

# PROBLEM MANAGEMENT

## Ag chemicals and trees

**Problem:** Our hard and red maple resources are in decline. People blame acid rain, drought, exhaust fumes and other sources. How much effect does the use of agricultural chemicals have on the overall health of trees? Most of the trees in question are on fence lines where their crowns and root systems extend into the fields. Since the fine root hairs and feeder roots lay within 18 inches of the service, and the root systems extend well into the field, could herbicides, insecticides or other chemicals not be taken up by the tree and cause a change to its cell structure? (Ontario, Canada)

**Solution:** I am not familiar with the adverse effect, if any, of agricultural pesticides (herbicides, insecticides and fungicides) on nearby adjacent trees. Proper application of the above products according to label specifications should not present any problem. Based on my limited experience in working with corn, soybean, alfalfa and some fruit tree culture in clay soils, I haven't seen any phytotoxicity or adverse problems on non-target nearby fence line trees. The effect may be different in sandy soils because of the potential for leaching. Still, I do not anticipate a serious problem.

Examine the leaves, twig growth and root system. Most of these will show specific symptoms and patterns of injury. Based on this, tissue diagnosis can be done.

Herbicides will show specific leaf symptoms if they come in contact with agricultural crops or any other sensitive plants. Depending upon the products used, the leaves may show twisting, curling, cupping with veins pulled together; the leaves may be bleached or plants may show degrees of decline.

Acid rain, drought and exhaust fumes might be a partial or total cause. It is difficult to speculate without studying the problem on-site.

We have seen various degrees of drought symptoms different plants produced over the past two to three years. Drought, combined with rainy springs, have caused a less than ideal growing environment. Whatever happens to the root will adversely affect the crown. If the crown is injured it will produce less sugar for the future years; the absorbing root development and establishment will lessen, and decline follows.

Deicing salt used on roads may partially affect plant roots. Salts suppress water absorption. Many plants show various degrees of decline because of the exposure to extremes in moisture and/or temperature, deicing salt and other abiotic stress factors.

## Fireblight to return?

**Problem:** Will we see fireblight in 1991? What is the best way to manage this problem? (Pennsylvania)

**Solution:** Fireblight affects rosaceous plants: pear, apple, cotoneaster, crabapple, quince, firethorn hawthorn and mountain ash. The bacterium overwinters on infected twig cankers and becomes active

by producing bacteria in ooze on twigs during spring rains. Rain splash and insects spread the disease to blossoms. Bacteria produce blossom blight and then spread to the leaves, resulting in leaf blight. The bacteria then spread to twigs and produce cankers. In late spring, sudden wilt occurs. Blighted twigs show typical shepherd's crook (inverted "U" shape) symptoms. Leaves appear as if they are scorched by fire.

If conditions for the disease prevail, it could return. The plant and inoculum of the pathogen are present, waiting for favorable climate.

Prune when dry, and prune selectively, at least 10-12 inches into the clear wood; disinfect tools between cuts with Lysol, rubbing alcohol or Clorox (1:4). Do not overfertilize with soluble nitrogen fertilizer. Provide insect vector management as needed. Avoid destroying pollinating beneficial insects. Many extension publications recommend the use of Bordeaux mixture or streptomycin (Agri-strep). Make sure these products are labeled for use on specific plants. Hopkins Streptomycin C-17 has Rosacre on the label, and can be used on many rose family plants. Check with your local cooperative extension personnel for updated recommendations.

## Bugs on pepper trees

**Problem:** What can be done to psyllid bug that has been affecting California pepper trees in the Southern California area? (California)

**Solution:** The pepper tree psyllid was first found in North America in Long Beach, California, in 1984. Since then it has been in many other areas of California. The California pepper tree is affected by the pest while its relative, the Brazilian pepper tree, is resistant. The adults are greenish and about 1/16-inch long. The nymphs are immobile and their feeding causes formation of pit galls. These insects usually occur on the lower leaf surface, but the upper leaf surface and small green twigs may be affected also.

The infected pepper tree usually appears grayish green and is sparsely foliated. Severe infestations cause major discoloration and distortion of affected plant parts, slowing of growth, and loss of foliage.

Acephate (Orthene) can be applied to control pepper tree psyllid. The insect appears to reproduce year-round along the coast so repeated spray applications about 60 days apart may be necessary. Read and follow label specifications for better results.

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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.