DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System

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SPDN
Southern Plant Diagnostic Network

Issue 29-October 23, 2016

Arkansas Plant Health Clinic Newsletter

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Pumpkin

Yield losses of more than 50% have been recorded in fields severely infested with the bacterium *Xanthomonas cucurbitae*. Pumpkins, cucumbers, gourds, and squash are all susceptible. Leaf symptoms appear as small, dark, angular lesions, with the centers of the lesions becoming translucent with age. However, the most damaging symptoms appear on the fruit. Fruit lesions begin as small, slightly sunken, circular spots, 1/16 to 1/8 inch (1.6-3.2 mm) in diameter. As the lesions enlarge the cuticle and epidermis crack. Larger lesions may have a scabby appearance with tan, raised blisters. Saprophytic fungi often colonize the older lesions, giving them a pinkish-white or green color depending on the species of saprophyte involved. The unsightliness of the lesions diminishes the marketability of the fruit as well as leading to significant rot in the field and in storage. The pathogen is seedborne and can also survive in crop residue. Bacterial Spot is more of a problem during high temperatures coupled with rainy weather or overhead irrigation. Inoculum is splashed onto young fruit before it develops its protective waxy cuticle. Good sanitation and crop rotation with non-cucurbit crops helps limit inoculum in the field. Rotate away from cucurbits for at least two years. The bacterium has been found to survive on crop debris for up to 24 months. Only clean seed should be used. Therefore, it is advisable to not save seed from a previous crop. Copper fungicides may be applied during early formation and fruit expansion to protect developing fruit. Once bacterial lesions are observed on mature fruit there is nothing to be done except to practice ruthless culling of diseased fruit.

Pumpkin Bacterial Spot-
Xanthomonas cucurbitae

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Pumpkin Bacterial Spot-
Xanthomonas campestris* pv. *cucurbitae

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Poinsettia

Poinsettia Gall

In the last few years, Leafy Gall and shoot proliferations, caused by the bacterium *Rhodococcus fascians,* have become a problem in the herbaceous ornamental industry. *R. fascians* is found in many parts of world and has a wide host range of 87 genera spanning 40 plant families. Symptoms may include leaf deformities, witches' broom, and leaf gall. Leafy Gall originates from a bud which would not normally develop. The disease can be confused with Crown gall caused by *Agrobacterium tumefaciens* or by the results of growth hormone treatments. Control of the disease is obtained mainly through good cultural control and plant hygiene. Propagating from infected plants should be avoided. Thorough and systemic disinfection of greenhouses and tools is necessary. All suspected plants should be removed.

Poinsettia Leafy Gall-*Rhodococcus fascians*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Poinsettia Scab

Poinsettias remain our most popular holiday plant, with over 65 million sold each year in the United States. Poinsettia Scab, caused by the fungus *Sphaceloma poinsettiae* can be a destructive disease in poinsettia production systems. Scab can infect both stems and leaves. Small round spots form on the leaf blade, most often on the mid-vein or lateral

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veins where they may coalesce. The spots develop whitish to brown centers, have a dark red to purple border, and often show a yellowish halo. A prominent feature of the spots is that they buckle out from the upper leaf surface. Sporulation causes the lesions to change from white to a velvety brown. Stem lesions are whitish in color, becoming brown with sporulation, and sometimes surrounded by red pigmentation. The fungus produces a growth regulating hormone that causes an affected shoot to super elongate. Infected plants may tower six inches or more above the rest of the crop. Disease is favored by high humidity and wet growing conditions. Diseased plants should be removed from the greenhouse and destroyed. Heritage, mancozeb, chlorothalonil, or chlorothalonil-thiophanate mixes have been found effective when applied protectively.

Poinsettia Scab Leaf Lesions- *Sphaceloma poinsettiae*

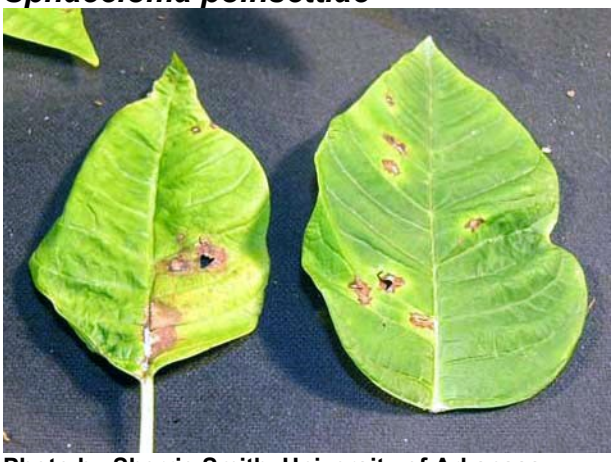

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Poinsettia Scab Shoot Elongation- *Sphaceloma poinsettiae*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Poinsettia Scab Leaf Spores- *Sphaceloma poinsettiae*

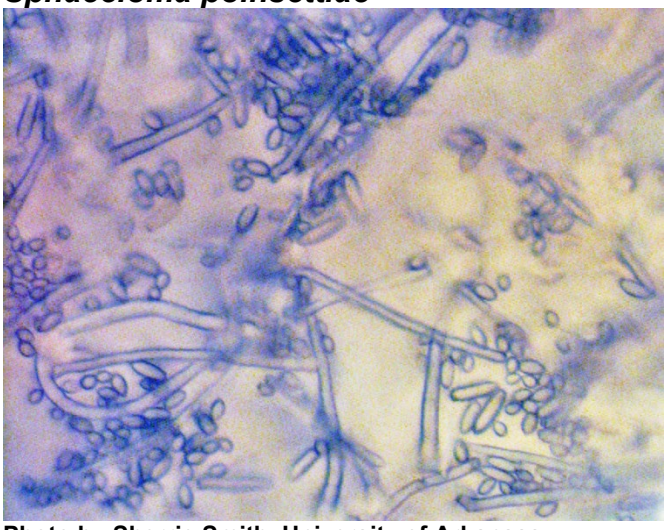

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Sedum

The stalk borer, *Papaipema nebris,* may attack the stalk of many kinds of herbaceous plants. They have been found as pests in 44 families and 176 species of plants. We find them commonly in coneflower and Rudbeckia, to name a few. The moths emerge in the fall and lay eggs on host plants. In the spring or early summer, the eggs hatch and the larvae begin to feed on nearby leaves before tunneling into the stalk. The larva tunnels up and down inside the stem, causing the top portion to wilt and later die. There is one generation each year. The mature larva is nearly 1 1/2" (38 mm) long, grayish brown with one white stripe on top and two white stripes on each side. On the front half of the body, the lateral stripes are interrupted, and the lower brown stripe extends forward onto the side of the head. The mature larva is solid white or light purple. The best control strategy is sanitation. Since the eggs overwinter on old stalks, disposing of all the old stalks and destroying weeds at the edges of the garden helps reduce the population.

Sedum Stalk Borer-*Papaipema nebris*

Photo by Jodie VanDerwall

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.

"This work is supported by the Crop Protection and Pest Management Program [grant no. 2017-70006-27279/project accession no. 1013890] from the USDA National Institute of Food and Agriculture."