The Effects of Row Spacing and Seeding Rate on Corn Yield Potential - Channel®

Trial Objective

- This trial was designed to provide farmers in southern Iowa helpful row width comparisons (20- and 30-inch row width systems) on later maturity corn products in Iowa and to help determine the yield response of higher seeding rates within each row width system.

Research Site Details

- Five Channel® corn brand blends of 109 to 116 relative maturity were planted in two adjacent blocks, at two different row spacings, and at three different seeding rates within each row spacing:
  - 6-row, 30-inch row spacing planted at 33,000 (33K), 38,000 (38K), and 43,000 (43K) seeds/acre
  - 12-row, 20-inch row spacing planted at 33K, 38K, and 43K seeds/acre
- A variable row spacing Case IH® 1215 Early Riser® planter unit was used for all plantings at general planting depth settings.
- Both blocks received 150 lb/acre of anhydrous ammonia in the spring. Cultural practices were identical.
- Individual plots were approximately 200 feet long.

Understanding the Results

- Differences in yield potential between the 20- and 30-inch systems can vary from year to year based upon environmental conditions (heat units, moisture, disease, etc.).
- In 2018, yield levels were significantly lower in 20-inch rows at this location but close to parity in 2017.
- Independent of the row spacing system, products need an adequate seeding rate to realize full yield potential and return on investment.
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Figure 1. Average yields by row spacing and seeding rate of five Channel® corn brand blends in 2018.

Figure 2. Average yields of Channel® corn brand blends at each row spacing and seeding rate in 2018.
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Figure 3. Average yields of Channel® corn brand blends at each row spacing and seeding rate in 2018.

Legal Statements

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

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B.t. products may not yet be registered in all states. Check with your seed brand representative for the registration status in your state.

SmartStax® multi-event technology developed by Monsanto Company and Dow AgroSciences.

IMPORTANT IRM INFORMATION: RIB Complete® corn blend products do not require the planting of a structured refuge except in the Cotton-Growing Area where corn earworm is a significant pest. SmartStax® RIB Complete® corn blend is not allowed to be sold for planting in the Cotton-Growing Area. See the IRM/Grower Guide for additional information. Always read and follow IRM requirements.

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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