Soybean Seeding Rates in 30-Inch Rows

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Objective

To determine whether there are significant yield differences when seeding rates of soybeans are increased from 110,000 to 165,000 to 220,000 seeds per acre.

Background

Cooperator: Darke County Farm
County: Darke County
Nearest Town: Greenville
Drainage: Subsurface
Soil types: Miami silt loam and Eldean loam
Herbicides: PRE: 26 oz/A Roundup Ultra Max
Soil test: pH 5.9, P 28 ppm, K 150 ppm

Methods

Soybeans were planted using a Buffalo slot planter with Kinze brush-type seed meter units. The plots were replicated four times with each plot 30 feet wide and approximately 750 feet in length. One stand count was taken approximately three weeks after emergence in each of the four replications of each population to verify differences in seeding rates.

Results

Table 1. Soybean Stand, Moisture, and Yield.a

<table>
<thead>
<tr>
<th>Planted Population (seeds/A)</th>
<th>Stand Count (plants/A)</th>
<th>Harvest Moisture (%)</th>
<th>Yield (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>110,000</td>
<td>93,573 a</td>
<td>12</td>
<td>12.4</td>
</tr>
<tr>
<td>165,000</td>
<td>138,747 b</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>220,000</td>
<td>157,551 b</td>
<td>12</td>
<td>13.7</td>
</tr>
<tr>
<td>LSD (0.05)</td>
<td>32,263</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>F-test</td>
<td>16</td>
<td>&lt;1</td>
<td>1.8</td>
</tr>
</tbody>
</table>

a Significant differences at 0.05 level determined by F-test
Summary

There were no significant differences in the yields when comparing three different seeding rates of soybeans planted in 30-inch rows. This was not an exceptionally good year for growing soybeans in our area. Expected yields are usually four to five times greater than what was experienced this year. Due to the extremely dry and hot weather, herbicide efficacy was very low, and the canopy was thin. This resulted in significant weed pressure.

For further information, contact:

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