

# Corn and Soybean Planting Date and Cultivar Trial

## RFR-A1976

Matt Schnabel, farm superintendent  
Mark Licht, assistant professor and extension  
cropping systems specialist  
Department of Agronomy

### Introduction

Every year corn and soybean planting is delayed or needs to be replanted due to weather related challenges. When late planting is encountered, the two questions asked are: 1) what yield can be expected, and 2) should maturities be shortened? This project continues to look at these questions across a nearly 45-day span in planting dates and the well adapted maturity range for northern Iowa.

### Materials and Methods

This trial was conducted beginning in 2019 using four planting dates and five corn hybrids and soybean varieties shown in Tables 1 and 2. This trial was set up as a randomized complete block design.

### Results and Discussion

Corn yields were maximized at the May 4 planting date at 204.6 bushels/acre with a drastic 21 percent yield decrease at the June 14 planting date (Table 1). The longer maturity hybrids had higher yield potential than the 101-day (P0157AM) hybrid. There was a planting date by maturity group interaction where some hybrids were less responsive to planting date than other hybrids.

Both hybrid and cultivar had significant main effects (Table 2). The June 14 yield (52 bushels/acre) was lower than the May and early June planting dates. P19A14X was lower yielding than the P21A28X and P23A15X varieties. The planting date by cultivar interaction was not significant.

### Acknowledgements

This trial was made possible with seed contributions from Corteva.

**Table 1. Corn grain yields for planting date by hybrid maturity in 2019.<sup>1</sup>**

		Planting Date				Culivar				
		4-May-19	15-May-19	3-Jun-19	14-Jun-19	P0157AM	P0306AM	P0589AM	P0688AM	P1197AM
Planting Date	4-May-19	204.6 A								
	15-May-19	194.7 AB								
	3-Jun-19	190.7 B								
	14-Jun-19	161.9 C								
pr>F		<0.0001								
Culivar	P0157AM	182.7	169.3	170.1	135.8	164.5 B				
	P0306AM	192.9	185.4	198.6	172.8	187.4 A				
	P0589AM	215.0	207.0	191.7	161.2	193.7 A				
	P0688AM	207.8	195.8	202.7	178.7	196.3 A				
	P1197AM	224.3	215.9	190.2	160.8	197.8 A				
	pr>F		0.0210				<0.0001			

<sup>1</sup>P-values within boxes are used to compare yields of the main effects or interaction effects within each box.

**Table 2. Soybean grain yields for planting date by variety maturity in 2019.<sup>1</sup>**

		Planting Date				Culivar				
		6-May-19	16-May-19	3-Jun-19	14-Jun-19	P18A98X	P19A14X	P21A28X	P23A15X	P24A99X
Planting Date	6-May-19	62.4 A								
	16-May-19	62.9 A								
	3-Jun-19	60.2 A								
	14-Jun-19	52.0 B								
pr>F		<0.0001								
Culivar	P18A98X	61.1	60.0	59.7	52.3	58.28 AB				
	P19A14X	60.5	62.2	58.9	49.4	57.7 B				
	P21A28X	64.2	65.5	61.9	52.6	61.0 A				
	P23A15X	64.5	65.3	61.3	53.3	61.1 A				
	P24A99X	61.9	61.6	59.5	52.4	58.9 AB				
	pr>F		0.9855				0.0247			

<sup>1</sup>P-values within boxes are used to compare yields of the main effects or interaction effects within each box.