



Arkansas Plant Health Clinic Newsletter

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Turf

Ground Pearls, *Margarodes* spp, are subterranean scale insects that feed on the roots of bermudagrass, bahiagrass, carpetgrass, St. Augustinegrass, and zoysiagrass, but prefer centipedegrass. They may be associated with low pH soils. Above ground symptoms are irregular or circular patches of turf that appears sickly and begins to thin out and die. The grass turns yellow, browns, and dies, especially in hot, dry weather. Adult females have pinkish sac-like bodies, about 1.6mm long, with well-developed front legs and shorter second and third legs. Males are tiny white to pinkish gnat-like insects. Mature females emerge from their overwintering cysts in late spring, and crawl to the soil surface where they mate with the tiny, winged males (they can also reproduce without mating). Once they have mated, the females dig back into the soil where they lay a cluster of 20 to 100 eggs in a mass of waxy strands. The eggs hatch into crawlers. The crawlers, attach themselves to grass roots, and begin to cover themselves with a yellowish to light purple wax, producing the diagnostic pearl-like shape. Unfortunately, insecticides are ineffective against Ground Pearls. Damage can be minimized in some

cases, by proper fertilization, mowing height, and watering during dry periods.

Turf Ground Pearls-*Margarodes* spp

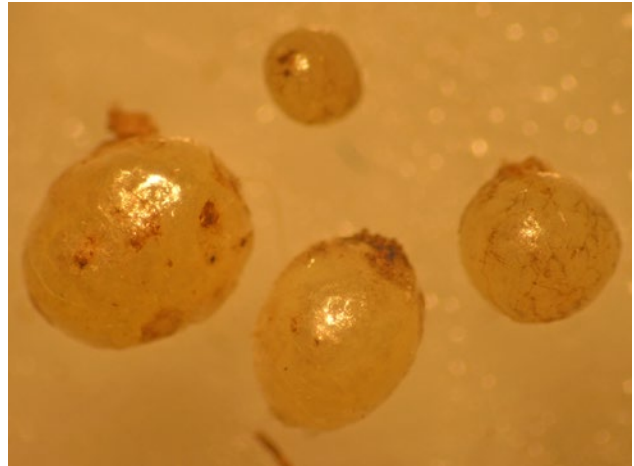


Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Pyracantha

Scab

Pyracanthas are grown primarily for their decorative red or orange berries. They are very attractive trained in espalier form against a wall. The most serious disease of Pyracantha is Scab, caused by *Spilocaea pyracanthae* (*Venturia inaequalis*). Scab is most noticeable on infected berries during the fall and winter months. Instead of being the normal red or orange color, the berries are covered with dark brown to black lesions. Infected fruit may drop. On leaves, velvety greenish-sooty areas appear on the underside of the leaves. Badly affected leaves may turn yellow and be shed prematurely. Twigs may be girdled and killed.



On susceptible cultivars, preventative applications of chlorothalonil, or Captan, or thiophanate-methyl, give good control if timed right. Begin spraying in the spring at bud break and at 7–10-day intervals until two weeks after petal fall.

Pyracantha Scab-*Spilocaea pyracanthae*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Fire Blight

Pyracanthas are also susceptible to Fire blight, caused by *Erwinia amylovora*. All members of the rose family are susceptible, including pyracantha, pears, apples, crabapples, photinia, cotoneaster, quince, hawthorn, roses, blackberries, and raspberries. Infection occurs during bloom, as insects carry the bacteria from blossom to blossom, and from plant to plant. Blooms wilt and die a few weeks after infection.

Infections spread down the twig, sometimes into a main branch. Young, infected shoots form a typical shepherd's crook as they wilt. The dead tissue turns either brown or black depending on the species of plant involved. For instance, the dead tissue is brown in pyracantha and apples, and black in pears. Susceptible trees should be sprayed at green tip, at 5% bloom and at 50% bloom with Agri-strep, Agri-mycin or a copper fungicide such as Kocide. All dead tissue should be pruned out 10-12 inches below the damage. Cutting tools should be dipped between cuts in a 10% bleach solution, (nine cups water to one cup bleach) or in 70% alcohol. Apache, Fiery Cascade, Rutgers, Teton, and Shawnee have resistance to both Scab and to Fire Blight.

Pyracantha Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Geranium

Cycocel and Citadel, active ingredient chlormequat chloride, are plant growth regulators. These products are commonly used on greenhouse grown crops such as Geraniums and Poinsettias to reduce stem elongation. However, concentrations exceeding 1,500 ppm, especially on sensitive cultivars, can cause yellow spotting, or discoloration of new leaves. The damage is usually apparent 3-5 days after the spray application. The yellowing is the result of chloroplast damage. Usually, leaves will recover within a few weeks.

Geranium (Pelargonium) Cycocel Toxicity-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Oak

Gall Wasps

There are hundreds of species of Cynipid wasps as well as several species of midges that produce galls on oaks. For the most part, gall wasps do very little real damage to the tree. Control is nearly impossible as an insecticide has to be timed for the adults. Once a gall is formed the larvae are protected from chemicals and most predators. Galls may be pruned out and destroyed if the tree is not too large and heavily infected to make this impractical. Galls come in a wide and sometimes bizarre variety of shapes and sizes, depending on the species of gall wasp.

Oak Horned Gall-*Callirhytis cornigera*



Photo by A. Steven Munson, USDA Forest Service, Bugwood.org



Oak Apple Gall-*Amphibolips* spp.



Photo by Steven Katovich, USDA Forest Service, Bugwood, org

Oak Gouty Gall-*Callirhytis quercuspunctata*



Photo by Randy Forst, University of Arkansas Cooperative Extension

Oak Jumping Gall-*Neuroterus saltatorius*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Oak Fuzzy Bead Gall-*Callirhytis furva*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Gall Midges

Other oak galls are caused by small members of the fly order whose family is known as gall gnats or gall midges rather than the unrelated gall wasps.

Oak Polystepha Gall-*Polystepha pilulae*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Oak Vein Pocket Gall-*Macrodiplosis quercusoruca*



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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