



2021 Dryland Corn Planting Depth by Population Study – Beatrice, NE

Trial Objective

- Uneven corn emergence and uneven distribution of plants can result in reduced yield potential.
- Planter setup is a critical first step to successfully establishing corn yield potential.
- The objective of this demonstration was to illustrate the importance of properly adjusted planting equipment for seeding depth and recommended seeding rate to maximize stand establishment and yield potential.

Experiment/Trial Design

- The demonstration used a 109 day relative maturity (RM) and two 113 day RM corn products.
- Each corn product was planted at 2 populations at 4 seeding depths:
 - » 25,000 and 30,000 seeds per acre planted at a 1.0-inch, 1.75-inch, 2.25-inch, and 3.0-inch depths.
- The trial was planted with a Precision equipped planter with Delta Force
- Each entry consisted of six 30-inch rows by 220 feet in length.
- Yield data was captured with Precision Planting YieldSense and Climate FieldView™.
- Field received 13.7" of total precipitation from planting date to harvest date

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Beatrice, NE	Silt Clay Loam	Soybeans	No tillage	4/24/21	9/27/21	200	25,000 30,000



Figure 1. Left rows of center planted at 30,000 seeds per acre and at a 3-inch depth, right rows of center planted at 25,000 seeds per acre and at a 1- inch depth.



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Understanding the Results

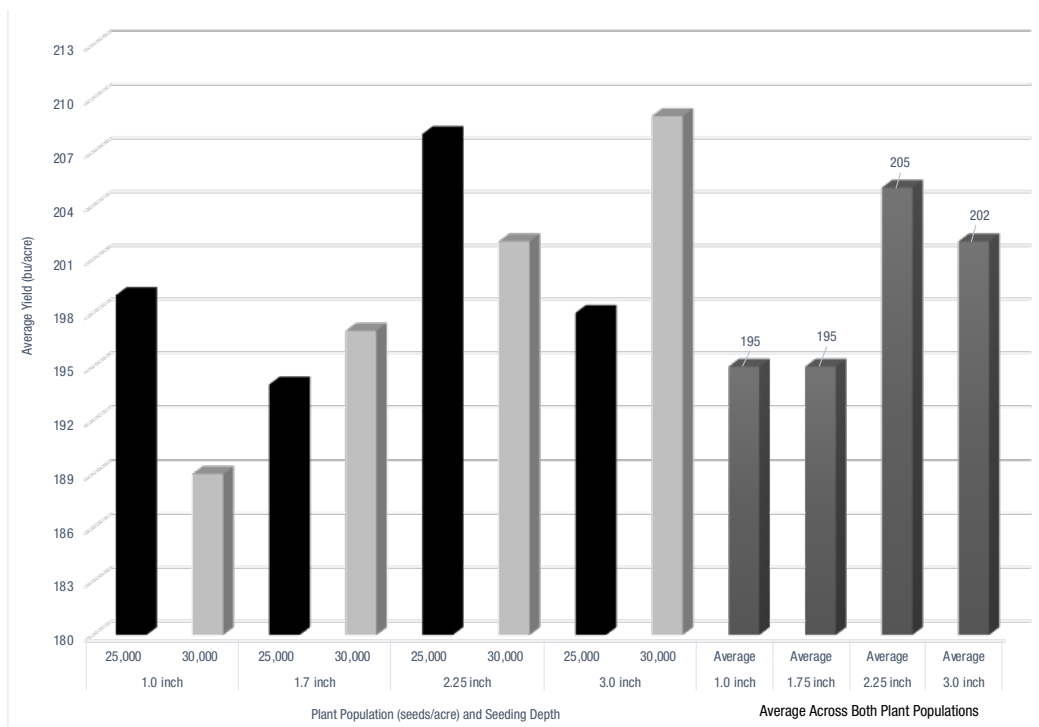


Figure 2. Corn yield performance averaged across 3 corn products planted at 2 different populations and 4 different depths. Beatrice, NE 2021.

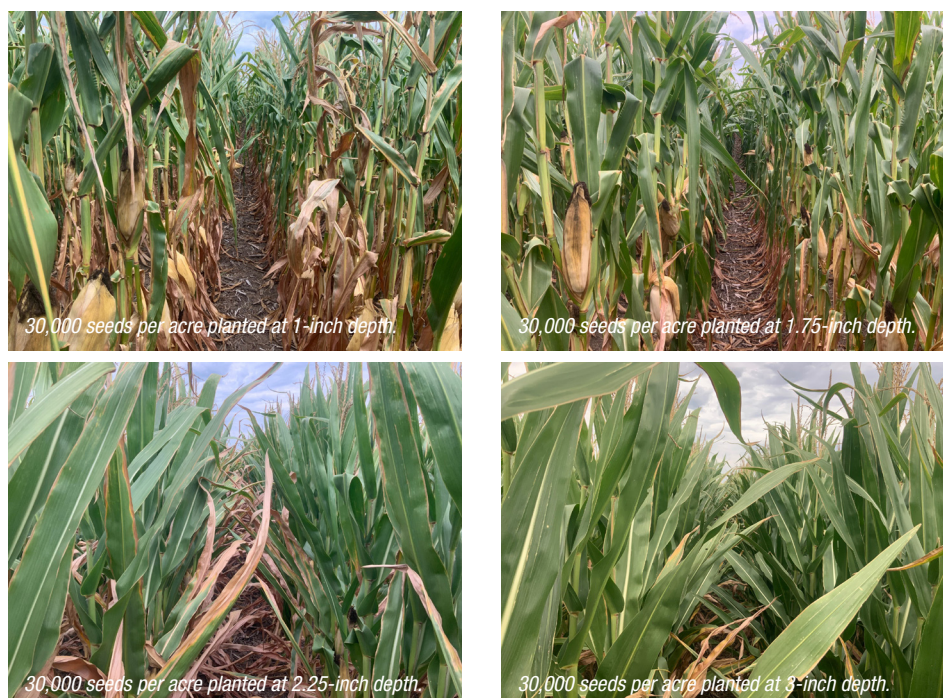


Figure 3. Note delay in maturity as a result of planting depth. Image taken on August 23, 2021.

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- In this trial, the highest yield was achieved with a seed depth of 2.25-inch when averaged across all three corn products (Figure 2).
- At the higher population, yield increased as seeding depth increased across the entries.
- Emergence was faster at the 1.0-inch seeding depth; however, yield inconsistency across corn products also increased (Figure 2).
- Senescence was also impacted with seeding depth as moisture stress caused shallower rooted entries to mature quicker than deeper planted entries especially at 30,000 seeds per acre (Figure 3).

Key Learnings

- This demonstration illustrates that planter setup for proper seeding depth combined with following recommended planting populations for a given corn product and area can help maximize yield potential.

Legal Statements

The information discussed in this report is from a single site, unreplicated 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.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. 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.

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