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Low Linolenic Soybean Variety Test

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Abstract

This project was designed to compare the yields of low linolenic soybean varieties being marketed in the area served by the Southeast Research Farm, Crawfordsville, IA. The area served by the Southeast Research Farm is fairly broad so the maturity range of the varieties used varies by one maturity range. The new low linolenic soybean varieties are adapted to the area surrounding the research facility, and producers will need performance data to determine whether the premium offered for growing the new soybeans is adequate. Premiums are designed to cover yield drag and identity preservation cost.

Disciplines

Agricultural Science | Agriculture

Low Linolenic Soybean Variety Test

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management specialist
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Introduction

This project was designed to compare the yields of low linolenic soybean varieties being marketed in the area served by the Southeast Research Farm, Crawfordsville, IA. The area served by the Southeast Research Farm is fairly broad so the maturity range of the varieties used varies by one maturity range. The new low linolenic soybean varieties are adapted to the area surrounding the research facility, and producers will need performance data to determine whether the premium offered for growing the new soybeans is adequate. Premiums are designed to cover yield drag and identity preservation cost.

Materials and Methods

The study was planted into corn stalks that had been fall chiseled and spring field cultivated twice before planting. No fertilizer was applied to the plot area, soil test indicated that levels were adequate (pH 5.9, P 55, K 200). The plots were planted on May 19 at a rate of 160,000 ppa in 30-in. rows at a depth of 1.5 in. The herbicides used were Raptor, crop oil, and AMS applied on May 13. A post application of Poast Plus, crop oil, AMS and Flexstar was applied on

June 28. The plots were harvested on October 2. There was not any crop damage due to weather and disease and insect damage was low. Weed pressure was low. The varieties in the study are shown in Table 1.

Results and Discussion

The plot contained low linolenic soybean varieties with one conventional non-GMO variety as a check. The overall plot average yield was 53.71 bushels/acre. The plot area had an SCN count of 300 eggs/100cc. The LSD at 5% was 2.3 bushels/acre.

This was a good year for soybean yields, with yield levels similar to last year. The maturity range did not seem to make a difference in final yields. The conventional non-GMO treatment yielded more than the average of the plot but there was variation within the low linolenic varieties with two of them yielding more than the conventional non-GMO variety. It appeared that the Asoyia STS and the Asgrow 3221V varieties have some yield drag compared with the other low linolenic varieties. This plot represents only one year of data and should be interpreted accordingly. There are some good low linolenic varieties on the market but just as with conventional varieties, you need to be selective. Table 2 shows the breakdown of the individual variety yields.

Table 1. Varieties used in the low-linolenic soybean plot at the Southeast Research Farm.¹

Company	Variety	Maturity	Characteristics
NK	S32-Z2	3.2	Non GMO
Asoyia	2505	2.5	Low Lin, non GMO
Asoyia	2525STS	2.5	Low Lin, non GMO
Asoyia	3005	3.0	Low linolenic, non GMO
Asoyia	3125	3.0	Low linolenic, non GMO
Asoyia	3204	3.1	Low linolenic, non GMO
Asgrow	3221V	3.5	Low linolenic, RR

¹The study was randomized and replicated three times.

Table 2. Yield results of varieties grown in the low linolenic variety trial.

Variety	Yield	Maturity
NK S32-Z2	55.2	3.2
Asoyia 2505	53.3	2.5
Asoyia 2525STS	49.7	2.5
Asoyia 3005	59.5	3.0
Asoyia 3125	57.8	3.0
Asoyia 3204	53.6	3.1
Asgrow 3221V	46.9	3.5