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Issue 25, July 31, 2017

Arkansas Plant Health Clinic Newsletter

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Sweet Potato

White Rust

We rarely see White Rust, caused by *Albugo ipomoea-panduratae* on Sweet Potato. Only certain cultivars seem to be susceptible. Symptoms begin as roundish to angular chlorotic spots or blotches on the upper surface of the leaves limited by veins. Small white pustules develop on the undersides of leaves. The infected tissue dies after sporulation, forming irregular brown lesions. Infection may induce the formation of spore-covered galls, with the galls developing on leaves, petioles, stems, and flowers. Leaf distortion, defoliation, and flower abortion may occur. Witches broom with shortened internodes and bunchy growth may develop on especially sensitive cultivars. Twining cultivars may assume an upright habit while upright cultivars may assume a twining habit. The pathogen overwinters on systemically infected living weed hosts. Infection occurs through stomata during periods of rain and cooler temperatures. Albugo is very temperature sensitive, with the optimal temperature range for infection between 55 and 77°F (13 and 25°C). The first symptoms of white rust appear 5 to 20 days after infection depending on the temperature. At the high temperatures we are seeing currently in Arkansas, the spores were starting to dry up. The disease is usually not severe enough to warrant chemical control. Cabrio is labeled for control of White Rust on Sweet potato. Homeowners may use copper. Removal of infected tissue, by either mowing or plowing prior to harvest will limit the spread of White Rust during harvest. Wild morning glories should be controlled in the field, as they are also a host.

Sweet Potato White Rust (leaf top)-*Albugo ipomoea-pandurate*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Sweet Potato White Rust (leaf underside)-*Albugo ipomoea-pandurate*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Sweet Potato White Rust pustules-*Albugo ipomoea-pandurate*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Sweet Potato White Rust spores-*Albugo ipomoea-pandurate*

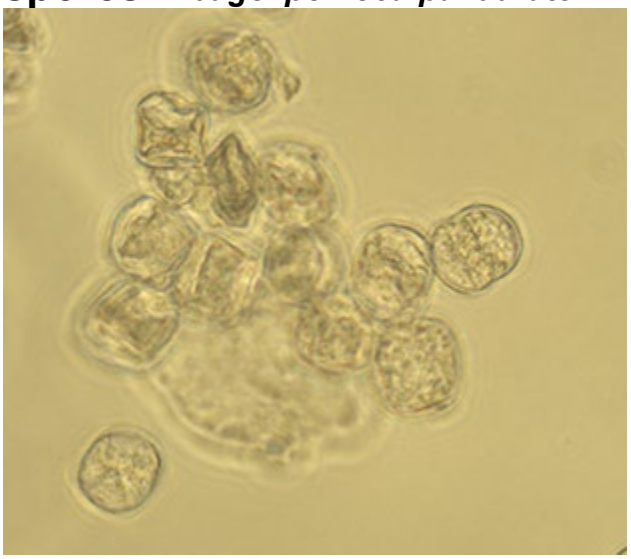

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Scurf

Scurf of Sweet Potato, also known as Soilstain, is a disease that produces undesirable cosmetic damage. Scurf is caused by the fungus *Monilochaetes infuscans*. This is a common disease in the United States. Symptoms are dark brown to black spots that develop on the potatoes during the growing season. Copper-skinned sweet potatoes usually have brown lesions and red-skinned cultivars have almost black lesions. The spots grow and may eventually cover most of the surface of the potato. The infection is a surface one that can be easily scraped off and does not affect the flesh of the potato. Losses, however, result from buyers avoiding the discolored tubers. Most infections result from using infected potatoes as propagating material. The

pathogen also survives in the soil for 1-2 years. Severity is greater in fine textured soils and in soils that have been manured. Two simple measures will give good control of Scurf: practice a 3-4-year crop rotation with other crops, and do not use symptomatic potatoes for propagation.

Sweet Potato Scurf-*Monilochaetes infuscans*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Crape Myrtle

The Crape Myrtle Bark Scale (CMBS), *Eriococcus lagerstroemiae*, is an imported pest from Asia, known to be a pest on crape myrtle and pomegranate in its native range. It was found in Arkansas in Little Rock in January 2014. Since that initial discovery, Crape Myrtle Bark Scale has been reported in numerous counties across the state, including Crawford, Sebastian, Franklin, Pope, Miller, Little River, Hempstead, Garland, Saline, Faulkner, White, Crittenden, Clay, and Green.

The first sign of infestation commonly noticed by homeowners and landscapers is black sooty mold on the trunk and branches. This occurs because scale insects feed on the sap of the plant, excreting excess amounts of the sugars. The sticky residue called honeydew attracts colonization by sooty mold fungi. When the sooty areas are examined closely, the white to gray felt-like females may be seen on small twigs, branches, and the trunk of the crape myrtle. They are often heavily concentrated near pruning wounds or under the exfoliating bark of the trunk. Dozens of pink eggs are laid under the females, which then die. The eggs hatch into pinkish crawlers. After several days, the crawlers molt, lose their legs and antennae, settle into one spot and become permanently stationary. They secrete white threads that become the protective white to gray felt-like covering over their bodies. The males emerge winged and after finding a female, mates and dies. There may be several generations in Arkansas. As with any heavy infestation of sap feeding insects, plants become weakened by repeated attacks. Control takes a concerted effort. Recommendations include washing the trunk and limbs within reach with a soft brush and mild solution of dishwashing soap. A winter application of dormant oil is believed to be helpful. Be sure to apply thoroughly to bark crevices and wounded areas as well as other parts of the plant. Systemic insecticides used as soil drenches applied to the root zone have been found to be effective when applied between May and July. Imidacloprid (Merit® or Bio Advanced™ Garden Tree and Shrub Insect Control), thiomethoxam (Meridian®) and dinotefuran (Greenlight Tree and Shrub Insect Control with Safari) have been shown to give decent control.

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Crape Myrtle Bark Scale-
Eriococcus lagerstroemiae

Photo by Tammy Laws, University of Arkansas Cooperative Extension

Crape Myrtle Bark Scale-
Eriococcus lagerstroemiae

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Crape Myrtle Bark Scale crawler- *Eriococcus lagerstroemiae*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Dead Man's Fingers-*Xylaria polymorpha*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Xylaria (Dead man's fingers)

We sometimes receive a request to identify a strange looking fungus growing at the base of a tree. *Xylaria polymorpha* is a wood rot fungus that appears throughout the year at the base of hardwoods trees. The fungus is commonly referred to as Dead Man's Fingers. It appears in tufts of three to six fingers that are often bent and black in color. The Dead Man's Fingers fungus specializes in consuming the polysaccharides - glucan and other minority content compounds of timber that bind the cellulose and lignin together to form what we recognize as wood. As a result, when these and various other ascomycetous fungi have consumed what they can of a dead stump, the remainder is a nutrient-rich soft mess upon which insects and other small creatures are able to feed.

This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

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