



# XtendFlex<sup>®</sup> Soybeans and Roundup Ready 2 Xtend<sup>®</sup> Soybeans Across Irrigation Environments

## Trial Objective

- Product performance across environments is one of the key evaluations made with new product releases.
- Water drives crop production on the Great Plains and understanding how XtendFlex<sup>®</sup> soybeans perform under irrigation compared to Roundup Ready 2 Xtend<sup>®</sup> soybeans is valuable information to farmers.

## Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Gothenburg, NE	Silt loam	Corn	No tillage	6/5/20	11/4/20	80	160,000

- Trial design was a randomized complete block with three replications of eight treatments.
- Two 3.6 maturity group soybean products with similar genetics were used in the trial:
  - XtendFlex<sup>®</sup> soybean product MG3.6XF
  - Roundup Ready 2 Xtend<sup>®</sup> soybean product MG3.6X
- Soybean plots were planted on June 5, 2020 into plots with a full soil profile in the Rainout Shelter. The Rainout Shelter prevents precipitation from reaching plots by closing over the plot area during precipitation events. However, the building is open the rest of the season to allow for normal accumulation of sunlight and heat.
- Irrigation treatments of 6, 10, 14, and 18 inches were applied through a surface drip irrigation system over an 8-week period (mid-July to mid-September).
  - Applications were split equally during that time from 0.75 inches per week in the 6-inch treatments to 2.25 inches per week in the 18-inch treatment.
- Weeds were controlled as necessary and no other pesticides or fertilizers were applied.

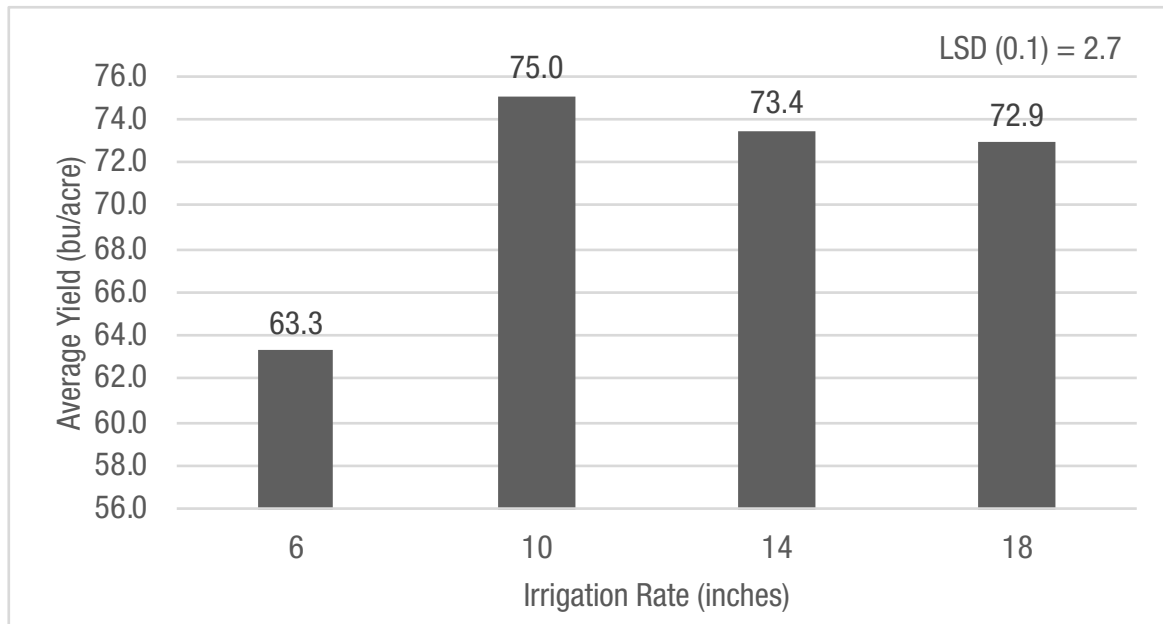


**Figure 1. XtendFlex<sup>®</sup> soybeans and Roundup Ready 2 Xtend<sup>®</sup> soybeans planted in the Rainout Shelter at the Bayer Water Utilization Center at Gothenburg, Nebraska. Plots show variation in yellowing because of moisture stress. The shelter was closed over the plots to demonstrate how it covers the plots during precipitation events.**



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## Understanding the Results



**Figure 2. Average soybean yield under four different irrigation rates.**

- For this trial, there was no significant interaction between irrigation rate and soybean products.
- There was no significant difference in average yield between Roundup Ready 2 Xtend<sup>®</sup> soybeans and XtendFlex<sup>®</sup> soybeans.
- Average yields from 10-, 14-, and 18-inch irrigation rates were all statistically similar, and greater than the average yield from the 6-inch rate.

## Key Learnings

- The two XtendFlex<sup>®</sup> soybean products tested in this trial maintained the same yield performance as Roundup Ready 2 Xtend<sup>®</sup> soybeans across irrigation rates. This was true for the water stressed environment with a 6-inch application through fully watered treatments.
- Farmers should be confident that the yield potential of XtendFlex soybeans would be similar to the yield potential of Roundup Ready 2 Xtend soybeans of similar genetics when exposed to field conditions with varying amounts of available soil moisture.



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## Legal Statements

The information discussed in this report is from a single site, 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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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<sup>®</sup> soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex<sup>®</sup> 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 Roundup Ready 2 Xtend<sup>®</sup> soybeans or products with XtendFlex<sup>®</sup> 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<sup>®</sup> soybeans contain genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex<sup>®</sup> 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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