Roundup Ready Soybean Seeding Rate
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Objective
To determine if Roundup Ready soybean seeding rates can be decreased and yields maintained.

Background
Cooperator: Tom Weiler
Fertilizer: None
County: Morrow
Herbicides: PRE: Canopy (3 oz/A)
Nearest Town: Chesterville
POST: Roundup (1.0 qt/A)
Soil type: Chili
Variety: Dekalb CX303RR
Tillage: Conventional
Planting Date: May 4, 1999
Previous Crop: Corn
Harvest Date: October 4, 1999
Soil Type: pH 6.8, P 104 ppm, K 208 ppm

Methods
A study using four replicates in a randomized complete block design was used to determine the effect of seeding rates of Roundup Ready soybeans on yields. DeKalb CX 303RR soybeans were used. They had a seed count of 3,200 seeds per pound. We used a John Deere 750 drill and dropped 42 pounds (134,400 seeds), 50 pounds (160,000 seeds), and 65 pounds (208,000 seeds) on a per-acre basis for our treatments. The beans were in 10-inch-row spacings. The plots were 567 feet in length and 30 feet wide. A 20-foot width cut was made in the center of the plots. Yields were determined by weigh wagon.

Results

<table>
<thead>
<tr>
<th>Planted Population (seeds/A)</th>
<th>Harvest Population (plants/A)</th>
<th>Yield (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>134,400</td>
<td>125,000</td>
<td>48.4</td>
</tr>
<tr>
<td>160,000</td>
<td>145,500</td>
<td>44.8</td>
</tr>
<tr>
<td>208,000</td>
<td>186,500</td>
<td>45.3</td>
</tr>
</tbody>
</table>

F=1.93, treatment mean yields not significantly different at P=0.05
LSD(0.05)=4.8, CV=6.0%

Summary and Notes
Roundup Ready soybean seed cost is in the range of $20 to $26 per 50-pound unit. Planting at rates of 65 to 95 pounds per acre will bring seed cost from $25 to $50 per acre. This is typically two to three times the seed cost for non-Roundup Ready soybeans. From this study it looks as though seeding rates can be dropped and yields maintained. This trial will be repeated in future years.

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