2013

Elite Soybean Test—North

Kevin O. Scholbrock
Iowa State University, kscholbr@iastate.edu

Follow this and additional works at: http://lib.dr.iastate.edu/farms_reports

Part of the Agricultural Science Commons, Agriculture Commons, and the Agronomy and Crop Sciences Commons

Recommended Citation
http://lib.dr.iastate.edu/farms_reports/1962

This report is brought to you for free and open access by Iowa State University Digital Repository. It has been accepted for inclusion in Iowa State Research Farm Progress Reports by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.
Elite Soybean Test—North

Abstract
The purpose of this test was to evaluate the experimental elite soybean lines adapted to northern Iowa. The 2012 Elite Test included 1 percent linolenic and for comparison of agronomic traits, commercially grown varieties released by Iowa State University. Oil from 1 percent linolenic soybean varieties grown in Iowa is used in the frying oil market. This oil is healthier for the consumer.

Keywords
Agronomy

Disciplines
Agricultural Science | Agriculture | Agronomy and Crop Sciences

This northern research and demonstration farm is available at Iowa State University Digital Repository: http://lib.dr.iastate.edu/farms_reports/1962
Elite Soybean Test—North

RFR-A12100

Kevin Scholbrock, agricultural specialist
Department of Agronomy

Introduction
The purpose of this test was to evaluate the experimental elite soybean lines adapted to northern Iowa. The 2012 Elite Test included 1 percent linolenic and for comparison of agronomic traits, commercially grown varieties released by Iowa State University. Oil from 1 percent linolenic soybean varieties grown in Iowa is used in the frying oil market. This oil is healthier for the consumer.

Materials and Methods
The elite soybean test for the northern district was planted at four Iowa locations including Ames, Charles City, Eldora, and Kanawha. At each location, three replications of four-row plots were planted. The plots were 13 ft long with row spacing of 27 in. The seeding rate was nine seeds/ft. Agronomic characteristics evaluated at Kanawha included plant height and lodging susceptibility. The center two rows were harvested using a self-propelled research plot combine. The moisture and weight of each plot were measured on the combine during harvest. The harvested seed was brought to Ames for seed weight calculation and oil, protein, and fatty acid analysis.

Results and Discussion
The test results of the commodity varieties, the 1 percent linolenic experimental lines, and varieties including the new variety IA1026 are summarized in Table 1. The data obtained from the test helped determine that IA1026 should be released to interested growers.

Acknowledgements
Thanks to David Rueber, ISU Northern Research Farm superintendent, for helping select the plot site, applying the pre-plant herbicide, preparing the seed bed, and harvesting the border rows.

The soybean varieties developed by Iowa State University were made possible through the financial support of the Iowa Soybean Association and the United Soybean Board.
Table 1. 2012 Elite Soybean Test North, Iowa State University Ames, Charles City, Eldora, and Kanawha, Iowa.

<table>
<thead>
<tr>
<th>Entry</th>
<th>Yield bu/a (^1)</th>
<th>Maturity date (^2)</th>
<th>Lodging score (^3)</th>
<th>Height in.</th>
<th>Seed weight mg/sd sds/lb</th>
<th>Protein % (^4)</th>
<th>Oil % (^4)</th>
<th>Palmitic %</th>
<th>Stearic %</th>
<th>Stearic %</th>
<th>Oleic %</th>
<th>Linoleic %</th>
<th>Linolenic %</th>
<th>Character</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA1008 hilum</td>
<td>48.8</td>
<td>9/3</td>
<td>2.2</td>
<td>36</td>
<td>168 2,710</td>
<td>34.1</td>
<td>19.4</td>
<td>10.6</td>
<td>4.9</td>
<td>15.6</td>
<td>25.3</td>
<td>52.3</td>
<td>6.8</td>
<td>SCN, yellow</td>
</tr>
<tr>
<td>IA1022 hilum</td>
<td>52.3</td>
<td>9/3</td>
<td>2.3</td>
<td>32</td>
<td>154 2,940</td>
<td>32.0</td>
<td>21.2</td>
<td>10.7</td>
<td>4.8</td>
<td>15.5</td>
<td>25.8</td>
<td>51.6</td>
<td>7.0</td>
<td>SCN, yellow</td>
</tr>
<tr>
<td>IA2102 yellow</td>
<td>56.1</td>
<td>9/8</td>
<td>3.0</td>
<td>35</td>
<td>160 2,830</td>
<td>34.7</td>
<td>19.3</td>
<td>10.4</td>
<td>5.2</td>
<td>15.6</td>
<td>23.1</td>
<td>53.4</td>
<td>7.8</td>
<td>Commodity,</td>
</tr>
<tr>
<td>IA2105 yellow</td>
<td>48.1</td>
<td>9/9</td>
<td>1.7</td>
<td>33</td>
<td>153 2,970</td>
<td>34.3</td>
<td>18.9</td>
<td>10.5</td>
<td>5.0</td>
<td>15.6</td>
<td>24.3</td>
<td>52.6</td>
<td>7.6</td>
<td>Commodity,</td>
</tr>
<tr>
<td>#IA1026</td>
<td>51.7</td>
<td>9/3</td>
<td>1.6</td>
<td>26</td>
<td>156 2,900</td>
<td>36.2</td>
<td>19.0</td>
<td>10.0</td>
<td>5.4</td>
<td>15.3</td>
<td>24.4</td>
<td>58.6</td>
<td>1.6</td>
<td>1% linolenic, SCN</td>
</tr>
<tr>
<td>A09-753035</td>
<td>49.9</td>
<td>9/5</td>
<td>1.9</td>
<td>30</td>
<td>146 3,120</td>
<td>35.2</td>
<td>19.6</td>
<td>10.9</td>
<td>5.5</td>
<td>16.4</td>
<td>27.4</td>
<td>54.7</td>
<td>1.5</td>
<td>1% linolenic</td>
</tr>
<tr>
<td>A09-755015</td>
<td>49.3</td>
<td>9/5</td>
<td>2.1</td>
<td>29</td>
<td>161 2,820</td>
<td>35.5</td>
<td>18.7</td>
<td>10.0</td>
<td>5.9</td>
<td>15.9</td>
<td>26.7</td>
<td>56.0</td>
<td>1.4</td>
<td>1% linolenic</td>
</tr>
<tr>
<td>IA2096</td>
<td>42.0</td>
<td>9/6</td>
<td>2.1</td>
<td>32</td>
<td>142 3,200</td>
<td>34.6</td>
<td>19.8</td>
<td>10.9</td>
<td>5.7</td>
<td>16.6</td>
<td>25.7</td>
<td>56.3</td>
<td>1.4</td>
<td>1% linolenic</td>
</tr>
<tr>
<td>IA2079</td>
<td>45.3</td>
<td>9/7</td>
<td>1.6</td>
<td>29</td>
<td>158 2,860</td>
<td>34.7</td>
<td>19.7</td>
<td>10.3</td>
<td>5.7</td>
<td>16.0</td>
<td>25.8</td>
<td>57.0</td>
<td>1.2</td>
<td>1% linolenic</td>
</tr>
</tbody>
</table>

\(^1\)Yield: bushels/acre at 13% moisture.
\(^2\)Maturity: month/day.
\(^3\)Lodging: 1 = erect, 5 = prostrate.
\(^4\)Protein and oil: 13%-moisture basis.

#Released in November 2012.