Southern stem rot, Sclerotinia blight and some imposters

Stem rot (aka southern stem rot; aka white mold) has been fairly active this summer. That is not surprising since this fungus seems to thrive in hot weather. The stem rot fungus *Sclerotium rolfsii* is a bit of a chameleon and can vary in thickness (from thick mounds to wispy to crusty) and color (white to buff) under different conditions. Ropy or coarse strands of the fungus radiate out from a growing point, producing fans of white fungus growth. Growth usually is seen close to the ground around parts of the plant in contact with the soil. If the fungus is colonizing green leaves, water soaking and browning is apparent. On stems, lesions are brown and penetrate into the stem tissue. Often you will be able to find round sclerotia (reproductive bodies) on dead or dying peanut tissue. These are white when they are just forming, but then turn tan and finally dark brown as they mature. If these sclerotia are present, you can be sure the fungus is *S. rolfsii*.

The **Sclerotinia** blight fungus is also white, but this fungus produces very fine and fluffy growth best seen early in the morning. The growth tends to be most apparent on stems close to, but not necessarily touching, the soil. Infections start out light tan to nearly white in color and tend to spread well in advance of the fungus. Later, the bleached stem tissue will start to shred. If sclerotia are present, they are black and irregular in shape, resembling insect or mouse droppings.

Occasionally we see imposters that can be confused with peanut pathogens. One of these is the **false stem rot** fungus *Phanerochaete omnivora*. This fungus is a relative of *Sclerotium rolfsii*, but it does not cause disease. It's most often found in reduced tillage fields and grows mostly on old crop debris. Occasionally you may see a bit of browning where it comes in contact with living peanut tissue but this is superficial and does not cause damage. Compared to the stem rot fungus, the false stem rot fungus produces a thick mat of fungus growth. The fungus starts out light yellow in color and eventually darkens to yellow-orange. Sclerotia are never present. Instead, it produces microscopic spores on the fungal mat.

Slime molds such as *Physarum cinereum* are seen occasionally on peanuts and can be mistaken for pathogens. In spite of their name, these bizarre organisms are not molds (fungi), but a completely unrelated life form. They spend most of their lives as single-celled amoeba-like organisms. Under wet conditions, the single cells may congregate to produce a slimy mass that creeps along soil and plant surfaces. Later, later masses of white to gray spore-producing structures are formed. When seen on peanut leaves and stems, these may resemble structures produced by true fungi. As these structures dry, they produce an abundance of brown spores. Slime mold is not damaging and will fade away with time.