



June 28, 2013

## **DOES TREATING HAIL DAMAGED CROPS PAY?**

We had some crops shredded in the Milligan-Friend area from an early morning storm with significant sized hail last Tuesday, June 25th. When you see a picture from a corn field with a crater in the soil bigger than your fist, it was a bad storm. There is always the question, what can I do to help the crop be better and come back healthier?

With soybeans, Loren Giesler, soybean pathologist at UNL, says there is very little replicated data to support the need for a fungicide application after hail. Hail damage can favor some diseases, such as stem canker, however, to date we have not seen much of this disease in Nebraska.

Therefore, based on current data, he does not recommend a fungicide application to help the crop recover from hail injury prior to the R3 growth stage. The R3 (pod fill) growth stage is when the most significant yield increases have been observed or a fighting chance to get a return on investment. In most cases applications prior to this stage have not been shown to significantly improve yield. It sounds good when a salesman says “Add a half rate of this,” but when there is no replicated data to support it, it becomes a question. If it was such a slam dunk improvement in yield, everyone would be talking about it. To prove it one way or another, leave replicated, randomized strips in the field and use the yield monitor at harvest.

Many also question whether a foliar fungicide should be applied to protect the remaining injured foliage from infection by pathogens with corn. Will I get a return on my investment for a foliar fungicide application?

With corn that has been hailed on, many of the diseases favored by wounding are not controlled with foliar fungicides, such as those caused by bacteria, and common smut and stalk rots. There is no third party data to support the fact that foliar fungicides allow corn to stand up better (reduced stalk rot). Foliar diseases that can be managed with foliar fungicides, such as gray leaf spot and southern rust, do NOT require wounds for infection. Unfortunately, hailed corn plants can be more prone now for Goss’s Wilt Bacterial disease and fungicides cannot cure that.

A study conducted in Illinois at a single location evaluated the effects of fungicide applications in simulated hail-injured corn on gray leaf spot severity and yield. In that study, fungicide applications did not statistically increase yield when applied on tasseling corn that was damaged the previous day to simulate hail injury. There is no strong consensus among plant pathologists regarding this topic due to the limited research data that are currently available, so additional research is needed to better determine the potential for foliar fungicides to protect hail-damaged corn.

Foliar fungicide application on corn essentially boils down to multiple factors. These factors are 1) Susceptible hybrid 2) Continuous corn 3) Late planting 4) High yield potential 5) Irrigation 6) Early disease activity 7) Field or location has a history of severe disease and 8) Weather is favorable for disease development. The current price of corn has influenced the economics of spraying fungicides in corn. Most fungicides provide approximately 14-21 days of protection.



During recent years, gray leaf spot and southern rust have been our most severe fungal foliar diseases and impacted yield in late July through August. Crop scout information is very important to time the application.

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