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Microbial Dynamics in Conventional and Organic Managed Systems.

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A large scale systems study on conventional and organic management systems was established. Two vs. four year crop rotations (corn-soybean, corn-soybean-wheat-alfalfa), inorganic vs. organic fertilizer sources, and conventional vs. strip tillage management practices were compared. Soil samples to 10 cm depth were taken in the Spring over four years from plot establishment. Microbial biomass C and N was determined by chloroform fumigation-direct extraction. Fatty acid methyl esters (FAME) were extracted from freeze dried soil and exhibited mostly differences in quantity rather than quality. Microbial C changed yearly, with little treatment effects. Microbial N showed differences related to crop rotation. Minimal differences among treatments were expected for the initial years of the study.

Handout (.pps format, 3276.0 kb)

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