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Snow Mold -

(Continued from Page 10)

tive as the flat fan nozzle at 30 PSI in work done at Virginia by Houston B. Couch.

A sprayer with a uniform deposition pattern must still have an applicator that makes uniform application. Skips and overlaps result in disease development and potential injury or costly waste of product. The use of spray pattern indicator products can clearly show skips, plugged nozzles and overlaps; however, it is one more item to suspend in the tank and it can increase compatibility problems. Spray tanks should be filled first with water, then add the product to be sprayed and be sure that the agitation is thorough and continuous. Never let the tank stand without agitation and spray soon after preparation. Prompt application after mixing well prevent the likelihood of chemical hydrolysis (product breakdown), separation, precipitation or caking in the tank. Tank mixes (two or more products) can save application time but you need to be aware of incompatibility. Physical, Chemical and Phytotoxic problems can develop. Check with the manufacturer of a product before trying mixtures.

Products should be applied to a dry turf surface at a time when the surface is expected to dry before a rainfall event or irrigation. Trials at Virginia by Dr. Couch show that 1) rain or irrigation before the treated area is dry results in significant disease control loss of non-systemic fungicides, 2) rainfall or irrigation immediately after the spray dries

will not appreciably reduce the effectiveness of fungicides with a sticking agent (check with supplier), and 3) systemic products are less vulnerable than non-systemic to reduce levels of effectiveness by rain or irrigation before the spray dries; however, differences among systemic products do exist. My general rule is to apply snow mold products in two gallons of water per 1,000 sq. ft. with a boom fan nozzle system at 30 to 60 PSI or Raindrop nozzles at 40 PSI. I prefer the tapered fan nozzle system and do not recommend flooding nozzles for fungicides on turf.

Cultural turf management to lessen disease pressure is more important with non-mercurial products. Integrated disease management can make the difference between success and failure with snow molds, especially with the non-mercurial products now available. The fungicide program results of the past that I recommended will not be possible in future, and more dependence will be shifted to IPM. This level of confidence in your ability to provide 98 or 99% disease control consistently simply will not exist with fungicides. Your expectations may be too high and if you don't use all the techniques to manage snow molds, your performance will be judged as inadequate. Avoid turf fertilizer applications that keep the grass growing into the fall. Slow release forms are desired and grass must not be left uncut in the fall. Keep mowing until top growth is stopped. Leaving the grass a little longer in the fall is good and may even allow for better winter survival. Thatch, snow compaction and excessive snow accumulation increase (Continued on Page 25)

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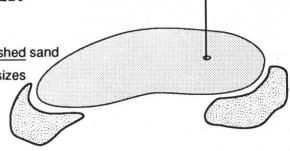
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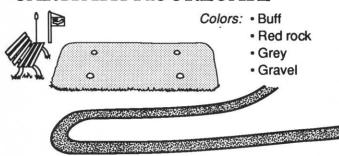
All specs available upon request

BUNKER SAND

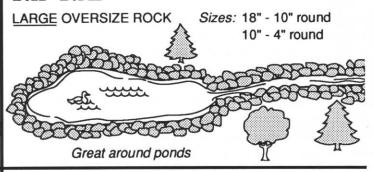
- · Clean, washed sand
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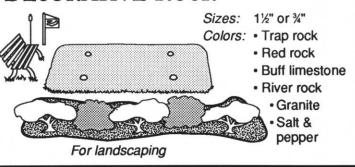
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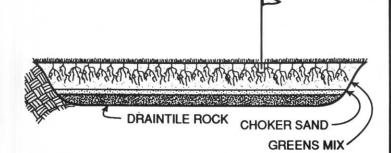
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Winter Covers: Are They For You?

By JIM SKORULSKI Agronomist, Northeastern Region, USGA Green Section

To 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

(Continued on Page 23)



CONTACT: **LARRY THORNTON** 1-800-642-2736 or 612/723-0151



MGCSA 66th ANNUAL TURF CONFERENCE

November 17, 18 & 19, 1993

Minneapolis Convention Center • Minneapolis, Minnesota

Wednesday, November 17, 1993

7:30 a.m. - 10:00 a.m.

Registration

9:00 a.m. - 11:00 a.m.

MGCSA Annual Business Meeting

GCSAA Representative - Issues Update

Thinking Staff

Session Moderator - Dale Parske

Equipment Tips
 Irrigation Tips

3) Course Accessory Refinishing

4) Traffic Control Options

11:00 a.m. - 1:00 p.m.

Lunch and Awards Presentation

Lunch Address by: Jack McCloskey, G.M. Minnesota Timberwolves

Participation Optional (Pre Registration Required)

1:00 p.m. - 2:00 p.m.

David McNally Keynote Speaker

2:00 p.m. - 5:00 p.m.

I.P.M. Strategies Concurrent Workshop

Instructor: Gerald Ferrantino Professor, Cornell University * Watson Award

* Distinguished Service Award

* Scholarships

* Service Awards 25, 30, 35 etc.

Golf Course Construction & Design

Mike Morley - Construction Budgeting

Leon Howard - Physical Soil Analyses

Tom Doak - Practice Facilities Jim Latham - Tee Construction

Concurrent Workshop

Thursday, November 18, 1993

7:30 a.m. - 8:30 a.m.

Fellowship Meeting

8:00 a.m. - 9:00 a.m.

Registration

8:00 a.m. - 11:00 a.m.

Professional Relations Concurrent Workshop

George Carrol - Team Building Jim Snow - Selling Your Ideas Reed McKenzie - Effective Committees

Craig Waryan - Pro Functions

Landscaping the Golf Course Concurrent Workshop

Instructor: Brad Pedersen,

Maintenance Considerations
 Plant Material Selection
 Project Estimating

U of M Turf Specialist/Assoc. Professor

11:00 a.m. - 12:00 noon

Community Relations and

Pesticide Risk Management

Dr. Frank Rossi, University of Wisconsin

12:00 p.m. - 1:00 p.m.

Lunch

Choose from numerous area restaurants, all within walking distance by skyway or

on-site cafeteria.

1:00 p.m. - 4:00 p.m.

Trade Show

4:00 p.m. - 5:00 p.m.

GCSAA Caucus

5:00 p.m. - 9:00 p.m.

Hospitality Night

Convention Center Ballroom

Board/Committee Speaker Luncheon

(Continued on Page 27)



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A Salute to the Grounds Crew

John Katterheinrich and Staff Had Interlachen In Superb Condition for Walker Cup Matches

In 1910 William Watson designed nine holes of what is now known as Interlachen Country Club in Edina. After formally opening in late July of 1911 with nine holes in play, the beginning of golf history in Minnesota had started a new chapter. In 1919 Donald Ross, the famed Scottish architect, was brought in from Aberdeen to complete the task started in 1910 and finish designing the front nine. Ross was known for his use of contours, matching the land to the hole, but little did Watson and Ross know that their combined design would be a golf course that golf legends were made of.

Over the years Interlachen has been host to the 1930 U.S. Open Championship, 1935 U.S. Women's Amateur Championship and, in 1986, the U.S. Senior Amateur Championship. The membership is well-recognized as a largely supportive, volunteering group that will cooperate to the tune of 110% and still find a way to give even more. The reputation of the golf course is legendary; not only is it a championship layout, but a golf course that is finely groomed everyday from the start of the season until the snow flies. The responsibility of the care of the golf course solely belongs to the grounds staff.



THE TWO CHAMPS

Accomplished Golf Course Superintendent John Katterheinrich and detail-oriented Assistant Superintendent Jim Kassera, along with 27 diligent, self-motivated, positive individuals who make up the grounds staff, did everything from cutting the putting surfaces to recovering the trash to keeping the cutting edges of all mowers razor sharp for the 1993 Walker Cup matches. The golf course was ready to accept the challenge of the 20 finest amateur golfers from the United States, Great Britain and Ireland.

When you toured the golf course Tuesday afternoon, you could plainly see that everything was in pristine condition.

Fairways were tight. When you hit a fairway, you could almost be guaranteed of not having a bad lie. The greens were in the finest condition imaginable. When one thinks of Interlachen, one thinks of immaculate putting surfaces. However, the greens for the Walker Cup and for the three weeks prior to the competition exceeded everyone's expectations.

Prior to the opening ceremony, John Katterheinrich had only one concern: the weather! He was extremely confident that the golf course was ready. At 5:45 a.m. Wednesday, the skies were ablaze with an extraordinary light show of heavenly origin. John's concern was in fact reality. The weather report just prior to Tuesdays opening ceremony was for a half-inch during the late night. At 6:25 a.m. Bob Distal, Superintendent at Wayzata Country Club, reported that



Interlachen's John Katterheinrich with Tom Morgan, USGA agronomist and Jim Kassera discussing the rain.

nine-tenths of an inch of rain had already fallen. The frequency of the light show picked up, along with the wind. A storm bordering on severe limits was now playing Interlachen to the tune of 40 m.p.h. wind gusts and delivering 1.8 inches of rain. Inside the maintenance facility, the staff knew what to do; squeegees were being assembled, pumps were being looked at, and the staff knew that it would be bunkers and greens first, then the rest of the golf course. But first the situation around the building came first. Why was there water draining through all the doors? The rain and wind came with such furor that the drain that was under the media center had clogged with plants and other material, so much that the media center now had a foot of water in it. The squeegees first use would be in the media center.

After a five-hour delay play was underway. Strategies concerning the golf course maintenance had been changed, but still it played well.

Thursday morning there was no threat of inclement weather. In fact, after a few morning clouds, the sun had come out to deliver a great day for golf. Tees had been (Continued on Page 19)

DURING MINNESOTA LPGA CLASSIC

Tom Fischer, Staff Draw Accolades for Work At Edinburgh U.S.A.

Edinburgh U.S.A. advertises itself as a municipal golf course with championship playing conditions. That's one claim that you can definitely take to the bank.

In Tom Fischer's eight-year tenure at this fine golf facility, you can see the great pride he takes in hosting such a fine LPGA event. The Classic has completed its fourth year, and it is continually getting stronger. This year the addition of a corporate village, and a most awesome skybox overlooking the incredible 17th hole, really added to the growth of this tournament site.

Once again, as with past tournaments, it was up to the grounds staff at Edinburgh U.S.A. to put up all the scoreboards, set up the ropes, take care of "ecology" and still maintain the golf course to championship levels during the course of the golfing season. Monday came, and it was business as usual for Tom and his staff. The only difference is that the ropes put up had to come down as well as the scoreboards.

In talking with Jane Reynolds, LPGA tournament official, it was clearly evident that her experience with the staff at Edinburgh has been an extremely good one. When asked to sum up here experiences with this site, she said, "I wish we could take Tom Fischer with us to all of our sites. He's extremely well-organized and just a super person to work with. That makes our job a lot more enjoyable."



Edinburgh USA's Tom Fischer with Minnesota native and Classic runner-up Cindy Rarick.

With Tom's positive outlook and "we can do it" attitude, look forward to many more tournaments to make their way to the impressive Edinburgh U.S.A. layout. Next year watch for the Minnesota LPGA Classic to move to a late June date. I'm sure Tom will appreciate the support from our Association that he has always given to the Association.

-Dale Wysocki

Walker Cup —

(Continued from Page 18)

moved Wednesday evening, and greens had also been moved once that evening.

With a multitude of mowers out mowing greens, aprons and fairways, everything was coming into shape, again! The greens were stimping at a smooth 10'6", with no signs of stress anywhere to be seen. Of course, during the preparation of any tournament, little gremlins do find a way of trying to mess up your day. These bothersome little creatures even show up weeks prior to the tournament. When the USGA accidently forgot to bring the tournament flags, it was not acceptable to have just a yellow flag sitting atop the flagstick. Katterheinrich immediately contacted MGCSA member, Steve Garske, president of Par Aide Golf Products Company, to come up with a flag that would symbolize the importance of the 34th Walker Cup Competition.

In the final analysis, the playing conditions at Interlachen are some of the finest anywhere within North America. The grounds were maintained exclusively by Interlachen's excellent grounds department. Many of the media and the players gave rave reviews of the golf course. U.S. player Tim Herron from Wayzata said "The greens were great...soft, and pure." George MacGregor of the GBI team



A sold-out crowd at Interlachen enjoying great golf at the 34th Walker Cup.

said after Wednesday morning's rain, "The course was absolutely playable... If the weather had an effect, it was the waiting... I certainly wouldn't use that as an excuse."

-Dale Wysocki

Old Dog to Learn New Tricks

66th Annual Turf Conference to Have New Format and Location!

By Mary Patricia Knaggs Golf Course Superintendent, Hazeltine National Golf Club

Featuring a diverse group of speakers and an ambitious format of concurrent sessions, the Minnesota Golf Course Superintendents' Turf Conference is seeking to educate, motivate and stimulate members at all levels of turfgrass management. This will be the first conference located at the Convention Center in downtown Minneapolis. This location offers increased lecture space, allowing the opportunity for concurrent sessions. Each session will target a particular topic and seek to thoroughly explore it from several angles.

The new location also lends itself to a very moderate fee structure. Conference registration will be on a daily two-or three-day basis, with the Wednesday luncheon being the only meal offered in an organized fashion, although priced separately.

Jack McCloskey, General Manager of the Minnesota Timberwolves, will be the featured speaker at this scholarship and Awards luncheon.

The first concurrent session on Wednesday, November 17, 1993 will feature staff members from golf courses and well-traveled vendors describing and illustrating the helpful, cost-effective and unique ideas being utilized on variouse sites. Designed to be a meeting that will give you "something to take home and use," these talks may be very stimulating to golf course staff not interested in attending the annual meeting of the Minnesota Golf Course Superintendents' Association.

David McNalley, The Keynote Speaker brings his talented presentation to the conference in the form of organizational and motivational management. Frequently hired as a corporate strategist, he will offer us the skills necessary to execute our personal and professional responsibilities in an efficient and enjoyable manner.

Following McNalley, the concurrent afternoon meetings will offer two diverse topics. Gerald (Rod) Farrentino, from Cornell University, Ithaca, N.Y., will illustrate Actual IPM Strategies Used by Superintendents in Northern New York State. Usually offered as a day-long seminar, this information will be condensed into three hours! The alternative session will focus on Golf Course Construction and Design. The three-way view of this subject will be represented from the design perspective of noted author and architect, Tom Doak (The Anatomy of a Golf Course).

Mike Morley from Wadsworth Construction Company will enlighten us on the broad picture required for design execution and Jim Latham, noted USGA agronomist, will describe to us the best ways to incorporate sensible agronomy into design and construction!

The lead off and concurrent sessions on Thursday morning, November 18, 1993 will be *Professional Relations* and *Landscape Development with Maintenance in Mind.*

Reed Mackenzie, (U.S. Open Chairman, Hazeltine National Golf Club); George Carroll, (General Manager, Town

and Country Club); Craig Waryan, (Golf Professional, Edinburgh USA), and Jim Snow, (National Director of the USGA), will address "The selling of your project, budget or agenda". Associate Professor, Brad Pedersen, from the University of Minnesota, will narrate Landscape Development with Maintenance in Mind. Offering highlights from his semester-long course, he will concentrate on project estimating and plant material selection.

Another not-to-be-missed topic and speaker (11 a.m. to 12 a.m.) on Thursday, is **Dr. Frank Rossi** (University of Wisconsin) and his presentation on *Community Relations and Pesticide Risk Management.* **Dr. Rossi** will provide us with the most effective ways to approach public perception and pesticide applications as it affects turf professionals on a daily and ongoing basis.

The three-hour trade show (1 p.m. to 4 p.m.) will be followed by a hospitality night (5 p.m. to 9 p.m.) sponsored by the participating vendors. This will be an opportunity to meet the speakers, compare session notes with new friends and old and, of course, regale all with the tall tales from the summer of '93!

The USGA will be the first feature of Friday, November 19, 1993. The year will be reviewed locally by **Bob Vavrak** and **Jim Latham. Jim Snow** will bring the national perspective of 1993 to the podium.

Two legal presentations will be provided to educate us on complicated subjects. **Janet Altman** from OSHA will speak on Facility Evaluation, and **Jim Liserud**, Executive Director of Physically Limited Golfers, will comment on our responsibilities to these golfers.

Three Minnesota superintendents will close the conference with their shared wisdom of hosting national and international golf tournaments. The idea is that as superintendents perhaps we can benefit from someone else's hard-earned lessons! John Katterheinrich, (Interlachen Country Club, The Walker Cup); Tom Fischer, (Edinburgh USA, The Minnesota LPGA Classic), and Jim Gardner, (Rochester Country Club, The USGA Womens Mid-Amateur) will be in the spotlight for this talk.

Designed with diversity and variety in mind and situated in the exciting city of Minneapolis, the Minnesota Golf Course Superintendents Turf Conference offers many things for all. The Timberwolves are playing Friday night, the Mall of America is five miles away and good food and music are easy to come by in downtown Minneapolis!

Here's hoping to combine a good time and a learning time with new and old faces! Don't be a stranger to Minneapolis and the Minneapolis Golf Course Superintendents Conference on November 17, 18, 19 1993! For futher information please contact Scott Turtinen, Executive Director, MGCSA, 612/473-0557.