



Is Fungicide Efficacy Affected by Application Time-of-Day?

Trial Objective

- Fungicides have been widely adopted by soybean growers, with some farmers making or considering two or more applications in a season.^{1,2}
- Farmers interested in maximizing their input costs may wonder whether there is an optimum time-of-day for fungicide applications.
- This research was conducted with a goal of determining whether the time of fungicide application during the day has any impact on crop yield potential.

Experiment/Trial Design

- This research was conducted in Woodford County, Illinois in 2021 and 2022.
- Trials located in grower fields with treatments repeated twice (2 reps) at each location.
- Soybean products ranging from 3.1 to 3.7 Relative Maturities (RM) were planted.
- Standard fertility and weed management practices were followed.
- Delaro® Complete Fungicide was applied at the R3 soybean growth stage.
- Fungicide applications were made in the morning (~8:00 AM), mid-day (~12:00 PM), and evening (~5:00 PM).

Location	Soil Type	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield (bu/acre)	Seeding Rate (seeds/acre)
Benson, IL	Silty clay loam	Corn	Conventional	4/17/21	10/19/21	80	160,000
Roanoke, IL	Silt loam	Corn	Conventional	4/27/22	10/8/22	75	160,000 (100,000 additional interplanted as replant on 5/25/22)
Minonk, IL	Silt loam	Soybean	Conventional	5/17/22	10/20/22	85	160,000



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Understanding the Results

- Averaged across all treatments, no significant yield differences (LSD=2.15) were observed between fungicide application timing during the day (Figure 1).
- Two out of three locations exhibited a minor trend of lower yield after the evening application.
- Disease pressure was low to moderate for both years.

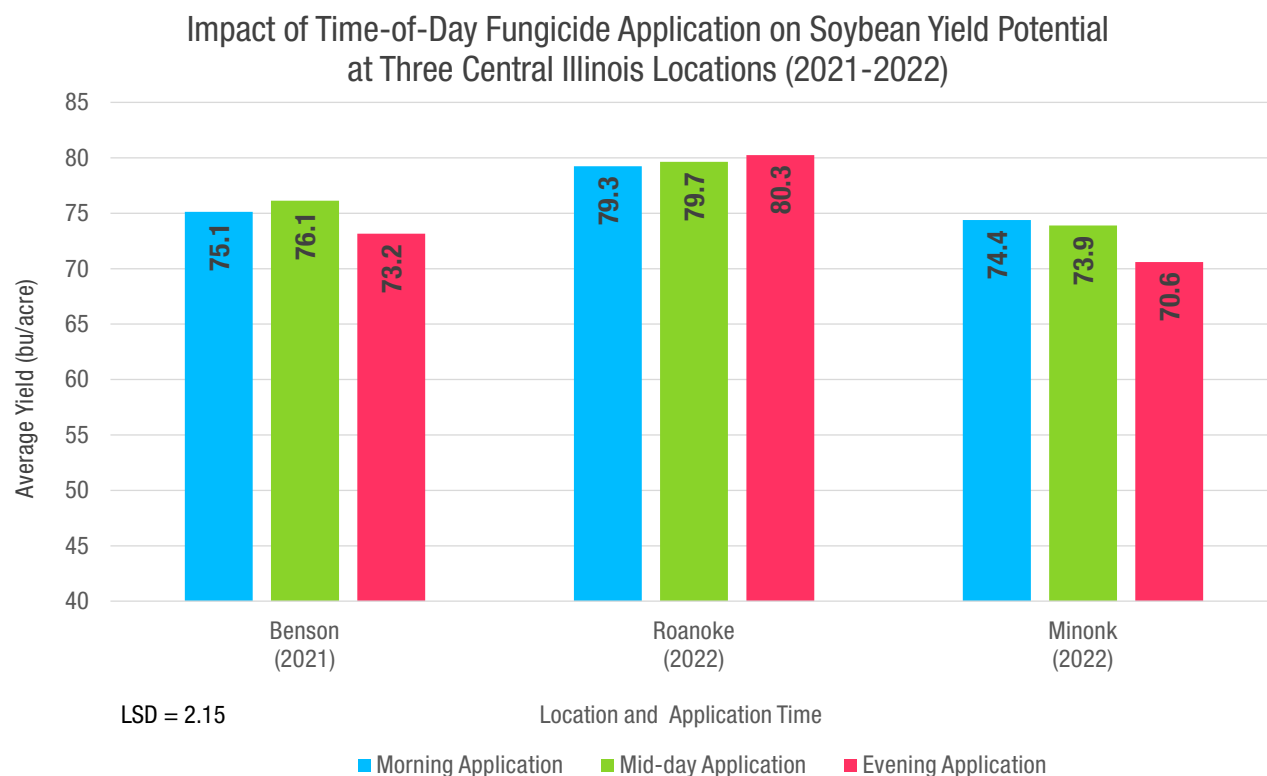


Figure 1. Averaged across all treatments, there was no significant yield differences relative to fungicide application timing. The Benson and Minonk locations showed a trend for lower yield for the evening fungicide application.

Key Learning

- In this research, fungicide application timing during the day did not have a significant impact on average yield potential.

References

¹Carr, J. 2019. Soybean fungicide application advice. ILSoyAdvisor. Illinois Soybean Association.
<https://www.ilsoyadvisor.com/soybean-fungicide-application-advice/>.

²Schmidgall, S. 2019. Applying foliar fungicide on soybeans. ILSoyAdvisor. Illinois Soybean Association.
<https://www.ilsoyadvisor.com/applying-foliar-fungicide-soybeans/>.



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Legal Statements

The information discussed in this report is from a multiple site, replicated demonstration. 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.

ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower's fields.

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