



Impact of Soybean Seed Treatment and Planting Date

Trial Objective

- Improvements in soybean seed quality and seed treatments have led to increased yield potential in early-planted soybean crops. In favorable planting conditions, early-planted soybeans can out-perform later-planted soybeans.¹
- Early-planted soybean plants may be at greater risk than late-planted soybean plants to injury from exposure to cold and wet conditions.
- The Monmouth Learning Center has conducted a trial for the past two years to evaluate the impact of a fungicide and insecticide seed treatment and planting date on soybean yield potential.

Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Planting Rate (seeds/acre)
Monmouth, IL	Silt loam	Corn	Conventional	4/24/19, 6/3/19	10/15/19	80	130K
Monmouth, IL	Silt loam	Corn	Conventional	4/25/18, 5/18/18	10/18/18	80	130K

- A 3.6 MG Roundup Ready 2 Xtend[®] soybean product was selected for this trial.
- Four treatments were included in this study:
 - Treatment 1: Early-planted (4/24/19) untreated seed
 - Treatment 2: Early-planted treated seed with Acceleron[®] Seed Applied Solutions STANDARD (includes fungicides and insecticides)
 - Treatment 3: Late-planted (6/3/19) untreated seed
 - Treatment 4: Late-planted seed treated with Acceleron[®] Seed Applied Solutions STANDARD
- This trial consisted of two replications.
- Results were combined with 2018 trial data (Figure 2).

Understanding the Results

- For this location, planting later resulted in a higher average yield than earlier planting. However, this is not consistent with most trials conducted at the Monmouth Learning Center. The yields in the earlier planting date may have been affected by the prolonged cold, wet conditions in the spring of 2019.
- Seedlings treated with Acceleron[®] Seed Applied Solutions STANDARD appeared healthier and more vigorous after emergence (Figure 1).
- Over two years at this location, Acceleron[®] Seed Applied Solutions provided an average 8.8 bu/acre advantage in the early-planted plots, and an average 4.2 bu/acre advantage in the late-planted plots.



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Key Learnings

- At this location, Acceleron® Seed Applied Solutions helped increase yield throughout the planting season.
- The yield response from seed treatments can vary from year to year; consult your local Field Sales Representative or Technical Agronomist for recommendations.
- Acceleron® Seed Applied Solutions can help ensure better seedling establishment and improved seedling vigor (Figure 1).



Figure 1. Soybean seedlings treated with Acceleron® Seed Applied Solutions STANDARD (left) and untreated seedlings (right) on May 16, 2019 at Monmouth Learning Center.

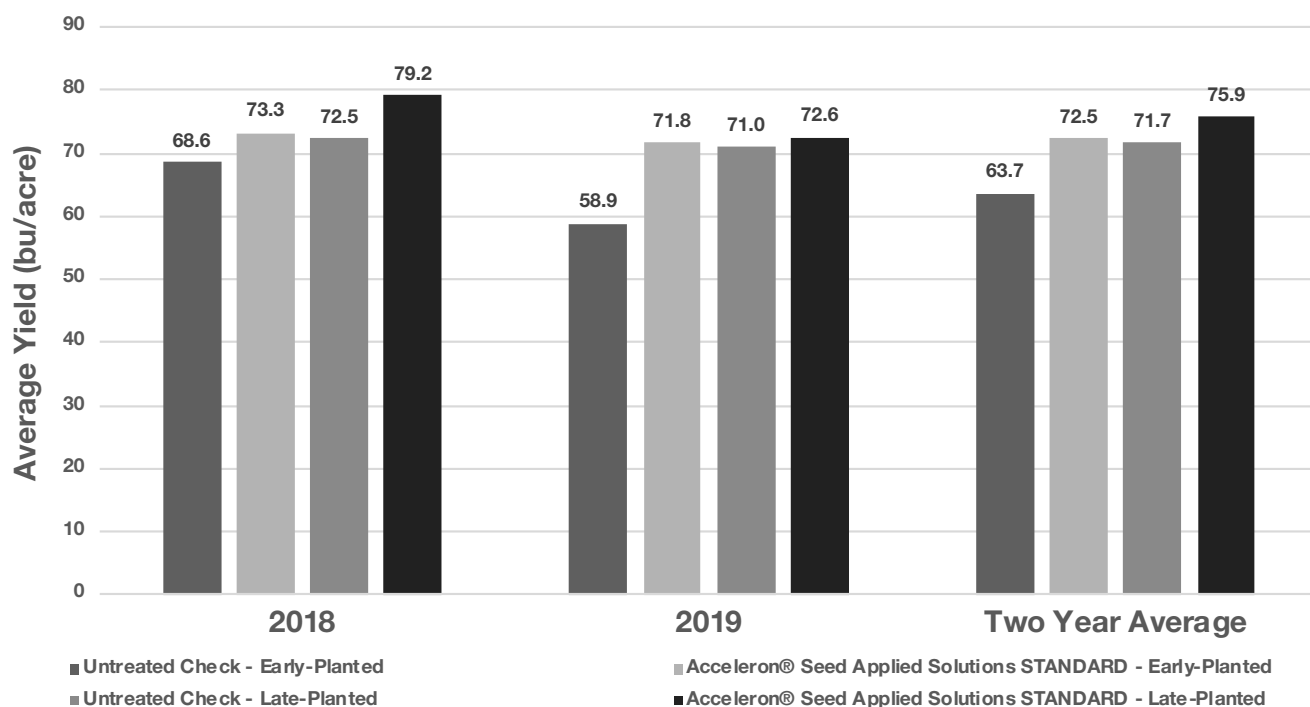


Figure 2. Average soybean yields for each treatment in 2018 and 2019 and averaged over the two years.



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Source (verified 10/30/19)

¹ Nafziger, E. 2019. Early-season soybean management for 2019. University of Illinois Extension. <http://bulletin.ipm.illinois.edu/?p=4491>.

Legal Statements

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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. 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® soybeans or cotton 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. Glyphosate will kill crops that are not tolerant to glyphosate. Dicamba will kill crops that are not tolerant to dicamba. Contact your seed brand dealer or refer to the Monsanto Technology Use Guide for recommended weed control programs.

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