



Diseased



Fungicide Treated

Historically, fungicides have been selectively utilized to control diseases, although better understandings of products such as Quilt® fungicide have uncovered other yield enhancing benefits that go beyond protecting against foliar diseases. This understanding of yield enhancement coupled with more favorable commodity prices has expanded interest beyond traditional use and led Syngenta Agronomy Research to conduct fungicide response trials.

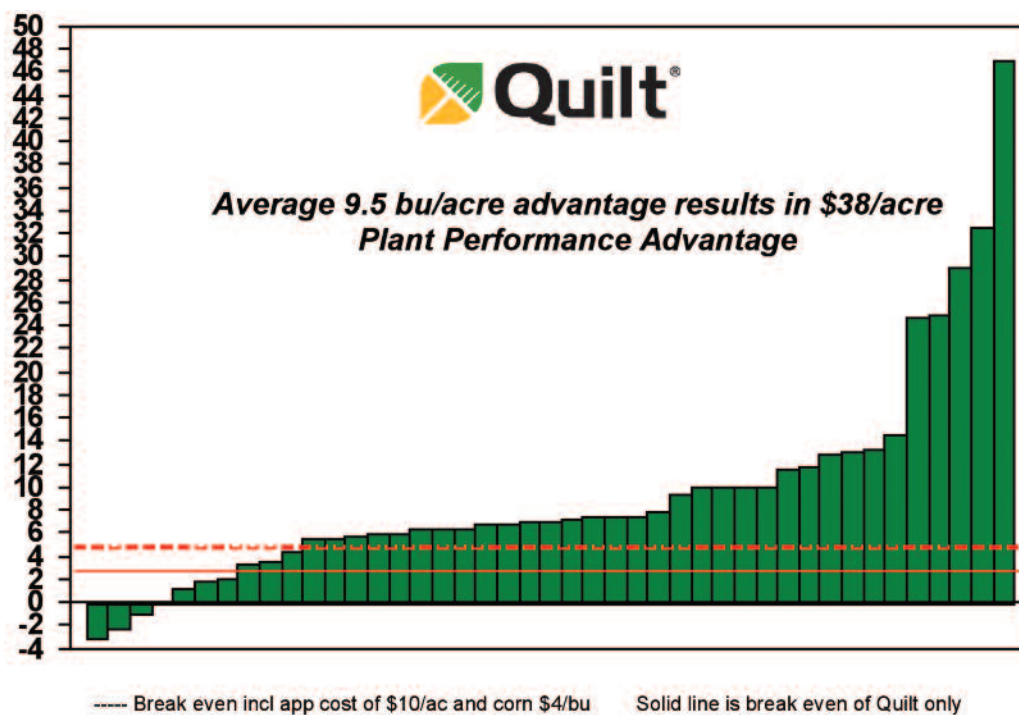
Hybrid Response to Foliar Corn Fungicide

The graph demonstrates the wide range of hybrid responses with the application of Quilt observed in Ontario in 2008.

Response differences are likely due to:

- Disease Severity and Conditions
- Hybrid response
- Maturity

Yield losses are likely due to normal plot variation.



Disease Severity and Conditions

Disease severity will also affect whether a plant will react positively to an application of fungicide. The more advanced the disease, the harder it will be to get under control. While, if the disease is in its early stage, an application of fungicide should have a positive result.

Hybrid Response

Corn hybrids will react differently to a foliar fungicide because of genetic differences. Some hybrids have a more “racehorse” type growing pattern and may be more susceptible to disease. This is because they put all, or most of their energy into yield. Other hybrids have a “workhorse” growing pattern. These hybrids have strong agronomic and disease packages. While their yields may not always be at the top of the trials, they remain consistent from year to year. Hybrids that are in the middle have high yields, strong disease tolerance and strong agronomic traits. Under the right conditions these hybrids could benefit from an application of fungicide.

Maturity

Maturity is an important factor to consider when deciding whether or not to apply a foliar fungicide. When a fungicide is applied it maintains plant health and extends the grain fill period of the plant. It is important to look at the maturity of the hybrids being grown. A longer day corn may not benefit from fungicide because it already has a long grain fill period. These hybrids may not reach maturity resulting in a difficult harvest. On the other hand a shorter day corn would benefit from a fungicide to extend its grain fill period, and hopefully result in higher yields.

Fungicide Response by Hybrid

Positive Very High Response	Response under Ideal Conditions	Minimal response
N51T	N53W	N64Z
N29T	N41C	N63R
N27W	N33E	N29A
N25N	N27B	N45A
N23K	N23F	
	N40T	

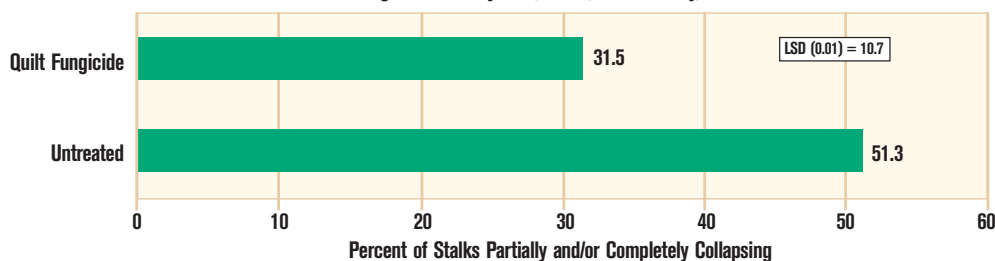
Foliar Corn Fungicides...More than Just Yield

The use of a foliar fungicide can also improve overall plant performance. An evaluation of stalk integrity prior to harvest was used to quantify this improvement. The graph below indicates that utilization of a foliar fungicide can:

- Significantly improve stalk integrity
- Improve agronomics of high yielding hybrids
- Reduce stalk lodging
- Decrease harvest losses
- Reduce harvest time

Influence of Quilt Fungicide on Late-Season Stalk Integrity

Averaged over 10 hybrids; Pekin, IL & Elk City, NE - 2007



Healthier stalk on the left shows the benefits of fungicide treatment versus untreated stalk on right.



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