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Elite Soybean Test—South

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

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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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Kevin Scholbrock, agricultural specialist
Department of Agronomy

Introduction

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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.

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Table 1. 2011 Elite Soybean Test—South, Iowa State University Ames, Agency, Carlisle, and Greenfield, Iowa

Entry	Yield bu/a[1]	Maturity date[2]	Lodging score[3]	Height in.	Seed weight mg/sd	Seed weight sds/lb	Protein %[4]	Oil %[4]	Chlorosis score	Character
IA3023	66.5	10/5	1.9	36	156	2,920	32.4	19.8	3.3	Commodity check
#IA2102	66.5	9/27	2.6	34	161	2,820	34.7	19.3	2.6	Commodity, yellow hilum
A07-626002	68.3	10/1	2.0	34	148	3,060	33.9	19.0	3.9	Commodity, yellow hilum
IA4004	59.5	10/5	3.1	37	163	2,790	34.8	18.2	4.2	Commodity, yellow hilum
IA3048	61.6	10/2	2.3	35	139	3,270	34.1	18.8	3.5	SCN, yellow hilum
IA2074	56.4	9/20	1.9	30	210	2,160	38.4	18.0	3.1	Large seed & high protein
#IA3051	61.2	9/23	1.7	34	201	2,260	38.3	17.8	3.1	Large seed & high protein
IA3047	60.1	9/23	2.1	34	206	2,200	37.7	18.1	3.0	Large seed & high protein
IA3046	56.6	9/25	2.0	32	199	2,280	37.9	18.0	2.7	Large seed & high protein
IA3027	62.3	9/26	2.1	32	205	2,220	37.8	17.6	2.5	Large seed & high protein
IA3027RA1	63.2	9/29	1.8	33	208	2,180	37.6	17.6	2.5	Large seed & high protein
IA3045	61.7	9/30	2.2	36	207	2,190	37.8	17.7	2.4	Large seed & high protein
IA3022	52.7	10/3	2.5	38	204	2,230	38.5	17.3	2.8	Large seed & high protein

[1]Yield: bushels/acre at 13 percent moisture.
[2]Maturity: month/day.
[3]Lodging: 1 = erect, 5 = prostrate.
[4]Protein and oil: 13 percent-moisture basis.
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