



Corn Response to Tillage and Seeding Rate

Trial Objective

- Previous research conducted at the Bayer Learning Center at Monmouth, IL yielded mixed results when comparing different tillage systems.
- This trial was conducted to compare the yield response of corn under three different tillage types and two different seeding rates.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Monmouth, Illinois	Silt loam	Corn	Vertical, strip, conventional	5/2/20	10/8/20	250	32K, 42K

- Treatments consisted of three tillage systems and two seeding rates for a total of six treatments.
 - Tillage system:
 - Vertical tillage
 - Strip tillage
 - Conventional tillage (fall chisel plow followed by one pass with a soil finisher prior to planting)
 - Seeding rates:
 - 32,000 seeds/acre
 - 42,000 seeds/acre
- This study had two replications of each of the six treatments.
- Two different corn products were planted in this trial, but there were no meaningful differences observed between the corn products. Therefore, results presented are an average of both corn products.

Understanding the Results

- Although statistically insignificant, small yield increases were observed at the higher planting population in all three tillage systems.
- Vertical and conventional tillage resulted in similar yields whereas strip tillage yielded lower. This may have been the result of faster drying and warming of the soil with vertical and conventional tillage during the prolonged cool and wet conditions experienced in the spring of 2020.



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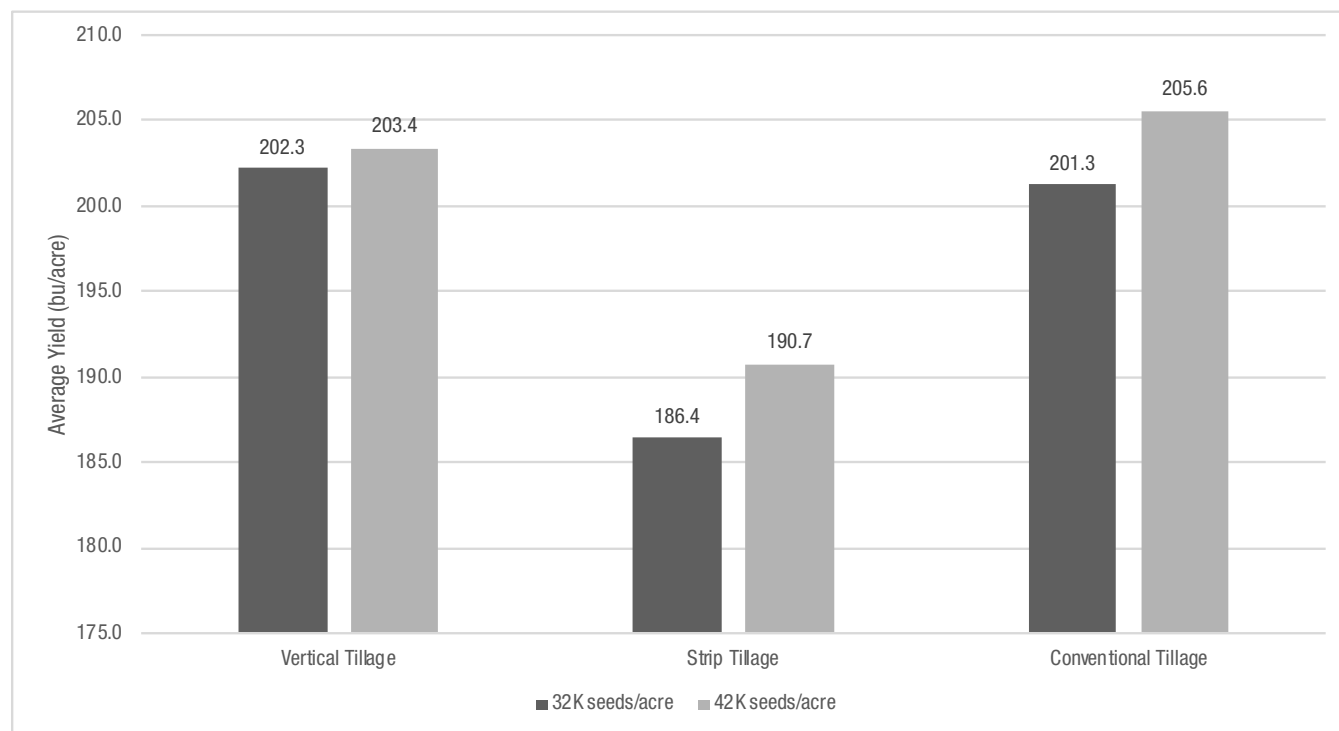


Figure 1. Average corn yields comparing three tillage systems and two seeding rates averaged across two corn products.

Key Learnings

- The interaction of soil type and environmental conditions can vary from year to year and have an effect on soil conditions at planting time.
- Some level of tillage may help to facilitate faster drying and warming of the soil in the spring.
- Consult your local Field Sales Representative or Technical Agronomist for tailored recommendations on your farm.

Legal Statements

The information discussed in this report is from a single site, replicated demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields. ©2020 Bayer Group. 1017_R8_20

