



Extension FactSheet

Plant Pathology, 2021 Coffey Road, Columbus, OH 43210-1087

Brown Spot of Soybeans

Anne E. Dorrance, Patrick E. Lipps, and Dennis R. Mills
The Ohio State University

Brown spot is also known as Septoria leaf spot. Its primary effect is premature defoliation of soybeans, but some yield loss may occur during extremely wet growing seasons. Rarely in Ohio has brown spot caused economic yield reductions. The primary effect has been early defoliation of lower leaves.

Symptoms

Symptoms of brown spot appear first on the cotyledons and unifoliate leaves early in the growing season. Angular, red to brown spots that vary in size from tiny specks to 1/4 inch diameter can be seen on the upper and lower leaf surfaces. Leaves with numerous spots rapidly turn yellow and fall to the ground. Spores produced on leaf spots infect the trifoliate leaves, stems, and pods of the soybean plant. Numerous tan lesions, which eventually become dark brown, appear. Later in the season infected leaves may turn yellow and drop prematurely. Defoliation proceeds from the bottom of the plant toward the top of the plant. Irregular brown lesions with indefinite borders may also develop on infected pods, stems, and petioles.

Causal Organism

Brown spot of soybeans is caused by the fungus, *Septoria glycines* which overwinters in infected soybean straw. During moist weather, spores are produced on crop residue and disseminated by wind and rain to nearby soybean plants where soybean leaves are infected. Fruiting bodies develop in lesions on infected cotyledons and

unifoliate leaves. Spores, which develop in these fruiting bodies, provide inoculum for later infections of trifoliate leaves, stems, and pods as well as neighboring plants.

High moisture and moderate temperatures (60°–85°F) favor infection and disease development. Spread of the fungus is usually halted during hot, dry weather.

Management

1. Crop rotation. This allows time for soybean straw with fruiting bodies to degrade. This disease is more severe in continuously cropped soybean fields.
2. Tillage. For fields with very high levels of brown spot, plow under soybean straw to promote rapid decay.



Septoria brown spot.

Additional information is available from your local Extension office or The Ohio State University Plant Pathology website (www.oardc.ohio-state.edu/ohiofieldcropdisease).

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Keith L. Smith, Associate Vice President for Ag. Adm. and Director, OSU Extension

TDD No. 800-589-8292 (Ohio only) or 614-292-1868

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