Cercospora Leaf Blight and Purple Seed Stain

KEY POINTS

- Warm temperatures and humid or wet conditions favor Cercospora leaf blight development.
- Foliar infection can cause premature defoliation and infected plants can produce seeds with a purple stain that may have reduced germination and vigor.
- Management options include fungicide applications, tillage, and crop rotation.

Topic

Cercospora leaf blight, caused by the fungus *Cercospora kikuchii*, can survive and overwinter on plant residue and infected seed. Warm temperatures (75 to 80°F) and humid or wet conditions favor *Cercospora* spore development. Spores can be spread by wind and rain to new soybean tissue where infection occurs. Other factors that can favor development include poor drainage, high plant densities, and poor air circulation.

Effect

During seed set, the upper leaves of infected plants become dark red, orange, or bronze colored and leathery in appearance (Figure 1). Infected leaves have very small, dark lesions on or near major leaf veins and on petioles. This condition can lead to premature defoliation. Other conditions that can commonly be confused with Cercospora leaf blight include sunburn and early senescence.

When the fungus grows into the upper vein on a pod, seed can become infected, resulting in purple seed stain (Figure 2). Purple seed stain may range from tiny purplish marks to blotches covering most of the seed. Planting infected seed the following year can result in reduced germination, emergence, and vigor.

The potential for the disease to reduce yields ranges from very low to substantial depending on the timing of disease onset, the speed of development, and environmental conditions.

Action

In-season. Management during the growing season may include the application of a labeled foliar fungicide. Fungicide applications should be based on disease severity and timing. Applications for late-season diseases are generally made between growth stages R3 and R5 (pod development stages). Spraying fungicides after plants reach full maturity, or after R6 growth stage, is generally not recommended.

Next season. When planning for the next growing season, consider management tools such as tillage and crop rotation, which can help reduce disease inoculum, and use certified disease-free seed.

Sources:

Web sources verified 10/15/18. 150814104521

Performance may vary, from location to location and from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the grower’s fields. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. 150814104521 101618DLB