

Southern Blight of Tomato

Symptoms

A typical symptom is a brown to black rot of the stem near the soil line. The lesion that is rotting the stem will end up girdling it and cause wilting (Fig. 1). Because of the damage done to stem tissue, this disease is also referred to as southern stem rot. Under moist conditions, a very white fungal growth will be observed (Fig. 2), followed by the production of tiny, round, reddish-brown structures called sclerotia (Fig.3).



Figure 1. Wilting of tomato. Photo:Ronald French



Figure 2. Fungal growth on stem. Photo:Ronald French

Causal Agent

Southern blight of tomato is caused by the fungus *Sclerotium rolfsii*.



Figure 3. Sclerotia forming in soil. Photo: Ronald French.

Inoculum Source and conditions

Because of the production of sclerotia, this fungus can survive for years. Because this fungus has a wide host range, whether causing disease or not, fields that have never been in vegetable production could still harbor this fungal plant pathogen. Both high moisture and temperature (86°-95°F) are ideal conditions for development of disease.

Management

If disease pressure is high, it is difficult to manage this disease. Rotating the diseased area of a plot or field with a grass crop such as corn will help lower the fungal populations of *S. rolfsii*. Under low disease pressure, using high calcium level fertilizers can provide some disease management. Plowing soil so that plant debris is incorporated into the soil can help lower fungal populations. Some chemical control may be achieved at transplant. If moisture levels can be reduced (no overwatering, below-ground drip irrigation, better drainage) and temperatures kept lower than the ideal for disease development, disease pressure will be reduced.

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