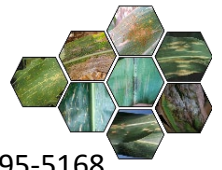




Purdue Field Crop Quick Disease Guide

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Tar Spot of Corn

If the farm saw severe tar spot.

1. **Watch the tracking map to know when the disease is first active in Indiana.** (<https://indianafieldcroppathology.com/>)
2. **Download the Tarspotter app** to help with determining if the weather conditions are favorable for tar spot to develop in your fields. (<https://ipcm.wisc.edu/apps/tarspotter/>)
3. **Scout, scout, and continue to scout** your fields.
4. **Make informed fungicide decisions.** Only in 2021 did our research trials show a benefit of two application at V10/V14 with a follow up application 3 weeks later. We have seen severe disease every season in Porter County, except in 2022 – yield impact will all depend on when the disease starts. In 2019 and 2020, we DID NOT see a benefit of a second fungicide application, that is why it is important to monitor and scout.
5. As for a fungicide timing window **VT-R2 has consistently provided good protection** with a single application program.
6. We need to make an informed decision on our fungicide use not only for ROI, but also for fungicide stewardship to make sure we aren't increasing risk for fungicide resistance to develop.
7. No, it will not be cost effective to apply fungicide every year. I suggest being flexible and it is important to understand how severe the disease was on your farm. The environmental conditions play a significant role in how fast tar spot develops.



A summary of what we have learned thus far.

Tar spot will continue to be an issue in Indiana

- Severity level will be a function of the hybrid, weather, and when epidemic initiates in the season.
- The 2021 epidemic was problematic, because tar spot started in some fields before tasseling.
- Fungus driven by weather – a wet July in 2021 compared to 2019, 2020, and 2022.
- Varying levels of tar spot occur across region due to weather.

The tar spot fungus can overwinter in the upper Midwest

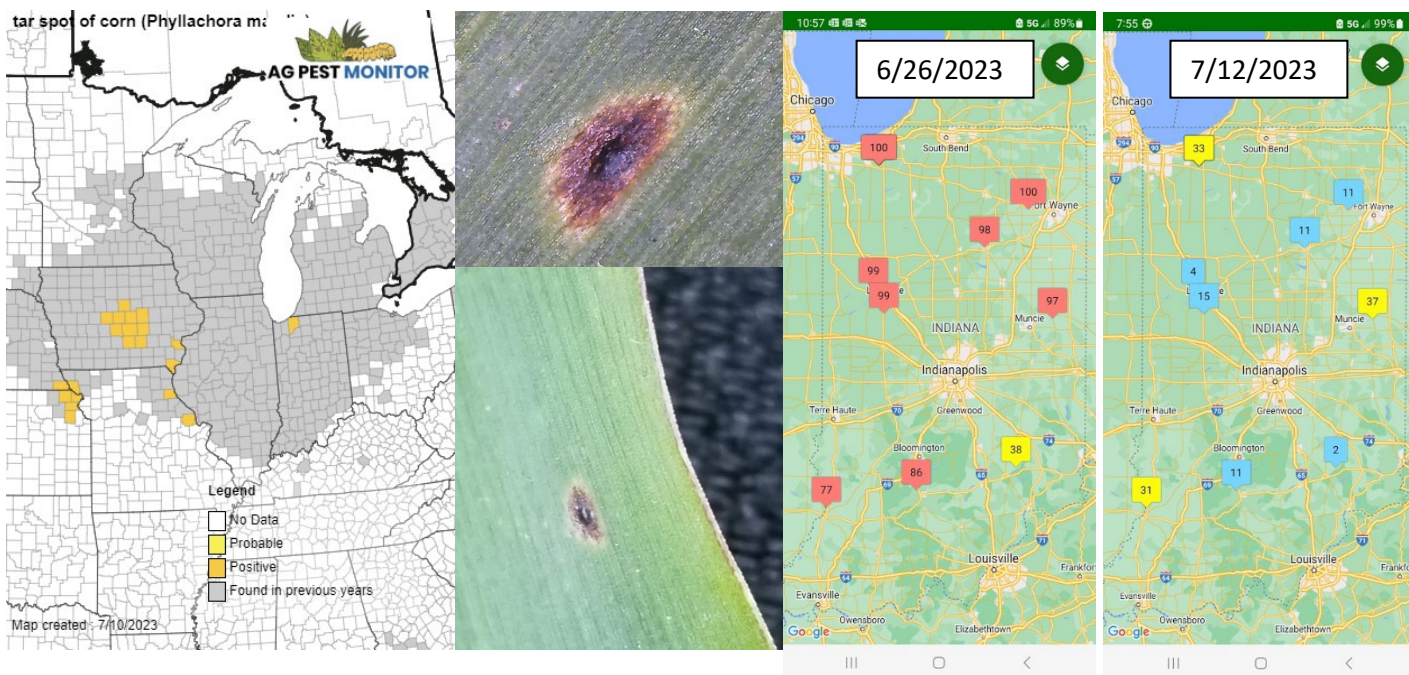
- We now have high inoculum levels in many locations in northern Indiana and other pockets.
- Weather is key (water and irrigation management).
- Rotation/tillage may help a bit, not a sole solution due to the aerial movement of the spores.
- Tar spot inoculum (spores) can travel long distances.

Some hybrids are more resistant than others

- Strong hybrid resistance can be overcome by a favorable disease environment.

Fungicide application can reduce tar spot severity

- Product is important, use multiple modes of action.
- Application needs to occur close to the onset of the epidemic
- Number of applications and optimal timing are going to vary by year. If just spraying once and not interested in prediction, VT-R2 has been most consistent timing in Indiana.



Tar spot map from 7/12/23 and Tarspotter forecast for Indiana locations on 6/26/2023 and 7/12/2023. – red means favorable environmental conditions for the disease at the end of June through July, but as of 7/12/2023 the conditions have become less favorable.

What you can do?

1. Assess your risk – is the disease endemic in your area? Did you find it in your fields? If so, how severe did tar spot get at the end of the season?
2. Talk to your seed salesmen about hybrid resistance – evaluate the hybrids on your farm at the end of the season.
3. Scout and monitor your fields throughout the season.
4. Use these tools if you have fields at high risk and are going to apply fungicides.
 - a. Fungicide efficacy tables and Extension research reports (see links below)
 - b. Use the Tarspotter App to monitor for conducive weather conditions
 - c. Follow the map to learn when tar spot is active new your county
5. Leave check strips if you try a new management strategy.
6. Don't forget about the other diseases – new and established (gray leaf spot, southern rust, ear and stalk rots, etc.).

Resources:

- **Purdue Field Crop Pathology Extension Website:** for in-season updates, the tar spot and southern rust maps and other resources. <https://indianafieldcroppathology.com/>
- **Crop Protection Network:** <https://cropprotectionnetwork.org/> - tar spot publications
- **Tarspotter Apps:** <https://ipcm.wisc.edu/apps/tarspotter/>

Free Indiana Samples to Purdue Plant Pest Diagnostic Lab

Corn foliar diseases – funding to cover sample processing costs – put Telenko on the form. <https://ag.purdue.edu/departement/btny/ppdl/submit-samples/submit-sample.html>

