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Elite Soybean Test—South

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

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Elite Soybean Test—South

Abstract
The purpose of this test was to evaluate the experimental elite soybean lines adapted to southern Iowa. The 2011 Elite Test included commodity—yellow hilum soybeans and large seed and high protein beans, along with commercially grown varieties released by Iowa State University tested for comparison of agronomic traits. These varieties are used in the production of soy foods

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Disciplines
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Elite Soybean Test—South

RFR-A11103

Kevin Scholbrock, agricultural specialist
Department of Agronomy

Introduction
The purpose of this test was to evaluate the experimental elite soybean lines adapted to southern Iowa. The 2011 Elite Test included commodity–yellow hilum soybeans and large seed and high protein beans, along with commercially grown varieties released by Iowa State University tested for comparison of agronomic traits. These varieties are used in the production of soy foods.

Materials and Methods
The elite soybean test for the southern district was planted at four Iowa locations including Ames, Agency, Carlisle, and Greenfield. 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/foot. Agronomic characteristics evaluated at Greenfield 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, oil, and protein analysis.

Results and Discussion
The test results of the commodity varieties IA3023, IA3048, and IA4004, the commodity–yellow hilum varieties and experimental lines IA2102 and A07-626002, and the large seed and high protein varieties and experimental line IA3051, are summarized in Table 1. The data obtained from the test helped determine that IA2102 and IA3051 should be released to interested growers.

Acknowledgements
Thank you Bernard Havlovic, Armstrong Research Farm superintendent and Kirk Schwarte, agricultural specialist, 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.
Table 1. 2011 Elite Soybean Test—South, Iowa State University Ames, Agency, Carlisle, and Greenfield, Iowa

<table>
<thead>
<tr>
<th>Entry</th>
<th>Yield bu/a&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Maturity date&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Lodging score&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Height in.</th>
<th>Seed weight mg/sd</th>
<th>Seed weight sds/lb</th>
<th>Protein %&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Oil %&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Chlorosis score</th>
<th>Character</th>
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<td>1.9</td>
<td>36</td>
<td>156</td>
<td>2,920</td>
<td>32.4</td>
<td>19.8</td>
<td>3.3</td>
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<td>#IA2102</td>
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<td>2.6</td>
<td>34</td>
<td>161</td>
<td>2,820</td>
<td>34.7</td>
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<td>A07-626002</td>
<td>68.3</td>
<td>10/1</td>
<td>2.0</td>
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<td>148</td>
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<sup>1</sup>Yield: bushels/acre at 13 percent moisture.
<sup>2</sup>Maturity: month/day.
<sup>3</sup>Lodging: 1 = erect, 5 = prostrate.
<sup>4</sup>Protein and oil: 13 percent-moisture basis.

# Released in November 2011.