Planter Unit Repair and Calibration for Corn
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Objective

To evaluate the effect of calibration and repair of planter units on yields of corn.

Background

Cooperator: Tom Weiler  
County: Morrow  
Nearest Town: Chesterville  
Soil Type: Sloan silty clay loam  
Drainage: Systematic  
Previous Crop: Soybeans  
Tillage: Conventional  
Soil Test: pH 7.0, P 23 ppm, K 154 ppm

Variety: Pioneer 34B23  
Fertilizer: 250 lb/A 0-0-60 on March 29  
Herbicide: PRE: Define 14 oz/A, Balance 1.5 oz/A  
Planting Date: April 27, 2001  
Seeding Rate: 30,200 seeds/A  
Row Spacing: 30 inches  
Harvest Date: October 22, 2001

Methods

Three seeding units were removed from a John Deere 7000 six-row planter. The units were calibrated, and any needed repairs and adjustments were made. The calibrated units were compared to the non-calibrated units in a split-planter study. The treatments were replicated four times, and the entire six rows were harvested and measured using a weigh wagon. The length of the plots was 850 feet, and the harvested areas were approximately 3/10 of one acre. The speed of planting was 5 mph.

Results

Table 1. Corn Yield.1

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Yield (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calibrated, repaired and adjusted units</td>
<td>205.8 a</td>
</tr>
<tr>
<td>Other units</td>
<td>193.6 b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>LSD (0.05)</th>
<th>F</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11.4</td>
<td>11.6</td>
<td>2.50%</td>
</tr>
</tbody>
</table>

1 Means followed by the same letter are not significantly different.
Summary and Notes

The results of this study show that the calibration, repair, and adjustment of the planting units of the John Deere 7000 planter did affect yield. This is the third study in two years that showed a significant increase in yield. This study supports the theory that a uniform stand is important in maximizing corn yields.

Acknowledgment

The author would like to thank Pioneer Hybrids for calibrating and repairing the three planter units and providing the seed for the study.

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