

University of Minnesota

Sixth Annual

William E. Larson and Raymond R. Allmaras

Emerging Issues in Soil and Water

Lectures



Mr. Robin O'Malley

Program Director
Environmental Reporting Program
The Heinz Center
Washington, DC

“An Environmental Information
System for the 21st Century”



Dr. Bob A. Stewart

Director, Dryland Agriculture
Institute, and Distinguished
Professor of Soil Science,
West Texas A&M University,
Canyon, Texas.

“National Indicators of Changes
in Soil Quality”

April 16, 2008
2:00-4:30 PM
335 Borlaug Hall
University of Minnesota

For more information, please contact Dr. Satish Gupta, sgupta@umn.edu, 612-625-1241.

Mr. Robin O'Malley: "An Environmental Information System for the 21st Century"

Abstract

The demand for accurate, unbiased, and timely information on environmental change will rise dramatically over the coming decades, as changes in global climate regimes cause environmental alterations not seen in the modern historical record. Changes in temperature, precipitation patterns, sea level, and other climate and weather modifications will exacerbate existing stressors and increase the competition for resources between humans and nature. Management in periods of uncertainty requires more and better feedback about changing conditions and the effectiveness of interventions, yet the "system" for providing information to decision makers is inadequate to its current task, let alone to meet the larger set of demands to be posed in the future. The United States has developed a powerful array of monitoring and observation techniques, but needs a systematic approach and some level of "central nervous system" coordination to fully realize the value of these assets and meet emerging demands. Utilizing insights from business and from successful multi-sector negotiations, Mr. O'Malley will posit several possible ways forward in this complex arena.

Dr. Bob A. Stewart: "National Indicators of Changes in Soil Quality"

Abstract

People are vitally concerned about water quality and air quality because they associate them with health. These resources are directly linked to soil quality that receives far less public attention. However, the surest way to have good air and water is to maintain or enhance soil quality. Indicators that can quantify changes in the physical, chemical, and biological properties of soils must be identified and used to guide producers and policy makers. Carbon sequestration and ethanol production are issues that are being greatly affected by public policies yet they could have very different effects on soil quality. Translocation of nutrients from crop producing regions to concentrated animal feeding areas also affects soil quality. Dr. Stewart will discuss indicators such as soil organic matter that can be used to assess changes in soil quality because a decline always leads to a decline in water and air quality.