

Impact of Tillage, Drainage and Residue Management on Soybean Growth and Soil Characteristics

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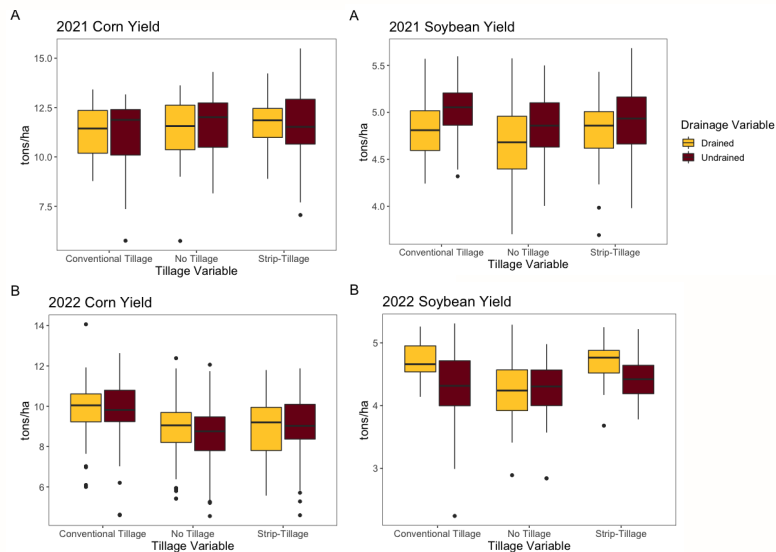
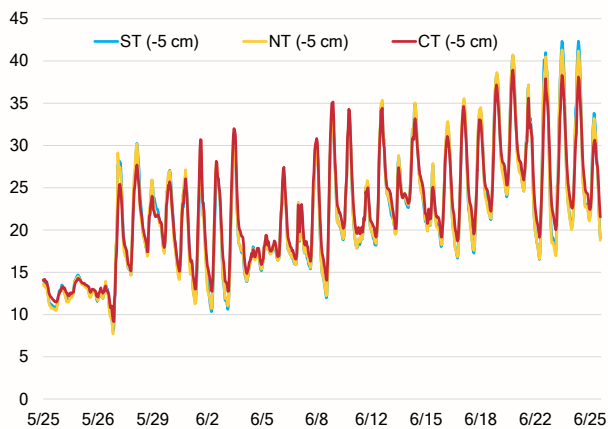
Objectives

1. Examine the impact of tillage, artificial drainage and corn residue on soybean planting, emergence, and vigor
2. Evaluate the primary and interactive effects on soil physical parameters

Materials and Methods

1. Experimental design
 1. Split-split-split plots in a randomized complete block with four replications
2. Factors
 1. Drainage condition
 1. Drained
 2. Undrained
 2. Tillage system
 1. Conventional
 2. No-till
 3. Strip-till
 3. Residue management
 1. Cover crop (2022 only)
 2. No-residue
 3. Corn residue

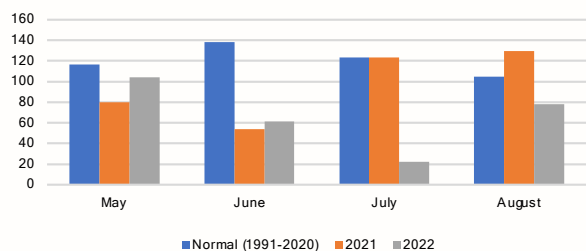
Effect of tillage on soil temperature (°C)



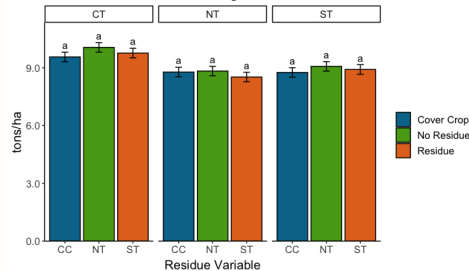
Results

2021-2022 Weather data – Wells, MN

Monthly Precipitation (mm)



Corn Yield ~ Residue Management



Soybean Yield ~ Residue Management

