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This presentation is part of [43: Integrated Crop-Livestock Systems for Profit and Sustainability](#)

Crop Productivity and Economics during the Transition to Alternative Cropping Systems in the Northern Corn Belt.

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Long-term cropping systems plots were established in West-Central Minnesota in 2002 to investigate the agronomic, economic and environmental performance of alternative cropping systems. Our hypothesis is that systems which increase crop diversity, reduce tillage and reduce use of purchased inputs hold the greatest potential for improving economic and environmental sustainability. However, even if alternative systems are economically viable in the long-run there may be short-term economic barriers to adoption. Yields were collected for a range of cropping system treatments including organic and conventionally managed systems under two-year and four-year crop rotations and with contrasting tillage and fertility management. Enterprise budgets were estimated based on the production practices, input use and yields under each cropping system. These budgets were used to compare the economic performance of the alternative cropping systems during the first four years in transition from conventional high tillage, high input, low-diversity, cropping practices. Results showed profitability could be maintained or improved under some cropping system alternatives even in the short term. However, cash flow constraints associated with the entry point into alternative rotations, the need to acquire additional equipment, and the certification period for organic production to receive price premiums could represent barriers to adoption.

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See more of [The ASA-CSSA-SSSA International Annual Meetings \(November 6-10, 2005\)](#)