Long-Term Agroecological Research (LTAR) in Iowa: Certified Organic Comparisons. (C03-delate163014-Poster)

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Abstract:

In the fourth year of our examination of the agronomic and economic performance of conventional and organic systems, using certified organic production practices at the Neely-Kinyon Long-Term Agroecological Research (LTAR) site in Iowa, organic corn yields were significantly greater (8.1 Mg ha-1) than conventional corn (7.1 Mg ha-1). Organic soybeans following two years of alfalfa and one year of corn had significantly greater yields (3.2 Mg ha-1) versus 2.7 Mg ha-1 for conventional soybean in a C-S rotation. Organic oat yields averaged 3.0 Mg ha-1 while organic alfalfa yields equaled 7.6 MT ha-1. Insect pest load did not vary between systems, while weed populations were equal in organic and conventional soybean systems, but greater in organic corn systems. Corn stalk nitrate concentrations at 5543 ppm in the conventional system were 55% greater than organic stalk nitrate concentrations. Returns for corn and soybean within the organic corn-soybean-oat-alfalfa rotations were significantly greater than conventional corn-soybean rotation returns.

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