A Comparison of Soybean Seed Treatments

Paul C. Kassel  
*Iowa State University*, kassel@iastate.edu

David Rueber  
*Iowa State University*, drueber@iastate.edu

Follow this and additional works at: [http://lib.dr.iastate.edu/farms_reports](http://lib.dr.iastate.edu/farms_reports)  
Part of the [Agricultural Science Commons](http://lib.dr.iastate.edu/farms_reports), and the [Agriculture Commons](http://lib.dr.iastate.edu/farms_reports)

**Recommended Citation**  
[http://lib.dr.iastate.edu/farms_reports/95](http://lib.dr.iastate.edu/farms_reports/95)

This report is brought to you for free and open access by Iowa State University Digital Repository. It has been accepted for inclusion in Iowa State Research Farm Progress Reports by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
A Comparison of Soybean Seed Treatments

Abstract
Seed treatment options are available to manage various fungi, insects, and nematodes that can damage soybeans before, during, and after emergence. These treatments are potentially beneficial for stand establishment and for protection against soybean cyst nematode (SCN). However, these seed treatments represent an additional cost to the producer.

Keywords
RFR A1189

Disciplines
Agricultural Science | Agriculture
A Comparison of Soybean Seed Treatments

RFR-A1189

Paul Kassel, Extension field agronomist
David Rueber, farm superintendent

Introduction
Seed treatment options are available to manage various fungi, insects, and nematodes that can damage soybeans before, during, and after emergence. These treatments are potentially beneficial for stand establishment and for protection against soybean cyst nematode (SCN). However, these seed treatments represent an additional cost to the producer.

This study was initiated to compare the effects of a fungicide only treatment, a fungicide-insecticide-nematicide treatment, and an untreated control on SCN soil populations and grain yield.

Materials and Methods
Soybean variety Stine 19RA02 was planted May 11, 2011 at 152,000 seeds/acre. Each plot was four 30-in. rows wide and 50 ft long. The experimental area was corn in 2010.

Tillage, planting, and pest management operations were typical of soybean production practices in northern Iowa.

Treatment 1 is a combination of an insecticide, a nematicide, two fungicides, and a biological fungicide. Treatment 2 is a combination of two fungicides. The seed treatments were applied with commercial seed treatment equipment (Table 2).

Each plot was sampled on June 28 and September 30 for beginning and ending soybean cyst nematode numbers per one-half cup of soil.

The plots were harvested on October 1, 2011. Soybean grain yield results are reported in Table 1.

Results and Discussion
Treatment 1 had greater SCN eggs per half cup at the end of the growing season and a greater difference between early and late season assessments, despite including a nematicide.

There were no differences in grain yield between treatments in this study (P = 0.63).

Acknowledgements
The authors would like to thank the Soybean Check Off and Bayer CropScience for partial funding of this experiment.
Table 1. Soybean Cyst Nematode (SCN) response and yields of treatments in a seed treatment trial at Northern Iowa Research Farm.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>SCN Initial</th>
<th>SCN Final</th>
<th>SCN Change&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Yield&lt;sup&gt;c&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>275</td>
<td>950</td>
<td>675A</td>
<td>58.3A</td>
</tr>
<tr>
<td>2</td>
<td>175</td>
<td>325</td>
<td>150B</td>
<td>55.9A</td>
</tr>
<tr>
<td>3</td>
<td>125</td>
<td>375</td>
<td>250B</td>
<td>54.3A</td>
</tr>
</tbody>
</table>

<sup>a</sup>Treatment 1 = Poncho/Votivo/Trilex 2000/Allegiance/ Yield Shield; Treatment 2 = Trilex 2000/ Allegiance; and Treatment 3 = untreated control.  
<sup>b</sup>SCN Final – SCN Initial; values with the same letter are not statistically different at alpha=0.1.  
<sup>c</sup>Yields listed as bushels/acre standardized to 13 percent moisture; values in the same column with the same letter are not statistically different at alpha=0.1.

Table 2. Descriptions of the components of the seed treatments used in this experiment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Active ingredient</th>
<th>Pesticide type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poncho</td>
<td>clothianidin</td>
<td>insecticide</td>
</tr>
<tr>
<td>Votivo</td>
<td>bacillus firmus</td>
<td>nematicide</td>
</tr>
<tr>
<td>Trilex 2000</td>
<td>trifloxystrobin</td>
<td>fungicide</td>
</tr>
<tr>
<td>Allegiance</td>
<td>metalaxyl</td>
<td>fungicide</td>
</tr>
<tr>
<td>Yield Shield</td>
<td>bacillus pumilus</td>
<td>fungicide</td>
</tr>
</tbody>
</table>