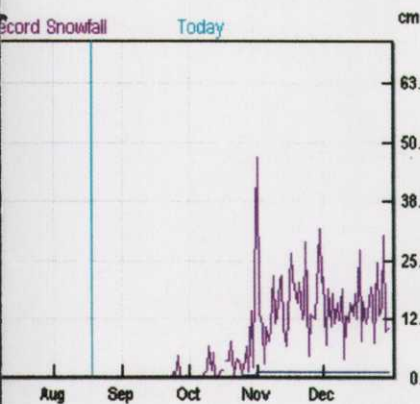
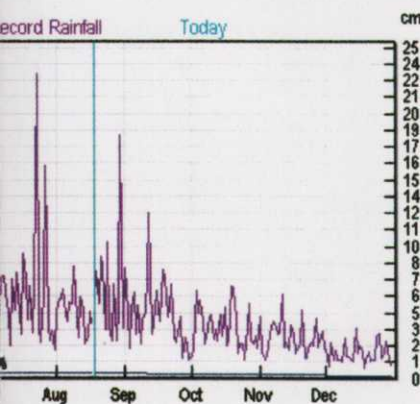
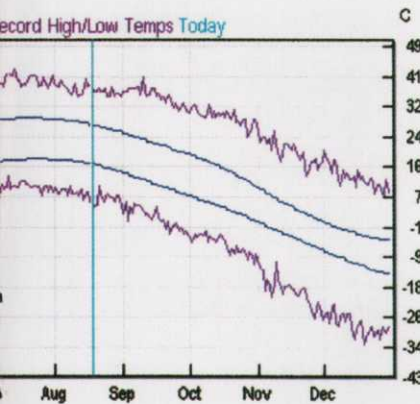
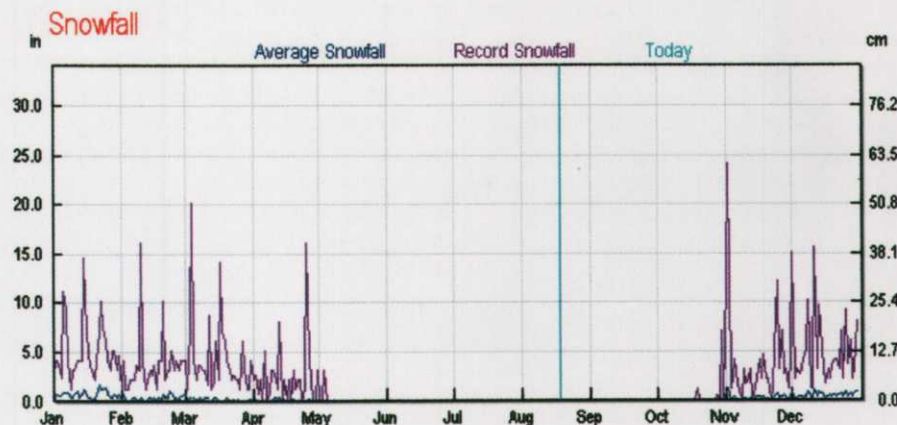
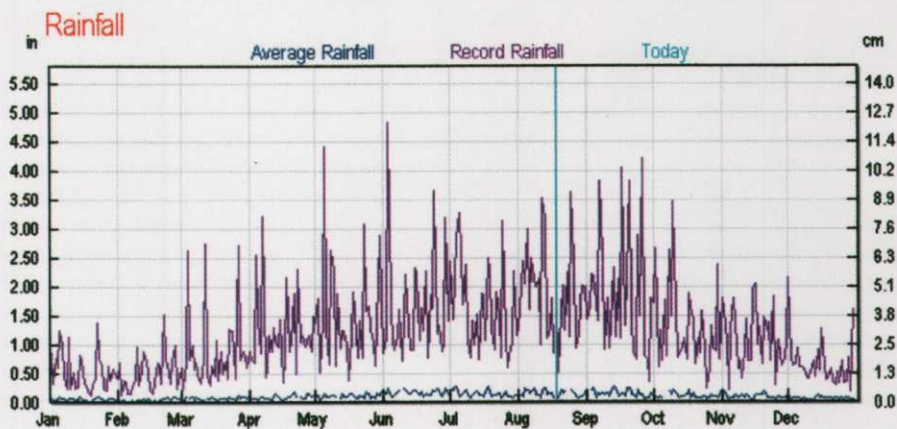
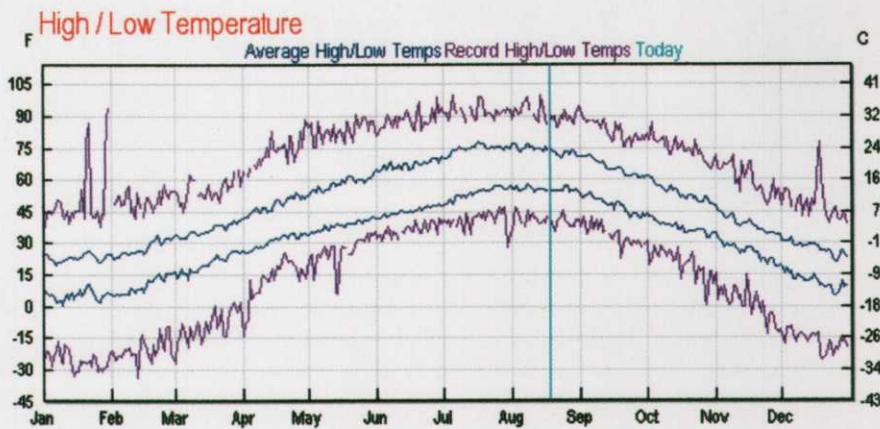


METRO AREA

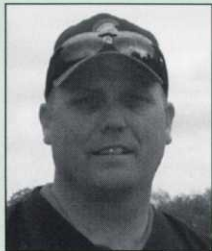


Month	August	September	October	November	December
High Temperature (F / C)	81 / 27	71 / 22	59 / 15	41 / 5	26 / -4
Low Temperature (F / C)	60 / 16	50 / 10	39 / 4	25 / -4	10 / -12
Precipitation (in / mm)	4 / 92	3 / 69	2 / 56	2 / 39	1 / 27
Snow (in / cm)	0 / 0	0 / 0	trace / trace	4 / 11	9 / 24
Wind Speed (mph / kmh)	10 / 15	10 / 16	11 / 17	11 / 18	11 / 17
Wind Direction (from the)	South	South	NW	NW	NW
Cloud Cover (out of 8)	4.3	4.7	5.0	5.8	5.7

DULUTH AREA



	January	February	March	April	May	June	July	August	September	October	November	December
High Temperature (F / C)	16 / -9	22 / -6	33 / 0	48 / 9	62 / 17	71 / 22	77 / 25	74 / 23	64 / 18	52 / 11	35 / 2	21 / -6
Low Temperature (F / C)	-2 / -19	3 / -16	16 / -9	29 / 2	-40 / 4	49 / 9	55 / 13	53 / 12	44 / 7	35 / 2	22 / -6	5 / -15
Precipitation (in / mm)	1 / 31	1 / 20	2 / 48	2 / 57	3 / 77	4 / 97	4 / 92	4 / 101	4 / 98	2 / 63	2 / 46	1 / 32
Snow (in / cm)	13 / 34	9 / 23	12 / 31	4 / 11	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 2	8 / 20	15 / 39
Wind Speed (mph / kmh)	12 / 19	11 / 18	12 / 19	13 / 20	12 / 19	11 / 17	10 / 15	11 / 17	11 / 17	11 / 18	12 / 19	11 / 18
Wind Direction (from the)	NW	NW	East	East	East	ESE	ESE	ESE	WNW	NW	WNW	NW
Cloud Cover (out of 8)	5.4	5.3	5.6	5.4	5.2	5.3	4.8	4.9	5.3	5.6	6.1	5.8



INSIGHT:

One Superintendent's Perspective

By **TOM MEIER**
Le Sueur Country Club
Le Sueur, Minnesota

Le Sueur Country Club is an 18-hole semi-private club located southwest of the metro area. Le Sueur Country Club was established in 1926 as a 9-hole course built along the Le Sueur Creek. In 1972, the course was expanded to 18 holes with the additional nine holes designed by Joel Goldstrand.

I have been in the golf industry for 28 years. Graduate of Worthington High School. Studied business at Minnesota West Community and Technical College.

Why did you enter the turf management industry?

I took up the game of golf in the late '70s and was immediately hooked. During my junior year in high school I was asked if I would be interested in working on the driving range at the Worthington Country Club. Enjoying the game of golf so much, I couldn't think of a better way to improve my own game than being around it all the time. As I was working that year, I also had the opportunity to help with the grounds crew several times and found that I really enjoyed that side of the business, too. The following year a position opened within the grounds department, which I applied for and was hired. The rest is history.

Who was your professional mentor?

I would say it has to be Mr. Drew Demorest who hired me as his assistant superintendent at the Worthington Country Club in 1981. He gave me the opportunity to further enhance my career

by sharing with me his knowledge of the golf course maintenance industry and also by giving me plenty of responsibility as his assistant. In addition, when he left in 1988, he recommended to the board of directors at WCC that I be promoted to the position of golf course superintendent.

What has been the highest point in your career?

There have been many high points in my career with the first and foremost being hired as superintendent at Worthington Country Club. Next would be being hired as superintendent at Le Sueur Country Club. I would also say that winning the MGCSA Championship has to be right up there, too.

What has been your lowest point?

I think that it had to be Thanksgiving weekend in 1996 or '97. We had a terrible ice storm followed by heavy snow, most of the trees on the course were either damaged or destroyed, there was also a 2-3" layer of ice underneath about 10" of snow on all of the greens. My heart sank to my stomach as I stood there watching huge trees succumb to the weight of the ice and snow and wondering if we were going to have any turf alive on the greens come spring. That was a long winter!

Are your greatest challenges political, agronomic or managerial?

I have learned to try and avoid the political side of the industry although it is hard to do sometimes and focus on the

agronomics and managerial side. The two are equal as far as challenges.

What is the most difficult disease to manage on your course?

Anthracnose and pythium are the most difficult diseases to manage here at Le Sueur Country Club. We monitor the weather closely and spray preventatively when conditions favor development. I've found that the phosphite products have worked very well the past couple of years.

Is it hard to find good help in your area of the state?

Not really, you just need to know where to look and use the great staff that you already have to make new contacts.

Where will our industry be in 10 years?

I wish I had a crystal ball to see that far into the future. My thought is that there will be continued improvements to chemistries, equipment and turf grass cultivars. Maybe new equipment that is controlled by GPS and operated at night so as not to disturb players on the course during the day, new and improved electric powered equipment that takes us away from our dependence on foreign oil. There may also be improved formulations of growth regulators, fungicides, herbicides and fertilizers that are safer for us to use and safer for the environment. I also think that our water supplies and usage will be a big issue. With the population growing at such a rapid rate, conservation of our natural resources will be extremely important for our industry.

Where would you like to be in 10 years?

Still happy, healthy, enjoying life and family, and of course, a little closer to retirement.

What is your perspective of our state association and what would you change?

I believe that our association is a well-run and organized group. The current and past B.O.D. and staff have done a fantastic job of giving our members plenty of educational opportunities to further enhance our careers, and also keeping us informed as to changes in the laws and regulations that will have an impact on our industry.

Name your foursome:

Jack Nicklaus because he's the greatest ball striker who ever has played the game (*maybe a little of that would rub off on me*). Ben Crenshaw, the greatest putter ever and Fred Couples, because of his calmness under pressure – we could all use a little help with that on the course.



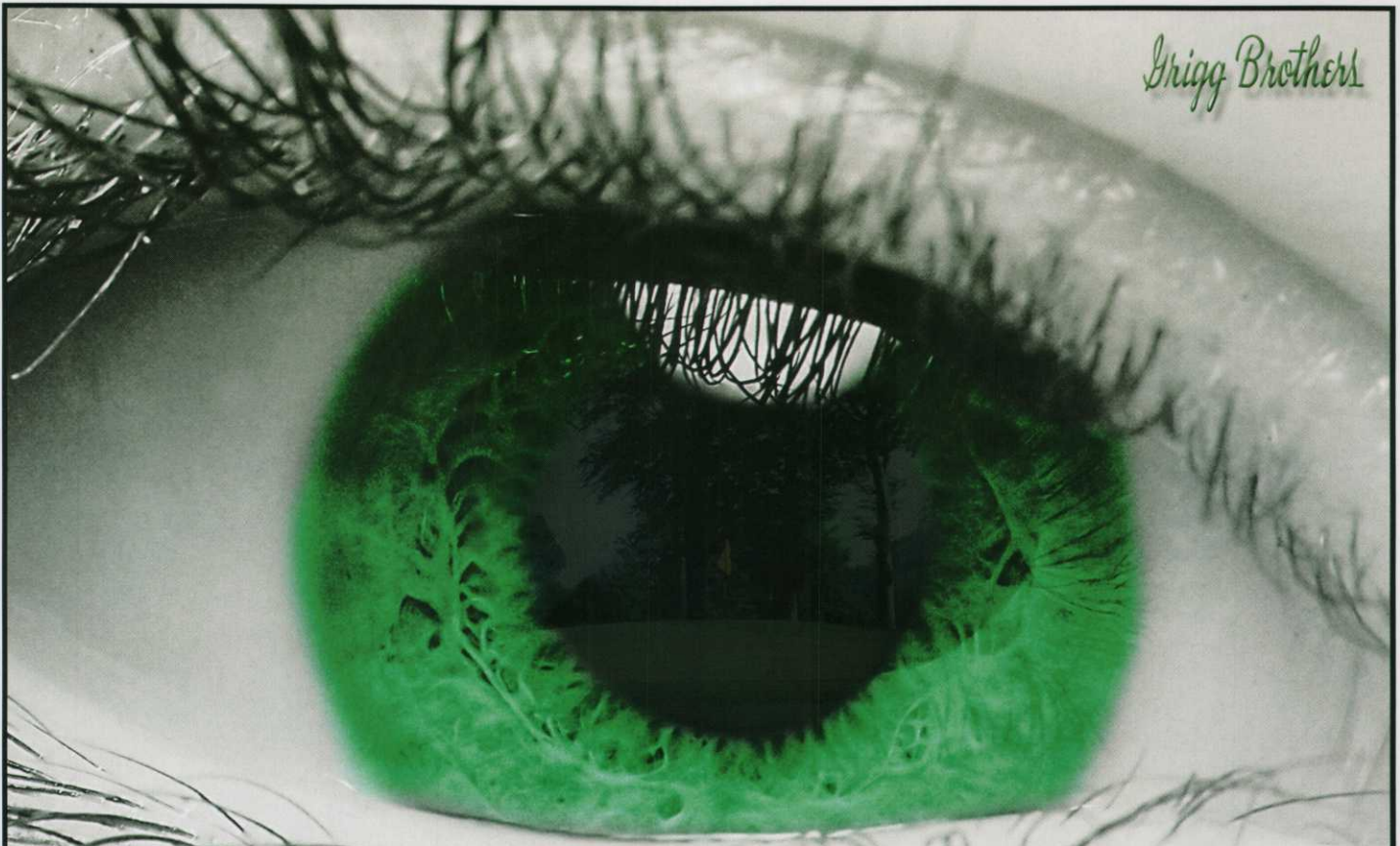
New Construction • Renovation
Restoration • Laser Leveling Tees
Drainage • Green Construction

800-328-8949
www.dbigolf.com
P.O. Box 208, Prinsburg, MN 56281





Grigg Brothers



A New Vision

in Granular Fertilizer Technology

Green Spec™

Granular Fertilizers & Soil Amendments

Want to know more?

Ask your Precision Turf Rep. for more information about the new granulars from Grigg Brothers!

Now Available At



4/23/2004

Pet Of The Month

Name: Milo (10)
Terrier Beagle Mix
Location: Arbor Point Golf Course
(Inver Grove Heights, MN)
Superintendent: Darren Johnson



Turf & Chemical Inc.

7728 Commerce Circle · Greenfield, MN 55373 · Phone: (763) 477-5885 · Toll-Free: (800) 925-TURF
www.PrecisionTurf.com · Email@PrecisionTurf.com

CLASSIFIED ADS

WANTED

Spartan cutting units
for 7-gang rough mower
Contact: Al Montague
Wayzata CC
952-475-9764

FOR SALE

1985 Jacobsen HF-5 fairway mower.
Has been used since new.
Fully operational. Probably the
last one in the country.
Best offer.
John Monson
Long Prairie CC
320-732-2341

FOR SALE

1996 National 68" Deluxe,
electric start \$500 obo
Bill Brooks
Rose Lake Golf Club
507-235-3981
brooks_b84@yahoo.com

FOR SALE

Cushman 3-wheel
truckster w/dump
as is needs TLC \$600
Chris Klatté
Grand View Golf
218/522-0812

FOR SALE

JAC LF100. Runs good,
looks rough. -- \$500
Cushman Groomsmaster Diesel
w/dozer blade -- \$300
Toro Sand-Pro 8hp, looks
and runs great -- \$500
Toro GM3, runs good -- \$500
Contact: Mike Krogstad
Hidden Haven Golf Course
763-458-4846 or 763-434-7911

FOR SALE

International loader/
backhoe - \$7,500
New turf tires
(front and back) - \$2,100
Rims fit John Deere Tractor
20 golf bag pull carts - \$20 ea.
Contact: Scott Wersal
Ridges at Sand Creek
952-492-2644, ext. 24

CLASSIFIED ADS ARE
FREE OF CHARGE TO MEMBER
SUPERINTENDENTS.
TO PLACE AN AD, CONTACT
SCOTT@MGCSA.ORG OR
CALL 952-473-0557
OR 1-800-MGCSA-27

163 Yard Par 3 eighth hole at the Refuge Golf Club in Oak Grove, Minnesota.



HERFORD ▣ NORBY Golf Course Architects

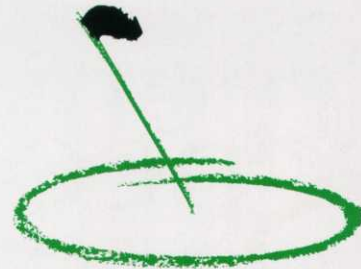
6452 City West Parkway, Eden Prairie, MN 55344
Phone: 952.942.0266 Fax: 952.942.0197
e-mail: golfnorby@eschelon.com
web: herfortnorbygolfarchitecture.com



★
SPECIALITY EQUIPMENT
PROFESSIONAL FERTILIZER
CHEMICALS
SERVICE

www.teeshot.org
800•950•4288

Andersons Fertilizer



Andersons
GOLF PRODUCTS®

Authorized Golf Products Distributor
Program Specialists for all of your turf needs.



MTI DISTRIBUTING, INC.
4830 AZELIA AVE. NO. #100
BROOKLYN CENTER, MN 55429
763-592-5600 800-362-3665

2005 Turf & Grounds Field Day Recap

By LARRY VETTER
Minnesota Turf and Grounds Foundation

The sixth annual Turf and Grounds Field Day was held on July 29 at the St. Paul Campus of the University of Minnesota. The Minnesota Turf & Grounds Foundation was pleased to be able to sponsor this event in conjunction with the University of Minnesota.

The day began with refreshments at the registration area, which was in the Display and Trial Gardens on the St. Paul Campus. Mother Nature cooperated beautifully and the event was graced with tremendous weather. The total attendance increased from previous years but continues to be disappointing. Those who did attend were amazed at the expansion and quality of the work being conducted at the TROE Center and other horticultural activities and projects in place in various areas.

Following the official welcome by Larry Vetter, MTGF Executive Director, and Dr. Eric Watkins, University of Minnesota turfgrass breeder and instructor, attendees were split into two groups, one interested in the turf activities and the other touring current grounds research and programs. The grounds group began at the Display and Trial Gardens while the turf group boarded wagons for the trip to the TROE Center site.

The "grounds" group had six stops that included "Garden Design & Construction," "Herbaceous Trials," "Plant Growth Greenhouses & Classrooms," a tour of the CAD Lab, a walking narrative of various trees on campus and a description of tree research experiments currently being conducted and funded, in part by the MTGF.

The "turf" group spent the morning at the TROE Center rotating between nine different research projects. They included "Nutrient & Pesticide Loss with Runoff," "NTEP greens trials," "Turf Insects", "Fine Fescue/Colonial Bentgrass Fairways," "NTEP Fairway/ 10-input fairway trials," "Tall Fescue & Kentucky Bluegrass Trials," "NTEP Perennial Ryegrass Trials," "Remote Irrigation Sensing" and "Low-input Turfgrass Plots."

Dr. Jeff Gillman hosted a stop at the TRE Nursery on the University of Minnesota's St. Paul campus which is the home of many new and exciting investigations into tree selection, growth, and care. Numerous organizations support this research including the MTGF, the Minnesota Nursery and Landscape Association and the Minneapolis Park Board.

Some of the projects currently underway at the TRE Nursery include evaluations of Dutch Elm disease resistant elms, investigations into the effects of planting deeply on stem girdling roots, and experiments on the effects of various techniques applied to potbound plants to encourage root growth.

Reinders will donate
\$5 to the MGCSA
Scholarship Fund for
every case of
Daconil or pound of
Heritage purchased.

Reinders
has donated more
than \$104,000
to the
WI Turfgrass
Association
over the past
12 years.



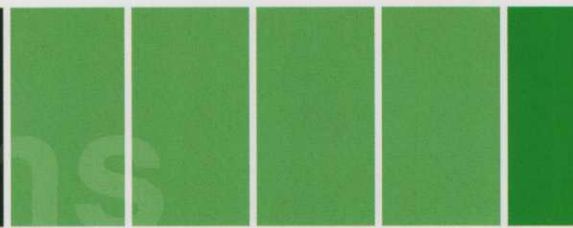
Reinders

Solutions & Supplies for the Green Industry

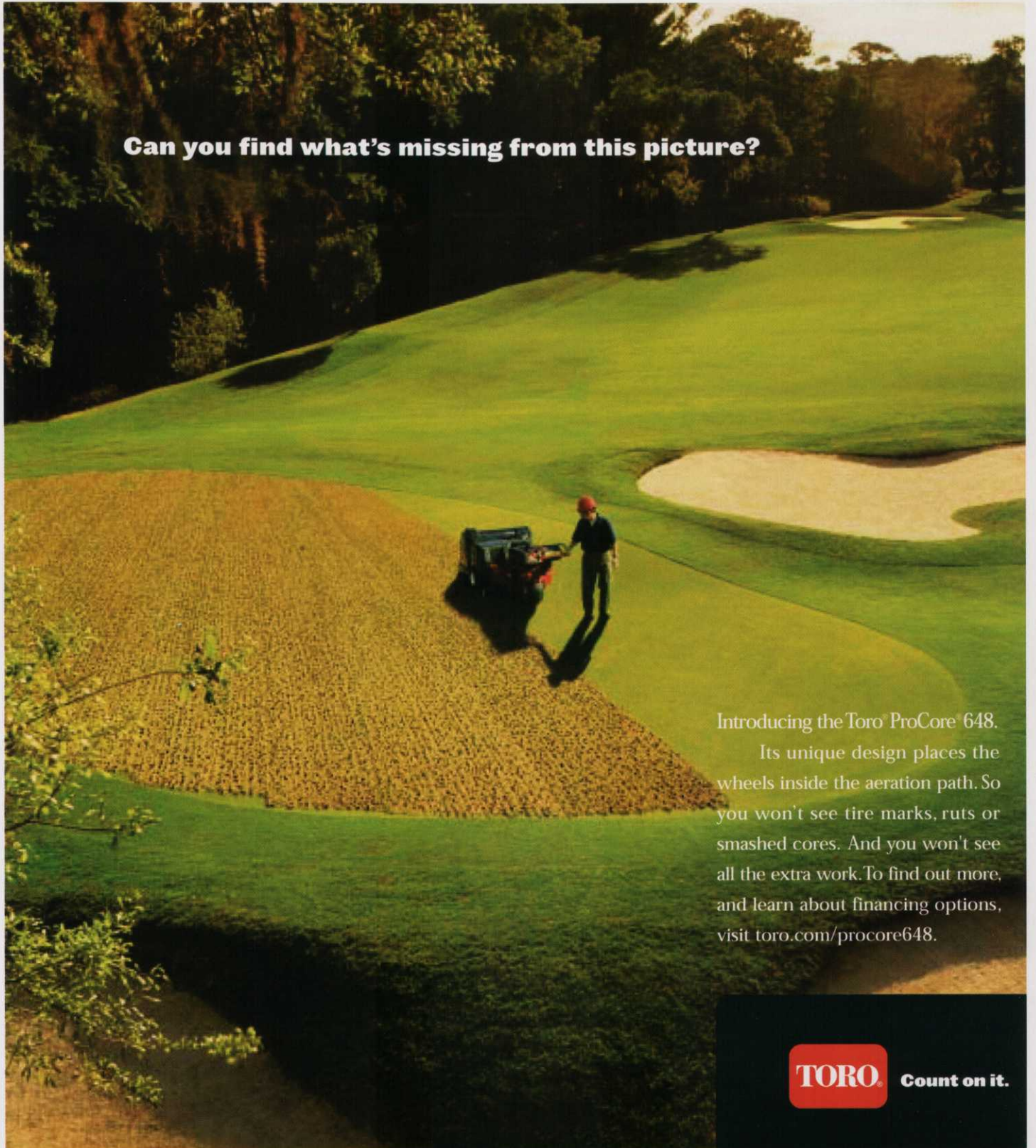
MIKE REDMOND (612) 963-0752 North Central Minnesota
PAT WALTON (612) 770-2015 Twin Cities Area
FRED ANDERSON (715) 456-0971 NW Wisconsin



Great
Solutions



Can you find what's missing from this picture?



Introducing the Toro® ProCore 648.
Its unique design places the wheels inside the aeration path. So you won't see tire marks, ruts or smashed cores. And you won't see all the extra work. To find out more, and learn about financing options, visit toro.com/procore648.

TORO Count on it.

TORO

The New TORO® Pro Sweep® 5200



A better mouse trap.

For commitment and high quality, contact MTI Distributing!



4830 Azelia Avenue North #100
Brooklyn Center, MN 55429
763-592-5600 800-362-3665
www.mtidistributing.com

TORO

Count on it.

Phosphorus Fertilizer Re-Training Program

By DR. BRIAN HORGAN and CARL ROSEN
University of Minnesota

It's hard to believe that it is now time to renew your Phosphorus Fertilizer Training certificate. For some of you, on January 1, 2006, the two year period that your initial training was good for will have expired. In order to accommodate over 400 people in Minnesota that have taken the 4-hour training session, re-training will occur via correspondence. Remember, this training is required by the state of Minnesota if you are a golf course employee and you want to be exempt from the legislation restricting the use of P fertilizers.

Here is how this will work. You read this article and research update on Phosphorus fertilizer fate. At the conclusion of the article, YOU are responsible for filling out and signing the tear-off then sending it to MGCSA office at the address provided. Signed tear-offs will be accepted until December 31, 2005.

If you have not completed the 4-hour training course, this does not apply to you. You need to complete the 4-hour training course first which is good for 2 years following completion. The next 4-hour training will be offered at the Green Expo on January 3, 2006.

If you have any questions, feel free to contact me at bphorgan@umn.edu.

RESEARCH UPDATE

Statewide regulations restricting phosphorus fertilizer application to turfgrass went into effect on January 1, 2005. This legislation prohibits the use of phosphorus containing fertilizers on established turf unless a soil or tissue test indicates a need. Golf course personnel are exempt if they have completed a certified phosphorus

fertilizer training course offered by the University of Minnesota. One of the provisions of the initial law was that effectiveness of the bill was to be evaluated through research and reported back to the legislature: "...the Commissioner must evaluate the effectiveness of the restrictions on phosphorous fertilizers under this section and report to the legislature by January 15, 2007".

In order to determine the environmental impacts of restricting phosphorus in lawn fertilizer, a dedicated research facility was established at the Turfgrass Research, Outreach, and Education (TROE) Center on the St. Paul Campus at the University of Minnesota during the 2004 growing season. The overall objective of this ongoing study is to determine the effects of phosphorus and clipping management on phosphorus runoff and turf health.

Methods: A sloped plot of land at the TROE Center previously used as pasture was selected for this study. The soil is classified as a Waukegin silt loam and is typical of soil in urban areas of the Twin Cities. To prepare the land for the study, the original vegetation was stripped and the site was graded to a uniform slope of 5% and then compacted to simulate an urban setting. Kentucky bluegrass was sodded in the fall of 2003 and uniformly managed during 2004 prior to initiating treatments. Twenty four individual plots were constructed by installing four inch plastic edging around the perimeter of each plot area. At the base of the plot, water is funneled to a metal trough. The dimensions of each plot are 8 ft in width and 24 ft in length, but because of the fun-

neling at the base of the plot, the actual runoff area is approximately 184 ft². A plastic tube at the base of the trough is used to direct the runoff water to a five gallon plastic bucket, which is located within a larger 30 gallon container to catch any overflow runoff water. After each runoff event, the volume of runoff water is measured from each plot and a subsample saved for soluble and total P determination. Total P analysis is not yet complete and therefore only soluble P concentrations and runoff are presented in this report.

Eight treatments are currently being evaluated:

1. Control (no fertilizer applied), clippings returned
2. 1N, 0P, 0.5K (1 lb N and 0.46 lb K₂O/1000 ft² applied 3 times per yr), clippings returned
3. 1N, 0.33P, 0.5K (1 lb N, 0.33 lb P₂O₅, and 0.46 lb K₂O/1000 ft² applied 3 times per yr), clippings returned
4. 1N, 1P, 0.5K (1 lb N, 1 lb P₂O₅, and 0.46 lb K₂O/1000 ft² applied 3 times per yr), clippings returned
5. Control (no fertilizer applied), clippings removed
6. 1N, 0P, 0.5K (1 lb N and 0.46 lb K₂O/1000 ft² applied 3 times per yr), clippings removed
7. 1N, 0.33P, K (1 lb N, 0.33 lb P₂O₅, and 0.46 lb K₂O/1000 ft² applied 3 times per yr), clippings removed
8. 1N, 1P, 0.5K (1 lb N, 1 lb P₂O₅, and 0.46 lb K₂O/1000 ft² applied 3 times per yr), clippings removed

Prior to fertilizer treatments, soil samples from each plot were collected at the 0-3" and 3-6" depths. Fertilizer was applied on Sept. 19, 2004, Oct 16, 2004 and May 31, 2005. These rates of P are typical for establishing turf. Starting in Sept. 2005, P rates will be reduced to one third of the rates listed above to more realistically simulate formulations for established turf previously used before the P fertilizer restrictions. In 2004, clipping samples were collected on September 30 and October 18 for phosphorus determination. The weight of the clippings was measured only for the clippings removed treatments on the second sampling date. Starting in 2005, clippings will be weighed for the

(Continued on Page 19)



Paskvan Consulting

Craig Paskvan
24070 315th Ave. ~ P.O. Box 249
Akeley, MN 56433
(218) 652-3542 ~ Fax (218) 652-2949
Cell (612) 889-8546 or (218) 368-5265

Golf Course - Sports Turf & Environmental Consulting Services

- Balanced Soil & Plant Nutrition - Consulting, Monitoring & Analytical Services -
"Where success is never an accident"
www.paskvanconsulting.com

Phosphorus Program-

(Continued from Page 18)

entire plot for those plots where clippings are removed. For the plots where clippings are returned, only a small area in the middle of each plot will be weighed and then returned. The remainder of the plot will then mowed with a mulching type mower. On a monthly basis, a sub-sample of clippings will be saved for P determination.

Results to Date: Runoff data have not been statistically analyzed and therefore results should be considered preliminary at this point in time.

Initial Soil Tests: Soil test values for the runoff plot prior to fertilizer application are presented in Table 1. These soil test results are typical of those in the Twin Cities area for turf - near neutral pH, medium organic matter and potassium, and high phosphorus.

Clipping Measurements: Clipping phosphorus concentrations and yields are presented in Table 2. There was a trend for P fertilizer application to increase P concentrations in the clippings at the second sampling date. All P concentrations in clippings were above the critical level of 0.26%P. (Continued on Page 21)

Table 1

Initial Soil Test Results for the Runoff Plots, September 2004

Soil Depth	pH	Organic Matter (%)	Bray P1 (ppm)	K (ppm)
0-3"	6.8+ 0.2	4.4+0.7	27+8	115+21
3-6"	7.0+0.2	2.9+0.6	20+5	87+17

Table 2

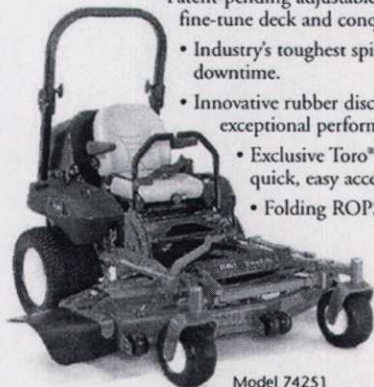
Treatment Effects on Clipping P Concentrations

Treatment	Clippings	9/30/2004 % P	10/18/2004 % P
Fertilizer lbs N, P205, K2O / 1000 ft ²			
0, 0, 0	Returned	0.41	0.33
1, 0, 0.5	Returned	0.36	0.32
1, 0.33, 0.5	Returned	0.44	0.40
1, 1, 0.5	Returned	0.40	0.42
0, 0, 0	Removed	0.44	0.37
1, 0, 0.5	Removed	0.39	0.37
1, 0.33, 0.5	Removed	0.36	0.36
1, 1, 0.5	Removed	0.39	0.40

Productivity that's a cut above the rest.

Z Master Z500 Series

- High-capacity TURBO FORCE™ deck features 7-gauge high-strength steel fabricated shell.
- Patent-pending adjustable baffle allows operator to fine-tune deck and conquer changing conditions.
- Industry's toughest spindle assembly eliminates downtime.
- Innovative rubber discharge chute provides exceptional performance and resists damage.
- Exclusive Toro® Z Stand® provides quick, easy access to underside of deck.
- Folding ROPS enhances operator safety.



Model 74251

ProLine Mid-Size Fixed Deck

- Exclusive T-Bar steering.
- Kohler® Command® PRO engine — gear drive.
- Fast 6.2 mpg forward ground speed — reverse assist.
- 36 inches side discharge deck — optional Recycler® mulching bagging kits available.



Model 30178

Landscape Contractor Equipment

TORO

Count on it.

Visit us at www.cushmanmotorco.com

CUSHMAN MOTOR CO., INC.

2909 EAST FRANKLIN AVENUE, MINNEAPOLIS, MINNESOTA 55406
(612) 333-3487 • Fax (612) 333-5903 • Toll Free 1-800-759-5343

Cushman
Since 1949

© 2005 The Toro Company. www.toro.com
*See dealer for warranty, guarantee and pricing details.

SOLUTIONS BEYOND THE LABEL

PROSOURCE ONE



Our sales reps are trained professionals who understand that there's more to know than what's on the label — things you can learn only by spending time with people in your area who are actually using the products. We offer the name-brand products that include the research, quality control, and after-the-sale product support you've come to expect from the industry's best manufacturers.

For solutions that go beyond the label call:

Bill Gauwitz — 507-269-0230

Jeff Schmidt — 952-237-0160

Or call the ProSource One office at 800-327-9066

Scott Gilbertson — 608-790-7667

Dale Parske — 952-250-8742

Chemicals

Fertilizer

Aquatics

Wetting Agents

Grass Seed

Specialty Products

Growing Smarter.