BACTERIAL BLIGHT

Soybean Diseases

Overview

Leaf spots caused by the bacterial blight pathogen can be found in most soybean fields every year in the Midwest. They are most common during rainy, humid periods in July and August. The bacteria can also infect snap bean and lima bean.

Bacterial blight is caused by the bacterium *Pseudomonas syringae* pv. *glycinea*. The disease can be confused with brown spot (Septoria leaf spot) and with bacterial pustule. Bacterial blight and brown spot are especially common. Both diseases often occur in the same fields and even the same plant, and symptoms can be difficult to separate.

Bacterial blight generally occurs at low levels that do not limit yield.

Disease cycle

The bacteria that cause bacterial blight overwinter in crop residue and on seed. Initial
infections can occur during seedling emergence, especially if infected seed is planted. The bacteria are spread by wind and rain, and outbreaks that occur later in the season often follow rainy rainstorms.

**Bacterial blight is favored in continuous soybean fields, no-till soybean fields, or fields planted with seeds from infected soybeans.**

**Look-alikes**

Bacterial blight is often confused with brown spot, a leaf spot disease caused by the fungus *Septoria glycines*. Bacterial blight occurs on upper new leaves and brown spot infection begins on older leaves, or leaves on the lower part of the plant.

**Cycle**

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**Scouting**

Outbreaks typically develop several days after a rainstorm or hailstorm. Symptoms are most evident on new growth that is expanding at the time of the rain event. New lesions of bacterial blight are small, angular, water-soaked, yellow to brown spots on leaves.

The angular lesions enlarge in cool (70-80° F), rainy weather and merge to produce large, irregular patches of dead tissue. The centers of these patches often drop out, giving infected leaves a ragged appearance.

The bacteria can also infect stems, petioles, and pods.

**Management**

Control measures are generally not needed. However, if bacterial blight was severe this season, the following agronomic practices will reduce the disease next season:
- Rotate soybean with a non-legume
- Cover soybean residues after harvest by tillage, if possible, or shred residue for quick decomposition.
- Plant pathogen-free seed. Do not use seed from plants infected with bacterial blight.

Foliar fungicides will not affect bacterial blight because it is caused by a bacterial pathogen, not a fungus.