Chisel vs. No-Till Corn Following Soybeans  
Dennis Baker, Agriculture and Natural Resources Extension Agent

**Objective**

The objective of this trial was to determine the effect of tillage on corn yields when following soybeans in a rotation. Farmers in the area have suspected yield decreases due to tillage.

**Background**

Cooperator: Darke County Farm  
Nearest Town: Greenville  
Soil Type: Miami  
Drainage: Tile  
Previous Crop: Soybeans  
Soil Test: pH 6.4, P 34 ppm, K 164 ppm  
Fertilizer: 0-0-60 (75 lbs/A)  
18-46-0 (125 lbs/A)  
150 lbs/A nitrogen with herb.  
Herbicides: Extrazine (5 qt/A), Banvel (1/4 pt/A)  
Hybrid: Pioneer 34G81  
Planting Rate: 30,000 seeds/A

**Methods**

A replicated study using six replicates in a randomized complete block design was planned to determine whether tillage affected corn yields when following soybeans. Individual strip plots averaged 30' x 1,045' in size. The field had been in a no-till corn and soybean rotation for the past four years. The tilled plots were prepared using a chisel plow and disk unit followed by two passes with a conventional disk. Pioneer 34G81 was planted on May 15 into adequate moisture and with adequate rainfall to activate herbicide and move nitrogen into the soil.

**Results**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Avg. Yield (Bu/A)</th>
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<tbody>
<tr>
<td>No-till</td>
<td>106.1</td>
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<tr>
<td>Chisel</td>
<td>138.18</td>
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LSD (0.05) 11.6  
F = 124.5, Very significant differences among treatment means at P = 0.01, CV = 4.1%

**Summary and Notes**

Emergence was uniform in all plots but as the corn grew, there became a very visible difference in corn height with the no-till being as much as 18 inches shorter. There was a significant yield increase when using tillage on this particular site when planting corn after soybeans.

For additional information, contact: Dennis Baker  
The Ohio State University Extension  
baker.5@osu.edu