

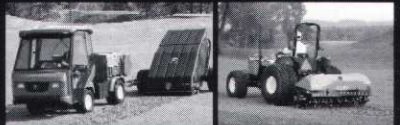
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HOLE NOTES

Official Publication
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plcc@eot.com

Dan Swenson.....River Falls Golf Club
715/425-2838 Fax: 715/425-0160
rfgc@presenter.com

Richard Traver Jr., CGCS.....Monticello CC
763/295-3323 Fax: 763/271-0124
supytrav@soncom.com

Editor

Richard Traver, Jr., CGCS
supytrav@soncom.com



Editorial and Business Office:
Scott Turtinen, Executive Director
Minnesota Golf Course
Superintendents' Association
240 Minnetonka Avenue South, P.O. Box 617
Wayzata, Minnesota 55391-1617
Tel: 952/473-0557 Fax: 952/473-0576
Toll Free: 1-800-642-7227
E-mail: scott@mgcsa.org

From Your President's Desk



Rick Fredericksen, CGCS
MGCSA President

August Will Be A Great Month For Golf Enthusiasts in Minnesota

August will be a great month for golf enthusiasts here in the state of Minnesota. Paul Grogan, at the TPC of the Twin Cities, will host the 3M Championship for the Senior PGA the first week of August. A week later, the PGA visits Hazeltine National to compete for its championship. Jim Nicol, CGCS, superintendent at Hazeltine, has been busy preparing the golf course for an event that could have the focus of the golf world. Having known Jim since he was the superintendent at Bunker Hills, he will approach the tournament with the same level of professionalism as he did when he was host superintendent for the Burnet Classic.

* * * *

Superintendents and their spouses can get into the PGA Championship by showing their GCSAA Gold Card at the will-call ticket window. Children can get in with their parents for \$10 on practice round days and for \$20 during the tournament. There will be an unmarked hospitality tent at the south end of the Jacklin Village below the white barn that superintendents and their guests can visit while at the event. The tent will be open during tournament hours and will close at 4 p.m. on Sunday. I would like to personally thank Jim for arranging the hospitality tent. Normally the PGA does not allow hospitality tents outside of its administration on the golf course. Jim was able to secure a site for the tent and also has helped to provide refreshments for visitors.

* * * *

Also in August is our own Superintendents' championship. Plan on bringing you're "A" game to Craguns Resort on August 26. Having just returned from Craguns, I would encourage you to bring your family with and spend Sunday there also. There will be a practice round available on Sunday, or just go up early and enjoy the lake. Tom Kientzle, Director of Golf at Craguns, has helped in making the arrangements. Thank you for allowing us to host our championship at your beautiful facility. Barry Provo, defending champion, should be back to defend his title that he won at Wayzata Country Club last year.

* * * *

In this month's Hole Notes, you will find an article on heat-related illnesses. Take the time to copy and post the article for your staff to read. This time of the year, our employees are susceptible to heat exhaustion. Watch for the signs and symptoms and plan accordingly.

Enjoy the remainder of the season.

-- Rick Fredericksen
r_fredericksen@msn.com

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UPCOMING MGCSA EVENTS

Monday, August 26
MGCSA CHAMPIONSHIP
 Host: Tom Kientzle, CGCS
 The Legacy Course at Cragun's
 Brainerd, Minnesota

Monday, September 23
STODOLA SCRAMBLE
 Host: Rick Fredericksen, CGCS
 Woodhill Country Club
 Wayzata, Minnesota



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PARTICIPATING AT THE TROE CENTER CEREMONIES are, from left, the U of M's Dr. Brian Horgan, MGCSA Executive Director Scott Turtinen, and Dr. Jon Powell. Powell recently announced his retirement from the University of Minnesota. (See announcement on Page 19.)

Attention all Pesticide License Holders:

If you did not recertify at last years conference in December you need to recertify this year. Since we will not be having this years conference until January you need to find an alternate recertification site to keep your license. If you fail to do so you will need to retest to have a license. And just as a reminder, all applicators of pesticides to golf course properties must have a license.

2001/2002 Snow Mold Trial

By JON POWELL
University of Minnesota

Although we are heading into the heat of summer is it also a time to think about this fall's snow mold management program. This last winter was mild with little snow cover early in the winter which resulted in low levels of *Typhula* gray snow mold throughout much of the state. However, late spring snowfall led to scattered epidemics of *Microdochium* pink snow mold. University of Minnesota snow mold management field trials for the fall/winter of 2001/2002 were conducted at two locations in Minnesota. Studies were conducted in north-eastern Minnesota at Northland C.C., Duluth, MN and at Giants Ridge G.C., Biwabik, MN on creeping bentgrass nurseries.

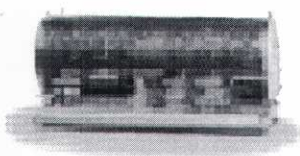
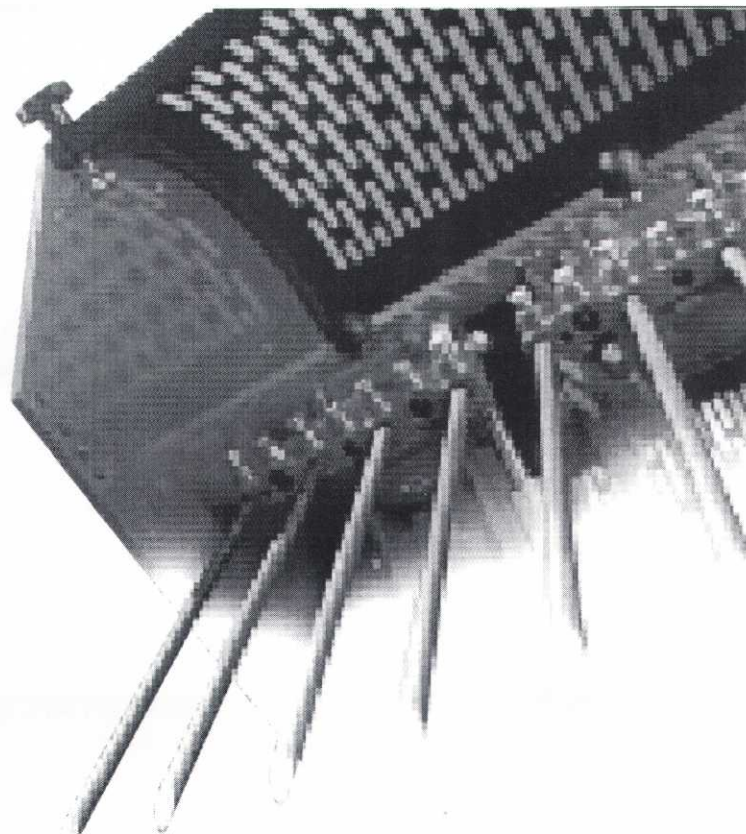
Field studies were set up in a randomized complete block design with four replications per location. Spray treatments were applied at a pressure of 30 psi to deliver 2 gallons water per 1000 ft². Treatments that were applied twice were first applied on October 22, 2002. All treatments were applied on November 12, 2002. Disease ratings were taken on April 17, 2001 as percent of plot infected, this rating date was within 1 week of snow melt. There was a limited amount of disease at the Northland site, however, the Giants Ridge site exhibited even disease pressure of ~45% gray snow mold.

The primary pathogen at Giants Ridge was *Typhula ishikariensis*, although a low level of *Microdochium nivale* (pink snow mold) was present. As the data represents, most of the treatments were effective in providing significant levels of snow mold management. It is important to note that although the PCNB products provided complete disease management alone, it is still recommended that fungicide combinations be used to assure snow mold management. These results highlight the availability of effective products available and being developed for the management of snow molds.

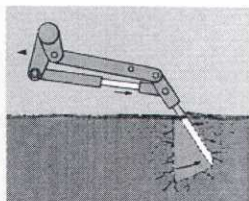
Treatment		# of Apps	% Disease	LSD ^A
1	UNTREATED		46.7	ab
2	TURFCIDE 400	8 fl oz.	1	0 e
3	SCOTTS FFII	3.5 lb.	1	0 e
4	LESCO NOVEX	6 lb.	1	0 e
5	PROSTAR	3.7 oz. 5	1	0 e
6	HERITAGE MEDALLION	0.4 oz. 0.5 oz.	1	0 e
7	BANNER MAXX MEDALLION	4 fl oz. 0.5 oz.	1	0 e
8	BANNER MAXX MEDALLION	3 fl oz. 0.3 oz. 3	1	0 e
	DACONIL WS. ^B	5.5 fl oz.		
9	BANNER MAXX HERITAGE DACONIL WS.	3 fl oz. 0.4 oz. 5.5 fl oz.	1	0 e
10	CHIPCO 26GT CHIPCO TRITON	4 fl oz. 1 fl oz.	2	1 e
11	DACONIL WS. HERITAGE	5.5 fl oz. 0.4 oz.	1	1 e
12	DACONIL WS. TURFCIDE 400	5.5 fl oz. 8 fl oz.	1	1.7 e
13	DACONIL WS. LEAFSHIELD	5.5 fl oz. 8 fl oz.	1	1.7 e
14	CHIPCO 26GT DACONIL WS.	4 fl oz. 5.5 fl oz.	1	1.7 e
15	MEDALLION	0.5 oz.	1	2.3 e
16	CHIPCO 26GT TADS 12529	4 fl oz. 0.3 oz.	2	3.3 e
17	CHIPCO 26GT CHIPCO TRITON	4 fl oz. 1 fl oz.	2	3.3 e
18	INSIGNIA (BAS 500F)	0.9 oz.	1	6 de
19	DACONIL WS.	5.5 fl oz.	1	7.3 de
20	CHIPCO SIGNATURE CHIPCO 26GT CHIPCO SIGNATURE	4 oz. 4 fl oz. 4 oz.	2 ^C	14 de
21	DACONIL WS. MEDALLION	5.5 fl oz. 0.5 oz.	1	19 cd
22	Experimental	0.2 oz.	1	31.7 bc
23	LEAFSHIELD	8 fl oz.	1	46.7 ab
24	CHIPCO 26GT	4 fl oz.	1	50 a
25	UNTREATED			46.7 ab
	LSD (P=.01)			1.04
	cv			20.39

A = Treatments followed by the same letter are not significantly different at the 99% level
B = Daconil Weatherstick
C = Initial application with Signature alone, second application of 26GT and Signature.

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HEAT WAVE:

A National Problem

Heat kills by taxing the human body beyond its abilities. In a normal year, about 175 Americans succumb to the demands of summer heat. Among the large continental family of natural hazards, only the cold of winter -- not lightning, hurricanes, tornadoes, floods, or earthquakes -- takes a greater toll. In the 40-year period from 1936 through 1975, nearly 20,000 people were killed in the United States by the effects of heat and solar radiation. In the disastrous heat wave of 1980, more than 1,250 people died.

And those are the direct casualties. No one can know how many more deaths are advanced by heat wave weather -- how many diseased or aging hearts surrender, that under better conditions would have continued functioning.

North American summers are hot; most summers see heat waves in one section or another of the United States. East of the Rockies, they tend to combine both high temperatures and high humidity although some of the worst have been catastrophically dry.

NOAA's National Weather Service Heat Index Program

Considering this tragic death toll, the National Weather Service has stepped up its efforts to alert more effectively the general public and appropriate authorities to the hazards of heat waves -- those prolonged excessive heat/humidity episodes.

Based on the latest research findings, the NWS has devised the "Heat Index" (HI), (sometimes referred to as the "apparent temperature"). The HI, given in degrees Fahrenheit, is an accurate measure of how hot it really feels when the relative humidity (RH) is added to the actual air temperature.

To find the Heat Index, look at the Heat Index Chart. As an example, if the air temperature is 95°F (found on the left side of the table), and the relative humidity is 55% (found at the top of the table), the HI -- or how hot it really feels -- is 110°F. This is at the intersection of the 95° row and the 55% column.

Important: Since HI values were devised for shady, light wind conditions, exposure to full sunshine can increase HI values by up to 15°F. Also, strong winds, particularly with very hot, dry air, can be extremely hazardous.

Note on the HI chart the shaded zone above 105°F. This corresponds to a level of HI that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

Heat Index / Heat Disorders

Heat Index Possible heat disorders for people in higher risk groups 130°F or higher Heatstroke/sunstroke highly likely with continued exposure.

105° - 130°F Sunstroke, heat cramps or heat exhaustion likely, and heatstroke possible with prolonged exposure and/or physical activity.

90° - 105°F Sunstroke, heat cramps and heat exhaustion possible with prolonged exposure and/or physical activity.

80° - 90°F Fatigue possible with prolonged exposure and/or physical activity.

The "Heat Index/Heat Disorders" table relates ranges of HI with specific disorders, particularly for people in the higher risk groups.

Summary of NWS's Alert Procedures

The NWS will initiate alert procedures (advisories or warnings) when the Heat Index (HI) is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. A common guideline for the issuance of excessive heat alerts is when the maximum daytime HI is expected to equal or exceed 105°F and a nighttime minimum HI of 80°F or above for two or more consecutive days. Some regions and municipalities are more sensitive to excessive heat than others. As a result, alert thresholds may vary substantially from these guidelines. Excessive heat alert thresholds are being tailored at major metropolitan centers based on research results that link unusual amounts of heat-related deaths to city-specific meteorological conditions.

The alert procedures are:

Include HI values in zone and city forecasts.

Issue Special Weather Statements and/or Public Information Statements presenting a detailed discussion of (1) the extent of the hazard including HI values, (2) who is most at risk, (3) safety rules for reducing the risk.

Assist state and local health officials in preparing Civil Emergency Messages in severe heat waves. Meteorological information from Special Weather Statements will be included as well as more detailed medical information, advice, and names and telephone numbers of health officials.

Release to the media and over NOAA's own Weather Radio all of the above information.

How Heat Affects the Body

Human bodies dissipate heat by varying the rate and depth of blood circulation, by losing water through the skin and sweat glands, and -- as the last extremity is reached --

(Continued on Page 9)

Heat Wave-

(Continued from Page 7)

by panting, when blood is heated above 98.6 degrees. The heart begins to pump more blood, blood vessels dilate to accommodate the increased flow, and the bundles of tiny capillaries threading through the upper layers of skin are put into operation. The body's blood is circulated closer to the

skin's surface, and excess heat drains off into the cooler atmosphere. At the same time, water diffuses through the skin as perspiration. The skin handles about 90 percent of the body's heat dissipating function.

Sweating, by itself, does nothing to cool the body, unless the water is removed by evaporation -- and high relative humidity retards evaporation. The evaporation process itself works

this way: the heat energy required to evaporate the sweat is extracted from the body, thereby cooling it. Under conditions of high temperature (above 90 degrees) and high relative humidity, the body is doing everything it can to maintain 98.6 degrees inside. The heart is pumping a torrent of blood through dilated circulatory vessels; the sweat glands are pouring liquid -- including essential dissolved chemicals, like sodium and chloride -- onto the surface of the skin.

Too Much Heat

Heat disorders generally have to do with a reduction or collapse of the body's ability to shed heat by circulatory changes and sweating, or a chemical (salt) imbalance caused by too much sweating. When heat gain exceeds the level the body can remove, or when the body cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and heat-related illness may develop.

Ranging in severity, heat disorders share one common feature: the individual has overexposed or overexercised for his/her age and physical condition in the existing thermal environment.

Sunburn, with its ultraviolet radiation burns, can significantly retard the skin's ability to shed excess heat.

Studies indicate that, other things being equal, the severity of heat disorders tend to increase with age -- heat cramps in a 17-year-old may be heat exhaustion in someone 40, and heat stroke in a person over 60.

Acclimatization has to do with adjusting sweat-salt concentration, among other things. The idea is to lose enough water to regulate body temperature, with the least possible chemical disturbance.

Cities Pose Special Hazards

The stagnant atmospheric condis-

(Continued on Page 9)

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Heat Wave—

(Continued from Page 8)

tions of the heat wave trap pollutants in urban areas and add the stresses of severe pollution to the already dangerous stresses of hot weather, creating a health problem of undiscovered dimensions. A map of heat-related deaths in St. Louis during 1966, for example, shows a heavier concentration in the crowded alleys and towers of the inner city, where air quality would also be poor during a heat wave.

The high inner-city death rates also can be read as poor access to air-conditioned rooms. While air-conditioning may be a luxury in normal times, it can be a lifesaver during heat wave conditions.

The cost of cool air moves steadily higher, adding what appears to be a cruel economic side to heat wave fatalities. Indications from the 1978 Texas heat wave suggest that some elderly people on fixed incomes, many of them in buildings that could not be ventilated without air conditioning, found the cost too high, turned off their units, and ultimately succumbed to the stresses of heat.

Know These Heat Disorder Symptoms

Sunburn: redness and pain. In severe cases, swelling of skin, blisters, fever, headaches. Ointment for mild cases if blisters appear. If breaking occurs, apply dry sterile dressing. Serious, extensive cases should be seen by a physician.

Heat Cramps: in muscles of legs and abdomen possible. Heavy sweating. Firm pressure on cramping muscles, or gentle massage to relieve spasm. Give sips of water. If nausea occurs, discontinue use.

Heat Exhaustion: Heavy sweating, weakness, skin cold, pale and clammy. Pulse thready. Normal temperature possible. Fainting and vomiting. Get victim out of sun. Lay down and loosen clothing. Apply cool wet cloths. Fan or move victim to air conditioned room. Sips of water. If nausea occurs, discontinue use. If vomiting continues, seek immediate medical attention.

Heat Stroke (or sunstroke): High body temperature (106°F, or higher). Hot dry skin. Rapid and strong pulse. Possible unconsciousness. Heat stroke is a severe medical emergency. Summon medical assistance or get the victim to a hospital immediately. Delay can be fatal.

Move the victim to a cooler environment. Reduce body temperature with cold bath or sponging. Use extreme caution. Remove clothing, use fans and air conditioners. If temperature rises again, repeat process. Do not give fluids.

Preventing Heat-Related Illness: Elderly persons, small children, chronic invalids, those on certain medications or drugs (especially tranquilizers and anticholinergics), and persons with weight and alcohol problems are particularly susceptible to heat reactions, especially during heat waves in areas where moderate climate usually prevails.

(Continued on Page 11)

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