Niger Time of Swathing Evaluation—Pennington County

Cooperator: Ken and Connie Mehrkens
Nearest Town: Thief River Falls
Soil Type: Clearwater Clay
Tillage: Fall chiseled, spring cultivated 3x
Previous Crop: Soybean
Variety: EarlyBird
Planting Date: May 8, 2003
Row Width: 6 inches
Soil test: 0-6” 16 lb N/a
6-24” 42 lb N/a
Fertilizer: 40 lb N/a
Herbicide: 1.5 pts/a Treflan
Populations: See table
Experimental Design: Randomized complete block with 4 replications

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Swath</th>
<th>Combine</th>
<th>Yield (lb/a)</th>
<th>Test Weight (lb/bu)</th>
<th>Population (plants/ft²)</th>
<th>Height (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14-Aug</td>
<td>20-Aug</td>
<td></td>
<td>400</td>
<td>39.7</td>
<td>9.5</td>
<td>41.3</td>
</tr>
<tr>
<td>19-Aug</td>
<td>4-Sep</td>
<td></td>
<td>427</td>
<td>42.6</td>
<td>9.3</td>
<td>41.8</td>
</tr>
<tr>
<td>27-Aug</td>
<td>4-Sep</td>
<td></td>
<td>430</td>
<td>44.0</td>
<td>8.3</td>
<td>42.4</td>
</tr>
<tr>
<td>2-Sep</td>
<td>9-Sep</td>
<td></td>
<td>229</td>
<td>44.5</td>
<td>9.3</td>
<td>42.6</td>
</tr>
<tr>
<td>9-Sep</td>
<td>16-Sep</td>
<td></td>
<td>104</td>
<td>43.7</td>
<td>8.6</td>
<td>39.4</td>
</tr>
<tr>
<td>None</td>
<td>9-Sep</td>
<td></td>
<td>168</td>
<td>43.2</td>
<td>10.9</td>
<td>40.0</td>
</tr>
<tr>
<td>None</td>
<td>16-Sep</td>
<td></td>
<td>96</td>
<td>43.1</td>
<td>10.4</td>
<td>41.4</td>
</tr>
<tr>
<td>LSD (0.05)</td>
<td></td>
<td></td>
<td>70</td>
<td>1.7</td>
<td>NS</td>
<td>NS</td>
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</tbody>
</table>

Purpose of Study:
To evaluate swathing date on yield and test weight of EarlyBird niger compared to straight combining after complete crop dry down.

Results:
During this dry summer and fall the crop matured faster than in previous years. Harvesting before the majority of the seeds were physiologically mature reduced the test weight (swathing in this trial on 14-Aug). Swathing past the time most seeds are mature reduced yield (2-Sep). Straight combined yields were low due substantial shatter loss while the crop was drying in the field. On August 21, 23, 28 and Sept 2 there were winds of 20 to 30 mph in the plots.

Judging from visual observations of the plots at swathing and the yields obtained, a good guide to swath the niger is between 20% and 80% browning of the canopy. If high winds are forecasted, swathing should be done on the early side of the range. If the crop is less than 20% browning and a severe frost is forecasted, then swathing prior to the frost or the day after the frost is recommended.

Partnership: NDSU
Funding: NDSU and Northwest Regional Partnership

For additional information:
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Paul Porter
Dave LeGare