



PLANT HEALTH CHALLENGE NEWSLETTER

On Twitter @Air_Tractor, #PlantHealthChallenge

BASF PRODUCT UPDATE

Plant Health Products Increase Harvestability

Note: This is the third installment in a three-part series on the difference between fungicides and plant health products.

The words fungicide and plant health are often used interchangeably, and immediately many growers think of disease control. However, while all fungicides are designed to provide some level of disease control, only a few provide plant health benefits above and beyond disease control.

In previous articles, we discussed the BASF EPA plant health label, stress tolerance and growth efficiency. In this last part of the series, we are going to

look into harvestability and yield.

Harvestability is the level of difficulty you have in harvesting your crops. So obviously, the easier it is to harvest your crop, then the better your harvestability. The plant health pieces we talked about in the last two weeks directly contribute to harvestability. A plant subject to lower stress and more photosynthesis and nitrogen assimilation will have stronger, healthier stalks.

When considering the advantages of stronger stalks, we only need to look back to 2018. Last year was a prime example of when improved harvestability due to plant health was



This week's GDU indicator

evident. A late harvest and wet fall conditions led to many fields being harvested four, five or six weeks after they would normally have a combine in the field. Corn fields that looked

Continued on next page

2018 CORN PHC SHOWCASE

Priaxor® Boosts Yields, Protects Against Windstorms

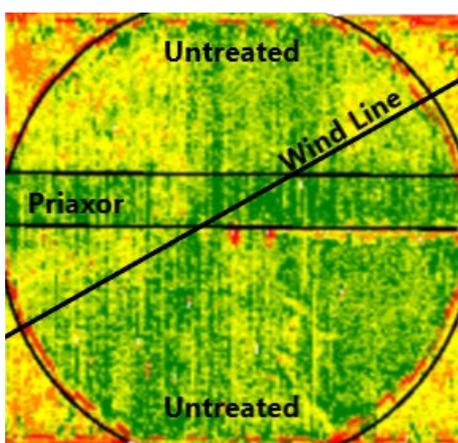
Field Location: Franklin County

Plant Date: 04/28/19

Seed: AgVenture 8614YHB, Pioneer 1311, Dekalb 64-35

Treatment & Timing: Pre-tassel Priaxor® 4 oz. at 1,103 GDU

This week, we look back on a Franklin County pre-tassel PHC. At approximately 1,103 GDUs, a pre-tassel aerial application of Priaxor® fungicide was made to this field. That would have put this corn somewhere between the V15-V18 stage of development at the time of treatment. Originally, we had planned on following this pre-tassel application of fungicide with a tassel time treatment of Headline AMP. However, a disease threshold was never met on this field and the Headline AMP was never applied. The only fungicide treatment that this field



received was on the 20-acre PHC strip.

Roughly 4-5 days after treatment, a thunderstorm came through this area carrying significantly high wind velocity. When you look at the yield map below, you can see the impact of this wind on the north half of the field. However,

within our 20-acre strip of Priaxor®, the corn was able to withstand the high wind speeds much better due to improved standability and overall plant health. This is another great example of the plant health benefits that BASF fungicides provide in addition to disease prevention.

This PHC strip yielded 15.29 bushels better than the untreated portion of the field. Using a local December corn price of \$4.20, a 15.29-bushel increase provided this cooperators with a 170% return on investment after recovering the cost of treatment.

In terms of total dollars returned, the 20-acre strip of Priaxor® put an additional \$40.47/acre in this producer's pocket.

— Tony Marquardt

NEBRASKALAND AVIATION

A SUCCESSFUL 2019 CROP

BASF PRODUCT UPDATE

Plant Health Products

good in the beginning of October were complete messes in November. The stalks couldn't maintain their integrity into November and fell down, forcing some growers to harvest in one direction or slow down the combine.

When you slow down the combine, it costs more money due to lost efficiency. Higher fuel cost, more separator hours, more hours for the hired hand, it all adds up. We captured many images of the harvestability difference between treated and untreated plants in the 2018 Plant Health Challenge. Time and time again, the benefits of plants still standing and improved harvestability were easy to see. (See Image 1)

Now onto the final and most important piece of the puzzle — yield. If the benefits of plant health weren't already enough, the best part of BASF fungicides is the increased yields or yield protection.

The plant health activity we have discussed leads to impacting the plant in a positive manner so that it can preserve the yield potential of your corn, soybeans or wheat. Again, yield increases are not something we have only seen in one year or one location, but it is repeated year after year. In 2018, the Plant Health Challenge (PHC) encompassed 10 counties, 50 cooperators and more than 4,500 acres. After a lot of hard work to collect more than 5,000 data points on 150 trials in the PHC, the results that came back were right in line with results BASF has been observing all across the state for the last six years. (See Table 1)

The return on investment (ROI) for pre-tassel and tassel applications in corn as well as R3-R4 applications in soybean shines through in the plant health challenge results. These results are not an accident or luck, but rather a



Image 1: Headline Amp improves yield and harvestability.

Table 1

Application Timing	PHC Results (2018)	BASF Results (2012-2018)
Corn Pre-Tassel	5.9 Bu/A	5.7 Bu/A
Corn Tassel	12.5 Bu/A	13.1 Bu/A
Soybean R3-R4	3.5 Bu/A	5.1 Bu/A

reflection of what repeat users of BASF plant health products learned a long time ago: the yields, the harvestability and the plant health benefits far outweigh the cost.

Tye Marquardt has a great presentation on the return on investment piece of the plant health applications, and many of you have probably already seen it. For example, using his own data from the PHC, he is able to show that corn would have to drop to \$1.85/bu or less before you did not see any ROI with a tassel application of BASF plant health products.

While diseases are important and they do impact yield, they are not prevalent every single year. Using a fungicide that provides plant health benefits as well as excellent disease control is the difference maker year in and year out. Remember... when you use a plant health product like Headline Amp®, Priaxor® and Nexicor™, you know you are getting a product that has been proven in the field and is backed by years of research.

— Brady Kappler,
BASF Technical Services Rep.

NEBRASKALAND AVIATION

WHEAT UPDATE

2019 WHEAT UPDATE

Nexicor™ Treatments Fight Against Stripe Rust

In the last week, you have probably noticed an influx of aircraft in the sky. With the spread of Stripe Rust headed our way, our pilots have taken to the air to protect producers' investments.

Losses of 40 percent can be common with some fields totally destroyed. It is a major disease of fall seeded wheat in regions with cool damp nights. Severe losses result when spikes are infected. Producers have been treating their fields with Nexicor™ fungicide this last week to keep Stripe Rust out.

Wheat continues to go through the heading and flowering growth stages across central Kansas and Nebraska. Depending on the weather and the variety, flowering usually occurs about 3-5 days after full head emergence



Stripe rust was found in a Kearney County wheat field.

(Feekes 10.5) – earlier under warmer conditions and delayed by up to 5 or more days after heading under cooler

conditions. Flowering is marked by the extrusion of anthers from the spikelets; the reason for which this process is also referred to as anthesis.

Flowering will continue over the next 7-10 days. The identification of this growth stage is important to manage Fusarium head blight (head scab) with fungicides.

We will have some good imagery starting to show up in the wheat. Multiple trials have been placed to ensure we get the best ROI for the producer. If you have any questions about treatment or are curious if there is still time to protect your crop, please give us a call.

— Jeff Landen

2018 SOYBEAN PHC SHOWCASE

Priaxor® & Fastac® EC Treatments Result in 55% ROI

Location: Kearney County

Plant Date: 05/07/18

Seed: Channel 2416R2X

Treatment & Timing: Priaxor® 4 oz. + Fastac® EC 3.8 oz. at R3

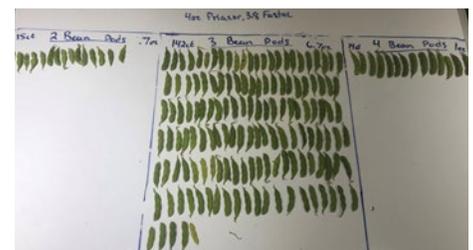
With many soybeans now emerged, it is a great time to take a glance back at one of our soybean Plant Health Challenges from 2018.

This Kearney County field received a PHC treatment on July 15. The treatment included two ingredients, Priaxor® fungicide and Fastac EC® insecticide. We timed this application for the R3 growth stage, as soon as one pod on the uppermost four nodes of the soybean plant measured 3/16" long. This is critical growth stage in a soybean plant's lifecycle, due to

the fact that it will abort anywhere from 60-75% of its flowers. As stress increases, so does the rate of flower abortion.

By applying Priaxor® fungicide in combination with Fastac EC® insecticide, we mitigate stress and help maximize the number of pods that a soybean plant is able to produce. This was very apparent in our scouting efforts (seen at right). We found that three of the treated plants in this field had produced 142, 3-bean pods weighing 6.7 oz. Untreated, our three check plants only counted 103, 3-bean pods weighing 5.4 oz. This amounted to a 5.46-bushel difference at harvest and a 55.42% ROI after recovering the cost of treatment.

— Tony Marquardt



Treated Soybeans



Untreated Soybeans

WHAT TO EXPECT THIS WEEK

Watch for Stem Rot, White Mold in Soybeans

R1 Plant Health Challenge treatments in soybeans are coming up later this month. When there is one open flower at any node on the main stem, we have reached R1. Narrow rows and tight canopy can be the ideal environment for disease. Sclerotinia stem rot or White Mold infections begin when a fungus feeds on senescing flowers but isn't usually identified until later in the season. While we are not making broad recommendations to treat at this time, we are looking forward to the results from these PHC trials using Endura® Fungicide.

Dicamba tolerant soybeans planted prior to April 24 are now off label for dicamba treatments. The label states that these products should not be applied after bloom (R1) or 45 days after planting, whichever comes first. Overlapping layers of maximum rate residuals are the best solution. On later planted soybeans, our goal is to have our second layer of residuals down 21 days after planting and the third layer applied 14 days after the second. This schedule provides a combined 10 days to work around wet field conditions and wind.

On Tuesday, corn planted on April 19 had accumulated 432 GDU and had reached the V5 growth stage. At this growth stage, the growing point has reached the surface, the tassel and uppermost ear have initiated and soon the kernel row numbers will be determined. Our job is to preserve yield by keeping our plants healthy for the



Corn planted April 19 has reached the V5 growth stage and 432 GDU.

remainder of the growing season. At this time, our PreT corn treatments are projected to occur between June 28 and July 4.

Post corn spraying continues to be delayed by rain while good growing conditions are speeding up corn development. Palmer Amaranth emergence will require a growth regulator in the tank for

most treatments. In about 7 days, corn planted on April 19 will begin to grow rapidly while herbicide from applications today will still linger and could cause brittle stalks. After corn reaches 4" in height, we recommend the safest growth regulator on the market, Status® Herbicide. Status can be applied on corn up to 36" tall.

— Tye Marquardt



We Can Help Control Mosquitos!

If you are interested in mosquito control around your home or for a special event, call us.