UF/IFAS
Soil and Water Sciences Department

2181 McCarty Hall A
Gainesville, FL 32611-0290
352-294-3151
352-392-3399 Fax

Soil and Water Sciences Department Distinguished Speaker Seminar

Speaker: **Dr. Guohua Xu**
Professor and Dean
College of Resources and Environmental Sciences
Nanjing Agricultural University, China
ghxu@njau.edu.cn

Title: **Enhancing Crop Nutrient Uptake Efficiency: Genetic Basis and Molecular Mechanisms**

Date: Monday, February 19th

Time: 3:00 pm – 4:00 pm

Location: McCarty Hall A, Room G186

Dr. Xu is a well-known plant biologist. He obtained his Ph.D. in plant physiology from Hebrew University of Jerusalem in 2000 and did a post-doc in Weizmann Institute of Science in Israel in 2001-2004. His research focuses on mineral nutrition of major field crops and vegetables and plant abiotic stresses by understanding the underlying molecular mechanisms of efficient use of major nutrients in plants and plant signaling in arbuscular mycorrhizal symbiosis. Since 2007, Dr. Xu has published 50 articles in reputable journals including PNAS, Journal of Experimental Botany, and Plant Physiology.

His presentation will focus on factors regulating NO_3^- and K^+ transport to increase rice yield and nutrient efficiency, providing an explanation for plant adaptation to changes in NO_3^- – NH_4^+ supply shift between the waterlogged and drained soil environment. His presentation will cover two aspects: 1) N and K are two most abundant essential nutrients for plant growth and development. Although NH_4^+ is the predominant N form in anaerobic flooded paddy soil, rice and other wetland plants may take up significant amounts of NO_3^- resulting from NH_4^+ nitrification in the rhizosphere; and 2) Cellular pH homeostasis is fundamental for life and all cells adapt to maintain this balance. In plants the chemical form and amount of NO_3^- and NH_4^+ together with K^+ dominate the preliminary change of cellular pH.

For our off-campus students, off-campus faculty, and on-campus students who cannot attend, this seminar can be viewed via live or watched at a later date via this link: Dr. Guohua Xu. In addition, all seminars are archived for viewing on our SWSD Seminar Page. For additional questions, please contact Dr. Lena Ma at lqma@ufl.edu.