



# Management Practices for Optimizing Yield and Productivity in Soybean

## Trial Objective

- Obtaining higher yields in soybean production involves the efficient and sustainable use of farm resources and management practices.
- There are several inputs and practices that growers use each year that ultimately impact yield and profitability. Therefore, the objective of this study was to evaluate the economic impact of these inputs and practices.

## Research Site Details

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Huxley, IA	Clay loam	Corn	No tillage	5/10/2018	10/17/2018	60	140K

- A 2.0 maturity group soybean product was planted in 200-ft long strips.
- The trial was carried out in 30-inch row spacing, six rows per treatment, with two replications.
- Overall disease incidence and severity were low for this trial/location.
- The management practices tested were two seed treatments, a nitrogen side-dress application, and a fungicide application. These practices were compared in incremental stair-step treatments (Table 1).
- Acceleron® Seed Applied Solutions STANDARD is a fungicide and insecticide seed treatment.
- ILeVO® is a systemic soybean seed treatment for protection against early-season damage caused by pathogenic nematodes and Fusarium virguliforme, which causes Sudden Death Syndrome (SDS).
- Delaro® 325 SC fungicide was applied at R3 for the fungicide treatment.
- 32% urea and ammonium nitrate (UAN) was applied at the R3 growth stage to deliver 40 lb/acre of nitrogen.

**Table 1. Treatments used in the trial with associated costs. Treatment cost does not include the price of seed.**

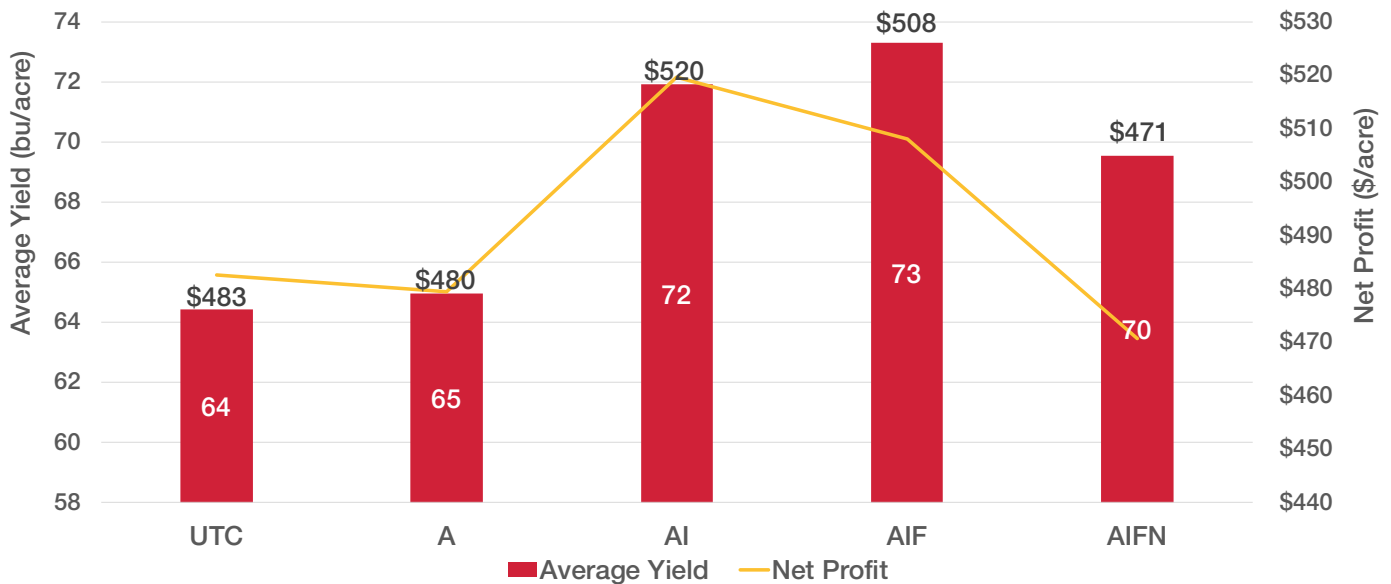
Treatments	Input	110 RM Cost (\$/acre)
<b>UTC</b>	Untreated	\$ -
<b>A</b>	Acceleron® Seed Applied Solutions STANDARD (A)	\$7.00
<b>A+I</b>	ILeVO® seed treatment (I)	\$19.00
<b>AI+F</b>	Foliar fungicide application at R3 (F)	\$41.00
<b>AIF+N</b>	Side dress 32% UAN at R3 (N)	\$50.20

## Understanding the Results

- All inputs improved yields over the untreated plot (UTC).
- The addition of ILeVO® seed treatment provided the largest yield response of all of the treatments.
- The addition of a fungicide application had a minimal effect on yield over the previous treatment and the addition of nitrogen did not provide a yield response over the previous treatment.



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**Figure 1. Productivity of soybean under the different management systems. Soybean grain price was set at \$7.50/bu.**

- The yield gained by some of the systems (treatments A and AIFN) were not high enough to provide an economic incentive over the untreated plot (UTC).
- A system with just the two seed treatments provided the most economical input in this trial.

## What Does This Mean For Your Farm?

- During the 2018 growing season, the research site experienced wet and rainy conditions in May and June followed by a dry July. Such conditions can result in poor plant health and may explain why the Acceleron® Seed Applied Solutions STANDARD with ILeVO® (AI) treatment was the most profitable.
- Growers should consider performing small-scale trials on their fields to understand how their management systems impact their operations economically.

## Legal Statements

The information discussed in this report is from a single-site, replicated demonstration trial. 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.

**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.

**FOR SOYBEANS, EACH ACCELERON® SEED APPLIED SOLUTIONS OFFERING** is a combination of separate individually registered products containing the active ingredients: **BASIC** Offering: metalaxyl, fluxapyroxad, and pyraclostrobin. **STANDARD** Offering: metalaxyl, fluxapyroxad, pyraclostrobin, and imidacloprid. **STANDARD FN** Offering: metalaxyl, fluxapyroxad, pyraclostrobin, and tiozazafen. **ELITE** Offering: metalaxyl, fluxapyroxad, pyraclostrobin, imidacloprid, and tiozazafen. **Upstream Treatment Offerings Only:** Acceleron® B-200 SAT is included seamlessly in the Acceleron® Seed Applied Solutions **STANDARD FN** and **ELITE** tiers.

**The distribution, sale, or use of an unregistered pesticide is a violation of federal and/or state law and is strictly prohibited. Not all products are approved in all states. Please visit <http://acceleronsas.com/stateapprovals> regarding the approval status of products containing NemaStrike™ Technology for application to seeds in your state.**

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