

Burrus Buzz

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MyFarmsSM Gray leaf spot tool

by Josh Gunther

Burrus is continuing to use the Crop Optimization Planner (COP) by MyFarmsSM that combines proprietary product knowledge collected by the Burrus research team with data provided by growers to help manage and improve crop production. One tool that Burrus and MyFarms continues to improve is our Gray leaf spot Alert System. This tool is designed to alert a grower to scout for Gray leaf spot when it would be most beneficial. By using this tool, growers can best manage their time by scouting fields that are the most crucial to scout.

The Gray leaf spot Alert System categorizes every field into three different groups: green, orange, and red. Every field starts the growing season in the green category, which means there is a low level of concern for development of Gray leaf spot. A field will move into the orange category when there is a moderate level of concern for the development of Gray leaf spot. If there is a high level of concern for the development of Gray leaf spot, the field will move into the red category.

Once a field moves from the orange category to the red category, the grower will receive an email alert/suggestion to scout for Gray leaf spot pressure in those fields. Burrus recommends growers scout fields in the orange category at least once a week and if that field moves into the red category, the grower should scout those fields at least twice a week.

The MyFarms Gray leaf spot Alert System works by using the basic disease triangle. For a disease to thrive it needs three things: a host, a pathogen, and an environment. The Alert System is designed to look at all three of these key elements to predict where and when growers will see Gray leaf spot.

For the host element of the disease triangle, MyFarms looks at the Gray leaf spot rating assessed by the Burrus research team and how susceptible that hybrid is to the disease. It will also take into account the expected growth stage estimated by Growing Degree Days since planting. Turning Planting Plans into Planting Records so MyFarms has a planting date from which to calculate GDD.

For the pathogen component, MyFarms takes into account the previous year's crop and the volume of residue expected since the fungus over-winters in corn residue.

In relation to the environmental factor, the program takes into account rainfall totals, humidity levels, and temperatures for the field in question. Because the environmental factor is constantly changing from day to day, it might cause a field to change back and forth between the orange and red categories resulting in multiple emails to the farmer about the same field.

To maximize the rate of return on fungicides, a farmer needs to decide if and when they will apply fungicides. The timing of fungicide application becomes very important to stop the spread of Gray leaf spot and minimize yield loss, but at the same time, no one wants to increase input costs unless it is truly merited. The only way to determine if and when to spray fungicides is to scout your fields. There is no substitute for time spent in fields looking for disease pressure on crops. The Gray leaf spot Alert System is not intended to provide recommendations for fungicide applications. It is merely intended to help optimize a grower's time scouting fields.

When scouting for Gray leaf spot, keep in mind that the fungus does over winter in residue. You will see the disease starting from the lower leaves on the plant. The fungal pathogen prefers wet weather and temperatures around 75-85 degrees F. It can take 1-2 weeks for the symptoms to become evident on the leaves after fungal spores infect the underside of the leaves. Gray leaf spot appears as rectangular tan to grey lesions starting on the lower leaves and spreading up the plant.

If the disease is present in the field in question, it is imperative to assess the pressure and continue to monitor the spread of the disease. If 50% of the corn plants in the field are showing symptoms of the disease on the third leaf below the ear or higher for a period of time before or after corn tassel, you might consider a fungicide application. If you are unsure if a fungicide application is necessary, please contact a Burrus agronomist.

