

Corn Date of Planting and Maturity

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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 is always 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 Northwest Research Farm as well as six additional Iowa State University research farms across Iowa in 2014 and 2015. Each year the same three hybrids (P0407, P9526, and P0987) 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 35,600 seeds/acre was used with a John Deere finger pickup style planter. Data collection included growth

staging, stand counts, grain yield, and grain moisture.

Results and Discussion

In 2014, the first two dates of planting (DOP) were consistently higher yielding than the last two DOP (Table 1). In 2015, each DOP was higher yielding than the subsequent DOP. This suggests that mid-April to early May is an ideal planting date window for corn in northwest Iowa. However, in both 2014 and 2015, the latest planting dates (July 3 and June 30, respectively) did not reach maturity.

In both years, the 109-day P0987 had the highest yield potential (Table 1). Switching maturity selection to an earlier adapted hybrid did not improve yield potential at later DOP.

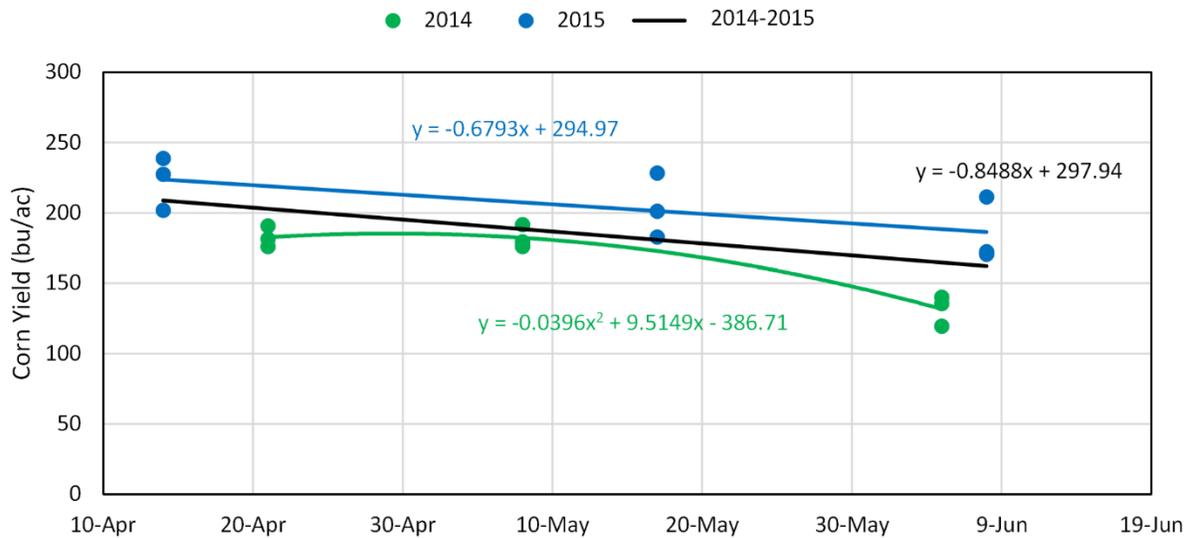
Yield loss/day of delay in planting was 0.84 bushels averaged across 2014 and 2015 (Figure 1). In 2014, overall yield potential was lower than 2015 with an average daily yield loss of approximately 1.5 bushels between the second and third DOP. In 2015, the average daily yield loss was 0.68 bushels.

Acknowledgements

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

Actual date of planting	P9526 (95-day)		P0407 (104-day)		P0987 (109-day)	
	Grain yield (bu/ac)	Grain moisture (%)	Grain yield (bu/ac)	Grain moisture (%)	Grain yield (bu/ac)	Grain moisture (%)
4/22/14	181.3	20.8	175.8	21.4	190.6	21.4
5/9/14	179.3	21.0	176.0	21.1	191.5	21.1
6/6/14	140.1	22.6	119.5	23.1	135.7	23.4
7/3/14	Did not mature		Did not mature		Did not mature	
4/15/15	201.8	13.0	227.2	13.9	238.6	13.1
5/18/15	182.7	14.3	201.0	16.4	228.2	14.0
6/9/15	170.4	13.9	172.3	16.5	211.2	16.6
6/30/15	Did not mature		Did not mature		Did not mature	

**Figure 1. Corn grain yield loss associated with delays in planting at the ISU Northwest Research Farm in 2014 and 2015.**