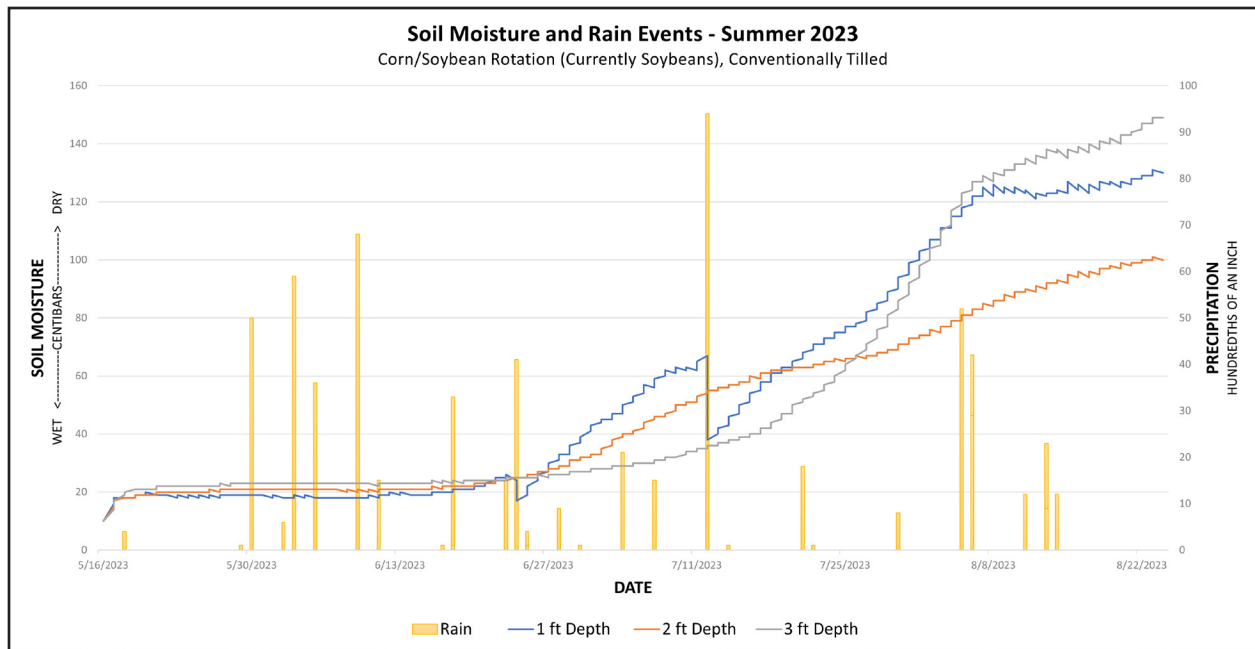
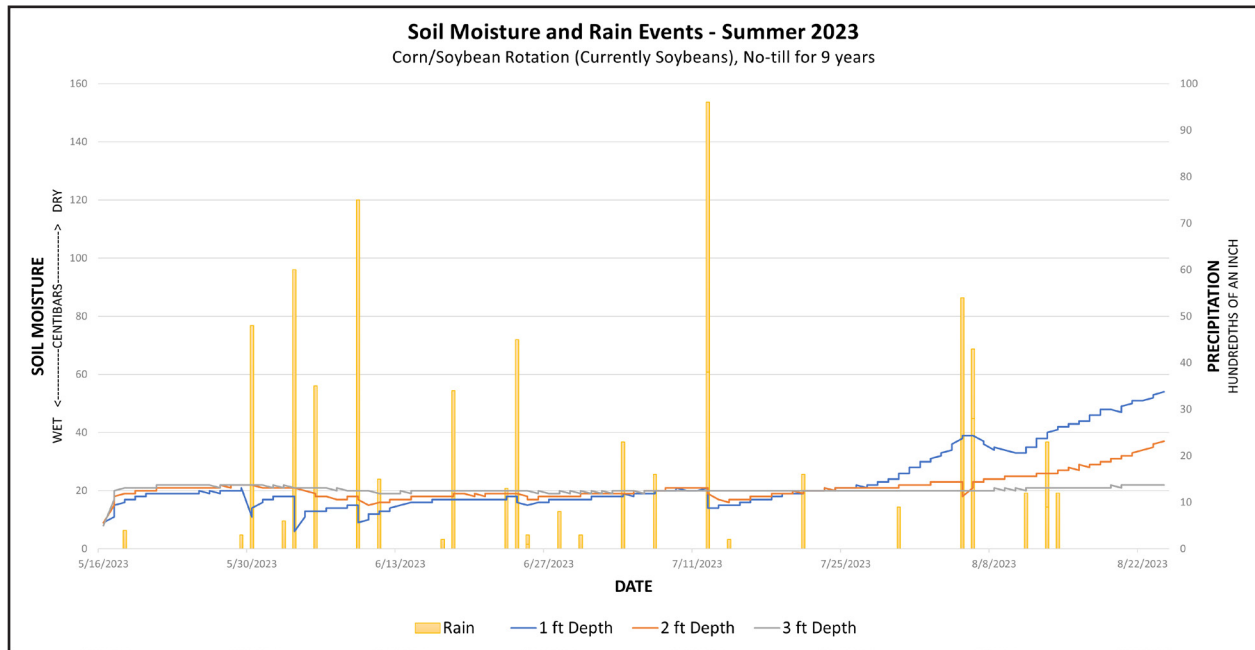


2023 Minnehaha County Soil Moisture Comparison



The Summer 2023 soil moisture and precipitation data for two nearby soybean fields – one managed with no-till practices and one managed with conventional tillage – show the dramatic effect management practices have on available moisture over the course of a season. The sensors in the two fields were placed approximately 1,000 feet apart on the same landscape position with the same soil types and similar mollic depths. In the tilled field, the soil began losing moisture rapidly in late June, and by mid-July rain events only minimally recharged soil moisture. In the no-till field, however, the soil at deeper depths retained its moisture well through the entire summer, and soil at the 1-foot depth held its moisture steady until the end of July. Also, rain events as late as early August still recharged soil moisture in the no-till field. On August 24th, there was a 127-centibar difference in soil moisture at the 3-foot depth between the two fields. This data indicates that water retention and water infiltration rates were greater in the no-till field.

Soybeans use more moisture during the reproductive growth stages which occur later in the summer. This means the no-till field had more moisture available when soybeans need it most.