

Plant Disease Notes

Southern Blight

Southern blight, also known as white mold and stem rot, is caused by the soilborne fungus *Sclerotium rolfsii*. The disease is a common problem on vegetables, especially tomatoes, as well as on most other broadleaf crops such as peanut and soybean.

Symptoms. Generally, the first aboveground symptoms are yellowing of leaves and wilting of infected plants. The stem at the soil line often appears soft and sunken (cankered) and develops a brown to black discoloration both internally and externally. Under moist conditions, a white fungal growth occurs on the lower stem near the soil surface, on fruit in contact with the soil, and on crop debris on the soil around the base of the plant. Spherical, light brown, mustard-seed size (1 to 2 mm) sclerotia (compact hardened masses) often form in the mycelium (the vegetative body of a fungus). Under dry conditions, fungal mycelium and sclerotia may not be visible.

If southern blight is suspected, place a section of the lower stem and a moistened paper towel in an enclosed plastic bag for 24 hours. If southern blight is present, a white mat of fungal growth will begin to grow. This would be diagnostic for southern blight.

Persistence and Transmission.

The fungus is spread as mycelium in infested organic matter or as sclerotia in infested soil. Infection usually takes place at the soil surface but may also occur below the soil line. The fungus may spread more than 3 feet through the soil and from plant to plant within a row. It is common to see five or six infected plants within a row killed. Sclerotia, produced on crop debris and dying plants, serve as inoculum for the next crop.

Development of southern blight is favored by moist conditions and high temperatures (greater than 85 degrees F). Plants of any age can be attacked if environmental conditions are suitable.

Control. Southern blight is difficult to control when inoculum levels are high and environmental conditions favor its development. Control strategies include the following:

- Rotate susceptible crops with corn, grain sorghum, and cotton to reduce disease. Rotations are most effective when tomatoes or other susceptible crops are not planted in the same area more than once every 3 to 4 years.

- Deep-plow the soil to bury crop debris and the fungus to help reduce inoculum.

- Use a wider plant spacing to improve air movement.
- Rogue (weed out) infected plants to reduce development and spread of southern blight within a field.
- Fumigate soil to control southern blight. Soil fumigation will not eradicate the pathogen from an infested field.
- Apply the fungicide Terraclor at transplanting.



Your Experts for Life

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Use chemicals **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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