

PROBLEM SOLVERS

by Balakrishna Rao, Ph.D

Managing pesky bermudagrass

Problem: We use fabric and Roundup to get rid of bermudagrass and it still gives us fits. How do we get rid of it? (Kentucky)

Solution: Your Roundup treatment should give better results. Make sure that the mixing and application are done correctly. Bermudagrass management is difficult. However, proper application of Roundup is the best approach to the problem.

Bermudagrass spreads by producing lateral stems called stolons. Often stoloniferous plants require several applications. Therefore, repeat treatments as needed. Read and follow label specifications.

Spruce gall aphid control

Problem: Every year we have problems managing spruce gall aphids. We are primarily interested in the one which produces galls at the tips of branches. We have used Sevin in the past. What are we doing wrong? When is the best time to apply chemicals? (New York)

Solution: The problem you describe is commonly referred to as Cooley spruce gall aphid. The causal agent, *Adelges cooleyi*, is closely related to aphids yet is not an aphid; it is an adelgid.

Success in managing this pest depends on (1) understanding their life cycle, and (2) using the proper material at the proper time.

The adelgid has a complicated life cycle. It may alternate between spruce and Douglas fir and complete cycles may occur on both. Aphids overwinter as immature females at the base of the buds of spruce and Douglas fir. They mature in early spring to become a "stem mother," produce waxy filaments, and then lay several hundred eggs underneath.

After the eggs hatch, the nymphs migrate to the new growth where they feed at the base of the growing needles. This feeding stimulates gall formation which envelopes the young insects. By July or August, the adelgids migrate through an opening at the base of each needle on the gall to the top of the needles and transform into females with wings. These winged females may fly to Douglas fir or spruce and lay eggs on needles. These hatch and the nymphs overwinter as immature females.

On Douglas fir they lay eggs on the needle and a generation of "woolly aphids" is produced. The next summer these adelgids remain on Douglas fir or fly back to spruce. Sometimes Douglas fir may be so heavily infested that the needles will be covered with white woolly mass. No gall is produced on Douglas fir, but extensive feeding can produce distinct yellowish spots and bent or distorted needles.

To manage Cooley spruce gall adelgid problems, apply superior oil or oil plus ethion in April on spruce. Oil may temporarily remove the bluish color from blue spruce for up to four weeks but it may come back. Application should be done thoroughly to cover the crevices of bark or terminal twigs and

base of buds on spruce and Douglas fir. After the galls open in late July or early August, apply either lindane, Sevin or Dursban on spruce or Douglas fir.

Maple scale treatments

Problem: What is the best way to manage cottony maple scale on maple? Can we use oil? Would a general scale management approach, including one dormant oil spray plus a crawler stage application in summer, take care of the problem? (Michigan)

Solution: Reports indicate that a dormant oil spray may be used before growth starts in the spring. Make sure to read and follow the manufacturer's recommendations. Some varieties of maple are extremely susceptible to oil injury.

If in doubt, spray the trees with Sevin, malathion, Orthene or diazinon around July 1 and again in 10 days. Be sure to cover the lower leaf surface with spray. Repeat applications as needed to manage the crawlers.

The right lime

Problem: What are the different types of lime and what kind would you recommend for lawns? (Pennsylvania)

Solution: Several different kinds of lime are available. Ground agricultural limestone (carbonate forms of calcium and magnesium) is the most commonly used. Calcium carbonate is known as calcite, while magnesium carbonate is referred to as dolomite. The use of dolomite is recommended if the soil is tested and found to be low in magnesium.

Two other forms of lime are available to correct the soil acidity—calcium oxide, sometimes called burnt or quicklime; and calcium hydroxide or hydrated lime. Calcium oxide has twice the neutralizing capacity, while calcium hydroxide has 150 percent the neutralizing power of ground agricultural limestone.

Both calcium oxide and calcium hydroxide may be difficult to apply because of their powdery form. Therefore, agricultural limestone is preferred by most lawn care companies because of its ease of application and lower burn potential.



Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.

Questions should be mailed to Problem Solvers, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.