Trial Objective

- Highlight the outstanding weed control of the XtendFlex® soybean system.
- Showcase the yield performance of the XtendFlex® soybean system.
- Gain a better understanding of the value of a whole system approach to soybean management.
- Explore the benefits of in-season soybean disease management with an application of Delaro® Complete fungicide at R3 growth stage.

Experiment/Trial Design

- Randomized Complete Block Design with three replications.
- Soybean products varied by location and were based on appropriate maturity group for the local markets.
- Treatments
  - Basic Offer
    » Locally adapted Bayer company soybean product.
    » Acceleron® Seed Applied Solutions Standard* + Acceleron® IX-409 Insecticide Seed Treatment
    » Herbicide Program
  - PRE: Warrant® Herbicide (48 fl oz/acre) + Mauler® Herbicide (8 fl oz/acre)
  - POST: Roundup PowerMAX® Herbicide (32 fl oz/acre) + Ammonium Sulfate (AMS) (17 lb/100 gal) + Warrant® Herbicide (48 fl oz/acre)
  - POST: XtendiMax® herbicide with VaporGrip® Technology (Restricted Use Pesticide) (RUP)** (22 fl oz/acre) + OnTarget® (Drift Reduction Agent) (DRA) (0.5% v/v) + Sentris™ (Volatility Agent) (VRA) (8 fl oz/acre).
- Premier Offer
  » Locally adapted Bayer company soybean product.
  » Acceleron® Seed Applied Solutions Standard* + ILeVO® Seed Treatment.
  » Herbicide Program
  - POST: XtendiMax® herbicide with VaporGrip® Technology (RUP)** (22 fl oz/acre) + OnTarget® (DRA) (0.5% v/v) + Sentris™ (VRA) (8 fl oz/acre).
    » Foliar Fungicide
  - Delaro® Complete Fungicide (8 fl oz/acre) at R3 growth stage.
- Grower Standard
  » Locally adapted, widely used soybean product.
  » Herbicide Program
  - PRE: Authority® Supreme Herbicide (8 fl oz/acre).
  - POST: Roundup PowerMAX® Herbicide (32 fl oz/acre) + AMS (17 lb/100 gal).
**XtendFlex® Soybean Systems Trial**

- POST: XtendiMax® herbicide with VaporGrip® Technology (RUP)** (22 fl oz/acre) + OnTarget® (DRA) (0.5% v/v) + Sentris™ (VRA) (8 fl oz/acre).

*Combination of Acceleron® DX-109 Fungicide Seed Treatment/Acceleron® D-109 Fungicide Seed Treatment, Acceleron® DX-309 Fungicide Seed Treatment, and Acceleron® DX-612 Fungicide Seed Treatment.

** XtendiMax® herbicide with VaporGrip® Technology is part of the Roundup Ready® Xtend Crop System, is a restricted use pesticide and must be used with VaporGrip® Xtra Agent (or an equivalent volatility reduction adjuvant). For approved tank-mix products (including VRAs and DRAs), nozzles and other important label information visit XtendiMaxApplicationRequirements.com.

- Disease Ratings, % Weed control, yield, and moisture data were collected at each location.

<table>
<thead>
<tr>
<th>Nebraska Locations</th>
<th>Soil Type</th>
<th>Previous Crop</th>
<th>Tillage Type</th>
<th>Irrigation</th>
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<th>Harvest Date</th>
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<th>Seeding Rate (seeds/acre)</th>
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</table>

**Understanding the Results**

- The Roundup Ready® Xtend Crop System can provide season long, broad spectrum weed control by implementing overlapping residual herbicides and planting into clean, weed-free field conditions (data not shown).

- Weed control was consistently acceptable across all treatments (Figure 1).

![Average Percent Weed Control at Soybean Canopy Nebraska (2021) – 3 Locations](image_url)

**Figure 1a. Average percent of weed control at soybean canopy.**
**XtendFlex® Soybean Systems Trial**

**Average Percent Weed Control at Soybean Harvest**

Nebraska (2021 - 3 Locations)

<table>
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<th>Location</th>
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<th>Premier</th>
<th>Grower Standard</th>
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<td>Beatrice</td>
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</tbody>
</table>

**Average Yield for XtendFlex® Soybean**

Nebraska (2021 - 3 Locations)

<table>
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<tr>
<th>Location</th>
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**Figure 1b. Average percent of weed control at soybean harvest.**

- Disease pressure was inconsequential at each of the locations.
- Yield response between treatments varied by location (Figure 2).

**Figure 2. Average yield for three XtendFlex® soybean systems in Nebraska (2021).**
XtendFlex® Soybean Systems Trial

- The Across Location average yields showed the improved yield performance of the Premier Offer treatment relative to the other treatments (Figure 3).
  - At a 90% confidence level the Premier Offer treatment showed statistically significant yield improvement from the Basic Offering but not the Grower Standard treatment (Figure 3).

![Average Yield of Three XtendFlex® Soybean Across Three Nebraska Locations (2021) 90% Confidence Level](chart)

**Basic Treatment**: Bayer company soybean product; Acceleron® Seed Applied Solutions Standard + Acceleron® IX-409 Insecticide, Herbicides: PRE: Warrant® Herbicide (48 fl oz/acre) + Mauler® Herbicide (8 fl oz/acre); POST: Roundup PowerMAX® Herbicide (32 fl oz/acre) + Ammonium Sulfate (AMS) (17 lb/100 gal) + Warrant® Herbicide (48 fl oz/acre); POST: XtendiMax® herbicide with VaporGrip® Technology (Restricted Use Pesticide) (RUP) (22 fl oz/acre) + OnTarget® (Drift Reduction Agent) (DRA) (0.5% v/v) + Sentris™ (Volatility Agent) (VRA) (8 fl oz/acre).

**Premier Treatment**: Same as Basic Treatment except iLeVO® Seed Treatment replaced Acceleron® IX-409 Insecticide and Delaro® Complete Fungicide (8 fl oz/acre) was applied at R3 growth stage.

**Grower Standard Treatment**: Locally adapted soybean product; Herbicides: PRE: Authority® Supreme Herbicide (8 fl oz/acre); POST: Roundup PowerMAX® Herbicide (32 fl oz/acre) + AMS (17 lb/100 gal); POST: XtendiMax® herbicide with VaporGrip® Technology (RUP) (22 fl oz/acre) + OnTarget® (DRA) (0.5% v/v) + Sentris™ (VRA) (8 fl oz/acre).

**Figure 3. Average yields across the three locations demonstrated the advantage of the Premier Treatment at a 90% Confidence Level. (Battle Creek, Beatrice, and Kearney, Nebraska, 2021)**

**Key Learnings**

- In this trial soybean product selection along with an in-season fungicide application consistently provided the highest yields.
- In-season fungicide applications can provide enhanced disease protection along with potentially improved yield performance.
- A grower should always consult their local sales representative and agronomist to select the appropriate variety for their specific environmental conditions and yield goal.

**Legal Statements**

The information discussed in this report is from a multiple 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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