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# Evaluation of Fungicide and Insecticide Seed Treatments on Soybeans

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# Evaluation of Fungicide and Insecticide Seed Treatments on Soybeans

## **Abstract**

Iowa State University personnel assessed fungicide and insecticide seed treatments at the ISU Southeast Research Farm (Crawfordsville). The experimental design was a randomized complete block with four replications. Asgrow AG3632 was planted on May 14, 2012. The control treatment was soybean seeds with no fungicide or insecticide applied as a seed treatment (untreated seed). Within each block there were four treatments that were also treated with foliar insecticide [Leverage 360 (2.8 oz/ac)] and fungicide [Headline (6 oz/ac)] on August 1, which was when soybeans were at the R3 growth stage. Upper canopy foliar disease was assessed on September 4 when soybeans were at the R5/R6 growth stage. No upper canopy foliar diseases were found above 1 percent severity in 2012, so no analysis of foliar diseases was completed. Plots were harvested on October 8. Total seed weight/plot and moisture was measured, seed weight was adjusted to 13 percent moisture, and yield was calculated.

## **Keywords**

Plant Pathology and Microbiology, Entomology

## **Disciplines**

Agricultural Science | Agriculture | Entomology | Microbiology | Plant Pathology

# Evaluation of Fungicide and Insecticide Seed Treatments on Soybeans

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## Introduction

Iowa State University personnel assessed fungicide and insecticide seed treatments at the ISU Southeast Research Farm (Crawfordsville).

## Materials and Methods

The experimental design was a randomized complete block with four replications. Asgrow AG3632 was planted on May 14, 2012. The control treatment was soybean seeds with no fungicide or insecticide applied as a seed treatment (untreated seed). Within each block there were four treatments that were also treated with foliar insecticide [Leverage 360 (2.8 oz/ac)] and fungicide [Headline (6 oz/ac)] on August 1, which was when soybeans were at the R3 growth stage. Upper canopy foliar

## Results and Discussion

Yields averaged between 67.1–72.1 bushels/acre across all three locations. There was a positive effect from several seed treatments and from the R3 pesticide sprays that were duplicated over several treatments. Because of wet conditions at the beginning of May the planting time was pushed back approximately 2 weeks from our targeted planting date.

## Acknowledgements

We thank Myron Rees for managing weed control and general agronomic management through out the growing season. Funded by the soybean checkoff from the Iowa Soybean Association.

**Table 1. Treatments evaluated for yield response at the ISU Southeast Research Farm.**

| Treatment                       | Plant population <sup>a</sup><br>(planted 125K) | Moisture<br>(%) | Yield<br>(bu/A) |
|---------------------------------|---|-----------------|-----------------|
| Untreated                       | 104,544   | 10.3            | 67.1            |
| Untreated <sup>b</sup>          | 105,996   | 10.7            | 70.2*           |
| Poncho/VOTiVO                   | 103,092   | 10.6            | 69.3            |
| CruiserMaxx Plus with Avicta    | 94,380  | 10.2            | 71.7*           |
| CruiserMaxx Plus                | 105,996   | 10.3            | 70.6*           |
| CruiserMaxx Plus <sup>b</sup>   | 104,544   | 10.5            | 72.2*           |
| Pioneer Premium                 | 111,804   | 9.9             | 69.1            |
| Inovate System                  | 111,804   | 10.5            | 70.1*           |
| Inovate + Metastar              | 98,736  | 10.6            | 69.7            |
| Inovate + Metastar <sup>b</sup> | 120,516   | 10.5            | 70.0            |
| Overall LSD (0.1)               | 19,330  | 0.7             | 2.9             |
| CV (%)                          | 15.3  | 5.9             | 3.5             |

<sup>a</sup>Plants/acre, 30-in. row spacing.

<sup>b</sup>Sprayed with Leverage and Headline at R3/R4.

\*Indicates significantly different from untreated control.