

Hardin County Extension News Release

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Tar Spot: Mid to Late R-Stage Fungicide Application

Hardin County – As of a week ago, most of the corn across the state of Ohio was between the late-R1 (silking) and late-R3 (milk) growth stages, with a few late-planted fields at late vegetative stages. Concerns about tar spot, but more likely, a sense of security provided by relatively high grain prices have led to several fields being sprayed with a fungicide at or shortly after R1 and questions being asked about spraying additional fields that are now at mid reproductive stages (between late-R2 [kernel blister] and R3 [milk]) of development. Concerns about tar spot are understandable, given how widespread the disease was last year (2021) and the level of damage it is capable of causing. However, the basic approach for tar spot management in Ohio should be no different from the approach commonly recommended for managing other, more common foliar, fungal diseases such as gray leaf spot. You have to scout fields, monitor the weather, and if needed, apply the fungicide when it is most likely to be effective, without violating label restrictions.

So far this season, the amount of tar spot being reported has been considerably lower than what we saw at a similar time and growth stage in 2021. However, it has been identified in Hardin County this growing season after being identified in the county for the first time this past year. Does this mean that your R2-R3 corn is no longer at risk for tar spot? In places where the disease is endemic (hot spots where lots of spores may be readily available), a susceptible hybrid is planted, and weather conditions are favorable (moderate temperatures and wet and humid), tar spot may still develop and spread quickly after R3. However, under conditions less favorable for tar spot development (cool and dry) where spores need to blow in from outside, the crop is at lower risk for tar spot, even if symptoms begin to develop at R3. So, the short answer is, if you planted a susceptible hybrid no-till or minimum-till in a corn field that had tar spot last year, and weather conditions become highly favorable over the next few weeks, your crop could still be at risk.

In scouting my R2-R3 corn field for tar spot, should I focus my attention on the lower or upper leaves? If you planted corn-after-corn in a no-till field that had tar spot last year, the lower leaves will likely be the first to become infected and develop symptoms. However, in cases where spores have to be blown in from neighboring fields or regions, symptoms may develop first on leaves in the middle and upper portions of the plant. But it is not always easy to determine where the spores are coming from, and as such, where symptoms will develop first. In addition, depending on the weather, it may take several days or weeks after infection for symptoms to develop. So, when scouting for tar spot, examine the entire plant. Begin at the edge of the field where more spores are likely to be deposited and work your way towards the center, examining plants at regular intervals as you go. Do this in multiple areas of the field.

If I scout and find tar spot, I did not spray at R1, my corn is now at R3, and the forecast is for wet, rainy weather over the next several days, would I benefit from spraying a fungicide now at R3? Based on data from neighboring states, fungicides do show promising results against tar spot, particularly those with multiple active ingredients.

Applications made between R1 and R2 tend to give the best results in terms of tar spot control and yield response, but you may still see a benefit from an R3 application, particularly if the disease comes in late, the hybrid is highly susceptible, and the wet weather persists for several weeks. Prolonged and extended wet conditions during the latter half of the season seem to favor tar spot. However, keep your eyes on the fungicide preharvest interval. Most of the 2- and 3- active ingredient fungicides that are among the most effective against tar spot have preharvest intervals greater than 20 days. Always read and follow the labels.

Article written by Dr. Pierce Paul, OSU Extension-Corn Disease Specialist and edited by Mark Badertscher, OSU Extension-Hardin County.

Photo caption: Tar spot identified in Hardin County field corn on August 16, 2022.