Identify the Risk

There are corn leaf diseases that need immediate treatment to protect and maximize yield. However, there are a lot of blotches and spots that won’t harm yield, but could easily be mistaken for more serious diseases. Much attention is given to diseases that require treatment, but it’s just as important to know which ones don’t require treatment. Here’s how to tell the difference.

Physoderma Brown Spot

Physoderma is a fungus that appears in years with above average rainfall. Infected leaves have numerous, small round or oval spots approximately ¼” in diameter. These spots are yellowish to brown and usually occur in broad bands across the leaf and can be misdiagnosed as eyespot. Look for dark purple to black oval spots on the leaf midrib to distinguish Physoderma from eyespot.

These dark colored spots can also be seen on the stalk. In rare cases, Physoderma brown spot will infect the stalk rind near the base of the corn plant, making it susceptible to breakage.

Many fungicides are labeled for Physoderma brown spot but economic thresholds have not been established. If over 50% of plants show leaf symptoms and rain is in the forecast, treatment might be warranted to protect healthy leaf tissue.

To learn more, click on the following link to a recent Iowa State article on this unusual fungal disease.

http://crops.extension.iastate.edu/physoderma-brown-spot-and-stalk-rot

Purple Leaf Sheath

Purple leaf sheath blotches are seen every year in corn. It’s caused by pollen that collects in the leaf axil where the leaf connects to the stalk. Secondary fungi feed on the pollen and the adjoining leaf area resulting in dark colored irregular shaped blotches. If you peel the affected leaf tissue, you will notice that the stalk tissue below is not affected. Although unsightly, purple leaf sheath poses no threat to corn yield.
Corn Blotch Leafminers

Sometimes an insect’s name perfectly describes it. That is the case for the corn blotch leafminer. The adult phase of this insect is a small fly that lays eggs in corn leaves. The eggs hatch into small larvae that feed in between the leaf surfaces resulting in irregular shaped, nearly translucent areas. In some cases the puncture wounds caused by the leafminers will appear as numerous small, rectangular, white spots that some people confuse for the onset of gray leaf spot. It’s extremely rare for corn blotch leafminers to cause enough damage to impact yield.

Conclusion

These blotches and spots are very common in corn fields every year, but they rarely cause economic damage. Physoderma brown spot can lead to stalk lodging in extreme cases, so it’s important to continue monitoring that disease throughout the fall.

These look-alikes can easily be mistaken for other, more threatening diseases like gray leaf spot, northern corn leaf blight, or eyespot. If those diseases are found on over 50% of plants they’re likely to cause economic damage, and a fungicide application should be considered to protect yield potential. The ability to identify and differentiate these blotches and spots from more damaging diseases will ensure fungicide applications are only used in fields that can provide the best return on investment.