Seeding Rates for Roundup Ready Soybeans
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Objective

To evaluate the effect of seeding rate on yield of Roundup Ready soybeans.

Background

Cooperator: Tom Weiler  Fertilizer: None
County: Morrow  Tillage: Conventional
Nearest town: Chesterville  Herbicides: Roundup Ultra 1 qt/A + AMS
Soil Type: Chili loam  Variety: Pioneer 93B01
Previous Crop: Corn  Row Width: 10 inches
Drainage: Naturally well drained  Planting Date: May 1, 2001
Soil Test: pH 6.5, P 104 ppm, K 208 ppm  Planting Rate: See Methods
Harvest Date: October 2, 2001

Methods

Three population rates were used to determine the effect of seeding rate on yields. They were 120,000, 162,500, and 227,500 seeds per acre. The seed used was rated at 85 percent germination. The population rates were replicated four times in a randomized complete block design. Individual plot size was approximately 1/4 acre. The soybeans were planted in 30-foot-wide strips for a length of about 360 feet. A 20-foot-wide strip was harvested the length of the strip and weighed using a weigh wagon.

Harvest population was determined by counting the soybean plants in 1/1,000 of one acre between two rows in each individual treatment.

Results

Table 1. Soybean Population and Yield.1

<table>
<thead>
<tr>
<th>Planted Population (seeds/A)</th>
<th>Harvested Population (plants/A)</th>
<th>Yield (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120,000</td>
<td>95,750 a</td>
<td>42.9 a</td>
</tr>
<tr>
<td>162,500</td>
<td>114,000 b</td>
<td>41.8 a</td>
</tr>
<tr>
<td>227,500</td>
<td>162,000 c</td>
<td>42.0 a</td>
</tr>
<tr>
<td>LSD (0.05)</td>
<td>17,329</td>
<td>NS</td>
</tr>
<tr>
<td>F-test</td>
<td>46.7</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>CV (%)</td>
<td>8.1</td>
<td>3.4</td>
</tr>
</tbody>
</table>

1 Means followed by the same letter are not significantly different.
Summary and Notes

A uniform stand was achieved for all the seeding rates. No significant difference in yields was found for any of the three population treatments. Weed control in all the plots was very good. No yield differences may be attributed to excellent growing conditions later in the season and lack of competition with weeds.

Acknowledgment

The authors would like to thank Todd Swetland and Pioneer Hybrids for providing the soybeans used in the study. Also, thanks to Tom Weiler for cooperating in this study.

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