



THE VALUE OF A FUNGICIDE APPLICATION ON CORN AFTER A HAIL EVENT

TRIAL OVERVIEW

- Hail during the corn-growing season is a common occurrence on the Great Plains. Growers may consider applying a fungicide one week after a hail event as a way to help reduce the effects of hail damage on their corn crop.
- Fungicides can help control foliar diseases like gray leaf spot, leaf blights, and rust which can occur without plant injury. Diseases that can occur after plant injury include Goss's Wilt, common smut, and stalk rots, which are not effectively controlled by fungicides.



Figure 1. The VT growth stage with 60% defoliation, September 13, 2016.

RESEARCH OBJECTIVE

- This study was established to evaluate if a foliar fungicide application following a mid-season hail event can increase the yield potential of a corn crop.

Location	Soil	Previous Crop	Tillage Type	Planting Date	Harvest Date	Potential Yield/Acre	Planting Rate/Acre
Gothenburg, NE	Silt Loam	Corn	Strip Till	05/06/2016	10/31/2016	225	34,000

UNDERSTANDING THE RESULTS

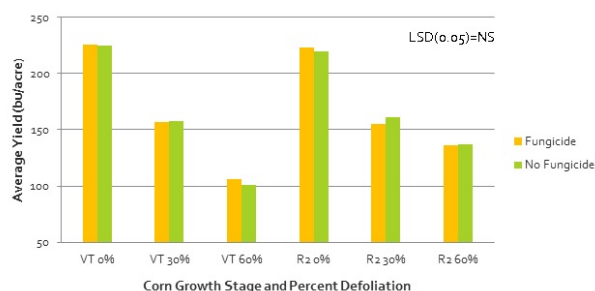


Figure 2. Average yield by corn growth stage and percent defoliation.

- There was no significant interaction between corn growth stage, percent defoliation, or fungicide application.
- There was no significant benefit of a fungicide application. Both the fungicide application and the no fungicide application treatments had an average yield of 167 bu/acre across all corn growth stages and defoliation treatments.
- These results vary from the Gothenburg Learning Center report published in 2015 where an 11 bu/acre increase in yield potential was observed when a fungicide was applied.
- This potentially was the result of dry weather conditions in Gothenburg in August with only 0.7 inches of precipitation recorded compared to 3.7 inches of precipitation in 2015. This environmental difference after fungicide application likely influenced results since more rainfall and higher humidity in 2015 was more conducive to foliar disease incidence and severity, possibly allowing fungicide application to result in increased yield potential.



- The timing of the hail damage was significant with more yield loss observed on corn with 60% defoliation at the VT growth stage compared to corn with 60% defoliation at the R2 growth stage, or 104 to 136 bu/acre (LSD (0.1) = 13).
- Hail damage during the VT growth stage occurs before flowering and pollination, which may lead to decreased yield potential as compared to the R2 growth stage when seed set has occurred.

WHAT DOES THIS MEAN FOR YOUR FARM?

- The benefit of a fungicide application on corn is independent as to whether or not the corn was injured by hail.
- Fields that experience wet and mild conditions during grain fill may benefit from a fungicide application. The benefit of a fungicide would be less likely if conditions were dry during grain fill.
- Severe hail damage at the VT growth stage consistently had the most negative effect on yield potential.

LEGAL STATEMENT

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