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Optimum Soybean Planting Date

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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, these two trials were designed to demonstrate the planting recommendation under local conditions.

Disciplines

Agricultural Science | Agriculture

Optimum Soybean Planting Date

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Wayne Roush, farm superintendent

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, these two trials were designed to demonstrate the planting recommendation under local conditions.

Materials and Methods
The two trials were 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 trials were replicated four times with two different planting date treatments. Planting dates were April 30 and May 14. Plot size was 20 ft wide by approximately 540 ft long. The trials had no fall or spring tillage and were no-till planted into standing corn residue in 30-in. rows. Seed drop for both trials was at 138,898/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/acre. One pre-plant burndown and one post-emerge application of Roundup was used. The burndown also contained 2 oz of Sencor DF and 0.8 oz of Brawl ll. Weed control was rated as excellent.

The two trials were located in the same field with all planting, fertilizing, spraying, and harvesting dates and rates the same. The same seed variety (Renze 2889RR) was used in both trials. However, Trial 1 had a CruiserMax seed treatment and Trial 2 did not have any seed treatment.

Results and Discussion
Tables 1 and 2 show that there was a yield benefit for early planting in both trials in 2012. 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, may be at greater risk of sudden death syndrome, and could be damaged if a late spring frost occurs.

Acknowledgements
Appreciation is extended to Dennis Boyle of Renze Seeds for providing the seed used in this trial. Additional thanks to Brad Hanson for harvesting the plot.

Table 1. Treated seed soybean planting date yields.

Treatment	Yield (bu/acre)
April 30	65.0
May 14	54.4*

* = statistical difference at a P value of P = 0.09.

Table 2. Non-treated seed soybean planting date yields.

Treatment	Yield (bu/acre)
April 30	60.1
May 14	51.9*

* = statistical difference at a P value of P = 0.16.