

## Timely response can save native pines

If native pines around your home or development are dying, the problem may be traced to either pine decline, insect attacks, or disease, according to Wayne P. Blythe, Vero Beach, FL, director of Native Resources, the environmental division of Vista Properties. He directs his advice to others, like himself, who are responsible for preserving the beauty of pines, particularly in the Southeast.

Pine decline, characterized by the gradual yellowing and dying of pines, can be caused by over irrigation, or by irrigation from wells with a high calcium concentration which raises the soil pH. Irrigation from storm water retention ponds in high fertilization areas such as golf courses also contributes.

Sometimes only simple precautions are needed to remedy the problem, Blythe notes, like reducing irrigation near pines by redirecting

sprinkler heads, or using only ammonium sulfate or other acid-forming fertilizers to prevent a rise in soil pH.

To achieve a quick green color as a temporary solution, Blythe recommends four lbs. of flowers of sulfur per 100 sq. ft., 10 lbs. aluminum sulfate per 100 sq. ft. or one lb. iron chelate per tree.

Insect attacks—either trunk or crown infestations—can create big problems and call for immediate action, Blythe says.

Engraver Beetles (*Ips gradicolis*, *Ips calligraphus*) and Black Turpentine beetles attack pine trunks, and are found throughout Southeastern forests. Usually the first indication of attack are small masses of pitch (called pitch tubes) and boring dust on or around the trunk of the tree, followed by browning of the needles. Another form of bark beetle attacks the branch area of the tree. Pitch tubes of these

beetles are often small, and experienced spotters or binoculars are usually necessary to detect them. If the tree is healthy, attacks by bark beetles may not be successful.

Beetles are attracted to pines which have either been cut or placed under stress. This stress can be natural such as a flood or drought, or man-made, equipment wounds, excess irrigation, or pH change.

Blythe recommends the following steps to control insects:

- 1 Leave the native understory plants undisturbed near the pines.
- 2 Downed pines should be cut up and removed immediately.
- 3 Pines injured during clearing operations should be sprayed with appropriate insecticide.
- 4 Severely infected trees should be removed immediately.
- 5 Trees cut up for firewood should be stacked away from living pines. Spray the firewood with insecticide.

In spraying, Blythe recommends 0.5 percent Lindane or 1.0 percent chlorpyrifos (Dursban 4E), with Lindane getting the nod for preventative treatment, chlorpyrifos for post infection treatment.

Disease problems are often harder to detect than insect pests, but in the Southeast be on the lookout for pitch canker and needle cast.

Canker, caused when spores of the fungus enter the tree through a wound, is the more serious. Symptoms include branch and terminal flagging and the flow of pitch from the infected area. Blythe feels pruning infected branches well below the infected area is the best response. In severe cases the tree should be removed.

The unseasonal shedding of needles or shedding in an excessive amount could signal the presence of needle cast. A magnifying glass or hand lens often reveals small black elliptical fruiting bodies of the fungi on the fallen needles. No control measures are recommended since this problem rarely kills a tree, Blythe notes, and infections usually occur long before symptoms are evident and then it's useless to apply fungicides.

Blythe says pines should be examined at regular intervals for timely pruning and removal of unhealthy specimens. This reduces the need for removal of trees and maintains the aesthetic quality of the environment around you.

