

Hands-on Experience with Plant Root Simulator (PRS®) Probes



Eric Bremer, PhD

Western Ag Innovations, Lethbridge, AB

Corresponding author: ericbremer@westernag.ca

Abstract

Have you ever wondered what plant roots see when they meet a fertilizer band? Or had to measure soil nutrients in Mongolia? Plant Root Simulator (PRS) probes are a useful tool to monitor soil nutrients *in situ* and in remote locations. They have been used in deserts, grassland, forests, tundra, wetlands and agroecosystems all over the globe. They consist of ion-exchange membranes on a plastic support. Eric Bremer, head of R&D for Western Ag Innovation, will provide a hands-on workshop on how to use PRS probes in a wide range of ecosystems, including general installation and handling, standardized burial methods at field capacity and saturation (including tips on controlling soil moisture and aeration), and lab methods to monitor nutrient dynamics adjacent to fertilizer prills.

Biography

Dr. Eric Bremer has been active in research on soil N and organic matter dynamics since grad student days at the University of Saskatchewan in the 1980s. He has managed the research use of PRS probes since 2011.