

# PROBLEM MANAGEMENT

## Diagnosing pin oak disease

**Problem:** Every year we see severe leaf spot type of disease on pin oaks. Any idea what causes this? How can it be managed? (Missouri)

**Solution:** Without examining the affected leaves, it is difficult to diagnose accurately. Oaks in your area as well as many parts of the country get several late season leaf diseases.

Actinopelte leaf spot is one of the most common late season leaf spot diseases caused by the fungus. Although most oaks are susceptible, pin oak is frequently the most commonly affected. This disease apparently is common in pin oaks suffering from iron deficiency and showing iron chlorosis symptoms. Symptoms of actinopelte leaf spot begin to appear in middle to late summer. The disease generally doesn't get severe until August. The fungus produces small, circular to angular reddish-brown spots which are 2 to 15 mm in diameter. The spots will coalesce and become larger, irregular areas of necrotic leaf tissue.

If the disease is severe it can cause the leaves to defoliate prematurely. The fungal agent is a weak pathogen which establishes on leaves damaged mechanically or by other diseases or iron chlorosis. Chemical control is not warranted since the infection occurred late in the growing season; the plant had a chance to produce normal sugar for the year; and damage to the tree is minimal.

## Info on zoysiagrass?

**Problem:** Where can I find detailed literature available on zoysiagrasses? Lawn and turf books usually cover the zoysia japonicagrass very lightly and in insufficient detail. Also, what type of scarification program should be maintained on zoysiagrass? At present, there is a thick build-up of thatch, and during the dormant period, the turf has a dark black background which is rotting cuttings and roots. These are over 30 years old and well implanted. We've been cutting the lawns to ground zero in the fall which I feel is wrong. (Italy).

**Solution:** We are not aware of authoritative works on zoysiagrass. References to zoysiagrass are typically brief sections of turf books and reprints of articles. Perhaps one of our readers will be aware of a source of information. Close mowing is sometimes practiced just prior to growth in the spring to help minimize the potential for thatch and allow sunlight to warm the soil, and encourage a rapid turfgrass recovery. I am not aware of any advantages of close mowing in the fall.

For thatch maintenance, consider aerification or dethatching in the spring. Aerification is effective in maintaining the proper thatch depth but may not be effective in reducing excessive levels. Core aerification removes a small plug of soil which is deposited on the surface. Scattering the core will provide "top-dressing" which aids in microbial breakdown of thatch. Mechanical dethatching literally tears the

thatch out of the lawn and in the process, injures the turfgrass.

On warm-season grasses such as zoysia, this procedure should be practiced only in the spring to allow for the maximum recovery period. Considerable debris is loosened which should be raked and discarded. If thatch is too thick to be adequately reduced by dethatching, the lawn should be renovated and then properly maintained to prevent thatch accumulation.

## Preventing pine cones

**Problem:** The campus at the University of Waterloo, Waterloo, Ontario is approximately 1000 acres in size. Intensive landscaping practices are required on 200 acres and maintenance is carried out as efficiently as possible. One of the problems we have with our maintenance program is with the cones from a large number of Austrian or black pines. Throughout the spring and early summer, cones cover the ground causing litter problems, particularly when mowed. Perhaps you can advise us as to the availability of some type of solution or spray which can be used to prevent the development of cones. As the trees are landscape trees, it is important that they are not damaged. It would also be desirable if the solution did not harm bees. (Canada)

**Solution:** At the present time, there aren't any materials registered for the removal of cones on pines. Reports from preliminary work suggest that Chipco Florel pro brand plant growth regulator manufactured by Rhone-Poulenc is showing some promising results. However, currently it is not on the Florel label. Possibly it can be used in the near future if the label is expanded. Your best approach now would be to hand or mechanically rake the cones or prune the cone bearing branches.



**Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.**

Questions should be mailed to Problem Management, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.