

Cercospora Leaf Blight in Soybean

Symptoms of *Cercospora* leaf blight (*Cercospora kikuchii*) can begin to appear later in the growing season. Correctly identifying this foliar disease can help determine potential actions this year and impact future management and seed placement plans.

Plant Symptoms

Leaves. During seed set, the upper leaves of infected plants become dark red or orange and leathery in appearance¹ (Figure 1). This condition can lead to premature leaf defoliation. Other diseases or conditions that can commonly be confused with *Cercospora* leaf blight include sunburn, sudden death syndrome, early senescence, or pod and stem blight².

Seed. Infection of the seed can result in purple seed stain, which appears as purple blotches on the seed that may range from tiny marks to covering most of the seed¹ (Figure 1). Planting infected seed the following year can result in reduced germination, emergence, and vigor.

Development

Cercospora leaf blight is caused by a common soilborne fungus (*Cercospora kikuchii*), which is related to the fungus that causes Frog-eye leaf spot (*Cercospora sojina*)¹. *Cercospora* can survive and overwinter on plant residue and infected seed. Warm temperatures (75 to 80° F), and humid or wet conditions favor *Cercospora* spore development². Spores can be spread by wind and rain to new soybean tissue where infection occurs². When the fungus grows into the upper vein on a pod, seed can become infected, resulting in purple seed stain².

Other factors that can favor the development of *Cercospora* leaf blight include poor drainage, high plant densities, and poor air circulation². Disease severity can vary by soybean variety.

Yield potential is generally not reduced by the leaf blight or seed infection². Severe seed infection can result in dockage of grain delivered to the elevator².

Management

In-season. Management in-crop may include an application of a foliar fungicide such as Headline® fungicide. Deciding



Figure 1. Leaves of plants infected with *Cercospora* leaf blight can have an orange and leathery appearance (left). Purple seed stain can be a result of seed infected with *Cercospora kikuchii* (right).

whether to spray can be a tough decision; one that should be based on disease severity and timing. Fungicide applications for late-season diseases are generally made between R3 and R5 (pod development stages). Spraying fungicides after plants reach full maturity, or after R6, is generally no longer necessary and not recommended.

Next season. When planning for the next growing season, consider management tools such as tillage, crop rotation, and variety selection¹.

Sources: ¹ X.B. Yang. *Soybean Cercospora diseases show up. Integrated Crop Management. Iowa State Univ. IC-492(17). July 26, 2004.*

² *Cercospora leaf blight. Plant Health Initiative. <http://www.planthealth.info> (verified 9/26/2011).*