



Arkansas Plant Health Clinic

Newsletter

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Sour mulch

Spring and fall are popular times to mulch flower and landscape beds. Mulch helps conserve moisture, reduces weeds, and moderates soil temperatures. Occasionally the clinic receives plant samples damaged by a condition called sour mulch. This occurs when mulch is stored in such big piles that the pile lacks oxygen in the center and starts composting anaerobically. The by-products of such conditions are methane, alcohol, ammonia gas, or hydrogen sulfide gas which can build to levels high enough to kill or damage plants. Such mulches have a pH as low as 1.8-4.0. Sour mulch feels warm to the touch, often emits steam, and smells like vinegar, ammonia, or sulfur. A simple pH test will help verify sour mulch. Healthy mulch has a pH close to 7.0. Plants exposed to sour mulch will show symptoms within a day. Leaf chlorosis, leaf scorch, defoliation, and/or plant death without evidence of disease, drought, herbicide, or fertilizer burn, are diagnostic where new mulch has been applied. Pulling back the mulch and drenching with water will help dilute the toxic effects. Damaged plants will often recover when the toxins have dissipated. Homeowners who notice steam escaping from stockpiled mulch should spread it into shallow rows or piles and turn frequently.

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Sour Mulch-Abiotic



Photo by Jim Robbins, University of Arkansas Cooperative Extension

Sour Mulch-Abiotic





Sour Mulch-Abiotic



Heuchera

Heuchera are delightful perennial plants for semi shaded areas of the garden. The common name is Coral bells. Some cultivars are grown for their beautifully colored and patterned foliage while others are grown primarily for their spires of pink, white, rose, or red blooms. Heuchera want well-drained neutral soil with plenty of moisture and excellent drainage. Here in the Mid-South the foliage will burn during our hot summers if they are planted in full sun. They have very few disease problems when their needs are met. The clinic sees Heuchera occasionally with minor leaf spots caused by several fungi and bacteria. Overcrowding and overhead watering are usually at fault. We see this most in nursery settings. Space plants for good air circulation and avoid prolonged periods of leaf wetness.

Heuchera Bacterial Leaf Spot- *Xanthomonas* spp.



Poinsettia

Over 65 million Poinsettias are sold each year in the United States. They are our most popular holiday plants, available in a variety of colors and sizes from minis to tree forms. Poinsettia scab caused by *Sphaceloma poinsettiae* was until recently considered a disease problem for tropical and subtropical regions. In recent years, cuttings produced in South America have caused major outbreaks of the disease in American greenhouses. Poinsettia scab is a spot anthracnose disease. The disease affects both stems and leaves. Small round lesions form on the leaf blade, most often on the midvein or lateral 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

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lesions to change from white to a velvety brown. Stem lesions are whitish in color, 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 as protectants.

Poinsettia Scab- *Sphaceloma poinsettiae*



Stinkhorns

The **Phallaceae**, or **stinkhorns**, are a family of mushrooms which produce a foul-scented, phallus shaped fruiting body. They do not use the air to spread their spores as other

mushrooms do. Instead, stinkhorns produce a sticky spore mass on their tip which has an odor of carrion, dung, or other things that attract flies. The flies land on the stinkhorn and in doing so collect the spores on their legs and carries them to other locations. Homeowners are often shocked to find these strange objects in their lawns or landscape beds. However, none of the stinkhorns are known to be poisonous to pets or humans. Control is nearly impossible. After a short while they will disappear until this time next year.

Elegant Dog Stinkhorn-*Mutinus elegans*



Photo by Scott Hall, Cabot AR

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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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