

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

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

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Victor, IA	Silty clay loam	Soybean	Conventional	04/25/18	10/04/18	250	33K, 38K, 43K

- Five Kruger™ Seeds corn brand blends of 108 to 115 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.

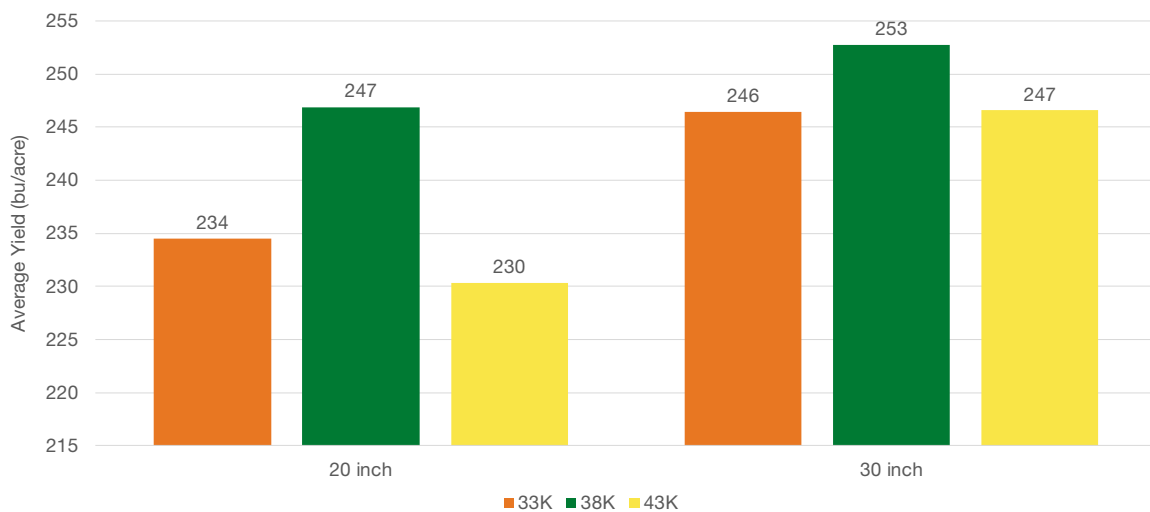


Figure 1. Average yields by row spacing and seeding rate of five Kruger™ Seeds corn brand blends in 2018.

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

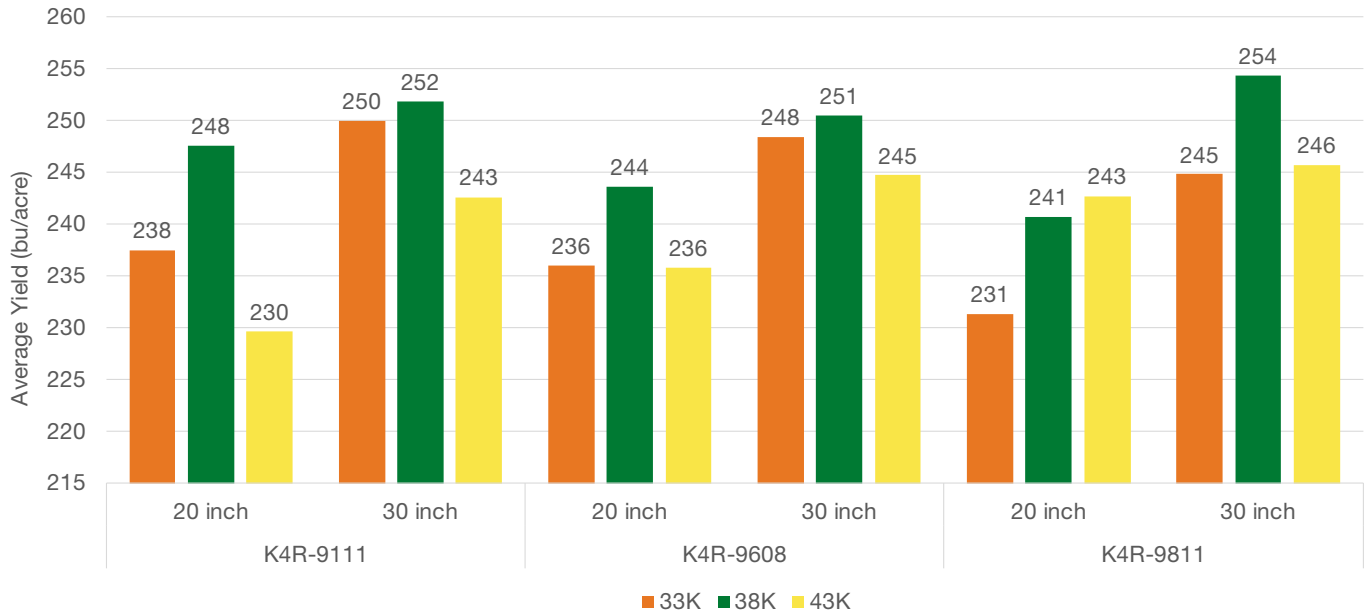


Figure 2. Yields of Kruger™ Seeds corn brand blends at each row spacing and seeding rate in 2018.

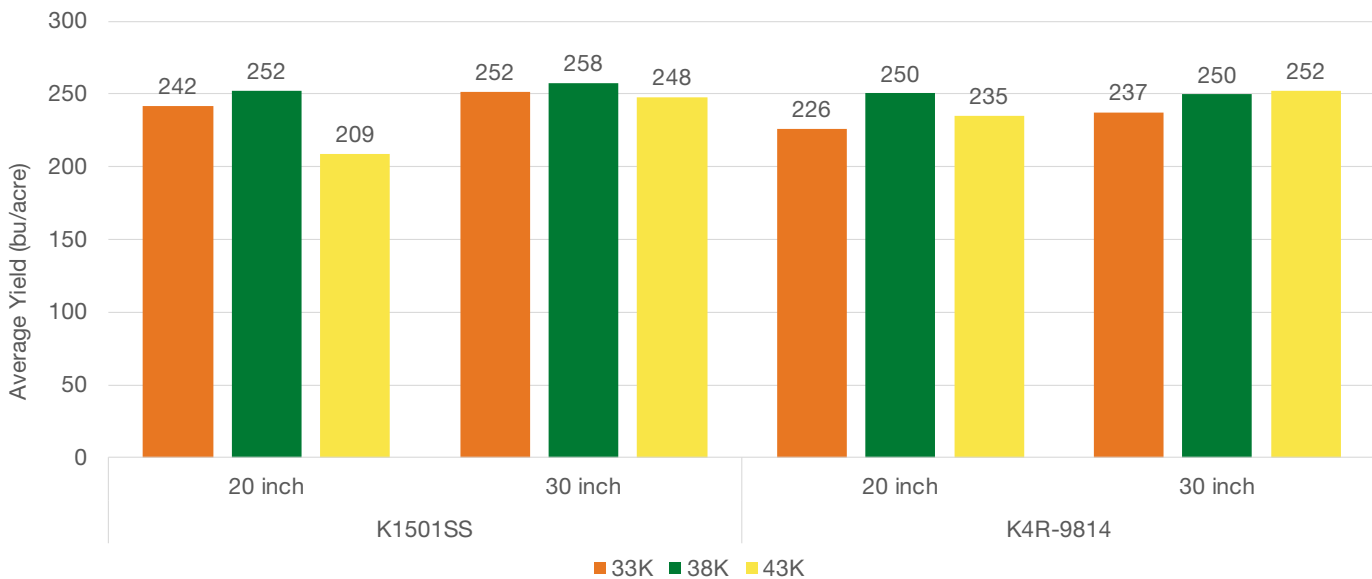


Figure 3. Yields of Kruger™ Seeds corn brand blends at each row spacing and seeding rate in 2018.

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

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.

Monsanto Company is a member of Excellence Through Stewardship® (ETS). Monsanto products are commercialized in accordance with ETS Product Launch Stewardship Guidance, and in compliance with Monsanto's Policy for Commercialization of Biotechnology-Derived Plant Products in Commodity Crops. This product has been approved for import into key export markets with functioning regulatory systems. Any crop or material produced from this product can only be exported to, or used, processed or sold in countries where all necessary regulatory approvals have been granted. It is a violation of national and international law to move material containing biotech traits across boundaries into nations where import is not permitted. Growers should talk to their grain handler or product purchaser to confirm their buying position for this product. Excellence Through Stewardship® is a registered trademark of Excellence Through Stewardship.


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.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Roundup Ready technology contains genes that confer tolerance to glyphosate, an active ingredient in **Roundup® brand agricultural herbicides.** Agricultural herbicides containing glyphosate will kill crops that are not tolerant to glyphosate. Herculex® is a registered trademark of Dow AgroSciences LLC. LibertyLink® and the Water Droplet Design® is a trademark of BASF Corporation. Respect the Refuge and Corn Design® and Respect the Refuge® are registered trademarks of National Corn Growers Association. Kruger Seeds and Design™, RIB Complete®, Roundup Ready®, Roundup®, SmartStax® and VT Double PRO® are trademarks of Bayer Group. ©2019 Bayer Group. All rights reserved. 181210075805 121218JMG



Before opening a bag of seed, be sure to read, understand and accept the stewardship requirements, **including applicable refuge requirements for insect resistance management**, for the biotechnology traits expressed in the seed as set forth in the Monsanto Technology/Stewardship Agreement that you sign. By opening and using a bag of seed, you are reaffirming your obligation to comply with the most recent stewardship requirements.

