Results

Stage 1: Predicted change in yield as a function of tillage change (Errors bars are a 95% Confidence Interval). Asterisks (*) designate confidence intervals that do not include no change (i.e., 0 MT Dry Matter/ha). Changes in yields are expressed relative to the Full-Tillage (Full-Till = 0 MT DM/ha) condition.

Stage 2: Predicted change in yield as a function of environmental conditions and tillage practice. (Errors bars are a 95% Confidence Interval). Asterisks (*) designate confidence intervals that do not include no change (i.e., 0 MT Dry Matter/ha).

Conclusions

In general, climate, fertilizer and time since adoption of conservation tillage have an influence on crop yields.

If yields change following adoption, the production tends to increase for crops grown in warmer climates, and decrease in cooler climates.

A crop production system with high N fertilizer rates will tend to have higher yields with conservation tillage adoption, or remain unchanged.

A crop production system with low N fertilizer rates will tend to have lower yields with adoption of conservation tillage, or remain unchanged.

Yields tend to increase over time following adoption of conservation tillage similar to the previous tillage management system, with the exception of corn production systems with higher N fertilizer levels.

References


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