Dryland Corn Population Performance Test
Test Location: Perry County
Farmer Cooperators: Stanley and Clay Walters
Regional Extension Agent: Rudy Yates
Alabama Cooperative Extension System

2014 Alabama Black Belt On-Farm Corn Program

Planted: May 5, 2014
Harvested: September 4, 2014
Tillage: No-till
Previous Crop: Corn
Soil Type(s): Okolona silty clay loam and Vaiden clay
Fertilizer Applied: 200 pounds/acre of N, 64 pounds/acre of P₂O₅, and 120 pounds/acre of K₂O

A dryland, on-farm corn population performance test was conducted near the Vaiden community in Perry County, Alabama to compare three plant populations: 22,000 (22K), 26,000 (26K) and 30,000 (30K). The corn hybrid planted was Terral Seed REV 28R10, a glyphosate-tolerant hybrid with a 119-day advertised maturity. The seed was treated with Poncho 500 and planted with a John Deere 1770NT 24-row planter. Each population was planted in a 24-row plot the length of the field with 30-inch row spacing. No significant disease or insect pressure was observed during the growing season. No significant lodging was observed. A 12-row strip was harvested from each population plot. The harvested length of the strips averaged 1,333 feet. A plant population count was made prior to harvest on 9/04/14 at 2 random locations in each strip using the 1/1000 acre method. Yields were calculated to 15.5% moisture. The 30K population yielded 176.4 bushels/acre. The 26K population had a yield of 168.3 bushels/acre. The 22K population yielded 159.4 bushels/acre. The 30K population produced an 8.1 bushel increase compared to the 26K population and a 17 bushel increase compared to the 22K population. The yield difference between the 26K and 22K populations was 8.9 bushels.

Table 1. Dryland, on-farm corn population performance test, Perry County, Alabama.

<table>
<thead>
<tr>
<th>Target Plant Population¹</th>
<th>Population Count 9/04/14</th>
<th>Harvest Moisture</th>
<th>Yield ²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plants/Ac</td>
<td>%</td>
<td>Bu/Ac</td>
</tr>
<tr>
<td>22,000</td>
<td>22,250</td>
<td>18.2</td>
<td>159.4</td>
</tr>
<tr>
<td>26,000</td>
<td>26,250</td>
<td>17.4</td>
<td>168.3</td>
</tr>
<tr>
<td>30,000</td>
<td>30,000</td>
<td>17.7</td>
<td>176.4</td>
</tr>
</tbody>
</table>

¹Corn planted was Terral Seed REV 28R10, a glyphosate-tolerant hybrid with a 119-day advertised maturity.
²Yield adjusted to 15.5% moisture and an assumed test weight of 56 lbs bu⁻¹.

Appreciation is expressed to Stanley and Clay Walters and the Alabama Wheat and Feed Grain Commission for supporting this test.