Evaluations of Soybean Seeding Rate and Yield Potential

Trial Objective

- Soybean seeding rate is a decision each soybean producer makes during planting season.
- In recent times, soybean seeding rate recommendations for the Midsouth have decreased from 150,000 to 120,000 seeds per acre. This trial was conducted to identify and reinforce appropriate seeding rates for the southern region by answering two questions:
  - » Do soybeans respond to higher-than-normal seeding rates?
  - » At what point do lower seeding rates begin to negatively influence yield?
- Growers should consider soybean seeding rates to help optimize productivity and return on investment.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Scott, MS	Mixed silt loam	Corn	Conventional	5/2/2022	As Mature	100	30,000 60,000 90,000 120,000 150,000 180,000

- All agronomics were per local standards.
- Asgrow® brand soybean products planted:
  - » AG40XF0 Brand
  - » AG43XF2 Brand
  - » AG46X6 Brand
  - » AG46XF2 Brand
  - » AG47XF2 Brand
- Plots were planted in 12-rows in a twin-row configuration and unreplicated. Plot size was approximately one acre.
- Approximately 80% of planted seed established seedlings.

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Understanding the Results

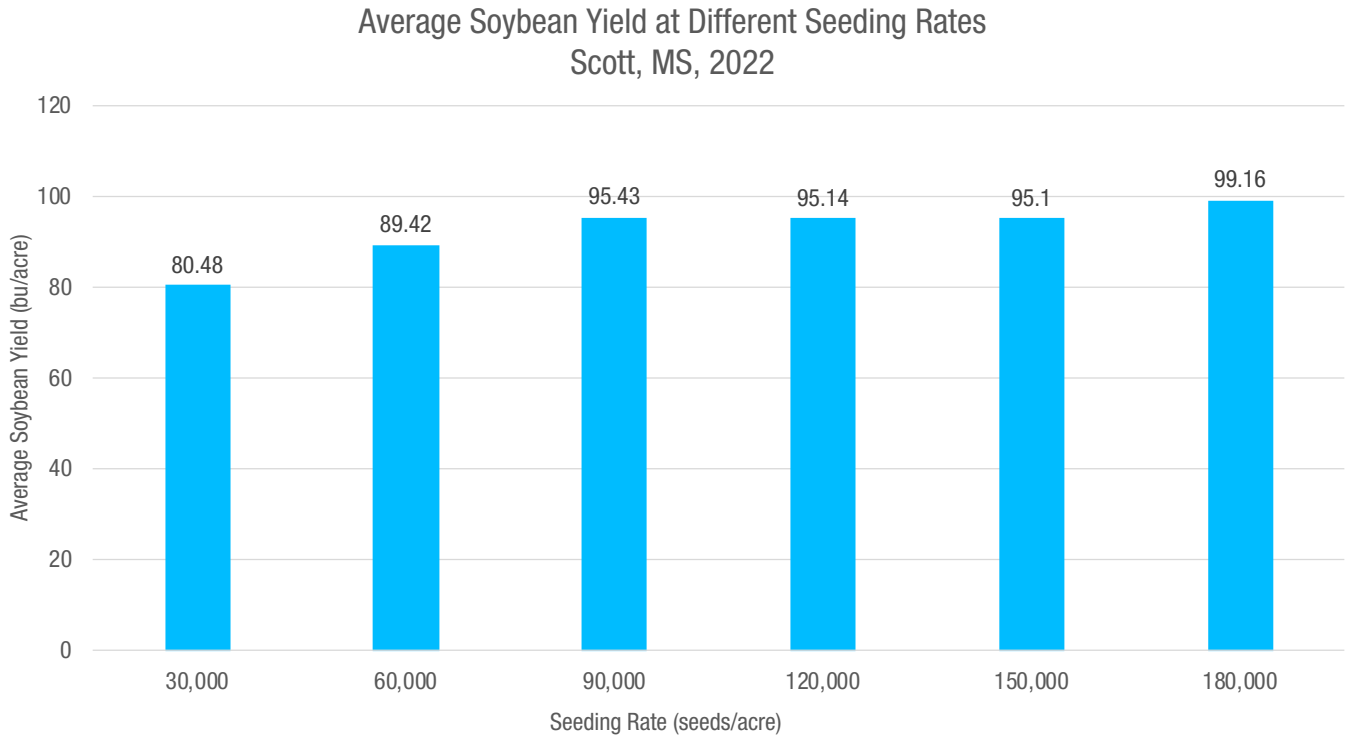

Figure 1. Average soybean yield at Scott, MS across soybean products in response to seeding rate in 2022. Yields are reflected after grain moisture was adjusted to 13.5%.

- Across soybean products, a positive yield response was observed between 60,000 and 90,000 seeds per acre seeding rates. Some products responded positively to even higher seeding rates, up to 180,000 seeds per acre.
- The net gain from 60,000 to 90,000 planted was 6.0 bu/acre for a gross increase of $84.14 per acre when using $14.00 per bushel as market price.
- Factoring out seed cost as $17.00 per 30,000 seeds gives a net profit of approximately $67.00 per acre for establishing higher populations (60,000 versus 90,000 planted and considering 80% seedling survival).
- In this trial, there was a general observation that soybean products with higher standability typically responded positively to higher seeding rates.
- Higher soybean populations may be due to increased planting rates or survival of healthy plants in adverse conditions.

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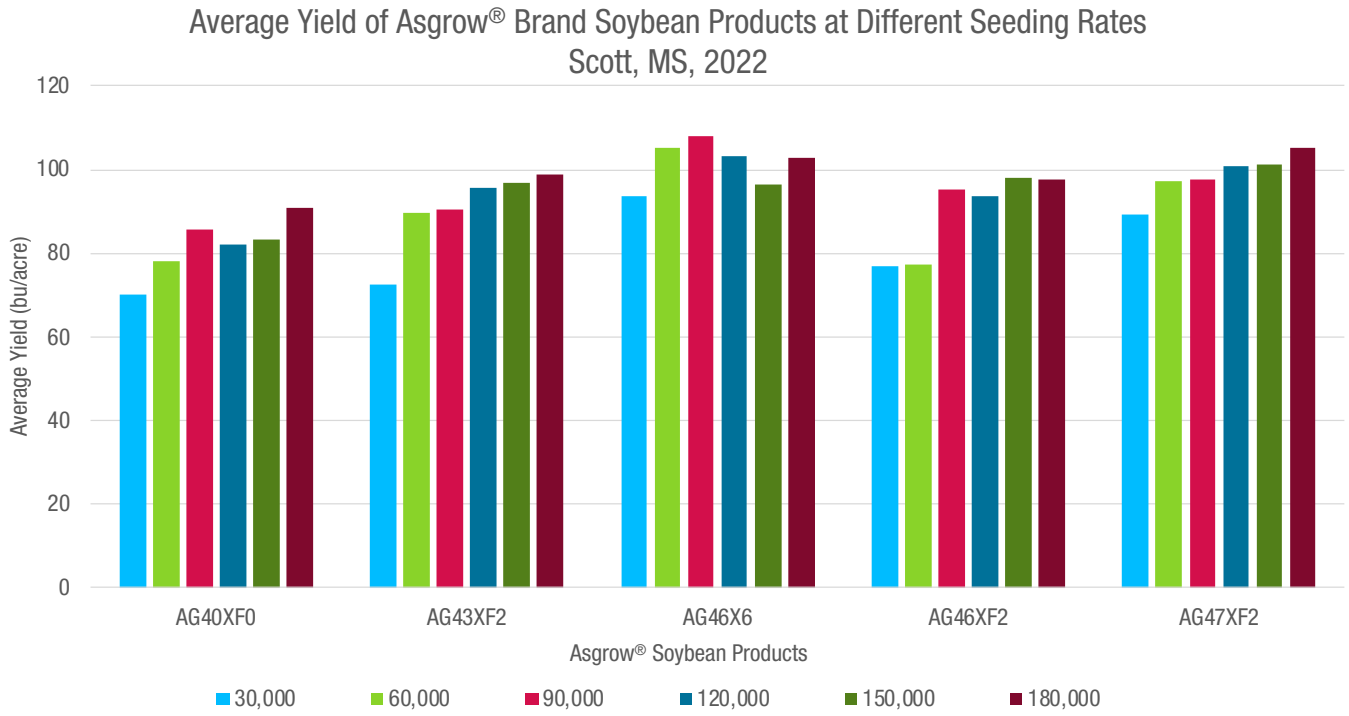

Figure 2. Average yield at Scott, MS of five Asgrow® brand soybean products at six seeding rates (at increments of 30,000 seeds/acre) in 2022. Yields are reflected after grain moisture was adjusted to 13.5%.

Key Learnings

- In this trial, soybean yield potential was optimal at seeding rates at or above 90,000 seeds/acre planted which is typical of the commercial norm.
- These results give growers a broad look at seeding rate information. Growers can discover the range of seeding rates to stay within without sacrificing yield potential. Plant health should be carefully considered when making the decision to keep stands established below levels typical for the region.
- Weed control and stand uniformity should be prioritized when keeping lower plant populations.
- These data should not be viewed as an endorsement to use seeding rates lower than the recommended range of 100,000 to 120,000 seeds per acre.
- Please contact your local Bayer representative for more information.

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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.

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal and state law to use any pesticide product other than in accordance with its labeling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with Roundup Ready 2 Xtend® soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELED FOR SUCH USES AND APPROVED FOR SUCH USE IN THE STATE OF APPLICATION. Contact the U.S. EPA and your state pesticide regulatory agency with any questions about the approval status of dicamba herbicide products for in-crop use with products with XtendFlex® Technology.

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.

Roundup Ready 2 Xtend® soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contains genes that confer tolerance to glyphosate, glufosinate and dicamba. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Glufosinate will kill crops that are not tolerant to glufosinate. Contact your seed brand dealer or refer to the Bayer Technology Use Guide for recommended weed control programs.

Contact your Bayer retailer, refer to the Bayer Technology Use Guide, or call the technical support line at 1-844-RRXTEND for recommended Roundup Ready® Xtend Crop System weed control programs.

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