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.

Tomato

Adult stink bugs are shield-shaped insects with piercing sucking mouthparts. They get their common name "Stink bug," from the strong odor they emit when disturbed. Several species of stink bugs feed on tomato fruit as well as on many other vegetables, fruits, nuts, and field crops. Stink bug species in Arkansas include the Green stink bug, *Acrosternum hilare* (Say), the Southern green stink bug, *Nezara viridula* (Linnaeus), the Brown stink bug, *Euschistus servus* (Say) and the Rice stink bug, *Oebalus pugnax* (Fabricius). Stink bugs pierce tomato fruit and inject enzymes from their salivary glands to liquefy and pre-digest the plant material. Damage on green tomato fruit appears as dark pinpricks surrounded by a light discolored area. On ripe fruit the area around the feeding site usually turns yellow. If the skin of the fruit is peeled back, white spots may be observed on the flesh of the tomato. For stink bug control, homeowners may use Ortho Max Flower, Fruit, Citrus, and Vegetable Insect Control, or Bayer Advanced Insect Control, or Spectracide Insect Control, or permethrins.

Stinkbug damage on tomato

Sherrie Smith University of Arkansas Cooperative Extension

Stinkbug damage on tomato

Sherrie Smith University of Arkansas Cooperative Extension

Green Stinkbug-*Acrosternum hilare*

Ricky Corder University of Arkansas Cooperative Extension

Plum by Nicholas Lawson

Black knot can infect many Prunus spp. such as plums, prunes and cherries. The disease causes warty looking black galls on woody parts of the tree. Infected limbs and twigs lose vigor and may eventually die. Once the disease is established the symptoms worsen with each growing season. Leaves can mask symptoms until the disease becomes more established.

Symptoms:

The major signs of black knot infections are elongated swellings on the woody parts of trees. These knotty swellings seldom surround the entire limb. When knots begin to develop they are olive green in color, and are corklike in their firmness. Older galls turn black, hard and brittle. Old tumors expand lengthwise at each end but the fungal mycelium can also spread internally and give rise to new galls some distance from the original knot.

Disease Cycle and Causal organism:

Black knot is caused by the fungus *Apiosporina morbosa*. Ascospores are produced and forcibly discharged from the ascostromata that are contained in the galls. This happens around the time of tree bud emergence in the spring. Infections begin on new shoot growth when an ascospore lands and begins to germinate. Asexual conidia are also disseminated by wind and splashing rain but probably do not figure as prominently as the ascospores in establishing new infection.

Control:

The best way to control this pest is to plant resistant varieties. The plum variety President has shown high resistance. Knots on small twigs and branches should be pruned 8-10 cm below the visible swelling. Removal is more effective if done in midsummer, when visible swelling is close to the advancing fungal growth in the stem. Fungicides can be an option to control black knot but are generally only recommended for commercial production. Fungicides such as captan, chlorothalonil, and benzimidazoles may be applied during active shoot elongation in the spring.

Plum Black knot-*Apiosporina morbosa*

Nicholas Lawson University of Arkansas Plant Pathology graduate student

Plum Black knot-*Apiosporina*

Keri Welch University of Arkansas Cooperative Extension

Grape

The Grape Leaffolder, *Desmia funeralis,* may cause yield reduction when numbers are high in a vineyard. In the southern United States, there may be as many as three broods a season. The adult is a small moth. She emerges in the spring from a pupal stage spent in the folded and fallen leaves of the previous season. The moth lays her eggs on the leaves. They hatch in 10-17 days and begin feeding on the leaves. Newly hatched larvae begin rolling leaves after just one week. They fold the leaves of bunch grapes and roll muscadine leaves. They anchor the folds and rolls with a silk thread and feed inside the protective areas, leaving them only at night to move to a fresh area. The life cycle takes 6.5-7.5 weeks. Good sanitation can reduce overwintering pupae. All fallen leaves should be raked up and destroyed. For small plantings homeowners may search for the folded leaves and crush the larvae. A standard insecticide employed against leaffolders is carbaryl (Sevin). Grapes must not be harvested within seven days of an application.

Grape Leaffolder- *Desmia funeralis*

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SPDN
Southern Plant Diagnostic Network

Department of Plant Pathology
PLANT HEALTH
CLINIC NEWS

Request for help from Dr. Robbins:

Root knot nematode populations are needed for our Arkansas species study. I am a nematologist in the department of Plant Pathology in Fayetteville. My student and I are trying to amass populations of as many species of Root knot nematode (Meloidogyne sp.) as possible for species identification using molecular techniques. At present no root knot species in Arkansas have been identified using molecular technology. We are interested in receiving populations from home gardens, shrubs, flowers, trees and grasses. For samples we need about a pint of soil and feeder roots in a sealed plastic bag that is plainly identified by plant host, location (City County, physical address, collector and date of collection). Please send samples to us at the follow address:

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