

Soybean Date of Planting and Maturity in South Central Iowa

RFR-A15112

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Introduction

Inevitably, every year soybean planting gets delayed or needs to be replanted because of weather somewhere in Iowa. Even if soybean planting starts and progresses in a timely manner, there always is the question of what maturity group should be planted. This trial was setup to determine what maturities are well suited for a given geographic location, but also how maturity selection should be adjusted as planting dates get pushed into late spring.

Materials and Methods

This project was conducted at the ISU McNay Research Farm as well as six additional Iowa State University research farms across Iowa in 2014 and 2015. In both years, three varieties (P25T51R, P35T58, P39T67) were planted at four target planting dates (May 1, May 20, June 10, and July 1). The plots were setup in a split plot arrangement with four replications. Target planting date was the whole plot and hybrid was the split plot. Data collection included growth staging, grain yield, and grain moisture.

Results and Discussion

In 2014, the May 20 date of planting (DOP) had higher yields than earlier or later dates (Table 1 and Figure 1). In 2015, yields were greatest for the two 3.0 maturity group varieties planted in late April to mid-May. However, a yield potential of 85 percent or greater was achieved when planting in April or May in both 2014 and 2015 with the exception of the P25T51 variety in 2015. These results support the ISU Extension and Outreach planting date recommendations of planting in early May as long as soil temperature and the weather forecast are favorable.

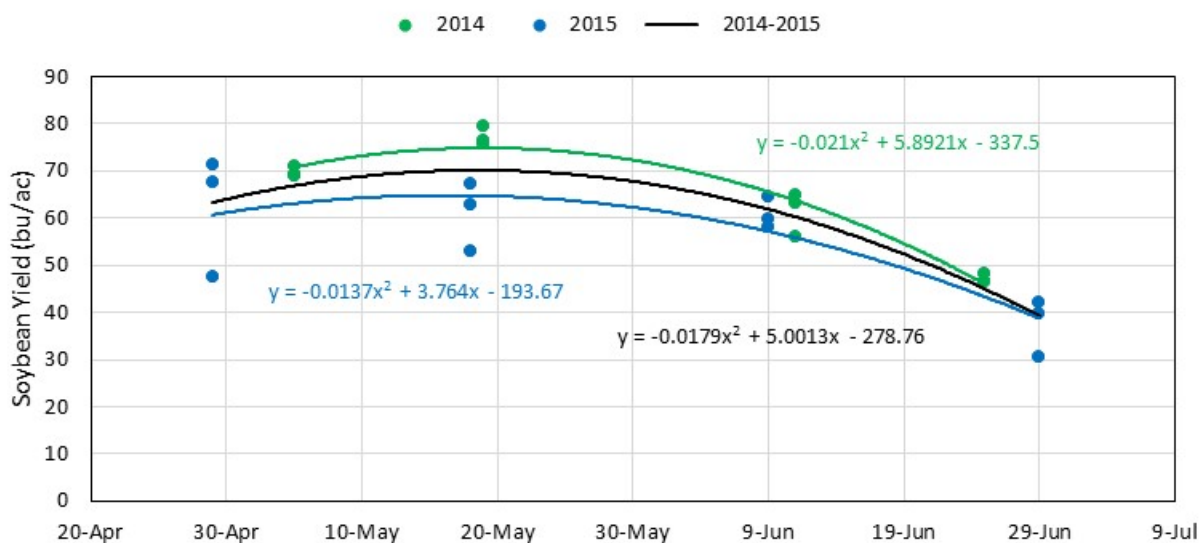
The highest yields were achieved with the 3.5 and 3.9 maturity groups in 2015, although yields were similar among maturities in 2014 (Table 1). Yield potential was not improved by switching to shorter season varieties at later planting dates.

Acknowledgements

This project was supported by the ISU Research and Demonstration Farms and the Iowa Agriculture and Home Economics Experiment Station. Seed was provided by DuPont-Pioneer.

Table 1. Soybean grain yield and moisture of three varieties at four planting dates at the ISU McNay Research Farm, Chariton, Iowa in 2014 and 2015.

Actual date of planting	Grain yield (bu/ac)	Grain moisture (%)	Grain yield (bu/ac)	Grain moisture (%)	Grain yield (bu/ac)	Grain moisture (%)
	P25T51 (2.5 MG)		P35T58 (3.5 MG)		P39T67 (3.9 MG)	
5/6/14	68.8	12.4	71.0	12.5	69.3	12.5
5/20/14	76.4	12.3	79.6	12.4	75.7	12.5
6/12/14	56.1	12.0	64.9	12.3	63.1	12.1
6/26/14	46.5	12.3	48.1	12.9	46.6	12.4
4/30/15	47.6	10.7	71.3	11.1	67.4	10.8
5/19/15	53.0	11.3	62.9	11.0	67.4	11.2
6/10/15	58.0	13.1	64.5	13.2	59.8	13.0
6/30/15	30.7	13.7	39.5	13.3	42.2	12.9

**Figure 1. Soybean grain yield loss associated with delays in planting at the ISU McNay Research Farm, Chariton, Iowa in 2014 and 2015.**