

# Winter Covers: Are They For You?

by JIM SKORULSKI

Agronomist, Northeastern Region, USGA Green Section

**T**O COVER OR NOT to cover is a question many superintendents face today. This is especially true in the northern regions of the country, where temperatures and snow cover seem less predictable each year. Geotextile covers can protect exposed greens from harsh, drying winds, and soil temperatures under covers can range as much as 8 degrees Fahrenheit higher than under uncovered areas. Soil and leaf moisture contents also are higher under the covers. The warmer temperatures and soil moisture stimulate earlier root and shoot growth, which can be beneficial in some instances. The use of winter covers is not without risk, however, as many have found. A closer look at the use and management of winter covers may help you decide whether they are the answer you are looking for.

There are many geotextile fabrics and plastic materials available today for use as winter covers. The covers are available in different shades of white, gray, and black, with the lighter, more porous materials being most popular. The covers are constructed from bonded polyester, woven polypropylene, plastic weaves and film, and other synthetic and natural materials. There are many individual preferences in the field. The lighter fabrics are easiest to manipulate and usually provide the highest light penetration. The heavier materials are probably more durable for high-wind situations and present more physical protection against winter sporting activities. Take time to research the various materials available and choose one that is best for your specific conditions.

The use of geotextile covers has definitely increased in recent years. Originally, the covers were used largely for protection against desiccation injury from the wind. The covers' insulating benefits then were discovered and the covers were used to stimulate earlier spring growth, especially on weak, shaded greens. This can be an effective program if the covers are managed properly.

In the South, covers are used frequently to protect bermudagrass on greens and tees against cold temperature injury. They also are effective in preventing frost cover that can

delay play during the morning hours. Superintendents in high-altitude locations use geotextile covers to extend their short growing season. Attempts have been made in the North to cover greens for protection against injury from ice cover and crown hydration. The covers also are used to provide a formidable barrier against injury from vandalism and winter activities.

Covers have been helpful for seed germination and establishment at any time of the season. Late fall or dormant seedings often are covered to prevent washouts and hasten seed germination and establishment. Superintendents have found that dormant seeding bentgrass and applying covers is a good insurance policy for greens that frequently suffer winter injury. The early seed germination hastens the recovery of damaged areas and can increase bentgrass populations on the greens. Damaged areas in spring can be aerated, overseeded, and covered to hasten the recovery process.

Unfortunately, winter covers are not a panacea and will not solve all winter problems. Covers have been very inconsistent in their effectiveness against ice and crown hydration injury. Their use in bringing the greens into play earlier in the season can backfire, as many superintendents and disappointed green chairmen have discovered. This is especially true if adequate labor is not available to properly manipulate the covers in early spring, when the turf is lush and susceptible to cold temperature injury. In one instance, a geotextile cover was blown free from half a green. The cover was not replaced and the turf wintered naturally. The side which was covered appeared very strong and was actively growing when the cover was finally removed in spring. A frost occurred and damaged the lush turf, but the portion of the green which wintered naturally was not harmed. The surface quality between the covered and uncovered portions of the green remained apparent into late spring.

Cool-season diseases such as pink snow mold, *Fusarium* patch, *Typhula* blight, root rot *Pythium*, and cool-weather brown patch also can be more damaging under covers, where temperatures and moisture are ideal

for disease activity. The actively growing plants often are succulent and more susceptible to pathogen infection. Fungicide applications made the previous fall can break down as a result of the accelerated growth and increased disease pressure. An extra fungicide application often is required to extend protection against cool-season diseases once the covers are removed.

There are several practices that can be used to help assure successful cover use. The covers normally are installed on greens in late fall or early winter, after turf growth has ceased and preventative fungicide applications have been completed. The covers are secured to the ground with large staples, or with spikes inserted through lathing strips. Once covered, the greens usually are not touched until late winter or early spring when temperatures warm or snow cover disappears. However, it is important to monitor the covered greens through the winter season, as high winds or vandals can tear the covers. It also is important to monitor for ice accumulations which form through the covers in areas of poor surface drainage. The ice should be softened with a darkening agent and carefully removed from the cover to avoid possible turf injury.

The critical management period for the turf occurs immediately after the covers are removed. The majority of failures that occur with covers take place at this time. Initial mowing should be completed as soon as possible, preferably with a walk-behind greens mower set at a height that will not scalp the turf. Remember, growth has been occurring under the covers, so the initial mowing height should be higher than that used during the regular season. The height can be slowly lowered during early spring until the desired height-of-cut is obtained.

The turf also should be assessed for disease activity. A granular application of a contact fungicide can be applied to extend control against the cool-season disease pathogens. The early spring fungicide application should reduce disease incidence through the remaining cold weather period.

**DO NOT PACK AWAY THE COVERS!** Instead, keep the covers near the greens



*(Left) A cover is pulled from a green in early spring, exposing the lush, actively growing turf beneath.*

*(Below) Note the lush condition of the covered turf as compared to the dormant turf that wintered naturally.*





Winter covers can create an ideal environment for disease activity, in this case, pink snow mold. The actively growing turfgrass plants often are succulent and susceptible to pathogen infection.

where they can be replaced should cold, windy weather return. It is probable that the covers will have to be put back on the greens at least once, and perhaps several times, following the initial removal. This labor-intensive technique protects the turf from the coldest temperatures and desiccation while allowing the turf to slowly acclimate to the normal spring temperatures. This technique is similar to manipulating young seedling plants destined for the vegetable garden. The young plants must be hardened off prior to exposing them to the harsh elements. This practice often makes the difference between success and failure with the covers. Where labor is not available, the covers are removed in early spring with the hope that the turf will be able to tolerate cold temperatures should they occur. Often this is not the case, and benefits gained from the earlier growth are lost as the turf is set back by cold weather.

So the question remains: To cover or not to cover? Covers are effective against winter desiccation and can provide protection against cold temperature injury and physical damage. When covers are properly manipulated in spring, they can help weak, shaded greens by promoting earlier spring growth

and root development. The use of the covers also provides a good opportunity to slice additional bentgrass into existing greens late in the season. This method of late fall overseeding has proven successful at several golf courses in the Northeast.

Covers should be used sparingly, however, if labor is not adequate to properly manipulate them in spring. The majority of covers provide little, if any, protection against ice and associated crown hydration injury and are not recommended for that purpose. The effects of winter covers on *Poa annua* populations also bring their use into question. The cool, moist environment under the covers is ideal for *Poa annua*. However, there is no research work or field data supporting this concern at this time.

If you are contemplating the use of covers this season, keep in mind that it is a labor-intensive operation. Limit the use of covers to one or two problem greens if labor is a concern. This will allow you to become familiar with their positive effects and potential problems prior to wide-scale use. Covers can be an effective tool for specific purposes. Learn to choose and use the tool properly, and the benefits will be realized with a healthy, vigorous turf in spring.

#### STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

(Act of October 23, 1962; Section 4369, Title 39, United States Code.) 1. Title of Publication — USGA GREEN SECTION RECORD. 2. Date of Filing — September 23, 1992. 3. Frequency of issue — Bimonthly: January/February, March/April, May/June, July/August, September/October, and November/December. 3A. Number of issues published annually — 6. 3B. Annual Subscription Price — \$12.00. 4. Complete mailing address of known office of publication — USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708. 5. Complete mailing address of the headquarters of general business offices of the publisher — USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708. 6. Names and addresses of Publisher, Editor, and Managing Editor: Publisher — United States Golf Association, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708. Editor — James T. Snow, USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708. Managing Editor — James T. Snow, USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708. 7. Owner (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.) — United States Golf Association, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708; President — Stuart F. Bloch, USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708; Vice Presidents — Reg Murphy and M.J. Mastalir, Jr., USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708; Secretary — Judy Bell, USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708; Treasurer — USGA, Golf House, P.O. Box 708, Far Hills, N.J. 07931-0708. 8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities — None. 9. For completion by nonprofit organizations authorized to mail at special rates — The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes has not changed during preceding 12 months. 10. Extent and nature of circulation —

	Average No. Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
A. Total No. Copies (Net Press Run)	16,617	15,700
B. Paid and/or Requested Circulation		
1. Sales through dealers and carriers, street vendors, and counter sales	None	None
2. Mail Subscription (Paid and/or requested)	15,791	15,111
C. Total Paid and/or Requested Circulation (Sum of 10B1 & 10B2)	15,791	15,111
D. Free Distribution by Mail, Carrier, or Other Means; Samples, Complimentary, and Other Free Copies	576	500
E. Total Distribution (Sum of C & D)	16,367	15,611
F. Copies Not Distributed		
1. Office use, left over, unaccounted, spoiled after printing	250	89
2. Return from News Agents	None	None
G. Total (Sum of E, F1 and 2 — should equal net press run shown in A)	16,617	15,700

11. I certify that the statements made by me above are correct and complete — JAMES T. SNOW, Editor.