Sherrie Smith

Issue 1-March 6, 2014

Arkansas Plant Health Clinic Newsletter

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Strawberry

Although early in the growing season, the Plant Health Clinic received a strawberry sample with White Mold. White Mold, also known as Sclerotinia Rot, caused by the fungal pathogen, *Sclerotinia sclerotiorum*, has an enormous host range, with over 400 plant species susceptible. Susceptible plants include alfalfa, beans, cabbage, canola, celery, chickpeas, coriander, cucumber, lentils, lettuce, melon, peas, pepper, potato, radish, rhubarb, rutabaga, soybean, squash, strawberry, sunflowers, tomato, and turnip, among others. Symptoms include stunting, chlorosis, wilting, and death of the affected plant. Infection of strawberry fruit nearly always begins at the calyx end of the fruit. The dense, white, cottony growth of the fungus rapidly involves the whole fruit. Black, flat sclerotia develop in the white, cottony growth. The fruit quickly rots. There are no specific control measures for White Mold in strawberries. The use of chemical fumigants in commercial fields and the immediate removal of plant debris may help to reduce the incidence and spread of this disease. Homeowners should immediately remove affected plants, along with the soil around the plant.

Strawberry White Mold-*Sclerotinia sclerotiorum*

Photo by Taunya Ernst, University of Arkansas Cooperative Extension

Strawberry White Mold sclerotia-*Sclerotinia sclerotiorum*

Photo by Terry Kirkpatrick, University of Arkansas Cooperative Extension

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Blackberry

Downy Mildew of *Rubus* spp., caused by *Peronospora sparsa*, can cause severe losses when pedicels and fruit are infected. Boysenberry, blackberry-raspberry hybrids, and blackberries are all susceptible. Symptoms begin on the upper side of leaves as a yellow discoloration, which soon changes to reddish-purple. The lesions are angular and restricted by leaf veins. Spore masses are produced in corresponding tan to pink lesions on the undersides of the leaves. Infections may become systemic, resulting in severe distortion of newly unfolding leaves. As the infected leaves age, the lesions often develop bright yellow margins with the centers becoming dead and brown. Suckers are stunted, and terminal leaves may develop a reddish discoloration. Infected berries shrivel and die. Downy Mildew is most prevalent during wet weather when temperatures are 18-22° C. Nursery stock is particularly vulnerable. Growers should take care to plant pathogen-free stock. Removal of suckers helps to limit inoculum. Fungicides should be applied in the spring to protect new foliage, flowers, and berries. Aliette 80WDG, Fosphite, and copper fungicides are effective.

Blackberry Downy Mildew-
Peronospora sparsa

Photos by Sherrie Smith, University of Arkansas Cooperative Extension

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Blackberry Downy Mildew sporangiophores and spores-

Peronospora sparsa

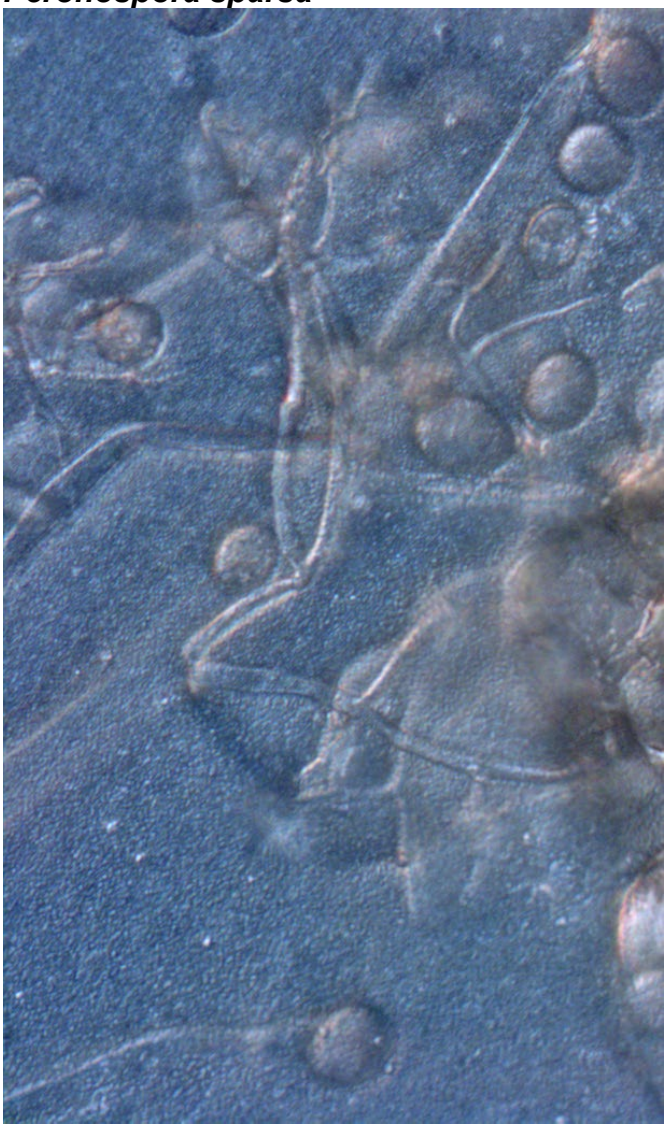

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Collards

Collards (collard greens), *Brassica oleracea,* are grown for their large edible leaves. They are widely grown in the southern United States and are a staple of southern cooking. Collards are low in calories and high in vitamins, such as vitamin K and vitamins A and C. They have cholesterol lowering ability as well as being naturally anti-inflammatory. While not difficult to grow, we sometimes receive samples suffering from herbicide damage, with some growers resorting to herbicides to control winter weeds. Phenoxy type herbicides, such as 2-4-D, cause severe leaf curling, distortion, and stem curling or curving. Plants will also sometimes develop adventitious roots on the stems, which may be abnormally thickened. Where herbicides have not been directly applied to the crop area, manures from a pasture source that has been treated with phenoxy herbicides are often the source of the damage. Phenoxy herbicides have a long residual in soil and manures. Glyphosate herbicides, such as Roundup, are another common herbicide problem in ornamentals, brambles, and vegetables. Symptoms are stunting, yellowing, distorted growth, and witch's broom.

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Collard Plant Phenoxy Damage (abnormally bent stem)-Abiotic

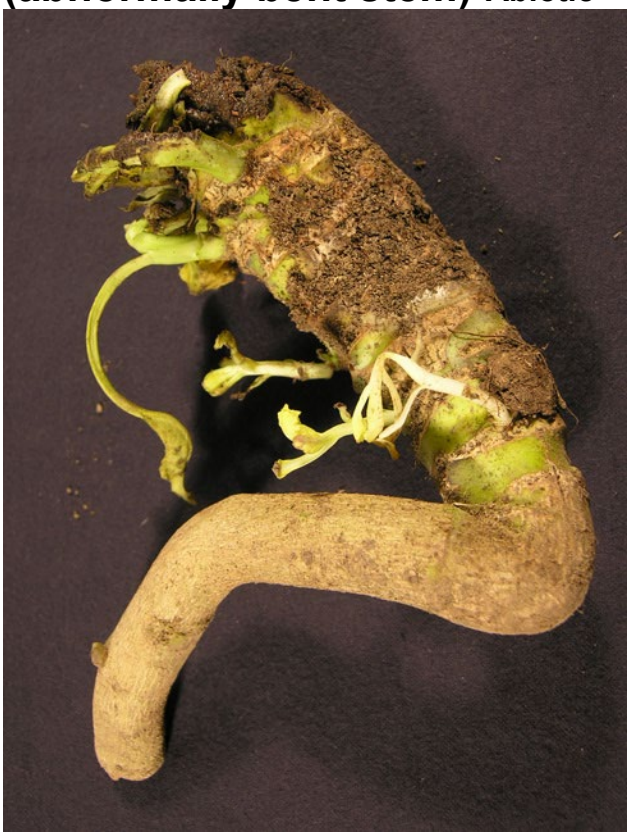

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Collard Plant Phenoxy Damage (distorted, cupped leaves)-Abiotic

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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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