Presented by the Department of Crop & Soil Sciences

and the College of Agricultural, Human,

and Natural Resource Sciences

2015

Campbell Lecture

Exploring the World of Roots

Tuesday, October 6th

4:10pm –5:00pm

Johnson Hall Annex C107

Dr. Zed Rengel

Winthrop Professor
University of Western Australia

With over 350 peer-reviewed publications cited over 8000 times, Dr. Rengel is one of the world's leading scholars of rhizosphere ecology.

Expanding the human population to at least 9 billion by 2050 will require doubling the food production using land that is likely to decrease in area as well as quality. Optimising soil-root interactions may help balance the above (potentially scary) equation.

1) How much do we know about the soil-root interface?
2) Who else is out there in the world of roots?
3) Can we travel there to have a look/make measurements/take samples?
4) Can we model the processes happening at the soil-root interface?

Zed will provide some answers and ask more questions. The seminar will deal with alteration of chemical and biological properties in the rhizosphere soil surrounding roots, and 3-D simulation models of root growth and nutrient uptake. Particular attention will be devoted to various techniques used to assess what is happening at the soil-root interface. Zed will talk about soil chemistry, microbial ecology, crop breeding, about agronomy and human nutrition, but most of all about roots. So, how much can roots grow in 45 minutes?

WASHINGTON STATE UNIVERSITY

World Class. Face to Face.

The Campbell Lecture was created to help further understanding of environmental soil science. It is named for Gaylon Campbell, who spent nearly 30 years as a professor of environmental biophysics and soil physics in the WSU's Crop & Soil Sciences department. He retired from WSU in 1998 to become vice president of engineering at Decagon Devices, a local manufacturer of biophysical research instrumentation. The lecture was created through gifts from Campbell Scientific, Inc., and Decagon Devices, Inc.