

Modified Oil Soybean Test—North

Kevin O. Scholbrock, agricultural specialist
Department of Agronomy

Introduction

The purpose of this test was to evaluate the experimental modified oil soybean lines adapted to northern Iowa. The 2006 Modified Oil Soybean Test included 1% linolenic, 2.5% linolenic, and low saturates, and for comparison of agronomic traits, commercially grown varieties released by Iowa State University. Oil from 1% linolenic, 2.5% linolenic, 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 northern district was planted at five Iowa locations—Ames, Charles City, Curlew, 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/foot. 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, oil and protein analysis, and fatty acid analysis.

Results and Discussion

The test results of the 1% linolenic experimental lines A05-114010 and A05-114019, the low saturates experimental line A04-641024, and the commodity varieties IA1021 and IA2068 are summarized in Table 1. The data obtained from the test helped determine that A05-114010, A05-114019, and A04-641024 should be released as IA2077, IA2078, and IA2092.

Acknowledgments

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