

# The Toro Greensmaster® 3100. So Quiet You Can Hear A Pin Drop.

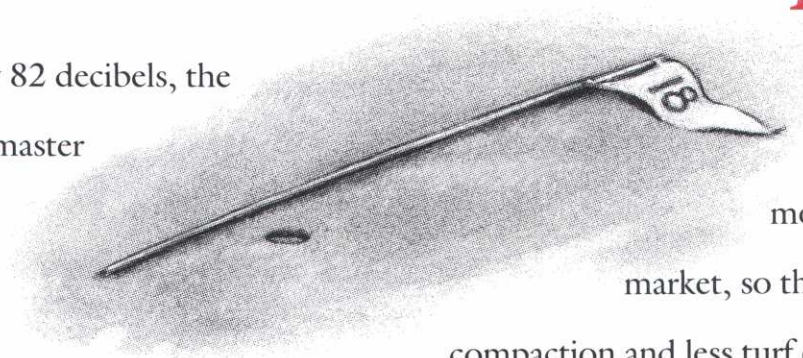
At only 82 decibels, the  
Toro Greensmaster  
3100 has to  
be heard to  
be believed.  
We'd like to come out and let you and  
your crew see, and hear, how it works  
on your greens.



Greensmaster 3100

Your maintenance  
chief, for  
example, will  
notice that  
all major parts  
are accessible, so  
repairs can be made quickly and easily.

You'll notice that this is the



lightest  
riding greens  
mower on the  
market, so there's lower  
compaction and less turf damage for  
better playability.

Your crew will love the  
responsiveness of our precise power  
steering. And your whole team  
will appreciate the assurance of  
Turf Guardian™ hydraulic oil leak  
detection.

Give us a call to arrange a demo  
of the 3100. Because until you test this  
mower in person, you  
ain't heard nothin'.



*Helping you put quality into play.™*

**CALL MTI AND TEST THEM TODAY**

**MTI** DISTRIBUTING CO.

**PLYMOUTH HEADQUARTERS**

14900 Twenty-first Avenue North  
Plymouth, Minnesota 55447-4655

1-800-362-3665 • 612-475-2200 • FAX: 612-475-0351



**FARGO BRANCH**

4310 Main Avenue  
Fargo, North Dakota 58104

1-800-782-1031 • 701-281-0775

# HOLE NOTES

Official Publication  
of the  
Minnesota Golf Course  
Superintendents' Association

## 1997 MGCSA BOARD OF DIRECTORS

### Officers

President ..... Fred Taylor  
Mankato GC  
507/388-2546 • Fax: 507/387-4991

Vice-President ..... Jim Nicol, CGCS  
Hazeltine National GC  
612/448-3626 • Fax: 612/448-1726

Secretary ..... Pat Walton, CGCS  
Rolling Green CC  
612/478-2179 • 612/478-6025

Treasurer ..... Tom Johnson  
New Richmond GC  
715/243-8030 • Fax: 715/246-7059

Ex-Officio ..... James Gardner, CGCS  
The Wilds GC  
612/496-0037 • Fax: 612/496-0104

### Directors

Jeff Backstrom ..... Cannon GC  
507/263-0831

Bob Distel ..... Wayzata CC  
612/473-6955 • Fax: 612/404-2532

Leif Erickson ..... Scotts Company  
800/728-0354 • Fax: 507/433-8711

Tom Fischer ..... Edinburgh USA  
612/315-8575 • Fax: 612/315-8585

Robert Panuska ..... Waseca Lakeside Club  
507/835-2574 • Fax: 507/835-3472

John Queensland ..... Cedar River CC  
507/582-3595

Steve Shumansky ..... Perham Lakeside CC  
218/346-6071

David Sime ..... Benson GC  
320/843-2109

Steve Young ..... Plaisted Companies, Inc.  
612/441-1100 • Fax: 612/441-7782

### EDITOR

Robert Panuska

\* \* \* \*

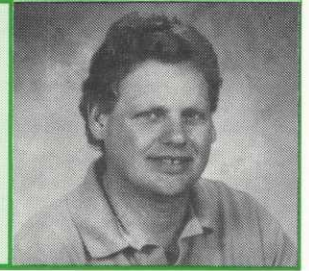
### Editorial and Business Office

Scott Turtinen, Executive Director  
Minnesota Golf Course  
Superintendents' Association  
240 Minnetonka Avenue South/P.O. Box 617  
Wayzata, Minnesota 55391-1617  
TEL: 612/473-0557 • FAX: 612/473-0576  
TOLL FREE: 800-642-7227



## FROM YOUR PRESIDENT'S DESK

# With a Little Help From Our Friends



At a recent impromptu gathering of a few local superintendents, the need for support from peers became very clear. Of the six superintendents in attendance, each had a story of losing some turf, losing their temper, or in some instances, just plain losing it. The stories, although different in each case, held similarities to experiences that we all have had at one time or another. It's not that we could cure the woes of the world, or even have formulated all the answers to our problems, but we had compassionate listeners, and sometimes that is what a person needs to get through the tough times. Most of us have that network of friends that we call for information and advice, or just to chat with after the weekly four-inch rainfall event. These are the friends that we share our frustrations with, friends that understand.

Support can come from many sources, usually starting at home. For those of us that are married, our spouses endure many hours of venting — listening to the tales of Pythium outbreaks and brown patch run amuck, all the while nodding in agreement, soothing our broken spirits. Think of how many times you've gone home and spewed at length about job-related frustrations. What would you have done without that encouragement?

Another important source of support can be co-workers and staff. In an outburst of frustration following the July 26-27 turfgrass bloodletting, I was calmed by Allen Starke, one of my assistants. "Just remember Fred, it's God, Family and Friends. Beyond that, things aren't that important." With those words and a pat on the shoulder, things were again under control.

A superintendent's job isn't easy, and there are few people that really understand that. Take the time to recognize the family, friends and co-workers who help you get through it all.

\* \* \* \*

**If you haven't got the network of friends in the business** that you would like, start by attending MGCSA meetings and activities. The MGCSA roster is also a great resource for contacting superintendents in your area. Remember, the greatest asset to any association is its members.

\* \* \* \*

**The employees at Cushman Motor Company** in Minneapolis, are saddened to report the death of their service manager, Steve Sturgesleski. He was 37 years old and had worked at Cushman Motor Company for the past seven years.

— Fred Taylor  
MGCSA President

HOLE NOTES (ISSN 108-27994) is published monthly except bi-monthly December/January, February/March for \$2 an issue or \$20 per year by the Minnesota Golf Course Superintendents Association, 240 Minnetonka Avenue South, Wayzata, MN 55391-1617. Scott Turtinen, Publisher. Periodicals postage paid at Wayzata, MN. POSTMASTER: Send address changes to HOLE NOTES, 240 Minnetonka Avenue South, Wayzata, MN 55391-1617.

# Inside This Issue of Hole Notes

# Advertisers

Century Rain Aid .....	25	North Star Turf .....	12
Chipco .....	36	North Star Turf .....	26
Classifieds .....	34	Par Aide Products Co. ....	23
Cushman Motor Co. ....	20	Paskvan Consulting .....	33
Country Club Turf .....	14	P&H Warehouse .....	18
Double Eagle Golf Construction ..	35	Peterson Seed Co. ....	33
Duininck Bros. .... Back Cover		Plaisted Companies .....	9
Glenn Rehbein Companies .....	7	Polfus Implement .....	24
Hartman .....	4	Precision Turf .....	32
Hydro-Green .....	16	Prinsco .....	35
IMC Vigoro .....	29	Rohling Green Corp. ....	4
Leitner Company .....	6	Superior Tech Products .....	22
Lesco .....	29	Turf Supply Co. ....	10
MTI Distributing Co. .... IFC		Twin City Seed .....	30
MTI Distributing Co. ....	13	Wilbur-Ellis .....	IBC
MTI Distributing Co. ....	28	Williams & Gill .....	8
MTI Distributing Co. ....	37		

- 1 Tom Meier's 76 Wins At Rush Creek GC**  
By Scott Turtinen
- 5 Sudden Bentgrass Decline On New Putting Greens**  
By Paul Vincelli and A.J. Powell
- 7 Sanctuary System Program Helps Protect Wildlife**
- 8 Lawn Chemicals a Risk**  
By Don Gordon
- 11 Hole-by-Hole of Les Bolstad U of M Golf Course**  
By Charlie Poch
- 15 MGCSA Winter Damage Survey** By Jim Nicol, CGCS
- 17 Environmental Stewardship – GCSAA**
- 21 Under Cover**  
By Douglas Graham
- 25 Protecting Your Assets**  
Courtesy *News USA*
- 27 1997 MGCSA Championship Results from Rush Creek**
- 30 1998 ESA Applications Are Now Available**
- 31 Options for Dual Membership Verification**
- 33 USGA, GCSAA, NTEP Join Forces – GCSAA**
- 36 GCSAA Registration Available Online**
- 37 Perseverance Pays Off**



**Specializing in  
Re-Design & Construction  
of Golf Courses**

---

**MAIN OFFICE**  
2 South 2nd Avenue — Suite 120  
Sauk Rapids, MN 56379

**PHONE: (320) 203-8451**  
**TOLL FREE: 1-888-251-4896**  
**FAX: (320) 253-4160**

---

**ELK RIVER OFFICE**  
817 Gates Ave., Elk River, MN 55330  
**(612) 441-5127**

## Departments

- 3 From Your President's Desk** By Fred Taylor
- 29 Membership Report**  
By Steve Shumansky
- 34 Job Opening**  
The Links at Northfork
- 38 Editor's Corner**  
By Rob Panuska

## HARTMAN

Est. 1972

**\*\*Sports Turf Specialists\*\***

- High Tech Drainage Techniques & Design
- Renovation & Landscaping
- Excavating & Grading

**Jeffrey L. Hartman**  
*President*

8011 Bavaria Rd., Victoria, MN 55386 • 612-443-2958 • Fax: (612) 443-3452

# Sudden Bentgrass Decline On New Putting Greens

By PAUL VINCELLI

*Plant Pathologist—University of Kentucky*

and A.J. POWELL

*Turfgrass Agronomist—University of Kentucky*

*Courtesy of Kentucky Pest News*

With the onset of hot weather several weeks ago, a number of new creeping bentgrass putting greens have suffered sudden deterioration of roots. Without a good root system, these greens quickly suffered extensive turf loss.

## Symptoms

Under the microscope, the seedling roots and adventitious roots of these plants exhibit deterioration of the outer tissues. Specifically, the cortex, epidermis and root hairs become disorganized, collapse and slough off from the stele, the interior "plumbing" of the root. To the naked eye, these roots still appear more or less viable, since one can find light tan "roots" that go three inches deep or more. However, the outer tissues of these "roots" have lost their integrity, resulting in a significant reduction in water-absorbing surface area. Once this happened, the greens wilt and rapid death of tillers occurs.

## Possible Causes

We have not found infectious microorganisms to be associated with this condition. Pythium root dysfunction is always suspected, but although we have conclusively diagnosed that disease in some circumstances, that disease does not appear to be involved in these greens. Thus, we believe the rapid loss of root cortex is due to an environmental condition.

At this time, we cannot say for certain which factors are directly responsible. We strongly suspect two factors,

which perhaps interact. During hot weather, photosynthetic efficiency of cool-season grasses declines, yet cellular respiration increases. Bentgrass must "go to the bank" and withdraw food reserves from stolons and crowns. These closely mowed new greens probably suffer from a rapid energy deficit during the hot weather. Bent tillers on new greens are very upright and have few stolons, especially when seeded at a heavy rate of 1-2 lbs/1000 sq. ft. And initial establishment is very rapid. Because they are young in age, individual tillers may not have enough leaf surface to maintain adequate photosynthesis, and they may have insufficient stolon and crown development to provide an energy bank for cellular respiration during hot weather. Although we observed that some of the largest tillers died, those tillers that were still alive were among the larger ones with robust pseudostems and sometimes attached to a significant stolon, which is consistent with this hypothesis.

Another factor that may be involved is the observation of some layering in these greens. Frequent topdressing and irrigation can create a surface layer about 3/8" to 1/2" that holds water readily, compared to the root zone mix below. Test it for yourself: Remove a core from a new green with a cup cutter, pour water through it, wait five minutes, gently tear open the core, then tear out some of this top layer with thumb and forefinger and squeeze. Plenty of water is there! Try

this again with some of the root-zone mix, and it is already at field capacity. This tendency to "pond" water in the top half-inch may create an oxygen-poor environment during hot weather, by sealing the root zone from the air above. Microbial activity in the root zone and root respiration may deplete the roots of oxygen during weather in which their oxygen demand is quite high.

Many new greens are constructed with sand that does not completely stabilize for a year or two. When these new greens become very wet from frequent watering and when much of the root system is lost during hot weather, the lack of structural stability is very obvious as one walks on the green. The physical injury that occurs to the root system from soil abrasion probably places additional stress.

It is very possible that these factors interact. A low energy reserve, reduced oxygen in the root zone and high respiratory demand caused by hot weather may cause roots (a "sink" for photosynthate) to lose out to leaves, which didn't have enough to share.

## What to Do?

While we don't fully understand this condition at this time, we feel that the following recommendations will provide the best chance of recovery for creeping bentgrass greens in which roots have suffered loss of the cortex and associated tissues. It may

*(Continued on Page 36)*

# Crown III™ Crumb Rubber Topdressing

## Is Advanced Technology for an Age-Old Problem

*For years turf managers have sought a solution and an effective product to use on high-wear areas.*

### **Crown III Benefits:**

- Reduces turfgrass wear
- Lessens resodding cost
- Insulates against winterkill
- Lengthens growing season
- Conserves water
- Reduces soil compaction

### ***Professional Turf Managers Love This Product!***

*"In 1996 we didn't have to resod or use any ropes where we had used Crown III. I'll be buying more this year."*

*— Dale Caldwell, CGCS  
Minneapolis Golf Club*

*"The soccer coaches have commented on how well the grass in the goal areas is holding up."*

*— Bill Randles  
Vanderbilt University — Tennessee*

*"I think Crown III is a tool which should be in every turfgrass manager's tool kit."*

*— Don Follett  
Sun Devil Stadium — Arizona*

### ***Advanced Technology***

Crown III crumb rubber top dressing was developed and patented by Dr. Trey Rogers and Tim Vanini at Michigan State University. It is non-abrasive, minimizes injury to sensitive crown tissue, and reduces scarring of the grass blade. The rubber absorbs and dissipates the impact from traffic, reducing any underlying soil compaction. As a topdressing, crumb rubber insulates and creates an evaporation barrier. It is ideal for wear spots on golf courses, athletic fields, parks and other high traffic areas.

### **Leitner Company**

- Specializing in Soils For Turf Maintenance and Construction
    - Distributor of Sand and Aggregate Products
    - Distributor of Crown III Crumb Rubber Topdressing
  - Representative for *International Sports Turf Research Center, Inc.* Olathe, Kansas
- Developer of the ISTRC System for Soil Testing and Analysis

#### **Mike Leitner**

945 Randolph Avenue, St. Paul, Minnesota 55102 • (612) 291-2655

**PROUD SUPPORTER OF RESEARCH AND EDUCATION THROUGH THE MGCSA**

# Sanctuary System Program Helps Protect Wildlife Habitats

It's been said that the world is our classroom.

No one has taken this more to heart than Audubon International, the Golf Course Superintendents Association of America (GCSAA) and Rain Bird.

Based in Selkirk, N.Y., Audubon International launched its Cooperative Sanctuary System to work with private landowners in implementing environmentally sound practices to preserve and enhance natural resources. Audubon International developed such programs for businesses, homes, schools and golf courses.

"Though many people believe that state or federal government agencies and their staffs have sole responsibility for wildlife and habitat protection, it is clear that the majority of real property is owned by private individuals and organizations," says Audubon International President and CEO Ron Dodson. "Most state agencies do not have the resources to

manage private lands. This is why AI launched the Audubon Cooperative Sanctuary System."

The golf course superintendent profession has been a leading participant in the Cooperative Sanctuary System through Audubon International's school and golf course programs. As a national sponsor of the Audubon Cooperative Sanctuary Program for Schools, GCSAA has partnered with Rain Bird to provide funding and services to promote awareness and participation in the program. The school program is a hands-on approach for community leaders, such as the golf course superintendent, to work with students, faculty, parents and the community to promote environmental stewardship.

By creating a sanctuary on school grounds, students, faculty and parents are able to learn first-hand the techniques that lead to success. To be-

come certified in the program, schools must meet established requirements in environmental education, wildlife habitat management, waste management and resource conservation.

People from the community, such as golf course superintendents, provide resources, expertise and supervision to transform school facilities into a certified sanctuary. Projects include recycling, bird nest boxes, butterfly gardens and nature trails, among others.

Along with the Audubon Cooperative Sanctuary Program for golf courses, sponsored by the United States Golf Association, the school program was born in 1991 to protect and enhance the quality of the environment on the school grounds.

For additional information about ACPS for Schools, contact Audubon International at 46 Rarick Road, Selkirk, NY 12158, or call (518) 767-9051. — *News USA*

## QUALITY SUPPLIER OF TURF

- Washed and Regular Turf (Sod) in 1½ yd. or up to 55 yd. Big Roll Size (42" Wide)

### TURF TYPES:

- ELITE KENTUCKY BLUEGRASS BLEND
- SPORTS TURF  
BLUEGRASS/P. RYEGRASS BLEND  
BENTGRASS



GLENN  
**R**  
EHBEIN  
COMPANIES

MEMBER	
NCTGA	MGCSA
MSTMA	WTA
SDGSA	ISTMA
MTGF	TPI

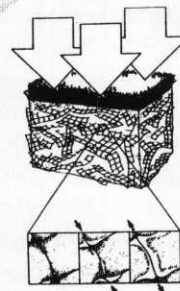
## QUALITY CONSTRUCTION & RECONSTRUCTION

- Golf Courses
- Sports Fields



### NETLON® ADVANCED TURF SYSTEMS

Self-Cultivating means healthier turf and better drainage.



### NETLON® MESH ELEMENTS AND MIXES

For Compaction Resistance on cart paths, sports fields and other high use areas.

For Quality Turf Contact:  
(612) 674-7937 • FAX: (612) 674-7044

8651 Naples St. N.E.  
Blaine, MN 55449

For Quality Construction & Neltor® Products Contact:  
(612) 784-0657 • FAX: (612) 784-6001

# Lawn Chemicals a Risk

By DON GORDON  
*Mankato Free Press*

In the quest for a lawn that mirrors the turf at Augusta and at other great golf courses, we Americans shell out between \$45 billion and \$50 billion a year for chemicals and maintenance of our home lawns.

Like it or not, the stereotyped impression of the perfect lawn for most Americans is the golf course. Weed and pest free, dark green and cut to a uniform height is the dream lawn.

To produce the "perfect lawn" many Americans seem to forget about nature and the environment.

For example, earthworms are probably the best animal friend of turf, but if they happen to get a little "up-pity," we don't seem to hesitate to zap them with a chemical that will put them back in their place. One of these chemicals called diazinon can solve the earthworm "problem," but along the way it also has the potential to kill birds. **The Environmental Protection Agency (EPA) has banned diazinon for use on golf courses, but the chemical manufacturers were apparently able to convince the government that it is OK for homeowner use. I wonder if they convinced the EPA that homeowners know more about turf than golf course superintendents.**

Recently, there has been a lot of press concerning the safety of farm pesticides and insecticides. Just last week, *The Free Press* profiled an Iowa study published in the *American Journal of Industrial Medicine* that called attention to potential health problems associated with some farm chemicals. What does not get much attention is that many of the same farm chemicals that may pose human and environmental risks are also used on home lawns. In many cases concentration of these chemicals on a square foot basis is higher on home lawns than on agricultural land.

**There is also the training and safety factor. Most farmers I know have passed a pesticide training course that emphasizes safety. In contrast, homeowners can purchase some of the same farm chemicals for use on home lawns with zero training.**

The top 18 lawn pesticides are marketed in about 4,000 products. About 53 percent of these products are used for turf, and the remainder are used for agriculture. Thirteen of these pesticides have been found in ground water and four have been identified as potential carcinogens. The most common pesticide used by homeowners to control lawn weeds is 2,4-D. This chemical is a major ingredient in 441 lawn products.

The *Journal of the National Cancer Institute* reported in 1991 that frequent lawn treatment with 2,4-D may be linked to increased incidence of canine malignant lymphoma. Because dogs and humans are both mammals, there is the concern that both may react to a carcinogen similarly.

For those who use lawn pesticides, herbicides and fungicides, there are some safety tips that should be followed.

- Keep children and pets off lawns for a minimum of 48 hours after application.

- Do not apply chemicals when it is windy. Some of the herbicides designed for broad-leaved plants may kill grapes (particularly susceptible) or garden crops such as tomatoes, peppers or beans.

- Wear a mask, gloves and cover all exposed body parts.

- Do not smoke when using these chemicals.

- Keep these chemicals away from water courses, wells and cisterns.

- Keep pregnant women away from areas where these chemicals are being used.

- Above all, read and follow all manufacturer's label directions.

**A major goal of golf course superintendents is to convince their clientele that a few weeds, insects, fungi and yes, even earthworms can and should be tolerated.**

Hopefully, there is also a message here for homeowners.

\* \* \* \*

Questions about horticulture or the environment can be sent to Don Gordon, Professor of Botany, Box 34, Mankato State University, Mankato, MN 56001.

\* \* \* \*

*Editor's Note: Touché, Don; you have hit the nail square on the head with this column. Thanks for comments.*

 <b>Williams-Gill &amp; Associates</b>	Office (715) 425-9511 Facsimile (715) 425-2962	<b>• Services •</b> <ul style="list-style-type: none"><li>• New Course Design</li><li>• Master Plans</li><li>• Golf Practice Center Design</li><li>• Environmental Planning</li><li>• Irrigation Design</li><li>• Renovation &amp; Restoration</li><li>• Site Planning</li></ul>
	Golf Course Architects	
Garrett Gill, Principal		

# When you need **Top Dressing Material...**



## you need Plaisted.

Plaisted Companies is the one call for all your golf course materials, including top dressing blends to meet your most demanding specifications.



# Plaisted Companies

INCORPORATED

P.O. Box 332 • 11555 205th Avenue N.W. • Elk River, MN 55330

**612-441-1100**

---

Construction Materials • Top Dressing Blends • Bunker Sand • Carpath Aggregate • Drintile & Decorative Rock

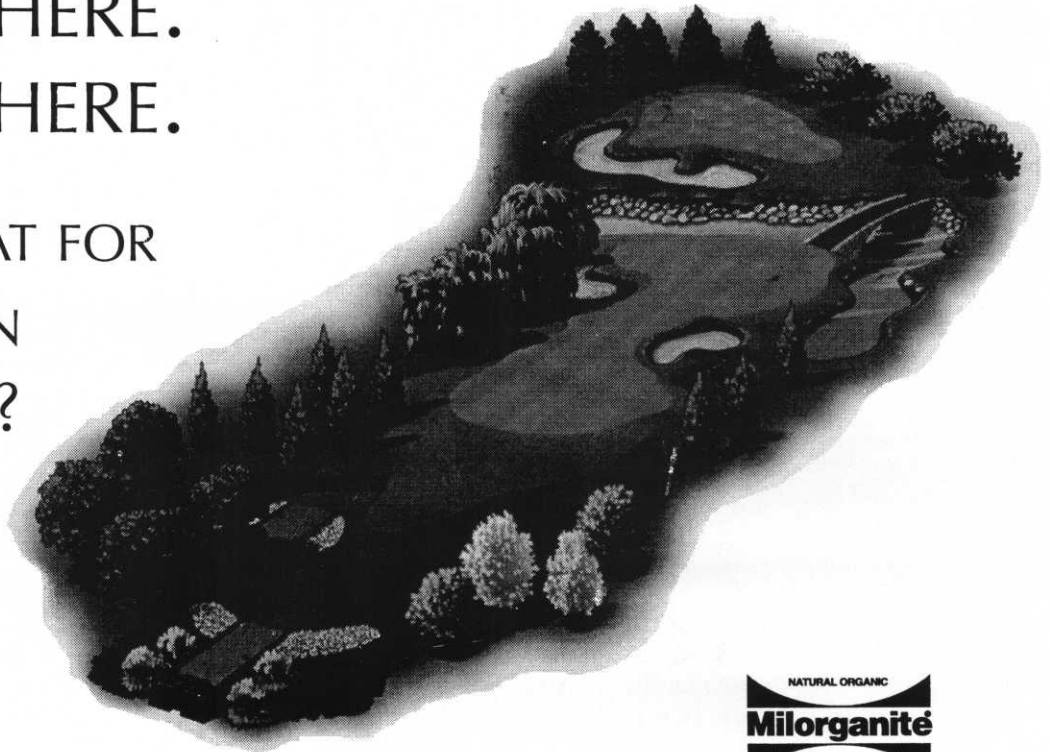
Photo courtesy of Burian Photography®





HERE. THERE.  
EVERYWHERE.

HOW'S THAT FOR  
APPLICATION  
GUIDELINES?



On greens. On tees. On fairways, roughs, flower beds, transplants – even in your divot mix. Milorganite delivers outstanding results for a uniform playing surface. No other fertilizer is easier on plants or simpler to use. Milorganite's slow release, organic nutrients won't burn or cause a flush of growth. Plus, it's high in micronutrients such as iron to promote dense, vigorous turf. And milorganite resists leaching, for a sound environmental profile.

*For more information contact your  
Turf Supply Representative at:*

***Turf Supply Company***

***2797 Eagandale Boulevard • Eagan, Minnesota 55121***

***(612) 454-3106 • Fax: (612) 454-7884 • 1-800-551-4857***