DIVISION OF AGRICULTURE
RESEARCH & EXTENSION
University of Arkansas System
Sherrie Smith

SPDN
Southern Plant Diagnostic Network
Issue 5-April 3, 2012

Arkansas Plant Health Clinic Newsletter

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Hawthorn

Hawthorns are delightful additions to the garden. Bird lovers will appreciate their dense spreading growth which provides safe nesting places for many species of birds. Attractive berries provide winter food for migrating species of birds such as waxwings and thrushes. Attractive flowers, fragrance, and the showy berries make hawthorns desirable specimen trees, or hedges in the home landscape. Depending on species, hawthorn grows into small trees or large shrubs from 5-14 ft tall. They are not particular about soil, but require good drainage and full sun to thrive. The most common problem we see in Hawthorn is fungal leaf spot caused by *Entomosporium mespili*. Entomosporium. Leaf Spot also attacks Photinia, Pyracantha, quince, loquat, crabapple, pear, peach, and mountain ash among others. Symptoms are numerous, small, reddish-purple spots that develop on leaves and fruit. As the season progresses the entire leaf surface may become discolored with large patches of purplish-brown blotches. Tiny black structures resembling pimples may be seen inside the lesions. Heavy infections cause the leaves to turn yellow and drop prematurely. Highly susceptible varieties may completely defoliate. The fungus overwinters on plant debris such as fallen leaves, and twigs. Rainfall in the spring splashes the spores onto new foliage. Repeat cycles of spore production keep the infection active throughout the growing season. Cultural controls include raking up and disposal of fallen leaves, avoiding overhead irrigation, and adequate spacing to ensure good air circulation. Ornamental fungicides such as Rose Spray or Daconil should be applied as soon as plants begin to leaf out and continued through the season. The best line of defense is to plant resistant cultivars. The Cockspur Hawthorn, Washington Hawthorn, Dwarf Yedda, Indian Princess, and Olivia have been found to have good resistance. Highly susceptible varieties such as Pinkie, Harbinger of Spring, Heather, Enchantress, White Enchantress, Spring Rapture, and Springtime should be avoided.

Indian Hawthorn Entomosporium Leaf Spot-

Entomosporium mespili

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Indian Hawthorn Entomosporium Leaf Spot-*Entomosporium mespili*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Photinia Entomosporium Leaf Spot-*Entomosporium mespili*

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Daffodil

Bloom Failure

Daffodils are among the earliest spring bloomers. We know spring is just around the corner when we begin to see their cheery flowers. It is frustrating when they fail to bloom. There are many possible reasons for failure to set flowers. By far, the most common cause of failure to bloom is cutting the leaves of the daffodils off too soon. The leaves should not be blocked from the sun by being tied in bundles or cut off until they lose their green and turn yellow. The bulbs need the foliage for about six weeks after bloom to replenish the bulb.

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Improper fertilization or no fertilization for several years may prevent bloom. Daffodils need to be fertilized, using a complete fertilizer such as 5-10-10 at planting, when leaves emerge, and at bloom. High nitrogen fertilizers should be avoided as they encourage leaf production at the expense of flowers. Too much shade also inhibits bloom. Daffodils need at least six hours of full sun for best bloom. In crowded plantings, the bulbs may not be able to compete for available water and food with aggressively growing species. Soggy soil conditions promote bulb rots, hence no flowers, followed eventually by death of the plant. Daffodils may also fail to bloom the first year after being transplanted as the bulbs are re-growing roots and trying to establish themselves. Another reason daffodils may fail to bloom is an early heat wave that may shut down bulb replenishment too soon. Many people buy a pot of blooming daffodils in the spring and leave them in the pot all year without proper fertilization and exposed to extremes of heat and cold.

Finally, bulbs that have been growing in the same spot for many years need lifted, divided, and replanted. The time for dividing and replanting is after the foliage has yellowed in the spring. Separate the clumps into individual bulbs and replant them 6" deep and 6" apart. Don't water them until fall if you replant immediately, as this can cause bulb rot. If you can't replant them immediately, dry the bulbs in the shade, store in mesh bags, and replant in the fall.

Daffodil bulbs too crowded and some too small to bloom-Abiotic

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Narcissus Yellow Stripe and Narcissus Mosaic Viruses

Viruses can also be a problem for daffodils. Narcissus Yellow Stripe Virus (NYSV) and Narcissus Mosaic Virus (NMV) will weaken the plant, causing loss of vigor and bloom. Symptoms of Yellow Stripe Virus are fine streaks of yellow the length of the leaves. Infected plants of most daffodil cultivars show yellow stripes on leaves and flower stalks, reduced bulb size, and eventually, severe stunting; the chlorosis (yellowing) in some cultivars is less conspicuous than in others. Symptoms of Narcissus Mosaic Virus are white blotches on the yellow flowers. Viruses are not

curable. Any plants with virus symptoms should be dug up and thrown away.

Herbicide Damage

The Plant Health Clinic is seeing a lot of herbicide damage to trees, shrubs, vegetables, and ornamentals. Homeowners must take great care with glyphosate products such as Roundup, and phenoxy based herbicides such as 2,4-D and Grazon. Grazon is a pasture herbicide that doesn't harm horses and cattle, but passes through them in their manure, and has a long residual. Never use manure from a pasture that has been sprayed with Grazon.

Pear Roundup damage-Abiotic

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Blackberry Cane 2,4-D damage-Abiotic

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Tomato Roundup damage-Abiotic

Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Potato Grazon damage-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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