



M & M Service Company



Bill Brink's Weekly Crop Report

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What is the Value of Foliar Fungicides?

I have had numerous questions recently about the value of foliar fungicides on both corn and soybean. Therefore, I did some searching to find out what research data has shown over the last few years, and here are the results of a long-term study (2007-2009) from Iowa State University for both corn and soybean. For corn, the results are as follows:

- For the total of 574 observations, the overall mean yield response was 4.04 bu/A.
- Yield response of small plot trials was 4.39 bu/A, compared with 3.89 bu/A for on-farm strip trials.
- The mean yield response in all years was similar: 3.42 bu/A (2007), 3.83 bu/A (2008), and 3.72 bu/A (2009).
- The mean yield response was higher in corn-following corn trials compared with corn-following soybean trials (4.54 bu/A compared to 3.96 bu/A).
- Applications at VT, R1 or R2 growth stages resulted in the highest mean yield response (4.12 bu/A, 4.21 bu/A, and 4.17 bu/A, respectively).
- Greater yield responses occurred with fungicides that contained a strobilurin alone (4.57 bu/A) compared with fungicides that contained a premix of a strobilurin and a triazole (2.85 bu/A). But it will be interesting to see if the trend continues, since the newer premixes contain roughly equivalent amounts of strobilurin active as the strobilurin alone fungicides.
- Mean yield response was greatest when disease severity in a field at R5 was high. If disease severity on the ear leaf at R5 was less than 5 percent, mean yield response was 4.83 bu/A, but when disease severity on the ear leaf at R5 was greater than 5 percent, the mean yield response was 9.46 bu/A.
- Based on the price of corn of \$3.72/bu and \$25 product cost, the breakeven yield response would be about 6.7 bu/A.

Here is the summary for their soybean study:

- For the total 831 observations, the overall mean yield response was 2.18 bu/A.
- Yield response of small plot trials was 1.67 bu/A, compared with 2.44 bu/A for on-farm strip trials.
- The mean yield response varied among years: 4.42 bu/A (2007), 2.37 bu/A (2008), and 1.46 bu/A (2009).
- Applications at R2 and R3 resulted in the highest mean yield response (2.32 bu/A and 2.42 bu/A, respectively). The mean yield response for an application at

R1 was 1.07 bu/A, while the mean yield response at R4 and R5 was less than 1 bu/A.

- The mean yield response was greatest for fungicides that contained a strobilurin, either alone (2.52 bu/A) or in a premix (2.13 bu/A).
- Disease ratings were not taken from all plots, but brown spot, downy mildew, Cercospora leaf blight and frogeye leaf spot were present in some, with brown spot being the predominant one. Mean yield response was greater when disease severity in a field at R5 was greater than 5 percent (1.79 bu/A) compared with a disease severity of less than 5 percent (0.68 bu/A).
- Based on the soybean price of \$9.48/bu and \$25 product cost, the breakeven yield response is about 2.6 bu/A.

The window of application for corn (VT-R2) has past for many fields; however, for the latest planted fields, there is probably still time. Actually, researchers feel the best response comes from the latest plantings.

For soybean, the recommended time of application (R2-R3) is fast approaching and may be already here for some fields. R2 is when the field has reached full bloom and the plants have one open flower at one of the upper 2 nodes on the main stem. R3 is the stage when plants begin podding and have small pods at one of the four uppermost nodes on the main stem.

I have talked to many producers about their fungicide experiences. Most have told me they feel they usually get their money back on corn and maybe a small yield increase over that amount. However, there are some at the extremes also—some producers feel there is a 10-15 bu/A yield increase and some have never used foliar fungicides.

If you are considering a foliar fungicide on either crop, talk to your M&M crop specialist, and he will help you make that decision based on scouting the field, the hybrid or variety disease resistance, weather conditions, planting date, and other factors.

Insect Outlook

The insect situation has been very quiet this year so far with only a few reports of black cutworm in April and early May. However, many farm magazines and newspapers are now mentioning the **western bean cutworm** as a potential problem on corn. Fortunately, this still continues to be a northern Illinois insect, and the fields most at risk are the sandy soils in northern Illinois. There are some traps in this area, but I have not heard of any significant catches.

Western bean cutworm is a new insect, which was first found in Illinois during the 2004 growing season. If present now, egg masses can easily be seen on upper corn leaves near the whorl of the plant. Early instars are dark brown, and as they mature, they turn tan, gray-brown, or pink-gray. A full-grown larva has three dark stripes on the upper surface of the segment just behind the head.

Soon after hatch, larvae leave the upper leaf surface and move to the whorl and feed on pollen in the tassel. But if tasseling has already occurred, they will begin feeding on silk tissue. As both corn and larvae mature, the larvae move into ears and begin feeding on kernels. After they move into the ear, treatment is very difficult. However, some Bt hybrids are somewhat effective as a control measure. There is only one generation per year, and they overwinter in the soil.

Western corn rootworm adult beetles and **soybean aphids** seem to be at very low densities so far this year. In fact, numbers for both insects being caught in traps has been fairly insignificant.

At this time last year, however, soybean aphids were not considered a threat, but aphid populations can build very rapidly. We will keep you alert of any insect problems that come up.

As always, if you have any crop production questions, contact your M&M crop specialist for his suggestions and advice.

Have a good week!