PROBLEM SOLVERS

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

Timing Insecticides for Billbugs

Problem: *For many years we have been using insecticides for surface insect control during the months of May and June. However, we have found a number of lawns severely damaged by billbugs, which become apparent during late August. Around this time, we have found many adults. Do you think we can get control of these pests if we apply treatments in August and September? Would you please explain the possible reasons for poor control from our existing practice. Also, we would appreciate your recommendation for proper management of the billbug problem. (New York)*

Solution: Billbugs can cause serious damage to turfgrass unless they are properly managed. For best results, as with any pest management program, it is necessary to have proper identification of the pest, proper pesticides, proper methodology and proper timing. Any mistakes in these areas would result in variable performance and might explain the reasons why you have been experiencing billbug problems. Further, it is important to know the life cycle of the billbug and administer the control program during the weak point of their developmental stages.

Billbugs overwinter as adults and become active in early spring. They feed on turf and lay their eggs in grass stems from mid-May to July. The eggs hatch in about a week and the young, legless larvae tunnel through the stems and become soil-inhabiting pests where they feed on the roots and crowns of plants from June through August.

During this period, billbug larvae can cause severe damage to lawns. However, their presence may go undetected because the damaged area will be masked by drought symptoms and, thus, often mistaken for moisture stress. If, with the onset of cool weather and rain during late August and September, the brown areas do not green up properly, close examination may reveal surface insect activity. You may find billbug adults alone or in combination with chinchbugs, sod webworms, etc.

August is not preferred timing for insecticide application for adult billbug control because during this period most of them might not have emerged as adults or some of them might be moving to overwintering sites in nearby vegetation.

Because of lack of information about fall treatment for billbugs, I suggest that you try a fall treatment on a small test plot first and study the rsults. Research conducted by Dr. H.D. Niemczyk, Ohio Agricultural Research and Development Center, Wooster, OH, suggests that a mid-April application of insecticide gives best billbug control. The objective is to remove the egg-laying population so that there will not be any future generations. If this is not feasible, then the next best time would be during the larvae feeding period from June through August. Larvae control is difficult because they are in a protected site in the plant stems or may have moved into the soil, becoming soil-inhabiting pests. Therefore, the performance of the insecticide applications may be variable which explains the reasons why you are experiencing poor results with your existing program.

We feel that it is to your advantage not to use any chemical during August; instead make a note of those lawns severely damaged by billbugs and treat those lawns in early spring for adult control. Severely damaged areas should be overseeded with compatible turfgrass cultivars.

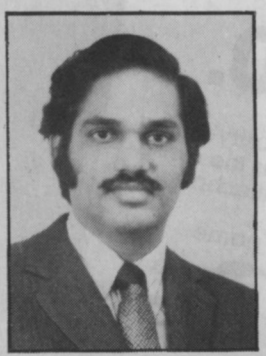
Delaying winter turf dormancy

Problem: *Every year in response to winter dormancy warm-season grasses, such as bermudagrass and zoysiagrass, show discoloration. We would appreciate your suggestions on how we can make the grass area look greener.(North Carolina)*

Solution: Reports indicate that warm-season grasses go dormant and become brown for a period of three or more months when the temperature falls below 50 degrees Farenheit or when there is intense light during daytime and temperatures in the evening reach about 49 degrees Farenheit. Under these conditions, chlorophyll pigment will be destroyed and photosynthesis is disrupted. In some instances, frost can also injure cells and thus contribute to the discoloration.

To minimize or mask the brown turf, I found the following suggestions in reference literature. Fall vertical mowing in combination with late fall fertilization has provided satisfactory results. Use of improved hybrid bermudagrass has reduced the length of the dormancy period. The practical approach would be to overseed the dormant turfgrass with cool-season grasses such as ryegrass, bluegrass or fescues. However, the overseeding operation is time-consuming, expensive and, if not done at the proper time, ineffective. Because of these problems much attention has been directed to the use of turfgrass colorants.

Since we do not have much information on colorants, I would suggest you use them on a small test plot to learn the advantages and disadvantages. Studies made by Cal Poly researchers on turf colorants might serve as a good reference for you.



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

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