



**Science
Societies**

Identifying and managing Cercospora leaf blight in soybean: From scouting to best management practices

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This photo shows differences in the incidence and severity of Cercospora leaf blight (CLB) symptoms between germplasm lines (top), a soybean leaf with severe CLB symptoms (bottom left), soybean seed showing symptoms of a disease caused by the same species of CLB (bottom middle), and petioles of soybean plants exhibiting symptoms of CLB (bottom right).



Cercospora leaf blight (CLB) is a major disease that can significantly decrease soybean yield and grain quality. To aid practitioners, this article describes how to identify and manage CLB, which is caused by several *Cercospora* species. Symptoms of CLB on leaves, pods, and soybean seeds, which often appear late in the season, are described. Readers will also learn about environmental conditions (including humidity and temperature) that favor disease transmission, as well as how to properly collect samples for accurate diagnosis.

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1. What is the predominant causal agent associated with Cercospora leaf blight (CLB) in the southern United States?

- a. *Cercospora kikuchii*.
- b. *Cercospora cf. flagellaris*.
- c. *Cercospora sojina*.
- d. *Septoria glycines*.

2. Approximately how much soybean yield loss was attributed to CLB in the United States in 2024?

- a. 0.5 million bu.
- b. 1.2 million bu.
- c. 2.0 million bu.
- d. 3.15 million bu.

3. CLB symptoms are typically first observed during vegetative soybean growth stages.

- a. True.
- b. False.

4. At what soybean growth stage do visible CLB symptoms generally begin to appear in the field?

- a. V3.
- b. R1.
- c. R3.
- d. R5.

5. Where in the soybean canopy are CLB foliar symptoms usually first observed?

- a. Lower canopy.
- b. Middle canopy.
- c. Upper canopy.
- d. Entire canopy simultaneously.

6. What is the characteristic early foliar symptom of CLB?

- a. Purplish or bronze discoloration.
- b. Water-soaked lesions.
- c. Yellow chlorotic spots.
- d. White fungal growth.

7. As CLB progresses, affected leaves often develop

- a. Galls.
- b. Powdery growth.
- c. Necrotic lesions and defoliation.
- d. Stem cankers.

8. The toxin produced by Cercospora species that contributes to symptom development is called

- a. Fumonisin.
- b. Aflatoxin.
- c. Deoxynivalenol.
- d. Cercosporin.

9. CLB symptoms can sometimes be confused with natural soybean senescence.

- a. True.
- b. False.

10. Which additional disease can be caused by the same Cercospora species responsible for CLB?

- a. Soybean rust.
- b. Purple seed stain.
- c. Frogeye leaf spot.
- d. Charcoal rot.

11. Purple seed stain is characterized by

- a. Purple-to-pink discoloration on the seed surface.
- b. White fungal growth on seed.
- c. Black lesions on pods.
- d. Shriveled green seed.

12. When scouting for CLB, how many symptomatic leaves or petioles should typically be collected for diagnosis?

- a. 1–2 samples.
- b. 3–4 samples.
- c. 5–8 samples.
- d. More than 50 samples.

13. Samples collected for CLB diagnosis should ideally be transported

- a. In direct sunlight.
- b. At room temperature for several days.
- c. After first being dried.

d. In a cooler with ice and refrigerated if stored.

14. Which laboratory technique is mentioned as a method for identifying *Cercospora* species associated with CLB?

- a. ELISA only.
- b. Gas chromatography.
- c. PCR-RFLP.
- d. Near-infrared spectroscopy.

15. Crop rotation and tillage alone are generally considered highly effective for eliminating CLB.

- a. True.
- b. False.

16. Why are crop rotation and tillage often limited in their effectiveness against CLB?

- a. Soybean residue decomposes too quickly.
- b. The pathogen can survive on alternative hosts and spread through the air.
- c. The pathogen survives only in seed.
- d. CLB develops only under irrigation.

17. What major concern complicates the long-term use of fungicides for CLB management?

- a. Herbicide drift.
- b. Seed quality reduction.
- c. Fungicide resistance within pathogen populations.
- d. Increased nodulation.

18. Which fungicide group has documented resistance issues in *Cercospora* populations associated with CLB?

- a. Group 3 (DMI) only.
- b. Group 11 (Qol/strobilurin) fungicides.
- c. Group 15 herbicides.
- d. Group 27 herbicides.

19. According to the article, what is considered the most effective and sustainable management strategy for CLB?

- a. Annual tillage.
- b. Multiple fungicide applications.
- c. Later planting dates.
- d. Selecting resistant soybean varieties.

20. Analysis of Louisiana soybean variety trial data showed that for every one-point increase in CLB disease rating, yield declined by approximately

- a. 0.1 bu/ac.
- b. 0.5 bu/ac.
- c. 1.5 bu/ac on average.
- d. 5.0 bu/ac.

This quiz was drafted with AI assistance and reviewed by the editorial team for accuracy and appropriateness.

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