Corn Date of Planting and Maturity in South Central Iowa

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Introduction

Inevitably, every year corn planting gets delayed or needs to be replanted because of weather somewhere in Iowa. Even if corn planting starts and progresses in a timely manner, there always is the question of what maturity 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 McNay Research Farm as well as six additional Iowa State University research farms across Iowa in 2014 and 2015. Each year the same three hybrids (P0636, P1151, and P1365) were planted at four target planting dates (April 15, May 10, June 5, and June 30). 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. A target seeding rate of 35,000 seeds/acre was used. Data collection included growth staging, stand counts, grain yield, and grain moisture.

Results and Discussion

Corn grain yield was greatest at the May 9, 2014 and May 7, 2015 date of planting (DOP) for each hybrid (Table 1 and Figure 1). The June DOP yields were lower in 2015 compared with 2014. However, in 2014 the latest DOP corn (June 26) did not reach maturity. These results suggest mid-April to early May is an ideal planting date window.

In 2014, yield potential was greater than 80 percent for the May DOP. In 2015, the April 15 DOP had yield potential of less than 80 percent for two of the hybrids. Planting dates in June and beyond in both years saw yield potential drop below 80 percent.

Acknowledgements

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

Actual date of planting	P0636 (106-day)		P1151 (111-day)		P1365 (113-day)	
	Grain yield (bu/ac)	Grain moisture (%)	Grain yield (bu/ac)	Grain moisture (%)	Grain yield (bu/ac)	Grain moisture (%)
5/5/14	216.3	19.7	202.6	20.0	194.0	17.6
5/9/14	236.2	20.0	229.9	21.5	216.6	21.1
6/12/14	173.7	21.3	170.7	21.9	180.4	24.3
6/26/14	Did not mature		Did not mature		Did not mature	
4/15/15	182.6	17.3	163.1	18.1	206.5	18.3
5/7/15	201.6	17.8	234.6	18.8	219.7	19.0
6/8/15	108.9	20.3	168.1	20.4	112.7	21.0
6/30/15	28.9	0.0	32.7	33.1	48.0	27.5

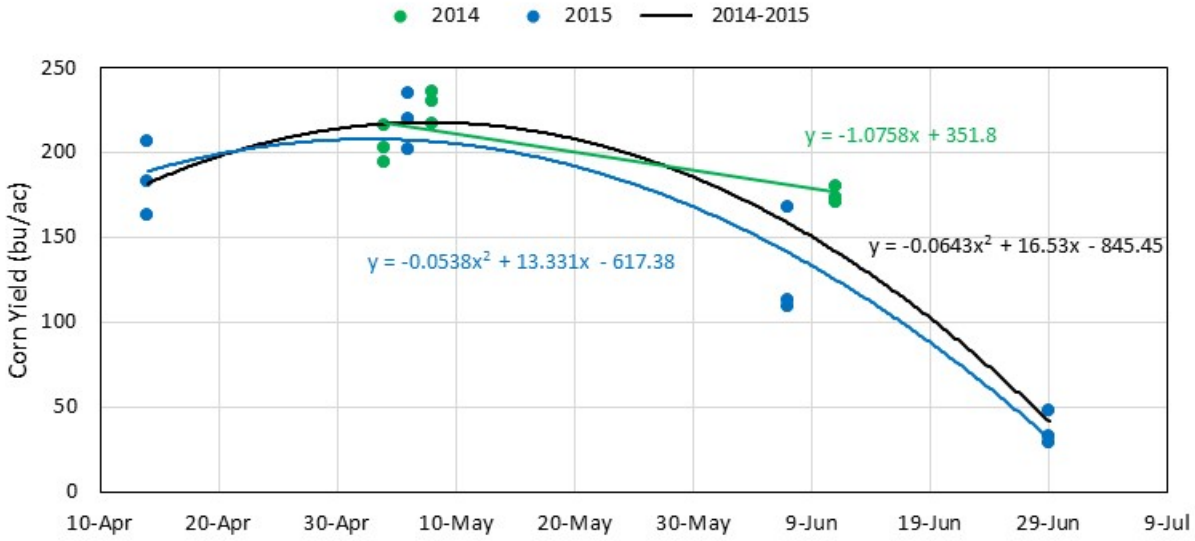

Figure 1. Corn grain yield loss associated with delays in planting at the ISU McNay Research Farm, Chariton, Iowa in 2014 and 2015.