

VEGETATION MANAGEMENT

By Balakrishna Rao, Ph.D., and Thomas P. Mog, Ph.D.

Q: Is northern Minnesota too extreme for late fall fertilization programs? I am specifically concerned about direct low-temperature kill due to lack of winter hardiness. (Minnesota)

A: Responses of Kentucky bluegrass in Minnesota to fall fertility indicate that cold tolerance is not adversely affected by late season nitrogen. The optimum rate of soluble nitrogen is approximately one pound per 1,000 square feet. Soluble fertilizers applied after October 15 tend to act like slow-release sources with visible responses the following June.

Poor surface or subsurface drainage during the cold hardening period is the major cause of low-temperature kill. Excessive available water inhibits normal reduction of plant water content during cold hardening and the internal water later forms ice crystals within the plant.

Q: Every year as the season progresses from summer into fall our customers have to continually raise their mowers in order to avoid the "scalped" look on Bermuda lawns, both hybrid and common. We have fertilized with well-balanced fertilizers including iron and don't really have a thatch problem. It seems as if it must be a growth response to something. Do you have an explanation? (California)

A: Without having sufficient information concerning mowing height and frequency, it appears the scalped effect could be due to letting the grass grow too tall before cutting it. If Bermudagrass is mowed frequently it is not necessary to raise the cutting height to avoid a scalped appearance, although sometimes Bermudagrass may produce upright growth which, when not mowed properly, may appear to be scalped. With proper irrigation and fertility management, turf should green-up quickly and if mowed frequently, should not require a change in cutting height later on.

Sometimes dull mower blades may pull tall grass plants resulting in the scalped appearance you describe. Common Bermudagrass should never be mowed less than one inch.

Q: A pond was treated with aquazine for weed control. The water from this pond was used to irrigate bentgrass which resulted in injury. Could you please suggest some guidelines to remove the herbicide contamination from the pond water and how soon the water can safely be used for irrigation? (Canada)

A: Reports indicate that aquazine (simazine) even at 1 ppb. can be toxic to bentgrass, which is extremely sensitive to this herbicide. Repeated use of even slightly contaminated water can accumulate the herbicide in the soil resulting in turfgrass injury.

Activated charcoal is generally recommended to remove triazine herbicide contamination. Ideally, the entire pond or the contaminated body of water should be treated with activated charcoal. Perhaps, this would be difficult to manage, if not impossible. An alternative suggestion is to pump the pond water through an activated charcoal filter into a holding pond or a tank. Water coming out of the filter should be periodically monitored for herbicide residue.

In addition to monitoring to establish a safety level, I also recommend that the water be tested on small bentgrass test plots to further verify that it would not be phytotoxic.

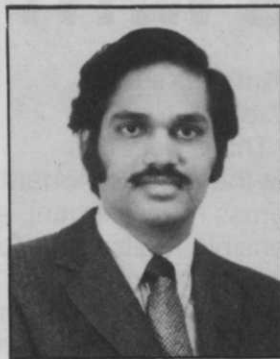
Q: It's not even summer and leaves are dropping from some maple trees. The leaves don't turn color, they just fall off. What is going on? (Illinois)

A: The maple petiole borer, June beetles and aphids are three of the more common causes of this problem.

It is the small larvae (caterpillars) of the maple petiole borer which do the damage. The adult petiole borer is a sawfly, a wasp-like insect. The larvae bore and feed inside of the leaf stalk. As a result, the petiole is weakened and breaks off a short distance from the leaf blade. The larvae usually stay behind in the stub which is still attached to the tree. The insect and the petiole stub fall off later. This insect overwinters as a pupa in the ground. I am not aware of an effective means of controlling the maple petiole borer.

The larvae of June beetles, also called May beetles, are white grubs which live in the soil. The adult beetles can fly. The adults feed on tree leaves and leaf petioles which brings about the leaf drop. When beetle feeding is the cause of the leaf drop, the length of the petiole which remains attached to the fallen leaf will normally be longer than the stub associated with petiole borer injury. Insecticide applied to the foliage should control May and June beetles. More than one application may be necessary.

Aphids are small, soft-bodied, rapidly-reproducing, sucking insects. Aphids can build up to excessive numbers almost overnight. Stress, induced by countless aphids sucking the sap from the leaves, will cause shedding of the leaves. This is especially true during a dry spell. When aphids are the culprits, the petiole of the shed leaf will not be chewed away or shortened. It often takes several foliar sprays of an insecticide to alleviate an aphid problem.



Balakrishna Rao is plant pathologist and Thomas Mog is pest management specialist for Davey Tree Expert Co., Kent, OH.

Questions should be mailed to Vegetation Management, Weeds Trees & Turf, 7500 Old Oak Blvd., Middleburg Heights, Ohio 44130. Please allow 2-3 months for an answer to appear in the magazine.