



# TWO-YEAR SOYBEAN FUNGICIDE TRIAL

A perennial interest, soybean yield response to R3 fungicide application has once again given us a few interesting things to look at. Across the Stewart Seeds footprint, diseases like frogeye leaf spot, Septoria Brown Spot, Anthracnose Stem Blight, and even Cercospora Leaf Blight are present nearly every year. The question everyone wants to know is – how much extra yield is out there if I use a fungicide to manage disease pressure? The last 2 years we’ve conducted on-farm fungicide research with Delaro® fungicide to look at what kind of returns could be expected and what varieties might give us the best response.

## MATERIALS AND METHODS

A variety of designs were used in making fungicide comparisons – large blocks, strip application, even application across variety plots. In each plot, we strive to obtain a high level of replication, regardless of the exact setup. Cooperators received enough Delaro® fungicide to mix a small batch in commercial sprayer and applications were made at the field scale. Where possible Climate FieldView™ was used to capture planting, in-season application, and harvest data. Yield data was recorded from calibrated yield monitors in many cases while it was weighed by weigh wagon at other locations.

## RESULTS AND DISCUSSION

While disease pressure varied across sites, the overall 2-year average yield response was + 5.6 bu/A (see Figure 1) for Delaro® fungicide applied around R3 (early pod) in 2017 and 2018. Harvest moisture was not affected by fungicide application. In 2017, soybeans receiving R3 application of Delaro® yielded 5.1 bu/A more than the Untreated Control, while this year the advantage

was 6.7 bu/A. In areas of our geography, frogeye leaf spot came in hard late (see Figure 2) and contributed at least some to this advantage. The warm, moist, humid finish to the season also provided an opportunity for a host of other diseases such as Anthracnose and Pod and Stem Blight to contribute to the yield loss without fungicide protection. If we plug in a \$30/A cost for fungicide and application fee and \$8.50 soybean commodity price, there was a little over a \$24/A benefit<sup>1</sup> to spraying

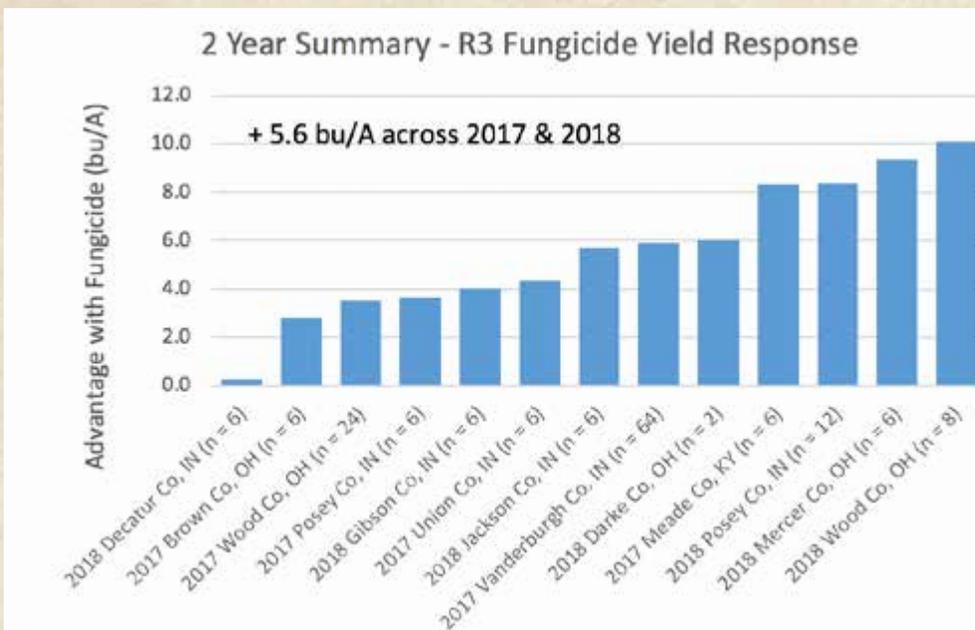


Figure 1. Yield response to R3 application of Delaro® fungicide by location – Year, County, and State are given, n = the sample size at each location.

<sup>1</sup> \$30/A fungicide price covers the high side of chemical plus application fees: <https://www.farmprogress.com/story-check-cost-fungicide-application-corn-soybeans-9-144794>  
\$8.50/bu soybean price used = most recent USDA monthly average at time of writing minus \$0.10



Delaro® in 2017 and 2018. Top individual finishers for response to fungicide (many of these were also extremely high yielding varieties at individual sites) were 4228R2X, 3827R2X, 3928R2X, 2827R2X, and 3337R2X all of which (except 3337R2X where the gain was non-significant) posted significant ( $p = 0.05$ ) 9+ bu/A gains at an individual site! If you're looking for the next way to break the yield plateau in your soybean fields, you may want to look at Delaro®. While you're at it ask a Stewart Seeds representative about our 2019 Roundup Ready PLUS® incentives program!



*Figure 2. Frogeye Leaf Spot pressure came in heavy later in the season in some areas this year. Pictured is Frogeye on 3527R2X (a soybean with average partial resistance at a "5") near Shelbyville, IN on August 15th.*

