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PROBLEM SOLVERS

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

Pros and cons of clippings

Problem: Grass clipping pickup and disposal presents a problem to most of us. I would appreciate your comments on leaving clippings in the lawns. (Texas)

Solution: Reports suggest that return of clippings over an extended period of time tends to reduce the turfgrass quality under conditions of intensive turfgrass culture. Clippings should be removed when the blades are too long or they have a high potential for the development and spreading of diseases. Under intensive turfgrass culture, if the plant is growing rapidly, the clippings should be removed.

Turf grown under a low-intensity fertilizer program can benefit by returning the clippings. These clippings release nitrogen to the soil which in turn can be utilized by the turfgrass plant. This would reduce the total amount of nitrogen required by the plant.

If possible, try to use a mower that would shred or mulch the clippings to aid in decomposition.

Fall webworm fights off controls

Problem: There is an awful lot of fall webworm in our part of the state this year. Will it kill the trees? (Indiana)

Solution: Webworm has been building up in Ohio, too, over the past several years. To my knowledge, tree mortality has not been attributed to the feeding activities of this insect (*Hyphantria cunea*). By the time the webworms and their webs are really noticeable, the leaves have produced the bulk of the food the tree needs for next year's growth. For this reason late season defoliators are thought to be less injurious to the tree than pests which feed on the new foliage in spring or early summer. For the tree, this is especially fortunate because the fall webworm feeds inside of the tough, silken webs it builds. Once a web of any size has been constructed it is difficult to get insecticides through the webbing and to the feeding caterpillars.

Most people feel that the large webs detract from the ornamental value or beauty of their trees. To these people management of this pest is justified. Just remember that if insecticides are used, they are best applied as soon as the problem is detected.

A cultural control for fall webworm is to prune out the nests and destroy the caterpillars inside when both webs and worms are small.

Pesticide inventory important

Problem: While making an inventory, we found many different kinds of unused pesticides in our storage area. Is there some way we can determine whether they are still good to use or if they have broken down? We would appreciate your comments in this regard. (Michigan)

Solution: It is good that you are making an inventory and are concerned about the unused pesticides.

Pesticide breakdown depends on the type of pesticide, its age (shelf life), and the storage condition. The following signs of pesticide breakdown should be checked:

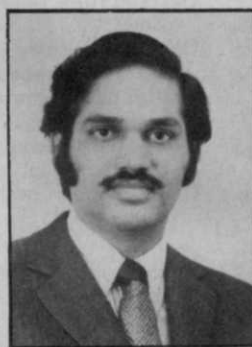
1. Caking of wettable powders or dusts.
2. Deposits in the bottom of containers of emulsions or any separation or different colored layers of the liquid formulations. Cold weather may cause some liquid formulations to crystallize or precipitate out. Warming and agitation often correct this problem.
3. Rust spots on containers indicate humidity in the storage area or some chemical reaction of the pesticide with the container.

If you see any of these unusual signs, you should not use those pesticides. Discard the pesticide following the safe disposal guidelines. Be careful while handling pesticides which have broken down as they may be more toxic. Inventory control, that is purchasing only pesticides which are intended for annual use and using the older pesticides first, will minimize the potential for waste.

Turf establishment after Roundup

Problem: How long does it take for turfgrass to establish that has been seeded into old sod sprayed with Roundup? We sprayed the lawn, waited seven days and seeded. Over a month has passed, and although the lawn turned brown, no new grass is showing yet. (Indiana)

Solution: Establishment time will depend on time of year, available moisture, turfgrass species seeded, rate at which seed is applied, and technique of application. Under ideal conditions, the lawn will begin to "green up" in about two weeks after seeding.



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 Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Please allow 2-3 months for an answer to appear in the magazine.

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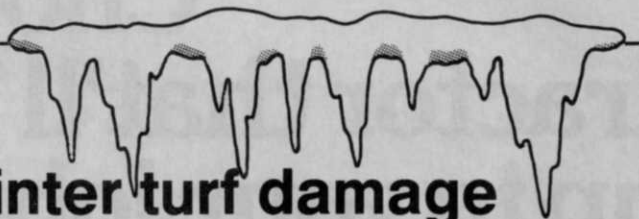


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By Thomas W. Fermanian

Simple steps curb winter turf damage



Winter damage is seldom caused only by exposure of the turf to low temperatures.

Commonly, the turf is weakened by one or more external events which lowers the tolerance of the grass to low temperature. With this lowered tolerance, injury can result from relatively short exposures to freezing temperatures.

An explanation of these "external events" is necessary, therefore, to totally understand winter damage. The most common problem is the desiccation of plant tissue. When dry winds remove moisture from leaves and stems, minor damage occurs and recovery in spring is rapid. If the meristematic tissue of the crowns is dehydrated, the damage is much greater and a serious loss of turf results.

Methods of Water Loss

The mechanisms of water loss are the same in both cases. Simple transpiration is one method of loss. Transpiration only occurs when free water is available in the soil for uptake by the roots. When the moisture level in the turf tissue is low and the roots cannot absorb water from the soil, a more serious mechanism of water loss occurs. As the air temperature drops, ice crystals begin to form in the intercellular spaces but not within the living cells. This causes water to move from within cells across to the cell membrane to the intercellular spaces. A water deficit can result within the cell. Hardened cool-season turfgrass can tolerate this phenomenon well. Damage occurs, however, during early spring when the hardening process reverses. The turf can no longer tolerate sharp drops in temperature and damage results. Insulation from an extreme temperature drop, therefore is most critical in late winter. Snow is good insulating material which does not require removal in the spring. Snow fences can be erected in the fall to help the accumulation of snow on crucial areas (perennial ryegrass turf, tall fescue turf, open areas, etc.) When expected snowfall is minimal, other materials, (leaves, straw bark chips, etc.) can be used to provide insulation. Follow recommended procedures to prevent snow mold when using any cover material.

Excessive Water a Villain

Excessive water is another leading cause of winter damage to turf. In areas of poor drainage or where underlying soil is frozen, water can accumulate during thawing periods. Thawing can occur in some locations under intense sunlight while air temperatures remain below freezing. If these areas remain under water for an extended amount of time, the grass crown tissue takes up water. Grass tissue in this hydrated state is more sensitive to low temperature.

A sudden drop in temperature below 20 degrees Fahrenheit can cause serious losses. Compacted areas (green fringes, tees, etc.) are quite prone to this type of damage.

What can be done to prevent these catastrophies? First, don't panic. Many damaged areas will recover slowly if managed properly. Find the extent of the damaged area, or better yet, determine first if there is any winter damage. If you have had damage in an area before or if you suspect a likelihood of trouble, remove several plugs of turf as soon as the soil allows. Place the plugs in a greenhouse or in your shop, allowing them to warm up slowly and watch for new growth.

After several weeks, you will know if there is anything to worry about, you missed the damaged areas, or you can begin to plan for renovation. Despite the results, it is nice to know before the growing season.

It is not too late to prevent some potential winter damage. Remember, most damage occurs during late winter or early spring during periods of thawing weather. Don't try to save everything; concentrate your efforts on the critical areas where you suspect problems. Where standing water is a problem, try to remove it slowly.

Snow and ice preventing natural runoff should be removed or grooved to release the water. One alternative to physical methods is to apply a coating of dark material (activated charcoal, Milorganite) to the ice or snow and let the sun do the rest.

Ice Cover Problems

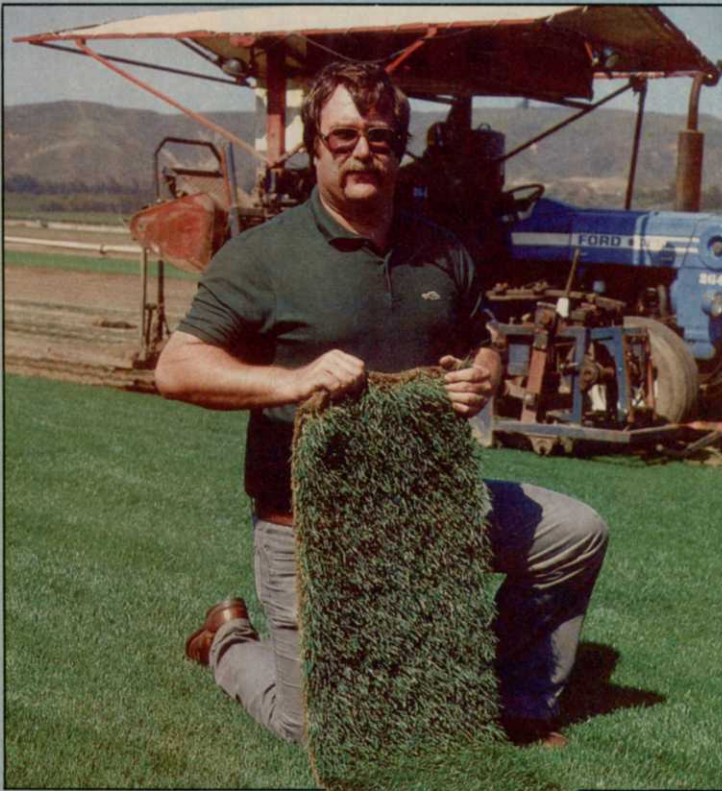
Ice cover over bentgrass or Kentucky bluegrass is generally not a serious problem. Other cool season turfs, especially perennial ryegrass can be seriously damaged by an ice cover of moderate duration. Large continuous sheets of ice over perennial ryegrass turf should be removed mechanically or as previously outlined.

If too little water is the problem, be cautious in applying more. Where snow cover is lacking, straw, leaves, or other mulching materials can be used to buffer the turf from a sudden drop in temperature and minimize further water loss. Use only mulching materials that are weed seed free. Weeds will tend to be a problem in damaged areas, therefore, Tupersan should be used in conjunction with seeding Kentucky bluegrass. Bromoxynil can be used to control immature broadleaf weeds after germination.

Plan ahead for next winter. Correct drainage problems this season for areas receiving winter damage. Be certain the soil moisture levels are adequate next fall before draining the irrigation system. Don't aerify critical areas late in the year and consider using a mulch where snow cover is minimal. Mulches also promote early green-up in spring.

Utilizing these few procedures, winter damage to turf should be a problem of the past. **WTT**

Thomas W. Fermanian is Extension Turfgrass Specialist at the University of Illinois, Urbana.



Bill Schader
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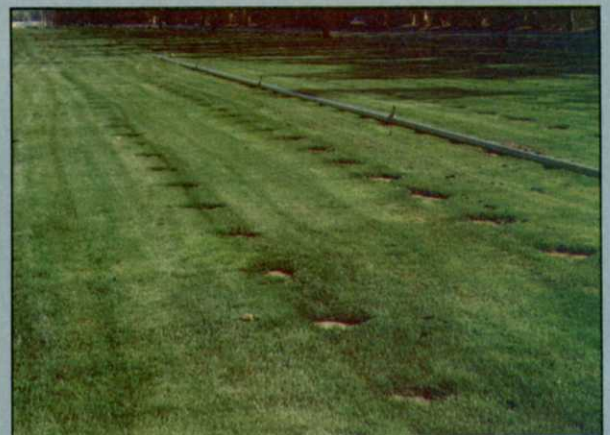


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Columbia	2	3	1	13	2	6
Midnight	*	1	3	13	*	1
Baron	14	39	12	23	13	27
Adelphi	1	36	2	16	4	4
Victa	20	38	*	15	*	9
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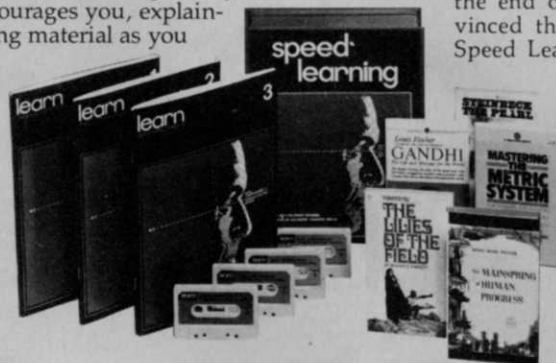
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22nd Annual North Carolina Turfgrass Conference, Jan. 3-5. Pinehurst Hotel, Pinehurst, NC. Contact W.B. Gilbert, 1119 Williams Hall, N.C. State University, Raleigh, NC 27650, (919) 737-2657.

36th Annual Agricultural Chemicals School, Jan 9-10. Contact North Carolina State University, Jane S. McKimmon Center for Extension and Continuing Education, Raleigh, NC, 27607

Maryland Turfgrass '84, Baltimore

Convention Center, Jan. 9-11. Cherly Gaultney, Box 223 White Marsh, MD 21162, (301) 335-3700.

24th Annual Virginia Turfgrass Conference and Trade Show, Jan. 18-20. Williamsburg Hilton and National Conference Center, Williamsburg, VA. Contact Dr. John R. Hall, III, Agronomy Dept., VPI&SU, Blacksburg, VA 24061-7294. (703) 961-5797.

18th Annual Conference of the Tennessee Turfgrass Association, Jan. 10-11. Music City Rodeway Inn, Nashville TN. Contact Brenda Goins, Executive Secretary, 25 Coach House, 523 Harding Place, Nashville, TN 37211, (615) 832-6493.

54th Annual Michigan Turfgrass Conference, Jan. 17-18. Lansing, MI. Contact Paul E. Rieke, Extension Specialist, Turf, Michigan State University, East Lansing, MI 48824.

To insure that your event is included, please forward it, 90 days in advance, to: WEEDS TREES & TURF Events, 7500 Old Oak Boulevard, Cleveland, OH 44130.

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