

Letters From Iraq—

(Continued from Page 10)

to talk to will just keep their mouth shut and wait to see who will be next in charge. All they want to do is raise sheep. I am totally convinced that the reason that a lot of the people here have not evolved out of the Stone Age (except for satellite TV hooked up in the mud hut) is that they have nothing to lose when the next guy steps up into power. They have nothing that the leaders would want except for their loyalty, which they easily get by threatening them (a concept that has been employed here for centuries). Anyway, enough preaching; you probably have your own opinion about this place and the war. I think everyone is in agreement that it could have been done a little better. Around here the insurgents are targeting the new police recruits. We are having pretty good success hiring police here and shipping them off for training. The bad guys have been targeting the police stations with suicide bombs. My company does a lot of the force protection around these places. If we build a bigger wall they build bigger bombs. The police are doing a pretty good job hanging in there. The Iraq army guys that I work with are coming along pretty well. They do a pretty good job and are starting to act like real soldiers. The problem is that the upper echelon guys are old school and slow to change. They are very short sighted and can't plan a trip to the bathroom. That is true

literally, but that is another story. All right, I think I have written enough. I think you guys can figure out the rest. I will give you the "Iraq for Dummies" scorecard: Insurgents bad, Iraqis scared, Iraqi army getting better and police being blown up a lot.

April 16, 2006

Happy Easter everyone. Hopefully this will be the last major holiday I spend outside the U.S. Sorry I haven't written in a while but things have been pretty busy around here. My guys are all still doing well and not much has changed with the missions we do. As we get closer to getting out of here, things will get even busier for us. Since the new set of Marines has taken over, it has gotten a little dicey for them. They are going into places that haven't really been visited too much by us. They are doing a good job but it is at a price. You have probably seen or heard about it in the news. Once again, to correct the news; the Government Center in Ar Ramadi hasn't been overthrown. It just gets attacked every once in a while or maybe a few times a week. It is all a blur to me. It is pretty well defended and the insurgents take a few inaccurate shots and run away. They are pretty good at video taping themselves during attacks. They must edit the piece out where they get chased out of town by a helicopter or F18 Hornet. We have not seen too much of the sect killings that they have in Baghdad. We did have one incident but not too much otherwise. You think we have race relation problems in the United States? Say

the wrong thing over here and wham-oh, it's off to see Allah! We are still working with the Iraqi army and they are doing pretty well. They haven't shot each other in a few weeks. They do, however, have a problem with the dogs in the neighborhoods. Apparently the Sunni/Shia thing must happen with dogs also because the Sunni dogs don't like the Shia soldiers and the dogs usually lose that one. The dogs leave the U.S. guys alone pretty much. They understand "come one step closer and it's going to be a bad day for you" must be universal dog language or something. The people here haven't changed. Having a new government probably will not affect them much. They will still be led by those that intimidate them. Being Sunni, they will resent anything that government puts in place. That is if they can get one in place. The propaganda operation by the insurgents is pretty good. Most of the people are uneducated and will believe anything they hear. In our area the Coalition Forces are rumored to be responsible for blowing up a doctor's clinic that we planned, financed and hired local contractors to build. It was about 90% complete before we decided to blow it up. Well, that is what some of the locals have been told. We didn't in case anyone is wondering. Otherwise we keep trucking along. Everyday gone is one day closer to home. I can't wait. Until then, everyone be safe and take care.

(Continued on Page 12)

Experience...

HYDROLogic
Turf Management Systems

HYDROLogic and Rain Bird understand that renovation is a major commitment, and we want to be your complete renovation partner. We can help you justify and implement a cost-efficient renovation package that's right for you. We ensure that our latest innovations will always be compatible with your existing Rain Bird system. After the installation is complete, we'll be there to help you maintain the quality of your entire system.

Call your HYDROLogic Representative
-Authorized Rain Bird Golf Distributor-

763-542-1188 800-422-1487 www.hydrologic.net



You can relax when you renovate with **HYDROLogic** & **RAIN BIRD**

Letters From Iraq—

(Continued from Page 11)

May 14, 2006

Hello all. All is well in Iraq. Well that isn't really true but it sounds good. Another month has gone bye and there isn't a whole lot to say. After a while here it gets to be like the movie Ground Hog Day. You wake up and do the same thing everyday with the exception that sometimes people shoot at you and sometimes they try to blow you up. It changes things up a little and keeps everyone on their toes. We have been pretty steady with our regular missions and have increased with some of the building and fortifying missions. I don't know if I ever explained that or not but my company does a few things. We patrol a large section of highway and then we also have heavy engineer equipment like bulldozers and loaders. I have guys that run the equipment and they are kept extremely busy. Every time the bad guys blow something up we

go and repair it as best as we can. We also do a lot of force protection things like put up barriers or build fighting positions. Anything we can do to keep the soldiers safe from bullets and bombs. We also do missions to interact with the local people. Sometimes we go by ourselves and sometimes we take some Iraqi soldiers with us. I can't say all the stuff we do but some-

"You wake up and do the same thing everyday with the exception that sometimes people shoot at you and sometimes they try to blow you up. It changes things up a little and keeps everyone on their toes."

times it gets interesting and sometimes you just get hot. Speaking of which, we hit 100 degrees again and it is only mid May. I am glad I will be out of here before it gets really hot again. I will take the cold winters any day over the heat. No wonder the people are in such a bad mood. I think they are all fighting for the air conditioners. Here is another little story to show how corrupt some of the

people can be. Last month a high-ranking Iraqi officer was caught stealing air conditioners from the huts and buildings that the Iraqi soldiers live in. Apparently he was bringing them to Baghdad and selling them. Now there is a guy that you want leading troops. Like I said before in one of the updates... the younger guys do pretty well leading troops while the older guys that have seen all the corruption just fall in line and continue the chain. It is really the norm over here. Hopefully someday they will get tired of it all and figure it out for themselves or they may be watching some of the politicians in the US and figure out if they can do it so can we. Well I guess I did have some stuff

to say. I am really looking forward to getting home and living the American dream. We have it so good at home. Unless you have been in a place like this it is impossible to know how good we have it. Well I may do one more of these things before I leave just to sum things up. I appreciate all the support from home. I hope to see you all when I get back. Take it easy.

-- Rob

LEITNER COMPANY

Specializing in Soils for Golf Course Maintenance & Construction

Soil mixing and processing specialists.

Supplying the Golf Course Industry with soil and sand products for over 60 years.

Material to specification for topdressing and construction.

Quality - Reliability - Experience

MIKE LEITNER

LEITNER COMPANY

945 Randolph Avenue ~ St. Paul, Minnesota 55102

(651) 291-2655

PROUD SUPPORTER OF RESEARCH AND EDUCATION THROUGH THE MGCSA

Mitigation of Nutrient and Pesticide Loss with Runoff from Fairway Turf

By Pamela Rice, USDA-Agricultural Research Service, St. Paul
and Brian Horgan, Department of Horticulture, University of Minnesota, St. Paul

Water quality surveys have detected excess nutrients and numerous pesticides in surface waters of rural and urban areas. The off-site transport of these chemicals are both an agronomic and environmental concern resulting in reduced efficacy in the area of application and contamination of non-target surrounding ecosystems. The use of fertilizers and pesticides in highly managed turf systems has raised questions concerning their impact on the quality of water resources and the contribution of managed turf systems to surface water contamination. To address these questions we designed and implemented experiments that would measure the quantity of fertilizers and pesticides transported with runoff from fairway turf, and evaluate the ability of turf management practices to reduce the transport of applied chemicals with runoff.

Both chemical application strategies and cultural practices were evaluated. Our overall goal is to identify management practices that maximize fertilizer and pesticide retention at the site of application, thereby improving desired results of turf maintenance and pest control while minimizing environmental impacts.

Chemical application strategies:

Potassium bromide (KBr) and fluorobenzoic acids (FBAs), traditional and alternative conservative-tracers, have been utilized as valuable hydrologic tools for characterizing water movement through soil. We applied three FBAs and KBr to selected areas of turf plots, representing a bentgrass fairway, to evaluate water movement and the influence of location of

chemical application to their transport with surface runoff. Within 24 hours of the tracer application, precipitation was generated with a rainfall simulator and runoff samples were collected. A portion of each runoff sample was analyzed for bromide ion using an ion-selective electrode and double-junction reference electrode. The remaining sample was filtered, acidified and analyzed via liquid chromatography-mass spectrometry for the three FBAs. Co-application of FBAs and KBr demonstrated these alternative and traditional hydrologic tracers have similar transport patterns and they can be utilized in differential application studies to characterize chemical transport with water movement. Use of conservative water-soluble tracers represents a worst-case scenario for off-site movement of fertilizer and pesticides. Selective application of multiple FBAs enable identification of areas of high impact that contribute the most to chemical transport with runoff. This data can be utilized in model simulations to assess potential environmental impacts as well as provide information to determine chemical application strategies to reduce off-site transport of applied compounds.

Cultural practices: Turf plots were managed as a golf course fairway (1.25 cm height of cut) following a standardized protocol for fertilizer and pesticide application, simulated precipitation and collection of runoff and turf/soil samples. Half of the plots received solid-tine aeration while the remaining plots were managed with hollow-tine aeration. Fertilizer (18-3-18 [N, P₂O₅, K₂O]) and a



Rainfall simulation and runoff collection

commonly utilized herbicide (2,4-D), insecticide (chlorpyrifos), and fungicide (flutolanil) were applied to each plot to evaluate their transport with runoff. Forty-eight hours prior to pesticide application each plot was pre-wet to saturation to ensure uniform water distribution. Pesticides, fertilizer and a conservative tracer (KBr) were each applied to the turf 24 hours prior to the initiation of the simulated precipitation. Replicate samples of surface runoff water and turf/soil cores were collected for analysis to determine levels of fertilizer and pesticides removed from the site of application with runoff water or leaching to the underlying soil. Rainfall simulations and collection of resulting runoff were completed two days and 63 days following aeration (2d, 63d). Preliminary results for fertilizer transport show reduced runoff volume (2d, 63d), nitrogen loss (2d) and phosphorus loss (2d, 63d) with hollow-tine aeration relative to solid-tine aeration. Completion of pesticide analysis and statistical analysis of fertilizer and pesticide data will determine the statistical relevance of the initial observed trends.

Identifying practices that reduce off-site transport of applied chemicals will increase fertilizer and pesticide efficacy at the intended sites of application and will also minimize their potential adverse impacts to the surrounding surface water resources. Results of this research will provide information that will allow for informed decisions on best management practices that are both environmentally responsible and provide quality turf.



Aeration of the turf plots



Nutra Green™

5-10-5 + Iron

**The best Tru-Foliar™ product for turf,
during early spring applications and
cold soil temperatures.**

Nutra Green™ is a universal product that provides fully chelated, quickly available Tru-Foliar™ micronutrients and phosphorus to cool soil. It increases seeding vigor, speeds up grow-in, and provides greener turf without rapid growth. Ask your Precision Turf rep. or call the office for more information.

Pet of the Month



Name: Lacey (4)
Shih-Tzu

Location: Minnewaska Golf Club
(Glenwood, MN)

Superintendent: Doug Larson



Turf & Chemical Inc.

University of Minnesota Turf Club Achieves a New Level

By Aaron Johnsen
University of Minnesota Turf Club

The University of Minnesota Turf Club is winding down its activities as we head towards the summer. This past year has been a very eventful for the Turf Club. A year ago, nine members (Sam Bauer, Justin Ellison, Aaron Karn, Adam Murphy, Nick Peinovich, Jonathan Spitzer, Kyle Stirn, Seth Swanson and Justin Zimmerman) graduated and this fall two more (Josh Olson and Mitch Savage) graduated. We also had the addition of nine new members to our club (Will Haselbauer, Mark Lambert, Jason Lamers, Justin Loegis, Justin Mangold, Ryan Moy, Chad Nowak, Charlie Fischer and Jake Ryan).



Members of the sixth place team, from left to right:
Mark Schloo, Chad Nowak, Gerad Nelson, and Aaron Johnsen.

Throughout the year we participated in numerous events and fundraising. Last summer we helped with the 3M Championship preparations at the TPC of the Twin Cities. In the fall, members assisted Minnesota Valley Country Club in setting up greens covers and we had James Bade speak at a meeting. Each of these events were extremely enriching experiences for those that were able to attend.

During Christmas break members assisted in setting up the Minnesota Green Expo. We also began our preparations for the turf bowl, which is held at the Golf Industry Show. The turf bowl is a three-hour test on a range of topics concerning warm season and cool season golf courses. These preparations continued well into the night the day before the test.

This year we had nine members attend the GIS in Atlanta, Ga. At the conference, we attended the trade show and some members participated in classes. For the turf bowl we had two teams compete and place sixth and 42nd. The sixth place finish is the highest the turf club has placed in this event and topped our 11th place finish of last year. The members of the sixth place team were Aaron Johnsen, Gerad Nelson, Chad Nowak, and Mark Schloo.

After returning from the trip, we began our spring fundraising events. Due to the poor sales of Easter baskets over the last few years, we elected to donate them. We donated 48 baskets to the Harriet Tubman Women's Shelter in Minneapolis.

This spring we also held our third annual golf giveaway. We would like to thank all golf courses that generously donated passes: TPC of the Twin Cities, Rush Creek Golf Club, The Jewel Golf Club, Mendakota Country Club, Izaty's Golf and Yacht Club, Keller Golf Course, North Links Golf Course, Chomonix Golf Course, Brightwood Hills Golf Course, Tartan Park Golf Club, Baker National Golf Course, Thumper Pond Golf Course, Emily Greens Golf Course, Fox Hollow Golf Club, Grand View Lodge, Deacon's Lodge Golf Course and Edinburgh USA. This event is one of our largest fundraisers for the annual GIS trip.

As we prepare for next year, we are always looking for events to attend. The members of the turf club are interested in learning all they can about the turf industry. If anyone needs help with fall clean-up or would like to speak to the club, please contact us. Thank you for your time and support. Any donations or inquiries can be directed to President Aaron Johnsen.

(Editor's Note: For more information about the Turf Club e-mail: john6333@umn.edu or mail to 1970 Folwell Ave., Alderman Hall 305, St. Paul, MN 55108.)

HEDBERG
LANDSCAPE SUPPLIES
"Built on Service"

Everything for
your Golf Course
but the Grass

The Midwest's largest selection of landscape hardgoods.
Four metro yards for easy pick up and fast delivery.

MULCH • DECORATIVE ROCK • PAVERS • RETAINING WALLS

Erosion control Turfstone allows grass to grow while reinforcing soft ground areas that are subject to traffic.



POND FILTRATION • AERATION SYSTEMS • FOUNTAINS

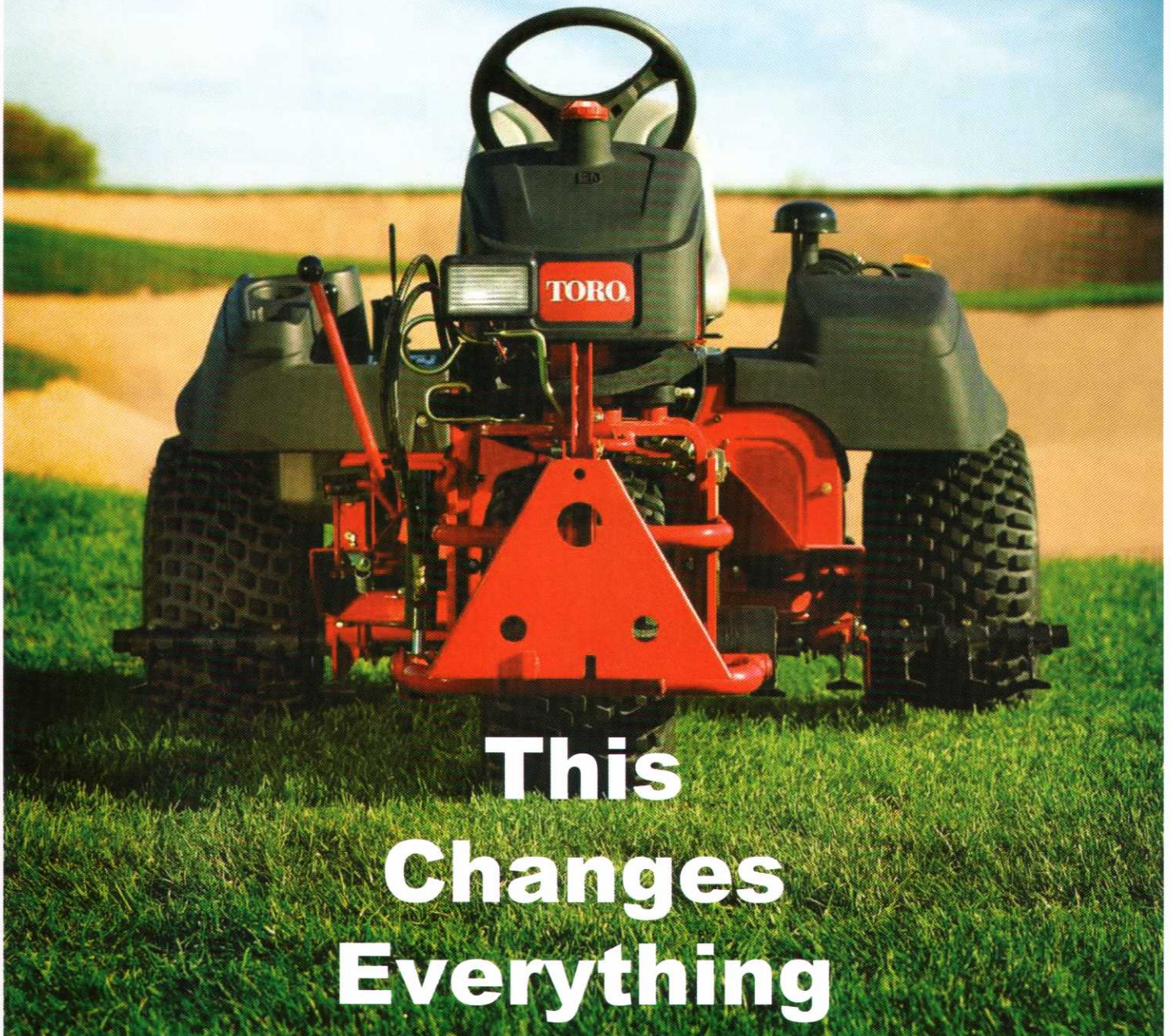
Pond bottom aeration and surface aeration options enhance the visual beauty of your ponds and solve water quality issues.



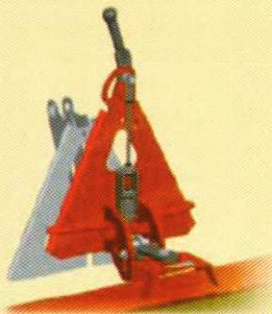
Farmington • 4375 170th Street West • 651-423-5048
Ham Lake • 14630 Highway 65 • 763-413-8330
Stillwater • 8400 60th Street North • 651-748-3158
Plymouth • 1205 Nathan Lane North • 763-545-4400

www.hedberglandscape.com

The New Sand Pro®



This Changes Everything



Introducing the revolutionary Toro® Sand Pro. With its patent-pending Quick Attach System (QAS), operators can switch out most of the 17 front, rear and mid-mount attachments in seconds. Realize the true potential of your equipment with the right tool for the job. The new Sand Pro with QAS, this changes everything.



Count on it.

www.Toro.com/SandPro

NEW TORO® REELMASTER® 5010 SERIES



HUNDREDS OF IMPROVEMENTS, ONE GREAT RESULT!

OVERALL PRODUCT IMPROVEMENTS

- Reduced overall weight to minimize turf compaction and maximize turf health.
- CrossTrax™, a four wheel version of our patented Series/Parallel drive system.
- More powerful models with Kubota 35.5 and 44.2 horsepower diesel engines.
- All routine service can be conducted from the left hand side of the unit.



MTI Distributing, Inc.
4830 Azelia Avenue N., Suite 100
Brooklyn Center, MN 55429
800-362-3665
763-592-5600



Count on it.

NTEP Trials

By Eric Watkins, Andrew Hollman
and Brian Horgan
Department of Horticultural Science
University of Minnesota

The National Turfgrass Evaluation Program coordinates a national turf trial evaluation each year. Results from NTEP trials throughout the United States can be found at www.ntep.org. The University of Minnesota is currently evaluating NTEP trials for bentgrass (greens and fairway), fine fescue, perennial ryegrass and Kentucky bluegrass. We have also been chosen as a site for the 2006 tall fescue NTEP trial. The data we have collected and will be collecting on these trials can be an invaluable tool for turfgrass managers who are selecting turfgrass varieties to plant in the coming year.

NTEP trials are rated at least one time each month for overall turfgrass quality; additionally, other ratings are taken as needed including spring green-up, winter damage, seed head number, density, leaf texture, disease susceptibility and drought tolerance.

The results of all University of Minnesota turf trials, including NTEP, can be accessed at our website: www.turf.umn.edu.

TROE Center Update

By Craig Krueger, Brian Horgan, Eric Watkins and Andrew Hollman
Department of Horticultural Sciences
University of Minnesota

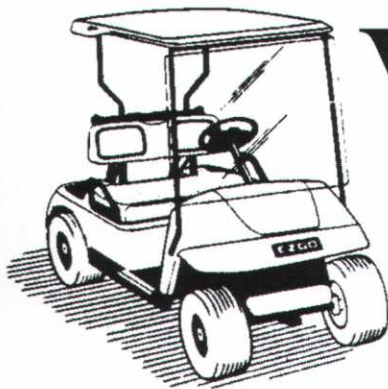
Greetings from the University of Minnesota TROE Center. It looks as if 2006 is going to be a very busy and exciting year for us here. At the present time we have over 30 trials and evaluations in progress. They range from variety evaluation trials to NTEP evaluations to nutrient fate studies. We will be establishing new evaluation plots for tall fescue, perennial ryegrass, Kentucky bluegrass and tufted hairgrass. There will also be a large velvet bentgrass green established for management studies. Along with all of these studies, we will be installing a turfgrass species demo area near the Trial Gardens on the St. Paul campus which will include prairie grasses and some no-mow varieties.

We would also like to extend a very sincere thank you to all of the vendors who have supported our research this year by donating supplies and equipment. Without their support our program could not be as successful as it is. Please join us in thanking the following vendors when you have a chance to talk to them:

MTI Distributing, Inc.
Turfwerks
Turfco
ProsourceOne
UAP
Turf Supply Co.
Plastad Companies
LESCO, Inc.
Twin City Seed Co.
Precision Turf & Chemical, Inc.

We hope to see you at our 2006 Field Day on July 27.

EZGO GOLF CARS



Versatile Vehicles, Inc.

Golf Cars, Utility & Industrial Vehicles

- SALES AND LEASES
- NEW • USED • REBUILT
- SERVICE & REPAIR
• ALL MAKES
- PARTS, BATTERIES
& ACCESSORIES
- RENTALS AVAILABLE

www.versatilevehicles.com



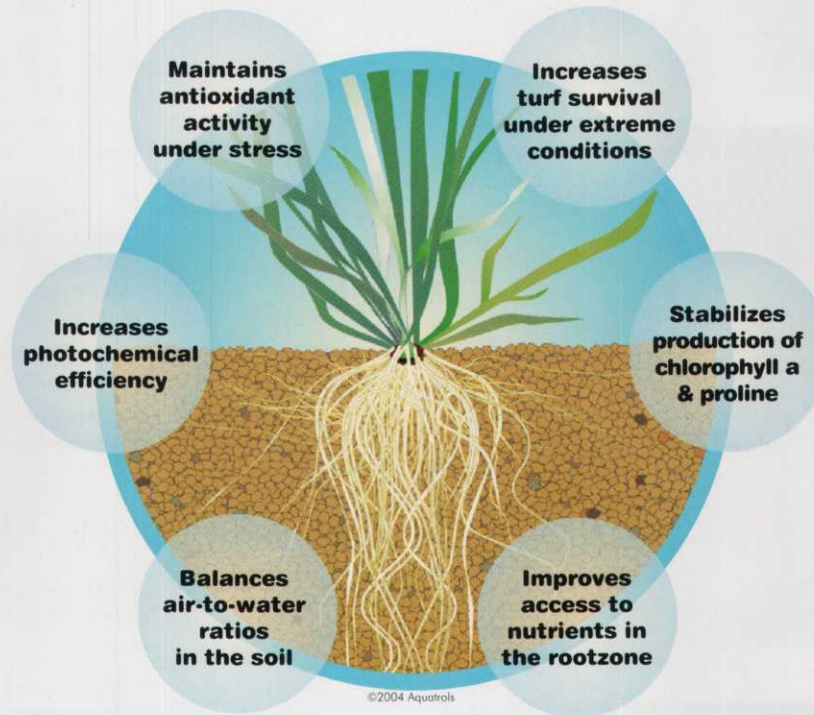
Brainerd
218-824-3533

18188 Highway 371 North • Brainerd, MN 56401

Savage
952-894-1123

5345 West 125th Street • Savage, MN 55378

The Revolution is Here!



There's no reason for you or your turf to stress over summer decline this year. Let Revolution[®] put you in control of rootzone conditions so that your turf can access and utilize resources more efficiently and keep summer decline at bay. Revolution makes sure you get the best performance possible from your turf, even when the heat turns on and the water turns off.

- Increases turf resilience & stress tolerance
- Boosts carbohydrate production
- Increases oxygen levels in the soil
- Promotes dry, firm putting surfaces
- Increases overall plant health

Join the Revolution.
We guarantee you'll be impressed.

AQUATROLS[®]



Revolution[®]



Contact your distributor:

John Wiley
2797 Eagandale Blvd.
Eagan, MN 55121
Phone: (651) 454-3106
Fax: (651) 454-7884
Email: jwiley@turfsupply.com



1273 Imperial Way
Paulsboro, NJ 08066
Phone: (800) 257-7797
Fax: (856) 537-6018
www.aquatrols.com

Prairie Junegrass: A Native Grass for Turf

By Eric Watkins and Andrew Hollman
Department of Horticultural Science
University of Minnesota

Recently, increased attention has been focused on the environmental effects of turfgrass areas such as home lawns and golf courses. In Minnesota, the most well-known of these efforts is the ban on phosphorus fertilizers for turf areas. In the coming years, an important issue for golf course superintendents and other turf managers will be the availability of turfgrass varieties that can perform well in low-input situations.

Grass species that are native to North America should be better able to cope with our environment and could lead to overall reductions in inputs such as fertilizers, pesticides and water. Prairie Junegrass, which is native to the Great Plains of the United States, has shown the potential to be successfully used as a turfgrass in lower-input environments (Mintenko et al., 2002). Based on data that has been collected during the past year, this species appears to perform well in Minnesota under low-input conditions (no

irrigation, limited nitrogen application and no fungicide or insecticide applications) (data available at www.turf.umn.edu).

Prairie junegrass has several attributes that would make it a useful low-input turfgrass in Minnesota including tolerance of droughty and alkaline soils, tolerance of sandy areas, survival of low and high temperature extremes and reduced growth rate (Dixon, 2000). The goal of our breeding program is to develop a Prairie Junegrass variety that exhibits these traits in a low-input turfgrass situation. A successful variety could be used for golf course roughs, parks, and home lawns.

In July of 2005, we collected Prairie Junegrass seed from several locations in

western Nebraska and northeastern Colorado. These collections were established in a breeding nursery last fall and we are currently developing breeding populations using this material. Seed from these populations will be used to evaluate this germplasm for use as a low-input turfgrass beginning this fall.

Dixon, J.M. 2000. *Koeleria macrantha* (Ledeb.) Schultes (*K. alpigena* Domin, *K. cristata* (L.) Pers. pro parte, *K. gracilis* Pers., *K. albescens* auct. non DC.). *J. Ecol.* 88:709-726.

Mintenko, A.S., S.R. Smith, and D.J. Cattani. 2002. *Turfgrass evaluation of native grasses for the northern Great Plains region.* *Crop Sci.* 42:2018-2024.

Technology to Improve Water Use Efficiency

By Aaron Johnsen and Brian Horgan
Department of Horticultural Science, University of Minnesota

As many of you know, water is becoming a large issue all around the country. In Minnesota, recently passed water use rate fees are cause for concern with turfgrass managers. Anticipating further water restrictions, it is only a matter of time before the amount and quality of water is limited. Therefore, anything that can improve water use efficiency will become valuable to the turfgrass manager.

This summer I will begin my graduate school research, which will look at technology to help with this issue. This technology has been used for many agronomic crops with great success. The technology involves shining infrared light on the turf canopy and using reflectance meters to measure the light reflected off the canopy. The data is downloaded to a computer program where it can be analyzed. One unique feature of the computer program is its ability to create a map of a golf course and highlight the stressed areas.

My research objective is to determine if this technology can predict drought stress in creeping bentgrass under two different fairway conditions. Treatments imposed will consist of two nitrogen rates and irrigating to replace four different ET rates. To determine if this technology can predict drought stress, I will compare light reflectance readings from the sensors to a visual rating. This visual rating will analyze the condition of the turf and need for water related to what a turfgrass manager would normally view. A 50' by 52' rain shelter is currently being constructed at the TROE center and will be functional by Field Day on July 27, 2006.

It is my anticipation that this technology will be able to sense drought stress before I will be able to visually see it. If this occurs, this technology will be of great use to turfgrass managers because it will provide the ability to use a wilt-based irrigation strategy more effectively and with confidence.

Proud Dealer of:

Helena Products
Jacobsen
Smithco
Ferris
Ryan
Cushman
Progressive
Soil Reliever
B&B Sprayers
Vicon
Pequea Top Dressers
Commercial
Jacklin Seed
Becker Underwood
Syngenta
Buffalo Blowers
Covertech
Standard Golf
Evergreen
Par Aide
Gandy
Foley
Lely

**Turfwerks: Providing
You with All of Your
Equipment, Products,
and Service Needs in the
Minnesota Region.**



Turfwerks

PARTNERS IN GROWTH

David Bastian 952.292.0756

Tom Fuller 612.802.3149

Tyler Pasco 605.201.8269

Jim Schmitz 612.790.0752

Brian Shaul 612.963.4239

Chad Sherrill 605.201.4501

Steve Shumansky 701.741.7947

2905 Lexington Ave. S.

Eagan, MN 55121

Office: 651.484.8411

Toll Free: 800.592.9513

Fax: 651.484.8257