Soil Quality Changes with No-Till in Dryland Cereal Systems. (S03-kennedy182209-Poster)

Authors:

- A.C.Kennedy* - *USDA-ARS*
- T.L.Stubbs - *Washington State University*
- W.F.Schillinger - *Washington State University*

Abstract:

Soil quality parameters were assessed at several long-term dryland cropping systems research sites in eastern Washington. The objective was to characterize soil quality changes over time as affected by no-till versus traditional tillage-based management systems. Organic carbon increased over time with long-term no-till. Changes in the microbial community and other soil quality parameters such as pH, electrical conductivity and microbial enzyme activity were variable in their response. Soil quality changes during the transition to no-till take longer and are more variable in the low (240-to 300-mm annual) precipitation zone. Changes in microbial communities often were seen before other soil quality indicators. Future data from these long-term experiments will allow us to better assess the health or quality of soils in the dryland cropping region of the Inland Pacific Northwest to aid farmers in the transition to no-till cropping.

Corresponding Author Information:

Ann Kennedy
USDA-ARS-LMWC
217 Johnson Hall
Pullman, WA 99164-6421

phone: 509-335-1554
fax: 509-335-3842
e-mail: akennedy@wsu.edu

Presentation Information:

Presentation Date: Wednesday, November 13, 2002
Presentation Time: 1:30-3:30 pm
Poster Board Number: 2012

Keywords:

Microorganisms, Fatty acid methyl esters, dryland agriculture, no-till