



LEARNING CENTER 2011

at Monmouth, Illinois

DEMONSTRATION REPORT

RESPONSE OF FOLIAR FUNGICIDE APPLICATION TIMING BY CORN HYBRID

Multiple stresses can negatively affect corn plants throughout the growing season, which can reduce yield potential. Taking preventative steps to mitigate or lessen stress may help maintain or increase yield potential. A research study was conducted at the Monmouth Learning Center near Monmouth, IL to evaluate the use of a foliar fungicide applications and timing to mitigate stress caused by foliar diseases in corn.

DEMONSTRATION TESTING

A demonstration trial was conducted at the Monmouth Learning Center to assess corn yield response to foliar application of a strobilurin fungicide. The fungicide was applied to corn hybrids with various trait packages to evaluate different application timings.

Twelve corn hybrids ranging from 111-113 day relative maturity (RM) were selected for the trial. Of the 12 corn hybrids selected, two were Genuity® SmartStax®, five were Genuity® VT Triple PRO® and five were Genuity® VT Double PRO®. All products

were planted at a population of 36,000 plants/acre on May 3, 2011. Each individual plot was 1,100 square feet. Each corn hybrid received an application of the strobilurin fungicide at either V6, tassel (VT) or at both V6 + VT growth stages. An untreated check of each corn product was established for comparison.

Late-season plant health notes were taken by examining plants for staygreen, plant intactness, stalk lodging, and anthracnose infestation. Yield comparisons of the corn hybrids treated with a fungicide compared to the untreated hybrids are shown in Figure 1. Corn hybrids reported various responses to the different fungicide applications and timings.

SUMMARY COMMENTS

Foliar fungal disease pressure on corn was low in 2011, and overall corn hybrids were largely unresponsive to fungicide applications. Selected hybrids all responded differently to fungicide applications and different application timings. For example, hybrid A and I reported the highest yield when a fungicide was applied at V6 timing, hybrid D reported the highest yield when fungicide was applied at VT timing and hybrid E, F, G, J, and K reported the highest yield when fungicide was applied at V6 and VT timings (Figure 1).

When averaged across all hybrids, the foliar fungicide applications did not affect yield. However, the combined application of fungicide at V6 and VT growth stage provided the highest overall yield, but did not appear to be additive (Figure 2). When comparing the single fungicide application timings, yield results from the V6 application were higher by approximately 2.5 bu/acre when compared to the VT application timing (Figure 2).

It was also determined that plant health was not notably affected by the fungicide applications. The individual hybrids reported different staygreen ratings parameters with relation to the fungicide application timing (Figure 3). Certain hybrids reported an increase in plant health with the fungicide

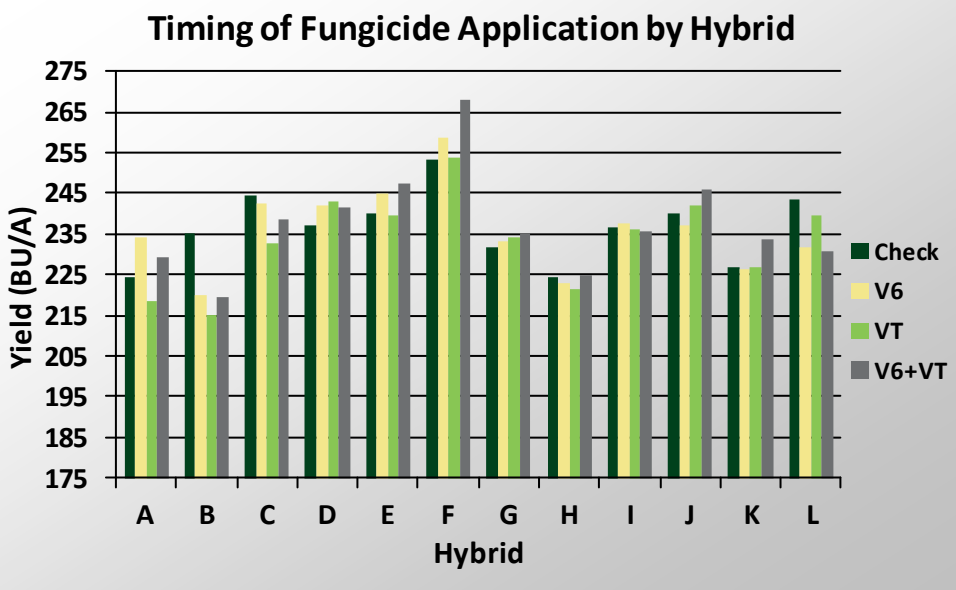


Figure 1. Corn hybrid yield response to different strobilurin fungicide application timings.

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Timing of Fungicide Application

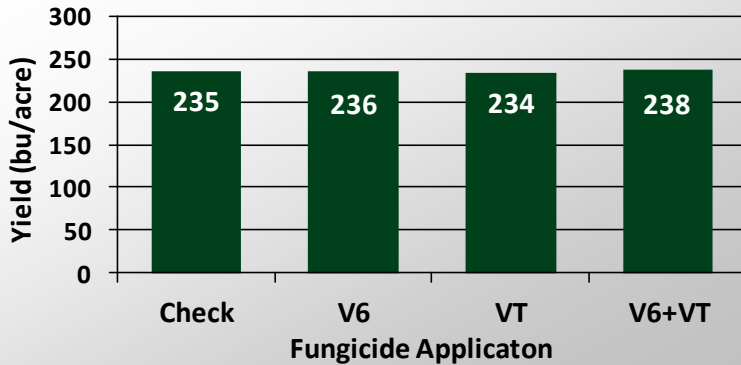


Figure 2. Yield response to strobilurin fungicide application timing across selected hybrids. Data represents average of 12 hybrids and two replications.

application as determined by staygreen evaluation, while other hybrids appeared to be unaffected by the fungicide application.

These results reinforce the importance of talking with local seed sales representatives about hybrid characteristics and fungicide products to determine the best fit for each individual field scenario.

The information discussed in this report is from a single site, non-replicated, one-year demonstration. This informational piece is designed to report the results of this demonstration and is not intended to infer any confirmed trends. Please use this information accordingly.

Timing of Fungicide Application by Hybrid

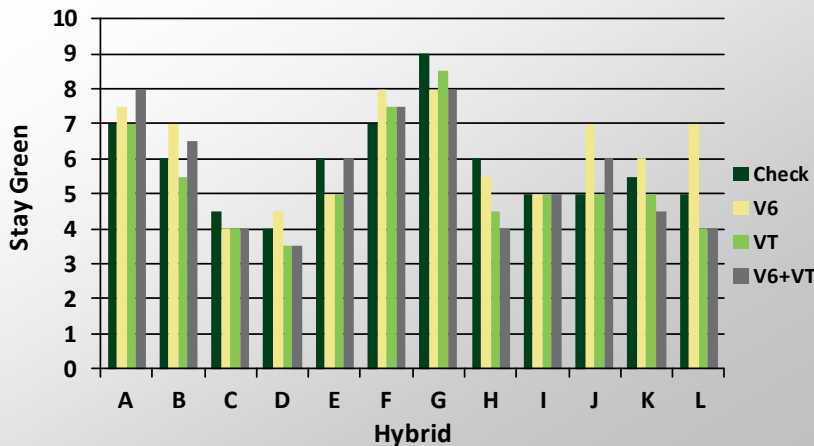


Figure 3. Staygreen response to strobilurin fungicide by hybrid and application timing. Data represents average of 12 hybrids and two replications.

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