2012

Effect of Date of Planting on Soybean Sudden Death Syndrome

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Abstract
The objectives of this project was to study the effect of planting date on the onset of soybean sudden death syndrome (SDS). It is believed, that avoiding planting soybeans into wet cold soil may delay or lower the severity of SDS. Planting date for soybeans is important and can have a large effect on yield potential.

Keywords
RFR A1171, Plant Pathology and Microbiology

Disciplines
Agricultural Science | Agriculture | Plant Pathology

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RFR-A1171

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Introduction

The objectives of this project was to study the effect of planting date on the onset of soybean sudden death syndrome (SDS). It is believed, that avoiding planting soybeans into wet cold soil may delay or lower the severity of SDS. Planting date for soybeans is important and can have a large effect on yield potential.

Materials and Methods

The experimental design was a randomized complete block with four replications. There were two sites at the ISU Southeast Research Farm, one with a history of SDS and one without a history of SDS. There was no SDS observed at either site so the sites were combined and analyzed together. Treatments consisted of five planting dates starting April 13 and ending June 13 with planting occurring approximately every two weeks (Table 1). Disease was assessed between growth stage R3 and continuing to R6. However, no disease was observed in 2011. Total seed weight and moisture were measured and seed weight was adjusted to 13 percent and yield was calculated.

Results and Discussion

Yield varied across treatments ranging from 40.9 to 57.8 bushels/acre (Table 1). Differences were observed between the planting dates for both seed moisture and yield. The greatest yield occurred from the May 10 planting date (57.8 bu/ac) and the lowest yield occurred at the June 13 planting date (40.9 bu/ac). There was a 16.9 bushels/acre difference between the highest and lowest planting dates. This is an expected difference when an early May planting date is compared with a mid June planting date. Yield potential is lost when delaying planting after the first third of May. There was no SDS observed in any of the plots.

Acknowledgements

We thank the ISU Research Farm personnel, especially Kevin Van Dee for planting all the treatment dates and harvesting the experiment. Funded by the Iowa Soybean Association and Soybean Checkoff.

Table 1. Yield and moisture response for planting date on SDS.

Planting date	Adjusted moisture	Yield (bu/ac)
April 13	7.30 bc*	49.6 b
May 2	7.43 bc	52.8 ab
May 10	7.70 b	57.8 a
June 1	7.14 c	47.6 bc
June 13	8.51 a	40.9 c
Overall LSD (0.05)	0.43	7.0
CV (%)	5.6	13.8

*Means in the same column with the same letter are not statistically different.