Southern Blight Unusually Prevalent in West Central Florida

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Southern Blight (*Sclerotium rolfsii*) has been more prevalent in West Central Florida tomato fields this fall than in the past, and has shown up not only on wet row ends as is often the case, but also in drier areas of the field and on older plants than we usually see it. The culprit was likely the prolonged rain earlier this season that some farms saw daily for 2-3 weeks straight. This disease prefers wet and warm (80-95°F) conditions and like many diseases, is just waiting for the right host and environmental conditions. The initial symptom that most will notice is wilting of the plant. Under moist conditions, white mycelium develops on the stem (Figure 1) and after a few days the sclerotia, mustard seed size, tan to reddish-brown over wintering structures, may appear. The fungus also readily goes to the fruit, causing a massive soft rot. Southern blight has many hosts and other than removing diseased plants, little can be done during the season. Even removing plants is not completely effective as often masses of sclerotia are on the soil as well as on the plant stem. What about next fall for those who are going back with tomatoes on this same ground? Rotation to corn, sorghum, other grasses (including pasture) or resistant plants can help as can eradicating weeds. This pathogen also favors acidic soils but liming to levels that are very effective results in soil too alkaline for growth of many crops. Deep plowing to bury plant residue may help. Sclerotia do not survive as well when buried at least 6 inches deep. Also, organic debris remaining on the soil surface offers a food base for this fungus. In smaller fields at first sign of disease, another alternative mentioned in the literature is using a propane torch for roguing, aiming the flame at the soil surface and lower 10 inches of the stem. Growers should make note of fields that are particularly affected this season, and ensure good fumigation next fall. If trying new alternatives, these fields would be good choices for those alternatives with higher levels of chloropicrin. (P. Gilreath, Manatee Co., A. Whidden, Hillsborough Co., K. Pernezny, Belle Glade)
Figure 1. Mycelial growth on tomato stem