Chisel vs. No-Till Soybeans Following Corn

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Objective

The objective of this trial was to determine the effect of tillage on soybean yields when following corn in a field with a four-year no-till history.

Background

Cooperator: Darke County Farm
Nearest Town: Greenville
Soil Type: Miami
Drainage: Tile
Previous Crop: Corn
Soil Test: pH 6.8, P 51 ppm, K 149 ppm
Fertilizer: 0-0-60 (125 lbs/A)
Herbicides: PRE: Roundup (1.5 pt/A), Firstrate (3 oz/A)
Herbicides: POST: Roundup (1.5 pt/A)
Hybrid: Countrymark 3975
Planting Rate: 175,000 seeds/A
Row Width: 30 inches

Methods

A replicated study using five replicates in a randomized complete block design was planned to determine whether tillage affected soybean yields when following corn. Individual strip plots were 15' x 1,465' in size. The field had been in a no-till corn and soybean rotation for at least the past four years. The tilled plots were prepared using a chisel plow and disk unit followed by two passes with a conventional disk. Countrymark 3975 was planted on May 16 into adequate moisture.

Results

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Avg. Yield (Bu/A)</th>
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<tbody>
<tr>
<td>No-till</td>
<td>47.05</td>
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<tr>
<td>Chisel</td>
<td>47.65</td>
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</tbody>
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F = 1.6, No significant difference among treatment means at P = 0.05, CV = 1.6%, LSD = 1.3 bu/A.

Summary and Notes

Emergence was uniform in all plots and soybeans looked very good all summer. There was no significant yield increase when using tillage on this particular site when planting soybeans after corn in a field with a four-year no-till history.

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