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Optimum Soybean Planting Date

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Optimum Soybean Planting Date

Abstract

Past research by Iowa State University has shown that the optimum planting date for soybeans, assuming favorable soil conditions, is the first week in May for the northern third of Iowa. The optimum date for the southern two thirds of Iowa is the last week of April. Given that rapidly changing soybean genetics have shown improvements in both yield and disease resistance, this trial was designed to demonstrate the planting recommendation under local conditions.

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Introduction

Past research by Iowa State University has shown that the optimum planting date for soybeans, assuming favorable soil conditions, is the first week in May for the northern third of Iowa. The optimum date for the southern two thirds of Iowa is the last week of April. Given that rapidly changing soybean genetics have shown improvements in both yield and disease resistance, this trial was designed to demonstrate the planting recommendation under local conditions.

Materials and Methods

The trial was on a Monona silt loam soil type with the majority having a 2 to 5 percent slope. The site was located in Monona County with the last week in April as the recommended planting date. The trial was replicated four times with two different planting date treatments. Planting dates were April 30 and May 19. Plot size was 20 ft wide by approximately 540 ft long. The trial had no fall or spring tillage and was no-till planted into standing corn residue in 30-in. rows. Seed drop was at 138,898 per acre. Dry fertilizer was broadcast spread in the spring as a mixture of 11-52-0 and 0-0-60 yielding an analysis of 17-80-80 per acre. One pre-plant burndown and one post-emerge application of Roundup was used. Weed control was rated as excellent.

Results and Discussion

Table 1 shows that there was a yield benefit for early planting at the trial site. These yields reinforce the ISU recommendation that for the southern two thirds of Iowa, under favorable soil conditions, the optimal soybean planting date is the last week of April. It should be noted that planting soybeans too early also has some risks. Early planted soybeans may have more seedling diseases, are at greater risk of sudden death syndrome, and could be damaged if a late spring frost occurs.

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Table 1. Soybean planting date yields

Treatment	Yield (bushels/acre)
April 30	55.7
May 19	49.7**

** = statistical difference at $P \leq 0.01$.

LSD (least significant difference) = 1.8 bushels/acre at $P \leq 0.01$.