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Soybean Planting Dates and Populations

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Soybean Planting Dates and Populations

Abstract

Soybean genetics are changing yearly with improved yield and/or resistance capabilities. Additionally, small plot research from Iowa State University indicates a planting recommendation of April 20 or as soon as soil and weather conditions are suitable at populations of 125,000 to 140,000 seeds/acre. This trial was designed to demonstrate this recommendation on a local site with local conditions.

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Introduction

Soybean genetics are changing yearly with improved yield and/or resistance capabilities. Additionally, small plot research from Iowa State University indicates a planting recommendation of April 20 or as soon as soil and weather conditions are suitable at populations of 125,000 to 140,000 seeds/acre. This trial was designed to demonstrate this recommendation on a local site with local conditions.

Materials and Methods

The soil type is Monona silt loam with the majority having 2–5% slope. The previous crop was corn. The trial was replicated three times with four treatments (combination of two planting dates and two seeding rates) of the same soybean variety. Seeding rates chosen were from 125,000 and 140,000 on planting dates of April 30 and May 14. Each plot was 30 ft wide by the plot length of approximately 540 ft.

The trial had no fall or spring tillage and was no-till planted. A preplant burndown herbicide application was used with a second herbicide application in mid-June. No insecticide was applied.

Results and Discussion

Grain yields indicated a slight but non-significant yield decrease by dropping the population from the 140,000 to 125,000 seeds per acre (Table 1). The earlier planting date of April 24 yielded slightly more, but not significantly, than the May 11 planting date.

These results indicate a recommended planting date as early as possible under suitable soil and environmental conditions. And, although grain yields don't show tremendous advantage for planting a higher population, the economic savings of planting fewer seeds may be a more important factor.

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Table 1. Grain moisture and yield results from two planting dates and two seeding rates at the Western Research Farm in 2009.

Planting date	Seeding rate	Grain moisture	Grain yield
	seeds/acre	%	bu/ac
April 24	125,000	12.9	45.7
April 24	140,000	13.0	46.8
May 11	125,000	12.9	44.6
May 11	140,000	13.0	45.9
LSD _(0.05)		ns	ns