University of Kentucky
- **Neil S. Mattson**, University of California-Davis
- **Emily G. Sneller**, University of Wisconsin-Madison
- **Mark W. Szczerba**, University of Toronto

“It is a privilege of our organization each year to recognize these excellent young individuals who represent such dedication and strong qualification in sciences relevant to plant nutrition. Since these awards began in 1980, nearly 160 graduate students have received Fellowships from the Institute,” said Dr. Terry L. Roberts, President of PPI.

Funding for the Fellowships is provided through support of potash and phosphate producers who are member companies of PPI. Scholastic record, leadership, and excellence in original research are among the important criteria evaluated for the Fellowships. Following is a brief summary of information for each of the 2006 recipients.



**Dennis W. Hancock**

**Dennis W. Hancock** is completing his Ph.D. in Crop Science at the University of Kentucky, Lexington. His dissertation title is “Spectral Reflectance of Canopies of Rainfed and Subsurface Irrigated Al-

falfa.” A native of Dawson Springs, he attended Berea College and earned his B.S. degree there in 1997. After receiving his M.S. at the University of Kentucky, Mr. Hancock worked as Extension Agent for Agriculture and Natural Resources in Grant County (Kentucky) from 2000 to 2002. Since 2002, he has served as Research Specialist and Extension Associate for Precision Agriculture statewide, coordinating the Multispectral and Subsurface Drip Irrigation Research Project. He has also maintained the university’s website, “Precision Agriculture in Kentucky.” One aspect of his work provides the foundation for development of a novel method for fine-tuning potassium fertilization of alfalfa. For the future, he hopes to help farmers improve yields and input use efficiency, decrease environmental impact, and increase profitability.



**Neil S. Mattson**

**Neil S. Mattson** is a candidate for a Ph.D. degree in Plant Biology at the University of California-Davis. His dissertation title is “Macronutrient Absorption during Growth Cycles of *Rosa Hybrida*: Role of Carbohydrate, Nitrogen, Phosphorus, and Potassium Storage and Reallocation on Plant Nutrient Absorption.” Originally from Minnesota, Mr. Mattson received his B.A. degree from the University of Minnesota-Morris in 2000 and his M.S. in 2002 at the University of Minnesota-St. Paul. The overall objectives of his dissertation are to develop methods to provide optimal levels of nitrogen, phosphorus, and potassium to rose plants in a manner that will reduce leaching of the nutrients while still maximizing plant yields. In addition to his project on mathematical modeling of nutrient uptake

in greenhouse crops, Mr. Mattson is also working with his major professor in software development of a greenhouse production timing tool for cut-flower rose production. His career goal is a university position that combines research with outreach efforts, with a focus on water and nutrient management in agronomic or horticultural crops.



Emily G. Sneller

**Emily G. Sneller** is pursuing her M.S. degree in Soil Science at the University of Wisconsin. Her thesis title is “Manure Source and Rate Effects on Soil Test Levels and Corn Growth in Relation to Fertilizer.” Origin-

nally from Michigan, Ms. Sneller grew up on a dairy farm and received her B.S. in 2005 from Michigan State University. Her current research project involves three main focus aspects. First is a field study to determine manure phosphorus availability to corn compared to fertilizer. Then, the same locations will be used to determine second year availability of each source. Third, an in-laboratory incubation study will be done to mirror the field study. Results of the various components will help fine tune phosphorus recommendations related to manure application. For the future, Ms. Sneller hopes to work with farmers in developing efficient and sustainable management plans while maintaining the effectiveness and economical aspects required in modern agriculture.



Mark W. Szczerba

**Mark W. Szczerba** is working toward a Ph.D. in Plant Physiology in the Botany Department at the University of Toronto. His thesis title is “Physiology of Potassium Nutrition in Cereals: Fluxes, Compartmentation, and Ionic Interactions.” Mr. Szczerba completed his B.S. degree at the University of Western Ontario in 2002. His current research focus is on potassium ( $K^+$ ) nutrition in barley and rice seedlings, seeking to better understand fundamental aspects concerning  $K^+$  transport. His findings related to low-affinity transport of  $K^+$  in cereals have already provided new insight and reworking of methodology for flux measurement in plants. He is also examining sodium ( $Na^+$ ) stress in cereals, in particular, how  $Na^+$  toxicity affects  $K^+$  uptake and compartmentation. As for future career goals, Mr. Szczerba would like to use his skills and knowledge in ion transport to better understand how to engineer plants that one day could be used to decontaminate soils laden with heavy metals or organic toxicants.

The Fellowships are named in honor of Dr. J. Fielding Reed, who served as President of the Institute from 1964 to 1975. Dr. Reed was well-known for inspiring advanced study and for encouragement of students and teachers. The 2006 Fellowship winners were selected by a committee of PPI scientific staff. **BC**

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## **How to Apply for PPI Fellowship**

Graduate students attending a U.S. or Canadian degree-granting institution are eligible to apply for the J. Fielding Reed PPI Fellowships. The award is made directly to the student and no specific duties are required. Deadline for the next round of applications to be received is January 16, 2007. Announcement of those awards would be in the spring of 2007. Applicants are asked to include transcripts of all college courses and letters of support from three individuals (one of whom should be the major professor). Application forms are available by contacting: Phyllis Pates, PPI, 772-22<sup>nd</sup> Avenue South, Brookings, SD 57006; phone (605) 692-6280; e-mail: ppates@ppi-far.org. **BC**