Soil Organic Carbon Concentrations in Adjacent Cultivated, Restored, and Never Cultivated Hapludalfs and Argiudolls in Northeastern Illinois. (S05-konen193255-Oral)

Authors:

- M.E.Konen* - *Northern Illinois University*
- L.Burras - *Iowa State University*
- J.L.Wollenweber - *Northern Illinois University*

Abstract:

Four adjacent management areas in northeastern Illinois were examined in order to evaluate land use impacts on the concentration and depth distribution of soil organic carbon. The four management areas consisted of a never cultivated savanna and three agricultural fields that had been cultivated for approximately 140 years. The three agricultural fields were managed similarly until the mid 1980's when one of the fields was taken out of production and planted to switchgrass. A second agricultural field was converted to no-till in the early 1990's. The final agricultural field remains under conventional tillage practices. Seven backslope soil profiles were sampled within each management area. Soil organic carbon contents and depth distributions were quantified. Wet and dry aggregate stability analyses were also performed. Particle size analysis and organic carbon concentration of each stable aggregate fraction was quantified in order to determine if land use had an impact on the distribution of organic carbon within stable aggregate size classes.

Corresponding Author Information:

Michael Konen
Northern Illinois University
18 Davis Hall
DeKalb, IL 60115

phone: 815-753-6849
fax: 815-753-6872
e-mail: konen@geog.niu.edu

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