



Impact of Seeding Rate on Irrigated XtendFlex[®] Soybeans

Trial Objective

- XtendFlex[®] soybeans is a new trait platform available for farmers to plant in the spring of 2021.
- The objective of this trial was to help answer questions regarding the impact of planting rate on three XtendFlex soybean products across two planting dates.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Gothenburg, NE	Hord silt loam	Corn	Strip till	5/20/20 and 6/12/20	10/2/20 and 10/9/20	80	40K, 80K, 120K, 160K, 200K, 240K

- This trial was a split plot design with planting date as the whole plot, seeding rate as the sub plot, and soybean product as the sub-sub plot.
- Planting dates:
 - May 20, 2020
 - June 12, 2020
- Seeding rates:
 - 40,000 seeds/acre
 - 80,000 seeds/acre
 - 120,000 seeds/acre
 - 160,000 seeds/acre
 - 200,000 seeds/acre
 - 240,000 seeds/acre
- Soybean products, by maturity group (MG):
 - 2.3
 - 2.5
 - 2.7
- Trial was sprinkler irrigated.
- Nutrient application included nitrogen (N), sulfur (S), and phosphorus (P): 27.5 lb N/acre, 15 lb S/acre, and 70 lb P/acre strip-till applied prior to planting.
- Weeds were controlled as needed and no additional fungicide or insecticides were used.
- The May 20 planting date was harvested on October 2 and the June 12 planting date was harvested on October 9. Total weight, test weight, and moisture content were collected to calculate yield per acre.



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Understanding the Results

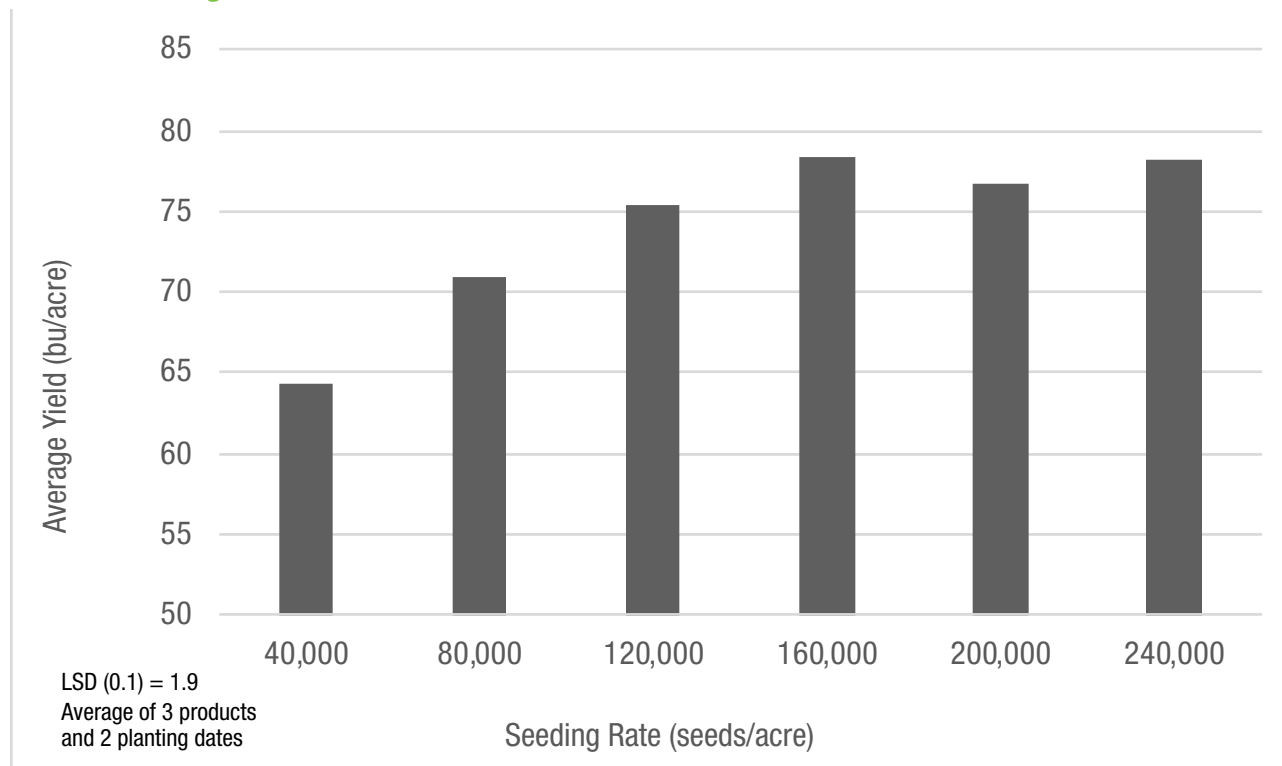


Figure 1. Average yield of three XtendFlex[®] soybean products planted at two planting dates (May 20 and June 12) as influenced by seeding rate.



Figure 2. Representation of the planting date, soybean product, and seeding rates in August of 2020.



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- There was no significant interaction between seeding rate, soybean product, and planting date.
- The impact of seeding rate followed the trend of previous research where average soybean yields steadily increased from 40K to 120K seeds/acre and then leveled off (Figure 1).
- The 160K seeds/acre rate had the highest average yield with no increase in yield observed with the 200K or 240K seeds/acre rates (Figure 1).
- The 2.3 MG soybean product had the highest average yield at 75.5 bu/acre while the 2.5 MG and 2.7 MG products yielded 72.1 and 74.4 bu/acre, respectively with an LSD (0.1) of 1.1.
- No difference in yield was observed from planting date with each date having an average yield of 74 bu/acre.

Key Learnings

- At this location, XtendFlex[®] soybeans planted around 160K seeds/acre helped maximize yield potential.
- Farmers should work with their local seeds sales team member to help identify the best adapted XtendFlex[®] soybean product for their production system.

Legal Statements

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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.

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.

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