



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.

Kiwi

Hardy kiwi, *Actinidia arguta*, is native to northern China, Korea, Siberia and maybe Japan. *Actinidia arguta* is known as Hardy kiwi because it can withstand temperatures of -25°F when fully dormant. However, Hardy Kiwi is susceptible to cold injury in the spring if newly formed buds are exposed late freezes. The most common symptom is bleached areas on the leaves. Hardy kiwi can be grown in Arkansas if they are grown on slightly acidic, well drained soils with plenty of sun. They are tolerant of some shade, but will not bloom well if they don't get at half a day or more of sun.

Hardy kiwi cold injury



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Peach

Peach tree short life (PTSL), also known as Peach tree decline, refers to the sudden collapse and death of young peach trees in the spring. Trees 3 to 7 years old are the ones usually affected. The primary pathogen is bacterial canker, caused by *Pseudomonas syringae* pv *syringae*. Many other factors contribute to PTLS,

including cold damage, time of pruning, rootstocks, fertilization practices, and importantly, the Ring nematode, *Mesocriconema xenoplax*. Symptoms in the spring are similar to those caused by root rots. However, when roots are examined, they are healthy. Cutting into the bark of main limbs and the trunk reveals a brown discoloration extending downwards towards the ground. A sour sap odor commonly accompanies the discoloration. Sometimes bacterial oozing from the bark occurs. Trees usually begin to leaf out, then collapse and die, although less seriously affected trees may die slowly over the course of the growing season. Susceptibility to PTSL has been linked to root stock susceptibility. Trees grown on Nemaguard rootstock are more susceptible to bacterial canker than trees grown on Lovell, which are in turn more susceptible than trees grown on Guardian (BY520-9) rootstock. Cold injury has also been closely linked to the PTSL complex. In short, any factor that interferes with the healthy cambium can contribute to PTSL. Older orchards are more likely to have higher rates of mortality because of elevated populations of Ring nematodes, hardpan development, and depleted soils.

Peach tree short life-bacterial canker *Pseudomonas syringae* pv *syringae*



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Peach bacterial canker- *Pseudomonas syringae pv syringae*



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Control of PTSL is a combination of sound orchard management, and careful choice of rootstocks. Soil testing should occur every year. Optimal soil pH is 6.5 at a depth of 16 to 18 inches. Sub soiling is a practice that also improves tree survival. Peach orchards should be tested for the presence of Ring nematode and appropriate control measures taken. Old orchard sites with a history of PTSL should not be planted with trees on Nemaguard rootstock unless screened for nematodes. Planting wheat first on new land planned for peaches has been shown to suppress Ring nematodes. Pruning during the months of October, November, December, and January should be avoided if possible, as pruning at these times makes trees more susceptible. If pruning during these months cannot be avoided, choose blocks over 7 years old, blocks known to be free of Ring nematode, and blocks with no history of PTSL.

Peach-Ambrosia beetle

Granulate Ambrosia beetle, *Xylosandrus crassiusculus*, is a destructive pest of red maple, redbud, styrax, ornamental cherry, pecan, peach, plum, persimmon, Japanese maple, golden rain tree, dogwood, sweet gum, Shumard oak, Chinese elm, magnolia, fig, azalea, and others. Unlike other borers, Ambrosia beetles are attracted to healthy trees as well as distressed trees. These tiny beetles (1.5-3mm) do not feed on the tree. They bore into the heartwood which they inoculate with an ambrosia fungus, *Ambrosiella* spp that they use as their food source. Symptoms are wilting leaves, branch and tree death, and extrusions (toothpicks) of sawdust mixed with frass protruding from the entry holes. The damage is caused by infection by secondary pathogens, which can block xylem vessels and interfere with vascular transport. Once beetles are inside trees they cannot be killed with insecticides and fungicides are ineffective against the secondary fungi. Preventive sprays of pyrethroids to prevent entry are the only option. Sprays should be applied when beetles are found in monitoring traps. Heavily infested trees should be removed from the orchard and destroyed.





Ambrosia beetle frass-“toothpicks”



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Ambrosia beetle- *Xylosandrus crassiusculus*



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Ambrosia beetle frass-“toothpicks”



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