Effect of New Soybean Inoculants on Yield
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Objective
Newly available inoculants may be able to improve nitrogen production by rhizobia bacteria. This study examined the effect of these new soybean inoculants on yields.

Background
Cooperator: Tom Weiler  Fertilizer: 0-0-60 (200 lbs/A)
County: Morrow  Herbicides: PRE: Canopy (3 oz/A)
Nearest Town: Chesterville  POST: Roundup Ultra (1 qt/A)
Soil Type: Chili  AMS ( 3 lbs/A)
Drainage: Random tile  Variety: Stine 3264RR
Tillage: No-till  Planting Date: April 25, 1998
Previous Crop: Corn  Planting Rate: 205,400 seeds/A
Soil Test: pH 6.7, P 30 ppm, K 123 ppm  Harvest Date: October 1, 1998
Harvest Pop.: 171,000 plants/A (avg.)

Methods
The two products studied were Cell-Tech 2000 and a powdered peat containing a USDA patented strain of *Bradyrhizobium japonicum*. A third treatment was the absence of an inoculum application. Treatments were replicated three times in a randomized, complete block design. Individual strip plots were 39 feet wide and averaged 1,698 feet in length.

Results

<table>
<thead>
<tr>
<th>Treatments</th>
<th>% Moisture</th>
<th>Yield (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell-Tech 2000</td>
<td>11.6</td>
<td>40.1</td>
</tr>
<tr>
<td>No Inoculum</td>
<td>11.7</td>
<td>39.8</td>
</tr>
<tr>
<td>USDA (Powdered Peat)</td>
<td>11.6</td>
<td>38.7</td>
</tr>
<tr>
<td>F-Test</td>
<td>0.55</td>
<td>0.66</td>
</tr>
<tr>
<td>Significance (P = 0.05)</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>CV</td>
<td>1.20%</td>
<td>4.00%</td>
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</table>
Summary and Notes

Contrary to many studies completed across the Midwest where these new inoculants have shown an average of 4 to 6 percent increase in yield, we did not find a significant increase. Rainfall was very short at the site in August/September with a total rainfall of only 2.4 inches for the two-month period. Nitrogen availability may not have been the determining factor with the limited moisture situation.

Acknowledgment

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