

WINTERIZING LANDSCAPES

Winter pests

- Mice, rabbits, and deer take over in winter as insect pests lie dormant.

Mice and rabbits eat the cambium, the living tissue just under the tree bark. Look for this injury on low-growing shrubs, especially evergreens, and on young fruit trees.

If the cambium is removed from the entire perimeter—called girdling—everything terminal to the girdled site loses contact with the root system and dies.

So when the trunk is girdled, the tree's entire top dies.

Deer damage plants in two ways. First, they eat twigs, buds and leaves. Although this is annoying because it can deform landscape plants, the damage usually is not fatal.

The second type of deer damage is worse and sometimes lethal. When bucks rub their antlers on tree trunks, the cambium is destroyed. It takes several years for the tree to grow new tissue, but the bucks often return to rub the same

trees year after year.

Snow fences, chicken wire, hardware cloth or other fabrics can help protect plants from these hungry marauders, but they'll only work on individual plants. Deer can clear fences, and other animals can burrow under them.

—Charles Owens, the
Holden Arboretum,
Mentor, Ohio



Shrub damage caused by hungry deer. Holden Arboretum

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A new whey to de-ice

- Salt used for de-icing roads and sidewalks causes conifer needles along some of the nation's

most scenic byways to turn brown. Around the home or beside well-landscaped parking lots, dissolved salt washes into the soil and can cause nearby trees to slowly die.

The good news is that researchers are trying to find ways to economically ferment cheese whey to produce calcium magnesium acetate, an effective and apparently harmless de-icer.

The *Wall Street Journal* says 20 billion pounds of whey are poured down the drain annually as waste. When perfected, however, the calcium compound will probably sound expensive to city officials. At a projected cost of \$300 per ton, it will seem to compare unfavorably to cheap salt, which sells for only about \$30 per ton. That is, until the aggregate damage from salt is calculated—a cost that some studies suggest required up to \$1000 per ton to rectify.

—National Landscape Association News

Take-all patch springs up on Southern golf courses

A disease that appears to be either brown patch or grub damage, but upon closer inspection is not.

By James E. Guyette

■ A relatively new turfgrass disease called take-all patch has been attacking St. Augustine and bermudagrass in Florida, Alabama, Texas and throughout the Gulf Coast states. The damage this fungus causes is similar to that of brown patch.

"Take-all causes costly damage to parks and golf courses, as well as to commercial sod farms," says Dr. Janell

Johnk, Texas A&M extension specialist, Dallas. It hits home lawns, too.

"Left untreated, the damage increases year-to-year, and ultimately it destroys an entire lawn or field," Johnk notes. "St. Augustine seems to be sustaining greater damage than bermudagrass. It's cropping up wherever grass is found," she adds.

Dr. Joe Krausz, Texas A&M plant pathologist, College Station, first identified take-all in Texas in 1991. The culprit is the fungus *Gaeumannomyces graminis* var. *graminis*. This same fungus is one of the three that cause spring dead spot in bermudagrass. "It's probably been here a



Take-all prefers alkaline soils.

long time, but we're probably just learning about it now," Krausz explains. "In the past, they would probably scratch their heads and attribute it to other things.

"The fungus prefers alkaline (high pH) soils. We're studying that now. It may be our mild winters have let this soil-borne disease get a foothold in
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become as severe as it is this year. And once you've got it, it's a real problem," says Krausz.

"The damage approaches epidemic proportions across the state, except for the desert areas," says Johnk. "Unfortunately, this fungal disease imitates brown patch and grubworm damage. What we use to treat for grubworms, for instance, has no effect on this disease. On the other hand, the appropriate chemicals to control take-all work on brown patch, but some chemicals for brown patch are not labeled for take-all."

The two fungicides labeled for take-all are fenarimol (Rubigan) and tridimefon (Bayleton). The best defense against take-all is a strong stand of turf. "It's a long-term management thing," says Krausz.

The best time to apply fungicides is in the fall, when the rainy season starts and evening temperatures dip to below 70°F. Local conditions usually help with timing.

"Don't use a fungicide unless you're sure that you have take-all, and then only at the right time—in the fall," says Johnk.

Adds Krausz: "These fungicides are most effective as preventive treatments and much less effective as curative treatments after the disease is established."

This disease is characterized by large irregular patches of dead turf, often ranging from a foot to several yards in diameter. Affected areas show irregular patterns as individual spots merge or as the disease subsides temporarily and weeds fill thinned areas.

Most visible in early spring and summer, damage usually occurs following stress, such as the first hot, dry days or after applying a quick-release fertilizer.

While take-all patch can be mistaken for brown patch or grub worm damage, a close look reveals several distinguishing factors. "It's a root rotter," Krausz explains. Entire stolons may be lifted easily from the turf. Once the roots are destroyed, they don't recover. Re-growth has to come from the unaffected edges of the diseased patch or new sod.

Brown patch, on the other hand, doesn't affect the roots, and the turf recovers when warm weather arrives. With brown patch, the base of the leaf

sheath is often slimy and rotted and the leaf pulls from the rest of the plant with a gentle tug. Although white grub damage looks similar on the surface, grubs will be found in the soil. Also, grub-damaged roots don't appear rotted.

"Turfgrass with a vigorous root system resists the damage from take-all patch fungus," says Johnk.

Recommended procedures to deal with the disease:

- Eliminate areas where water accumulates in low spots.
- Water only when needed. Infrequent but thorough watering is best.
- Use fertilizers that lower the soil pH, such as ammonium sulfate. Fertilize the last time in early September if nitrogen is needed, taking into account local climate conditions.
- Prevent thatch and aerate to alleviate soil compaction.
- Preventive fungicide treatments in the fall should be repeated for at least two years.

—The author, former editor of Lawn Care Industry magazine, is a frequent contributor to LM.

WINTER GREEN.

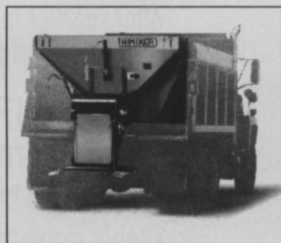
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