Three Graduate Students Receive "J. Fielding Reed PPI Fellowships"

THREE outstanding graduate students have been announced as the 1995 winners of the "**J. Fielding Reed PPI Fellowships**" by the Potash & Phosphate Institute (PPI). Grants of \$2,000 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 sciences.

The 1995 recipients were chosen from over 30 applicants who sought the Fellow-ships. The three are:

• Jürg M. Blumenthal, University of Minnesota, St. Paul

• Kevin A. Cook, Brigham Young University, Provo, UT

• Mark A. Fairchild, University of Kentucky, Lexington

Funding for the Fellowships is provided through support of potash and phosphate producers who are member companies of PPI.

"Each year, we have the privilege of presenting this recognition. All of the applicants for the Fellowships have excellent credentials," noted Dr. David W. Dibb, President, PPI. "The individuals selected and their educational institutions can take pride in the level of achievement represented."

Scholastic record, excellence in original research, and leadership are among the important criteria evaluated for the Fellowships. Following is a brief summary of information for each of the winners.



Jürg M. Blumenthal

Jürg M. Blumenthal is a native of Surcasti, Switzerland. He received both his B.S. and M.S. degrees from the Federal Institute of Technology, Zürich, Switzerland. He is currently pursuing his Ph.D. degree at the University of Minnesota. The title of his dissertation is "Nitrogen Economy of Alfalfa." He believes his research will characterize germplasm efficiency in remediating nitrate-N contaminated soils, broaden knowledge of the interdependence of symbiotic N fixation and mineral N nutrition and contribute to the sustainability of agricultural systems. He plans a career in soil fertility and plant nutrition research and Extension, at either a public or private institution.

Kevin A. Cook was born in Provo, UT, and raised on a farm in Ririe, ID. He received his B.S. from degree **Brigham Young** University (BYU). He is presently studying for his M.S. degree, also at BYU. The title of his thesis is.



Kevin A. Cook

"Assessment of the Potential Use of Iron Reductase Isozymes as an Indicator of Iron Deficiency Chlorosis Resistance in Soybeans." One of his professors said, "Kevin is as fine a student as has graduated from our department." Another described him as "... perhaps one of the best all-around students I have advised in 30 years." Mr. Cook plans a career in research upon completion of his Ph.D. degree at Iowa State

University.

Mark A. Fairchild is currently working toward a Ph.D. degree at the University of Kentucky. He earned both the B.S. and M.S. degrees from Kansas State University. Mr. Fairchild is a



Mark A. Fairchild

native of Tribune, KS. The tentative title of his dissertation is "Denitrification Dynamics in Fragipan Soils of Kentucky." The purpose of his research is to see how manure and cover crops influence denitrification above a fragipan under controlled conditions. After receiving his

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shown in **Table 4**. Both N and K showed the greatest increases from fertilizing before the harvest (11 percent and 10 percent, respectively). Phosphorus use efficiency increased slightly, but S showed no response and Mg use efficiency decreased by 5 percent.

Summary

For the farmer/rancher, the advantages of fertilizing before harvest compared to the conventional method include:

- Improved forage quality.
- Higher forage crude protein content (greater than 15 percent throughout the season except for the drought harvest on July 21).
- Increased seasonal yield (17.6 percent).
- Increased protein production/A (37 percent).
- Increased nutrient use efficiency.
- Improved water use efficiency (over 17 percent).

Ph.D. degree, Mr. Fairchild plans to work in a less developed country where he can teach better farming methods to the people . . . including better use of fertilizers and environmentally sound practices. He would also like to conduct research to support his teaching. ■

Table	4.	Effects	of	fertilizer	scheduling	on
		apparent	t nı	itrient use	efficiencies.	

Seasonal nutrient use efficiency– Ib/A harvested/Ib/A applied									
	Ν	$P_{2}O_{5}$	K ₂ 0	S	Mg				
Total amt. applied, lb/A	360	100	440	220	40				
Conventional fertilization	0.63	0.47	0.55	0.12	0.54				
Fertilized before harvest	0.74	0.49	0.65	0.12	0.49				

Advantages of this system for fertilizer dealers include:

- Spreader tracks visible and easily discerned by applicator driver, aiding in achieving even spread pattern.
- Fields can be fertilized without delays caused by hay baling and removal.

The bottom line is that timing fertilizer applications before harvest can boost Coastal bermudagrass yields, quality and profits. ■

Western Nutrient Management Conference Proceedings Available

THE FIRST Western Nutrient Man-



agement Conference was held in Salt Lake City, UT, March 9-10, 1995. This conference provided a forum for discussion of nutrient management for all types of crop production with emphasis

on environmental protection. A total of 33 oral and poster papers were presented on subjects including implementing nitrogen fertilizer best management practices, potassium fertility guidelines for California crops, chloride nutrition of wheat, predicting wheat protein increases from topdressed N, and fertility management for high density apple orchards.

The United States, Canada and Mexico were represented by presentations at the Conference. States and provinces covered by the Conference included Saskatchewan, Alberta, British Columbia, Alaska, Washington, Idaho, Montana, Oregon, Wyoming, California, Nevada, Utah, Colorado, New Mexico, Arizona, Hawaii and northern Mexico.

Copies of the proceedings are available at a price of \$15 from the Potash & Phosphate Institute, 2805 Claffin Road, Suite 200, Manhattan, KS 66502; phone 913-776-0273, fax 913-776-8347. ■