Southern blight, also known as southern stem blight, is a serious disease of many vegetable crops, causing an almost certain death of affected plants. It is caused by the soil-borne fungus, *Sclerotium rolfsii*, and attacks a number of vegetable crops including bean, cantaloupe, carrot, potato, pepper, tomato, eggplant, sweetpotato, tomato, watermelon and others.

**Symptoms**

Southern blight is one of the most common causes of a sudden wilting and death of a plant. Mild yellowing of the leaves may occur prior to wilting. Under humid conditions, a thin, white, fan-shaped mold forms on affected stem tissues and adjoining surface soil (see photo). Even under dry conditions, at least a trace of the white mold should be evident on the stem surface. Soon after mold formation, seed-like bodies (sclerotia) develop in the mold. The sclerotia begin white, turning tan, then bronze. When the plant is pulled up, a brown, dry rot of the lower stem and upper roots is apparent. In vegetables in which the fruit contact the ground, such as pumpkin and cantaloupe, the fruit are rotted, beginning with the side of the fruit in contact with the soil. On the surface of the edible roots of sweetpotatoes are 1/4 to ½ inch circular, sunken, dark gray spots.

**Disease Cycle**

The fungus overwinters as sclerotia in the soil and in plant debris. A characteristic of the fungus is that it is generally restricted to the upper 2 or 3 inches of soil and will not survive at greater depths. The fungus is more active in hot, wet weather, and it requires the presence of undecomposed plant residue to initiate infection. *S. rolfsii* is more active under acidic soil conditions. The fungus does not have an air-borne spore, so all infections result from contact of the plant tissue with soil. It is spread when infested soil particles are moved, as with cultivation. The fungal body is so strong that it is capable of growing across the soil surface to reach a plant, if old plant debris is available.

**Control**

- In gardens, remove affected plants, including roots and a small amount of soil surrounding the plant. Be careful not to scatter debris as the material is removed. Place the material in a place that will not be used for a garden in the future.
- Do not plant susceptible crops where southern blight occurred the previous year.
- Control weeds, which can allow buildup of the fungus.
- Prepare the land properly. The previous crop must be well decomposed prior to planting, and this may require disking or rototilling the field several times in the fall and in the spring.
- Bury the previous crop litter with a moldboard plow to a depth below later cultivation equipment movements (8-12 inches). The crop litter should be below a 3 to 5 inch depth. None of the buried litter should ever be brought back near the soil surface during the current season by cultivation.
- Do not throw soil with debris against plant parts during the growing season if southern blight is a problem.
- Control foliar diseases since dead leaves on the ground may trigger infection. Weeds should also be controlled early in the season for the same reason.
- Avoid using organic mulches where southern blight is a problem.
- For commercial growers, soil fumigation is an option. It will reduce, but not eliminate, southern blight.
- Terraclor (PCNB) can be used at planting time for tomatoes, peppers, potatoes, and beans. Refer to the label for proper use instructions. Terraclor will reduce southern blight when used preventively and cannot be used after planting.