

Modified Oil Soybean Test—South

Kevin O. Scholbrock, ag specialist
Department of Agronomy

Introduction

The purpose of this test was to evaluate the experimental modified oil soybean lines adapted to southern Iowa. The 2008 Modified Oil Test included 1% linolenic, 2.5% linolenic, mid oleic, and low saturates, and for comparison of agronomic traits, commercially grown varieties released by Iowa State University. Oil from 1% linolenic, 2.5% linolenic, mid oleic, and low saturates soybean varieties grown in Iowa is used in the frying oil market. This oil is healthier for the consumer.

Materials and Methods

The modified oil soybean test for the southern district was planted at five Iowa locations—Ames, Carlisle, Lewis, Osceola, and Ottumwa. 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 Lewis 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, and fatty acid analysis.

Results and Discussion

The test results of the 1% linolenic experimental lines A05-314011 and A06-815026, the low saturates experimental lines A06-817005, A06-817010, A06-817038, A06-915034 and A06-915036, the 2.5% linolenic variety IA2065, and the commodity variety IA3023 are summarized in Table 1. The data obtained from the test helped determine that A05-314011 (now IA3041), A06-815026 (now IA2097), A06-817005, A06-817010, A06-817038, A06-915034, and A06-915036 should be released to interested growers.

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