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Elite Soybean Test—North

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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

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Disciplines

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Elite Soybean Test—North

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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.

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Table 1. 2012 Elite Soybean Test North, Iowa State University Ames, Charles City, Eldora, and Kanawha, Iowa.

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

¹Yield: bushels/acre at 13% moisture.

²Maturity: month/day.

³Lodging: 1 = erect, 5 = prostrate.

⁴Protein and oil: 13%-moisture basis.

#Released in November 2012.