

SOYBEAN ROW SPACING BY PLANT POPULATION

TRIAL OVERVIEW

- Row spacing and plant population have the potential to influence soybean yield.



Figure 1. 20-inch rows (left); 30-inch rows (center); and twin rows on 30-inch center (right).

RESEARCH OBJECTIVE

- Evaluate different soybean row spacings and plant populations to determine their effect on yield potential.

Location	Soil	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield/Acre	Planting Rate/Acre
Monmouth, IL	Silt Loam	Corn	Conventional	05/30/2017	10/19/2017	75 bu/acre	120,000 and 170,000 seeds/acre

SITE NOTES:

- The trial consisted of two replications.
 - 2.7 RM and 3.6 RM Roundup Ready 2 Xtend® Soybeans were planted.
 - Seeding rates were 120,000 and 170,000 seeds/acre.
- Row width configurations were 20-inch, 30-inch, and twin rows on a 30-inch center (Figure 1).

UNDERSTANDING THE RESULTS

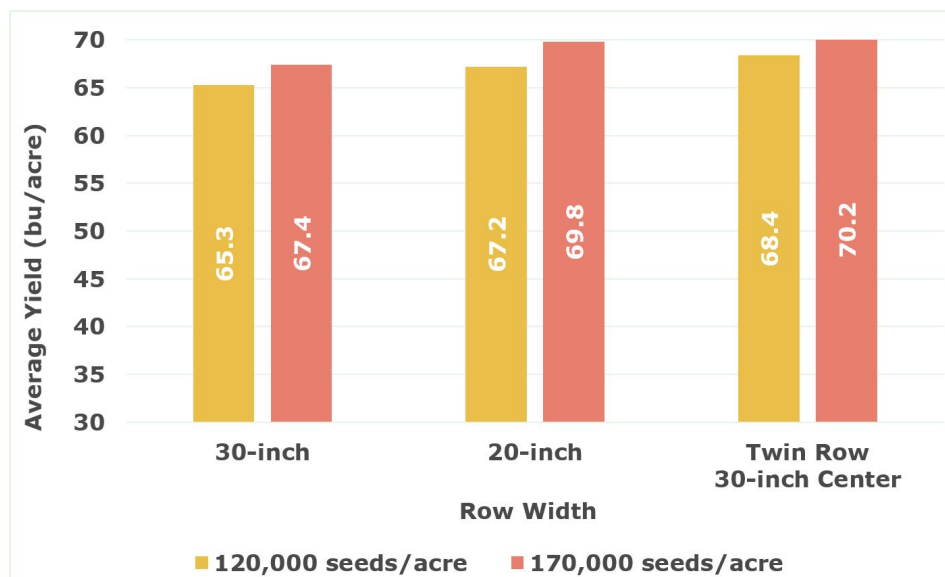


Figure 2. Average Yield Response of Two Soybean Products Using Three Row Widths and Two Seeding Rates, Monsanto Learning Center at Monmouth, IL (2017).

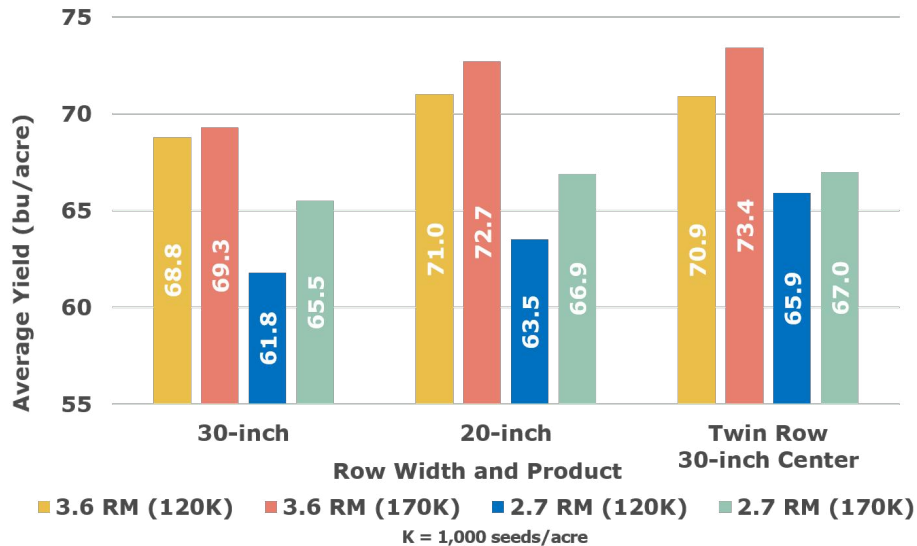


Figure 3. Soybean Yield Response to Row Width and Seeding Rate at the Monsanto Learning Center at Monmouth, IL (2017).

- Narrow rows (20-inch and twin) produced higher yields than wider, 30-inch rows (Figure 2). This is consistent with results from multiple row spacing trials over the past several years at the Monsanto Learning Center at Monmouth, IL.²
- The yield advantage in narrow rows and twin rows may be attributed to better weed control because of earlier canopy closure and increased sunlight interception.
- The 3.6 RM product @ 170,000 seeds/acre was the highest yielding regardless of row spacing (Figure 3).
- Although 170,000 seeds/acre was the optimum rate in this trial (Figure 3), previous work at the Monsanto Learning Center at Monmouth, IL has shown soybean response to planting population to be inconsistent year over year.
 - Soybean Populations by Stress Mitigation. 2013 Demonstration Report.¹
 - Soybean Row Spacing by Population. 2014 Demonstration Report.²

WHAT DOES THIS MEAN FOR YOUR FARM?

- Multiple years of data from the Monsanto Learning Center at Monmouth, IL have shown high soybean yields at a range of seeding rates.
- The Monsanto Learning Center plans to continue conducting trials to help determine the optimum combination of soybean seeding rates and row spacing.
- Multiple years of data from the Monsanto Learning Center have supported an advantage of 20-inch and Twin 30-inch center rows over 30-inch rows.²

SOURCES

1 Soybean Populations by Stress Mitigation. 2013 Demonstration Report. <https://monsanto.com/app/uploads/2017/05/mlc-lc-soybean-population-by-stress-mitigation.pdf>.

2 Soybean Row Spacing by Population. 2014 Demonstration Report. <https://monsanto.com/app/uploads/2017/05/mlc-lc-soybean-row-spacing-by-population.pdf>. Sources verified 11/6/17. 171102110840

LEGAL STATEMENT

For additional agronomic information, please contact your local brand representative.

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