

VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: What kind of spray can be used to prevent seed formation on mature silver maple trees?

A: Normally, cool temperatures and spring frosts eliminate much of the fruit so that chemical control is not necessary. Hormonal sprays should be applied with caution since the response is highly variable, depending upon weather conditions, plant species, stage of development, and chemical concentration. Fruit set is often unaffected by the spray, and leaf distortion and increased fruit set are common.

The only reference I could find that specifically mentioned maples was an article written by Dr. Davidson (Michigan State) in 1972, entitled, "Preventing Fruiting of Ornamental Trees." His suggested application for maples was naphthyleneacetic acid (NAA) at a concentration of 40-60 ppm sprayed at full bloom. The results were listed as poor to fair. You should check with your local extension agent to see if NAA, or any other materials, are presently labelled for prevention of seeds on maples.

Q: How can you tell if a gas leak caused a tree to die?

A: Assuming you are referring to a natural gas line, call the gas company and have the area checked for a leak.

Damage usually occurs in a circle radiating out from the source of the leak with the most serious injury occurring over the leak. If the tree is planted in a lawn, the turfgrasses will turn brown in the affected area. Also, the soil is often abnormally dry with a sour gas smell and the roots an abnormally dark color.

Q: Several of our golf course fairways are lined with Australian pine trees. The shallow root system of the pines prevents the establishment of good Bermuda turf in these areas. Can Australian pines be root pruned without causing damage to the trees themselves? If so, what equipment do you recommend for this pruning? (Orlando, Florida)

A: Australian pine (*Casuarina equisetifolia*), also called Beefwood, is a vigorous grower and should not be injured if root pruned properly.

Starting at the dripline (the outermost tip of the branches), measure the distance to the trunk. Root pruning cuts should not be made closer to the trunk than one half the total distance from the trunk to the dripline. As a precautionary measure, you may want to root prune a few trees and observe the effects over one season.

A hydraulic spade such as used in digging trees should easily cut the roots while causing minimum disruption to turf.

Q: Why are white birches so hard to grow? (Ohio)

A: Every plant has a climatic zone of adaptation within which it grows. At the northernmost and southernmost limits of this zone, plants do not grow vigorously and

are more susceptible to stress conditions such as certain insects and diseases.

White or paper birch (*Betula papyrifera*) will grow in Ohio but the warm-season temperatures and fluctuating soil moisture predispose it to the bronze birch borer which infests weakened trees. Heavy infestations usually kill the trees.

Vertical mulching, pruning, fertilization, and watering when needed are recommended to keep the trees growing as vigorously as possible. Most trees will also require several applications of insecticide every season. A more practical solution would be to plant birches more adapted to a warm climate.

Q: What is an acaricide?

A: An acaricide is a miticide, or more simply, any chemical used to kill mites.

Q: How can I get rid of crowfoot in bentgrass? This is a problem on all golf courses in this area and it gets worse each year. (North Carolina)

A: The extension service in your area has told us that crowfoot is a common name for goosegrass (*Eleusine indica*), although it may be confused with other coarse-bladed grasses. Goosegrass is an annual grass with a prostrate, star-shaped growth pattern and distinctive seedhead. It can be controlled with pre-emergent herbicides such as bensulide applied in early May or before the soil temperature stabilizes above 75°F.

Q: We have been searching for a growth regulator to be used on Bermuda 419 turf around sand traps. We have been looking at Atrinal, by Maag Agrochemicals Marketing, but cannot find any information concerning turfs. Do you know of any growth regulators that will work on turfs?

A: At the present time, Atrinal is not labeled for turf and the cost is not competitive with mowing.

The most commonly used chemicals for turf growth retardation have been maleic hydrazide (MH-30, Retard) and chlorflurenol (Maintain CF-125). In 1978, Embark 2-S (Mefluidide) was introduced and has shown favorable results on common Bermudagrass. Although Embark 2-S appears to have overcome some of the serious disadvantages of maleic hydrazide and chlorflurenol, all growth retardants slow turf recovery from environmental and other stresses.

I would suggest that you test one or more of the products to determine how they perform under your conditions. The basic producers are:

Maleic hydrazide — Uniroyal Chemical

Chlorflurenol — U.S. Borax

Mefluidide — 3M Company

Send your questions or comments to: Vegetation Management c/o WEEDS TREES & TURF, 757 Third Avenue, New York, NY 10017. Leave at least two months for Roger Funk's response in this column.