

Foliar Fungicides and Disease Management for Ontario Seed Corn Production

Purpose:

Over the past few years, the promotion of foliar fungicides has increased in North America and most of this information has been generated for commercial corn and soybeans. Very little work has been done in Ontario to investigate inbred-specific responses to fungicides; therefore, a multi-year study was started in 2008 in order to identify factors that would increase the probability a seed corn grower would have in achieving a profit from a fungicide application. Seed corn growers in Ontario would benefit from local data to assist in profitable and accurate decisions when it comes to disease management, thereby maintaining or increasing the competitiveness of the Ontario seed corn industry.

Methods:

In 2008, five commercial seed corn fields were selected in the Chatham area in southwestern Ontario. This area represents the primary seed corn production area in the province. At each location, four treatments were established which included three fungicides (Headline, Quadris and Quilt) and a untreated control in which no fungicides were used. Fungicides were applied with the high clearance John Deere Field Research Sprayer maintained by the University of Guelph Ridgetown Campus. Plots were allowed to be naturally infected and disease ratings were recorded pre fungicide application.

Results:

Yield increases were observed for all five fields individually regardless of which of the three fungicides were applied (Figure 1) when compared to the untreated control. All three fungicides also resulted in a significant yield increase when the data from all five locations were combined as compared to the untreated control. Although the difference between the fungicide treatment and untreated control was significant there was no significant difference between the three fungicides.

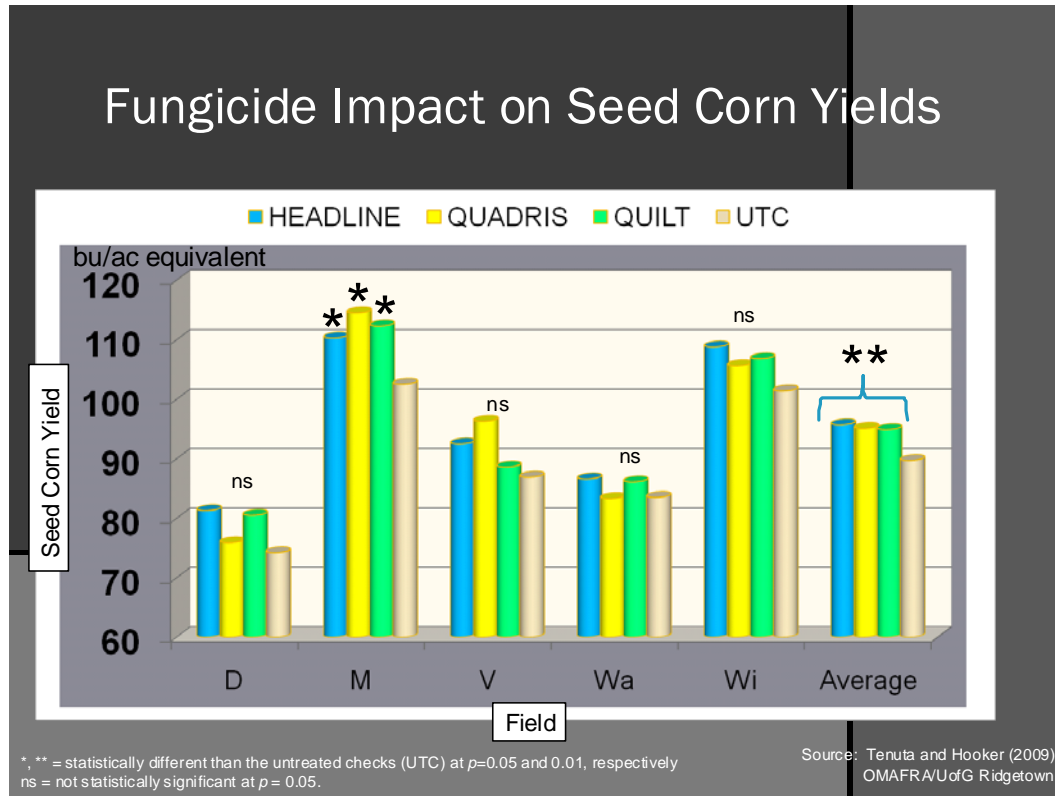
Summary:

Many of the corn inbreds used in commercial seed corn production are prone to many of the common foliar diseases found in the province. The use of fungicides has been utilized for many of these inbreds and this trial supports the use of these products to limit disease and increase yields, thereby increasing the competitiveness of the Ontario seed corn industry.

Next Steps:

As previously described, this is a multi-year project and will be continued in 2009 with more fields and products.

Figure 1. Fungicide Impact on Seed Corn Yields



Acknowledgements:

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Project Contacts:

Albert Tenuta, OMAFRA , albert.tenuta@ontario.ca, 519-674-1617.
 Dr. Dave Hooker, UofG-Ridgetown, dhooker@execulink.com, 519-644-2036.

Location of Project Final Report:

Please visit the Seed Corn Growers of Ontario website at www.seedcorngrowers.com.