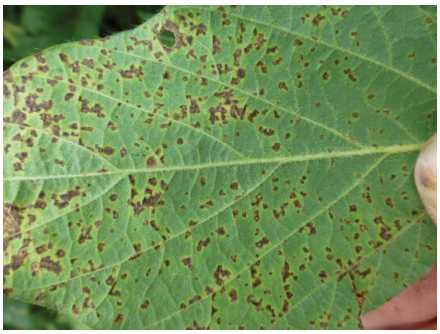
# BACTERIAL PUSTULE

Soybean Diseases





## Overview

Bacterial pustule is a soybean disease caused by the bacterium *Xanthomonas campestris* pv. *glycines*. Although the pathogen is common in soybean producing regions, it is of minor importance because of the high level of resistance in most commercial soybean varieties. Bacterial pustule can also infect snap beans.

Because this pathogen produces a pustule, it can easily be confused with soybean rust, a much more serious disease. Bacterial pustules will differ from those of soybean rust, however, because they will not have a natural opening in the pustule, or masses of spores like those of soybean rust.

## Cycle

The bacteria overwinter on surface crop residue and on seeds. The bacterial cells are spread during the season by wind-blown rain, rain splashing up from old crop residue, and mechanically during field work when the canopy is wet. The bacteria enter the plant through natural openings and wounds in the leaves.

Unlike bacterial blight, which develops best in moderate temperatures of 70 to 80° F., bacterial pustule develops best during very warm temperatures of 85-90° F., if conditions remain wet.

## Scouting

Symptoms typically develop later in the season when temperatures are hotter. Lesions will generally be in the upper canopy. Symptoms begin as small, light green spots (without water-soaking). Light-colored, raised blisters (pustules) often develop in the center of lesions on both the upper and lower surface of leaves. The lesions can grow together into large, irregular patches of dead tissue. Loss of tissue in the infected areas may give the leaves a ragged appearance like bacterial blight. Small raised spots may also develop on pods.

## Management

There are high levels of resistance to bacterial pustule in most soybean varieties. Should bacterial pustule develop in a field, a note of the variety should be made, and it should be replaced in future years with resistant ones. Since the disease can be seed borne, it is important to use disease-free, certified seed. If a field develops bacteria pustule, it should be rotated out of soybeans until all infested debris has decomposed. Tillage can shorten the length of rotation where soil erosion is not an issue. Avoid moving equipment through fields or scouting when the foliage is wet.

Foliar fungicides are not effective against bacterial pustule because it is caused by a bacterial pathogen, not a fungus.

## Distribution

*For information about Bacterial Pustule, and other* soybean diseases visit our resource page

**Additional Resources:**

Bacterial Pustule on Soybean, University of Minnesota, 2018

Bacterial Pustule, University of Nebraska, 2015

Bacterial Diseases: Identification and Management, University of Nebraska, 2015

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