

Identifying Tar Spot in Corn

Tar spot is a relatively new disease to the United States. While tar spot alone is not known to cause economic damage, when it is present with another disease (*Monographella maydis*), a disease complex is formed which may cause yield losses. Samples should be sent to a laboratory to confirm the presence of tar spot.

What to Consider

Tar spot is a corn disease caused by the fungus *Phyllachora maydis*. It was first confirmed in the United States in 2015 in Illinois and Indiana, and has since been confirmed in surrounding states, including Iowa, Wisconsin, and Michigan. Infection and disease development are favored by cool, humid conditions with extended periods of leaf wetness.

Symptoms of Tar Spot:

- Symptoms begin as oval to irregular bleached to brown lesions on leaves in which black spore-producing structures called ascomata form (Figure 1).
- Black spots that cannot be rubbed off on the leaf.
- Lesions protrude from the leaf surface, giving affected leaf areas a bumpy feel.
- Lesions may coalesce to cause large areas of blighted leaf tissue, which can be mistaken for saprophytic fungal growth on dead leaf tissue.
- Symptoms can also be present on leaf sheaths and husks.



Figure 1. Symptoms of tar spot.

Impact on Yield

Tar spot alone is not known to cause economic damage. However, when tar spot (*P. maydis*) is associated with another fungus, *Monographella maydis*, yield losses can occur. This is known as the tar spot complex, which can be found in Latin America. To date, *M. maydis* has not been found in the U.S.

While the potential impact of the disease is still being determined, late-season agronomics are currently being evaluated in many fields infected with tar spot.

Management Options

Farmers should scout and prioritize fields for harvest as tar spot may contribute to weaker stalks later in the growing season. Though the disease does not typically cause significant economic damage, in 2018, some parts of the upper Midwest have had higher-than-usual levels of the disease, leading to poor late season standability, and in some cases, potentially yield loss.

Since the symptoms of tar spot can easily be confused with other diseases, like saprophytic fungi or corn rust, it is important to get a laboratory diagnosis. If you suspect tar spot please contact your local agronomist to collect a sample for diagnostics.

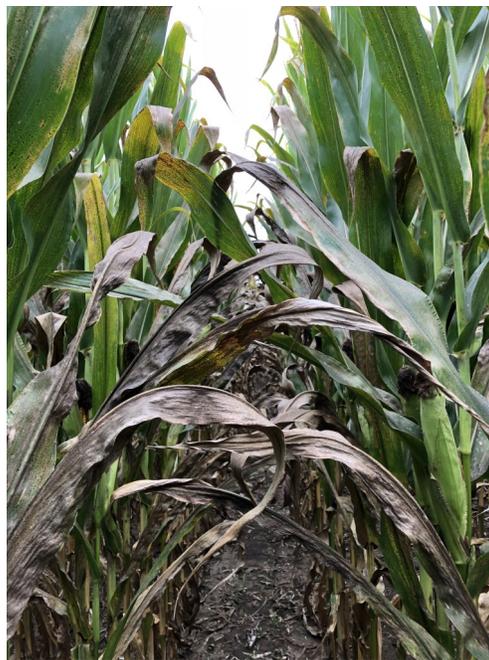


Figure 2. Heavy tar spot infestation in corn field.

Sources:

- ¹ Wise, K. and Ruhl, G., Creswell, T. 2016. Diseases of corn. Tar spot. BP-90-W. <https://www.extension.purdue.edu>
² Robertson, A., Zaworski, E. 2016. Tar spot confirmed in corn in eastern Iowa. Iowa State Extension. <https://crops.extension.iastate.edu>
³ Chilvers, M., McCoy, A., Byrne, J. 2017. Corn tar spot confirmed in Michigan. Michigan State Extension. <http://msue.anr.msu.edu>
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