



Corn Response to Fungicide Application Timing

Trial Objective

- Fungicides are often used to protect corn from disease and help producers reach higher yield potential, but there are multiple timings that the fungicide can be applied.
- The goal of this trial was to look at the yield impact of one or multiple applications Delaro® Complete Fungicide on three corn products.

Experiment/Trial Design

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Gothenburg, NE	Hord silt loam	Soybean	Strip-Till	4/26/2021	11/4/2021	280	36,000

Treatment (#) ¹	Corn Product	Fungicide Treatment	Fungicide Used	Rate/acre	Application Timing
1	115-RM	Untreated Control	None	Not Applicable	Not Applicable
2	109-RM				
3	113-RM				
4	115-RM	V6 + VT growth stages	Delaro® Complete Fungicide	4 fl oz	V6 (6/15/21)
5	109-RM		Delaro® Complete Fungicide	8 fl oz	VT (7/15/21)
6	113-RM				
7	115-RM	VT growth stage	Delaro® Complete Fungicide	8 fl oz	VT (7/15/21)
8	109-RM				
9	113-RM				

- The study was setup in a split-plot design with four replications. Fungicide treatments were the whole plot, and corn products were the sub-plot.
- A base fertilizer application of 25 lb/acre nitrogen (N), 60 lb/acre phosphorus (P), 25 lb/acre sulfur (S), 0.25 lb/acre zinc (Zn) was applied with a strip-till application across all treatments on April 23, 2021.
- A stream bar broadcast application of 100 lb/acre N was made on 5/12/2021.
- An additional 60 lb/acre N was applied with 360 Yield Center Y-drops on 6/18/2021 at the V7 growth stage. Weed control consisted of a VE application of 5 oz/acre Corvus® herbicide, 2.0 pt/acre Harness®, 1 qt/acre Atrazine 4L, and 1 qt/acre Roundup® PowerMAX on 5/8/21 followed by a post-emerge application of 3.0 oz/acre Laudis® herbicide, 3 pt/acre Warrant® Herbicide, and 12 oz/acre DiFlexx® herbicide, and 1 qt/ac Roundup® PowerMAX on 6/15/202. Weed control was excellent season long.
- Corn was sprinkler irrigated with a total of 5.5 inches of irrigation applied during the growing season.
- Dry conditions during the growing season led to little fungal disease development in the trial.
- Plots were combine harvested. Grain moisture content, test weight, and total weight were determined. Statistical analysis for Fisher's LSD was performed.



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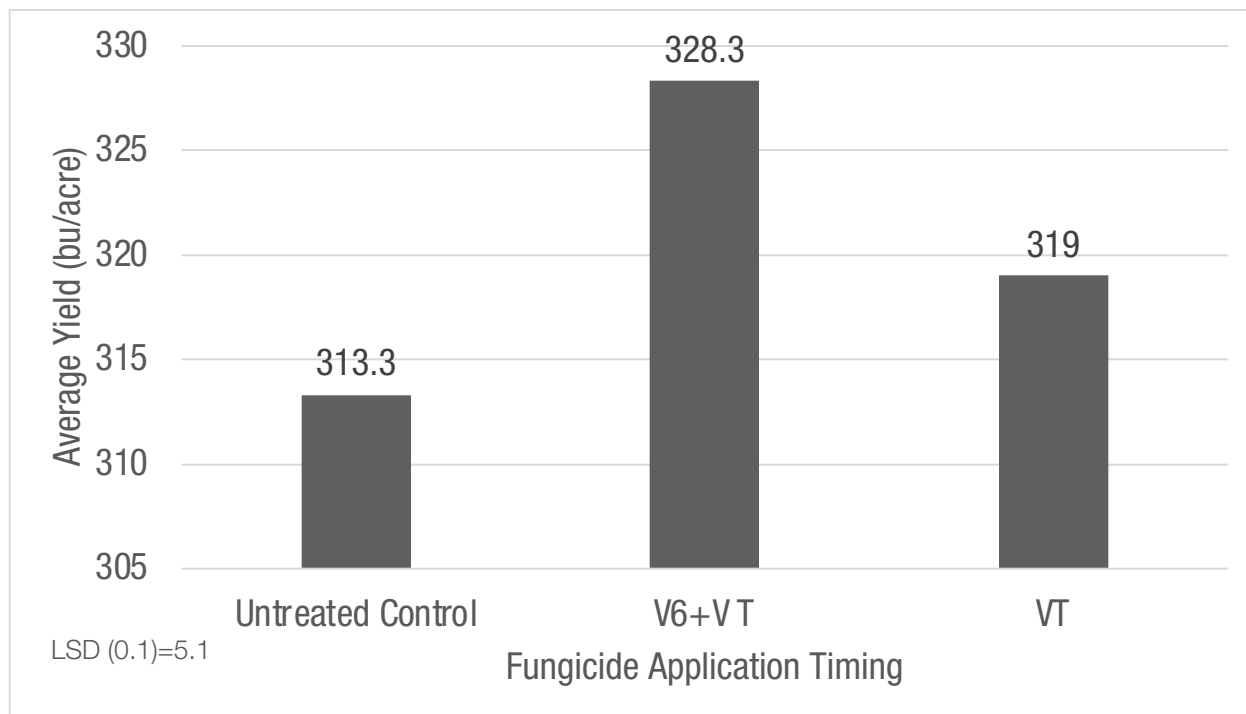


Figure 1. Average corn yields for three corn products as impacted by two fungicide rates and timings at the Bayer Water Utilization Learning Center, Gothenburg, NE (2021).

Understanding the Results

- Yield was improved by both fungicide application timings over the untreated control even with the dry conditions and low disease pressure observed at the end of the growing season.
 - » The VT application alone showed a 5.7 bu/acre advantage over the untreated control.
 - » The V6+VT application had a 15 and 9.7 bu/acre advantage over the untreated control and VT application respectively.

Key Learnings

- The key benefit observed with Delaro® Complete Fungicide applications was an increase in corn yield for both application strategies.
- Applying an early V6 application of Delaro® Complete Fungicide along with a VT application in sequence provided the highest yields in this study.
- The yield improvement has been consistent across both the 2020 and 2021 growing seasons at the Bayer Water Utilization Learning Center in Gothenburg, NE.
- Farmers should check with their local Bayer Crop Science seeds sales team member to discuss the right corn product and management plan for their fields.



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Legal Statements

The information discussed in this report is from a single site, replicated trial. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

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