Foliar Fungicides and Disease Management for Ontario Seed Corn Production
(Interim Report)

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 see corn industry.

Methods:
In 2008 and 2009, five and four 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 3 fungicides (Headline, Quadris and Quilt) and an 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 and post fungicide application.

Results:
Yield increases were observed for all fields individually regardless of which of the three fungicides were applied (Figures 1 and 2) when compared to the untreated control except in one field in 2009. All three fungicides resulted in a significant yield increase each year when the data from all 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 in 2008 whereas in 2009 Headline and Quilt were statistically more significant then Quadris but again all three fungicides were significantly better then the untreated control in 2009 as was the case in 2008.

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.

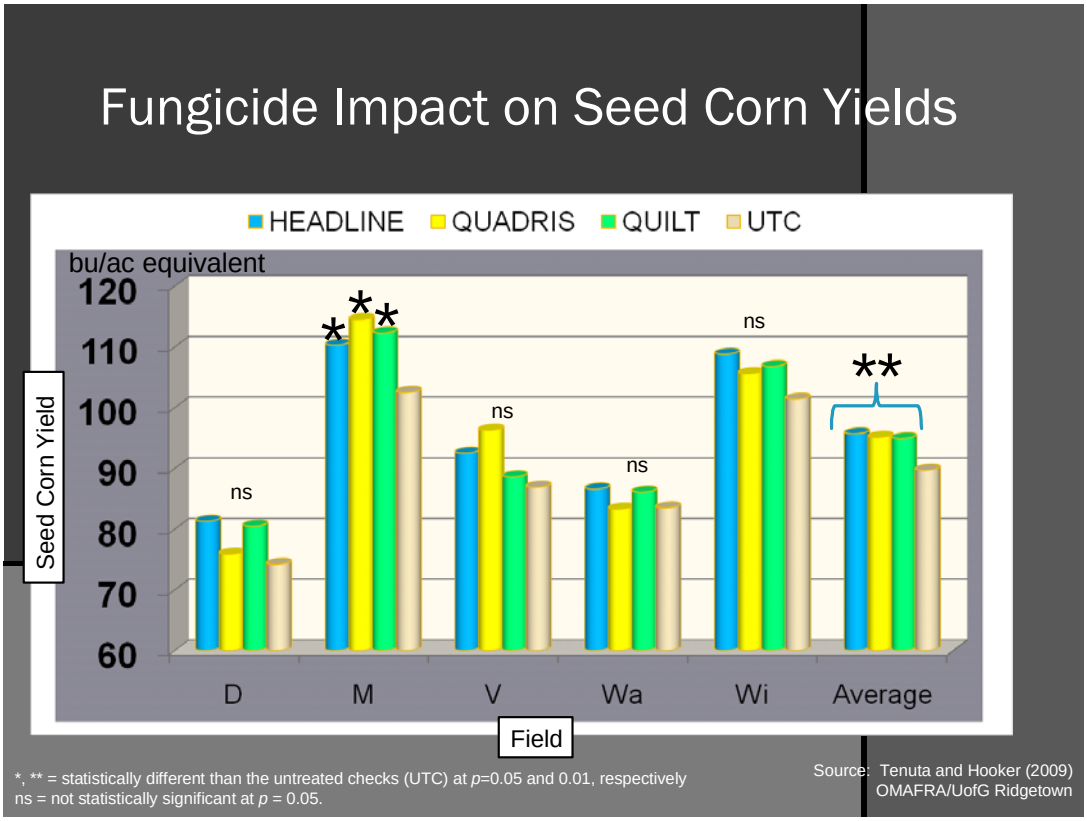

Figure 1 – Fungicide Impact on 5 Commercial Fields in 2008

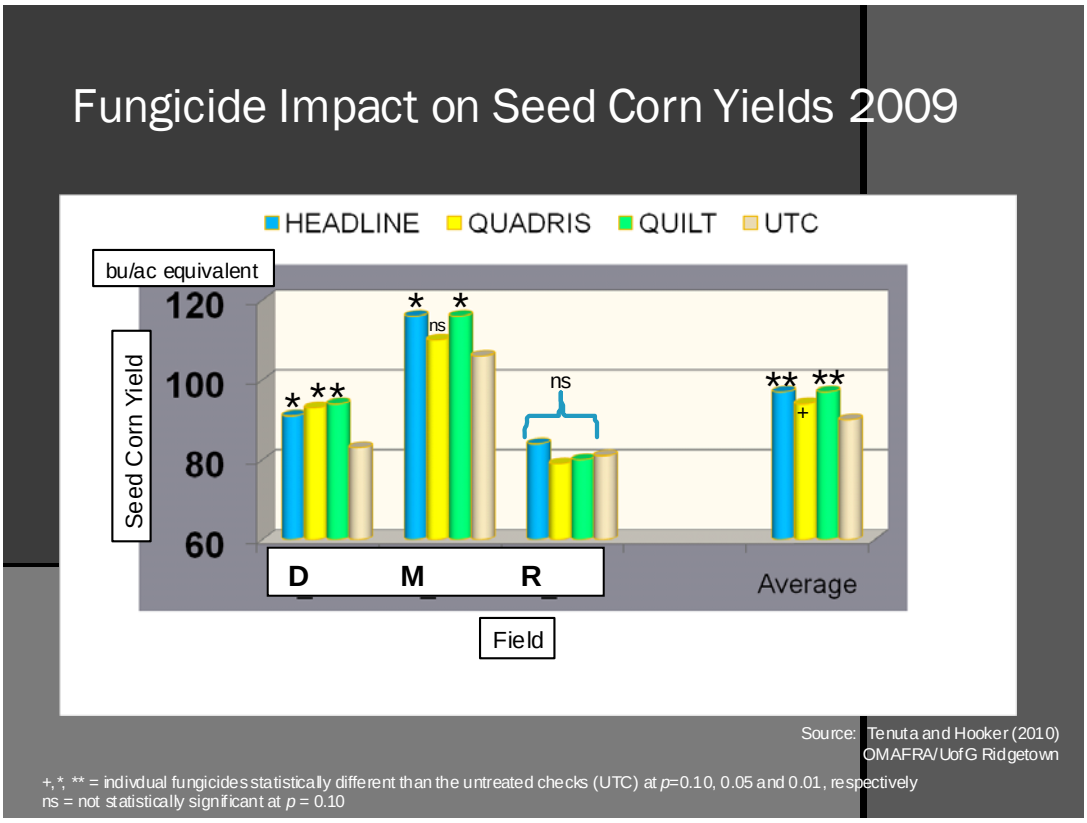

Figure 2 – Fungicide Impact from 3 Commercial Seed Corn Fields in 2009

Next Steps:

As previously described, this is a multi-year project and will be continued in 2010 and linked with other work being done by OMAFRA and the University of Guelph, Ridgetown Campus.

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Location of Project Final Report:

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