2011

Soybean Planting Dates and Populations

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Soybean Planting Dates and Populations

Abstract
Soybean genetics are changing yearly with improved yield and/or resistance capabilities. Additionally, small plot research from Iowa State University indicates a seeding rate of 125,000 to 140,000 seeds/acre depending on environmental, weather, and risk of pathogens. This trial was designed to demonstrate this recommendation on a local site with local conditions.

Keywords
RFR A1053

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences
Soybean Planting Dates and Populations

RFR-A1053

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Introduction
Soybean genetics are changing yearly with improved yield and/or resistance capabilities. Additionally, small plot research from Iowa State University indicates a seeding rate of 125,000 to 140,000 seeds/acre depending on environmental, weather, and risk of pathogens. This trial was designed to demonstrate this recommendation on a local site with local conditions.

Materials and Methods
The soil type is Monona silt loam with the majority having 2 to 5 percent slope. The previous crop was corn. The trial was replicated four times with three seeding rate treatments of the same soybean variety. Seeding rates chosen were from 100,000, 125,000, and 140,000. Each plot was 30 ft wide by varying plot lengths ranging from 300 to 380 ft.

The trial had no fall or spring tillage and was no-till planted. A preplant burn-down herbicide application was used with a second herbicide application in mid-June. No insecticide was applied. The plot was planted on May 5, 2010 and harvested on October 5, 2010.

Results and Discussion
Grain yields indicated a slight but non-significant yield increase at the 100,000 and 125,000 seeds/acre treatments (Table 1). Yields ranged from 68.2 down to 66.3 bushels/acre. These results would reinforce the ISU recommendation of a seeding rate of 125,000 to 140,000 seeding rate.

Acknowledgements
Appreciation is extended to Wayne Roush for doing the plot work. Additional thanks to Brad Hanson for plot harvest.

<table>
<thead>
<tr>
<th>Seeding rate (seeds/acre)</th>
<th>Grain yield (bushels/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100,000</td>
<td>68.7</td>
</tr>
<tr>
<td>125,000</td>
<td>68.2</td>
</tr>
<tr>
<td>140,000</td>
<td>66.3</td>
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<tr>
<td>( \text{LSD}_{(0.05)} )</td>
<td>ns</td>
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</tbody>
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Table 1. Grain yield results from three seeding rates.