Effect of Row Width on Wheat Yield
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Objective

To evaluate the effect of row width on wheat yield.

Background

Cooperator: OSU Unger Farm  Fertilizer: 27-69-60 actual N-P-K (fall)
County: Crawford  29% UAN (99 lb N) March 26
Nearest Town: Bucyrus  Tillage: Disk
Soil Type: Pewamo clay loam/ Blount silt loam  Variety: Agra 962
Previous Crop: Soybeans  Row Width: See Methods
Drainage: Systematic  Planting Date: October 4, 2000
Soil Test: pH 6.6, P 63 lb/A, K 245 lb/A  Planting Rate: 120 lb/A
Harvest Date: July 12, 2001

Methods

Wheat yield is important to producers in wheat/soybean double-crop systems where wider wheat row systems might be used to facilitate soybean planting. A randomized complete block design having small plots (5.5 x 50 feet) was used to evaluate the effect of row width on wheat yield. Treatments were 7.5- and 15-inch-wide row wheat planted in six replications. Wheat was planted with a three-point hitch-mounted tool-bar planter equipped with sunflower openers. All wheat plots were harvested completely for yield data with a small plot combine. Yield was adjusted to moisture of 13.5%.

Results

<table>
<thead>
<tr>
<th>Row width (in)</th>
<th>Wheat Yield¹ (bu/A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.5</td>
<td>86.7a</td>
</tr>
<tr>
<td>15</td>
<td>79.2b</td>
</tr>
<tr>
<td>LSD (0.05)</td>
<td>4.4</td>
</tr>
<tr>
<td>F</td>
<td>14.5</td>
</tr>
<tr>
<td>CV (%)</td>
<td>4.4</td>
</tr>
</tbody>
</table>

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

Wheat yield differed significantly between 7.5- and 15-inch-wide rows. This yield difference of about 9% is consistent with work done by others working with wide-row wheat (article titled *Effect of Acrylic Polymer Seed Coating on the Feasibility of Relay Intercropping in Indiana* by S.M. McCoy, T.J. Vyn, and T.D. West of Purdue University). Therefore, wheat in 7.5-inch-wide rows usually out-yields 15-inch-wide rows. Wheat seeding rates were the same across both row spacings; however, the seeds planted per acre in the 15-inch rows are still within Ohio State University Extension guidelines (*Ohio Agronomy Guide*, page 63) for wheat seeding.

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