2007 Minnesota Green Expo Jan. 3-5
The buzz starts here!

Give Us Three Days …
…and the Minnesota Green Expo will give you a leg up on what’s new to ensure you’re on the cutting edge of the market. All of it: Products, accessories, educational seminars, marketing and business workshops, parties, receptions and networking. It’s all business, and it’s all at Expo. Make it your business to be there in January, or you’ll be left behind!

Trade Show News
The trade show continues to grow and is now over 1000 booths in two halls of the Minneapolis Convention Center. The 2007 Trade Show Hours will be:

<table>
<thead>
<tr>
<th>Day</th>
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<tr>
<td>Wednesday</td>
<td>9:30 am – 5:30 pm</td>
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<tr>
<td>Thursday</td>
<td>9:30 am – 5:30 pm</td>
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<tr>
<td>Friday</td>
<td>9:30 am – 1:00 pm</td>
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Visit us online at www.minnesotagreenexpo.com for a complete online directory of trade show exhibitors including contact information and links to supplier websites.

Educational Seminars
Over 90 educational seminars will fill the rooms of the Minneapolis Convention Center during this three day event. Highlights of the turf and grounds educational program can be found on page 6.

For a comprehensive list of seminars and speakers, visit www.minnesotagreenexpo.com and click on the Education Programs link on the navigation bar.

Networkung Opportunities
Connect with new green industry professionals at the Minnesota Green Industry Reception on the trade show floor Wednesday afternoon.

Plan to meet up with old friends or clients at the Casino Party for a night of networking on Thursday, Jan. 4.

Registration
Members of an MTGF related association get a $20 per person discount!

Register prior to December 29 for additional discounts.

There are two ways to register:

Online: Register online at www.minnesotagreenexpo.com

Call: 651-633-4987 and request a registration form, either by fax or mail. Then either fax it back with credit card payment or mail it back with payment or credit card information.

Where to stay?
The Hyatt Regency Hotel Minneapolis is the Minnesota Green Expo’s headquarters hotel. The Hyatt is home to Manny’s, Spike’s, Oceanaire, and the Regency Health Club and Spa.

Discounted rooms available for $90!

Discounted rooms are limited, so make your reservations now by calling toll free 888-421-1442.

GREEN EXPO continued on page 6

IMPORTANT DATES

Pesticide Recertification Workshop – November 16, 2006

Power Limited Recertification Workshop – November 29, 2006

Minnesota Green Expo – January 2, 3 - 5, 2007

Most recent information and registration – www.mtgf.org and www.minnesotagreenexpo.com

TAKE A LOOK INSIDE

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Turf & Grounds Field Day
U. of M. St. Paul Campus
Larry Vetter, MTGF Executive Director

The 7th Annual Turf & Grounds Field Day was held on July 27, 2006 on the University of Minnesota St. Paul Campus. Two separate educational tracks were offered featuring turf related research and grounds activities.

Registration featuring networking opportunities and refreshments was from 7:45 to 8:45 in the Display and Garden area on campus. At 8:45 there was a brief “Welcome” by Larry Vetter, Dr. Beverly Durgan, Dean of Extension and Dr. Brian Horgan, Turfgrass Specialist, University of Minnesota.

At 9:00 a.m. the attendees were invited to choose a tour, one featuring turfgrass research and the other featuring a variety of non-turf plant materials. The turf program attendees were divided into three groups that circulated between nine different stops featuring a variety of reports and demonstrations conducted by faculty and staff of the University. Dr. Don White discussed his on-going creeping bluegrass research. Don has been breeding and selecting different cultivars of creeping bluegrass for a number of years and has had the product of this work planted on a number of sites.

Andrew Hollman presented the latest data on the “Low-Input Turfgrass Species Evaluation for Fairway Use” research being conducted by himself, Dr. Brian Horgan and Sam Bauer. As budgets are cut, environmental concerns and traffic on turf sites increase, finding grasses that will maintain quality under lower management – higher use has become extremely important. Increasing restrictions on the use of fertilizers, pesticides and water are a concern to all turf managers. At the same time, facilities are experiencing increased use (traffic) on their sites. This combination poses major problems since most newer cultivars are being developed under high management conditions.

This project includes twenty turf species being evaluated under two heights of cut with clippings removed. Plots are mown three times per week at ¾ inch and one inch and are fertilized with a total of one pound of nitrogen and potassium. Compaction treatments to simulate golf cart traffic are split into three levels: control (no traffic), Medium – one pass Monday, Wednesday and Friday, and Heavy – two passes Monday, Wednesday and Friday.

The goal of this study is to establish one or two species that excel under low inputs, compaction and fairway heights of cut. The best performing species will move on to further trials and breeding efforts in the University of Minnesota Turfgrass Breeding Program.

The next stop was hosted by Brent Hulke and featured the “Perennial Ryegrass Breeding Program at the University of Minnesota”. Since 2004, turfgrass breeders at the University of Minnesota have been testing previously underutilized perennial ryegrass lines that could be useful in improving the winter hardiness of perennial ryegrass. In this study, 300 of these lines were tested for winter hardiness and turf quality traits. This study involves field exposure as well as freezing tolerance tests in the lab. The most winter hardy lines will be included in future variety development efforts.

Another project has been started to improve the turf breeder’s ability to select and integrate useful endophyte stains into grass varieties. A breeding method is being developed that will help study the interaction between specific endophyte strains and specific grass genotypes. If developed successfully, this will enable researchers to be able to select both the best grass genotypes and the best endophyte strains to include in a variety. This would greatly increase the value of these new varieties.

A new study was introduced this year which is being conducted by Dr. Joe McFadden on “Carbon Budgets of Turfgrass in Urban and Suburban Ecosystems”. Joe reports that “vegetation is recognized as a possible mechanism of carbon storage sink through photosynthesis because atmospheric CO₂ is converted into biomass. At the same time, decaying plant material and soils are a source of carbon dioxide that is released during decomposition”. A recent study estimated that lawns cover 163,800 square kilometers of the continental U. S. This is three times larger than the area covered by any other single irrigated crop. The potential impacts of this research will: (1) Inform regional land use planning and management in minimizing carbon sources and maximizing sinks, and (2) Provide a data set for the future development of carbon exchange models that will allow carbon budget estimation over the Upper Midwest region.
Next on the agenda was “Technology to Improve Water Use Efficiency” presented by Aaron Johnsen. This work is being done by Aaron, Dr. Horgan and Van Cline of the Toro Company. A new technology used in agriculture to determine drought stress involves shining red and infrared light on the plant canopy and using reflective meters to measure the light reflected off the canopy. The data collected provides an indicator of a stress imposed on the plant. The goal of this research is to evaluate the use of reflectance meters to predict drought stress in a bentgrass fairway. The objective is to develop a reliable method of detecting drought stress prior to visual symptoms appearing. This technology could 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.

“Understanding Nutrient and Pesticide Loss with Runoff from Fairway Turf” was hosted by Dr. Pam Rice, USDA-ARS. This work is being done by Drs. Rice and Horgan. We are all aware of the environmental issues concerning fertilizers and pesticides in surface water. This experiment was designed to measure the quantity of these materials transported with runoff from fairway turf and to 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. The overall goal is to identify management practices that maximize fertilizer and pesticide retention at the site of application. 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. This is an on-going study that will provide updated data at next year’s turf and grounds field day.

“Selecting for Improved Kentucky Bluegrass Cultivars” was presented by Dr. Nancy Ehlke. This work is being conducted by Drs. Ehlke, Watkins, Wyse and Vellekson. While Kentucky bluegrass is apomictic which makes breeding new varieties very difficult, there are certain plants that are capable of sexual reproduction. When these plants are used as females, from 0 – 17% of the seed produced on the plant may be a hybrid and potentially have different characteristics from the mother plant. These progeny are evaluated for improved traits such as disease resistance, seed production potential, overall turf quality, color, leaf texture and growth habit to determine if the progeny are distinctly better than the original parental sources.

The University of Minnesota recently initiated a hybrid breeding program that should be able to produce high quality cultivars of Kentucky bluegrass with better turf quality and disease resistance with high seed yields in northern Minnesota. These new cultivars will benefit both the turf and seed producers in the state.

The next stop featured “Pesticides for Turf: Updated 2006” and “Pesticides for Home, Nursery and Landscapes: Updates 2006” presented by Dr. Vera Krischik. Recently several commonly used insecticides for the control of insects on landscape plants were removed from sale. EPA is phasing out the use of chlorinated hydrocarbons, organophosphates and carbamates due to safety concerns. Insecticides that have lost their registration for turf include: bendiocarb, chlorpyrifos (only for nursery production, golf courses and road medians), diazinon and endosulfan. In addition to these, the following have also their registration for trees and shrubs: dimethoate and lindane. Dr. Krischik handed out guides containing various insects along with recommended insecticides recommended for their control, indicating their targets, active ingredients and trade names.

The last stop on the turf tour was “Mowing and Dew Removal to Minimize Dollar Spot Disease on Creeping Bentgrass” presented by Dr. Brian Horgan. The study has been conducted by Dr. Horgan and Alex Ellram. “Dollar spot disease on bentgrass can be greatly reduced by mowing and other cultural practices which reduce leaf wetness duration.” Three different mowing times, different methods of dew removal and frequency have been studied for the past two plus years. The severity of dollar spot was also studied in laboratory experiments. Results indicate that dew removal reduced...
Two new Regional Extension Educators (REE’s) have been selected by the University of Minnesota who will provide additional extension support for the Green Industry. Michelle Grabowski was added to the staff this past spring. She completed a B.S. degree in Botany and Plant Pathology at Michigan State University in 1998. While at MSU she interned with the MSU plant diagnostic clinic, the Arboretum at Flagstaff, AZ, Pioneer Hi Bred and Americorps. Michelle completed a Master’s degree in Plant Pathology at North Carolina State University in 2001. In North Carolina, she conducted on-farm research examining both organic and conventional control strategies for root rotting pathogens in strawberries. After graduating Michelle moved to Minnesota and worked for the USDA cereal disease lab for five years, primarily working with leaf rust on wheat. Michelle began working as a Regional Extension Educator for the University of Minnesota in the spring of 2006. Her work focuses on common diseases of plants grown in yard and gardens.

The second addition to this staff is Dr. David Zlesak. David recently finished his Ph.D. in Applied Plant Sciences in the Department of Horticultural Sciences at the University of Minnesota working on the genetics of Easter lilies and re-flowering lily hybrids. David grew up in Wisconsin and has lived in the Twin Cities since 1998. His horticultural experience is extensive and practical and includes working for the USDA Forest Service, a ball and burlap wholesale nursery and as a commercial greenhouse grower. He has written for professional and popular audiences, teaching diverse audiences in both casual and formal educational settings, and has conducted technical research in plant breeding and genetics. David has a passion for horticulture and especially ornamentals. He has been breeding hardy landscape roses as a hobby for over twenty years along with other ornamentals including heliopsis, ageratum and ninebark.

David started as a Regional Extension Educator in Horticulture September 5 of this year and is excited to partner with others and promote horticulture in Minnesota.

The MTGF is excited to feature both of these talented individuals as presenters at the Pesticide Recertification Workshop being held on November 16th at Minnesota Valley Country Club. Those who attend this workshop will very quickly become aware that the addition of Michelle and David greatly expands the level of expertise now available to the Green Industry from the University of Minnesota. The members of the MTGF welcome Michelle and David to the University’s REE staff and we look forward to them contributing to our efforts of providing the best possible plant materials for our clients.
As the end of another growing season approaches, many of you may soon have more time to reflect on the past and make plans for the future. Mother Nature, for a change, let us all get off to a good start this spring and then threw some interesting things our way. For the most part, the weather was conducive to healthy plant growth through most of the season. However, July presented some interesting challenges with near-record heat, very high dew points and little precipitation. Cool season plants do not like these conditions and many struggled to survive. Some witnessed turf damage. Oaks and elms kept arborists hopping. In many cases increased facility use with ever-decreasing budgets presented high stress levels for those charged with their maintenance. Probably everyone says this about the state they live in, but growing plant materials in Minnesota can be interesting with most years offering new and different challenges.

Everyone, both personally and professionally, seems more stressed with today’s fast-paced world. Interest rates, the labor supply, oil markets, wars, catastrophic events and a myriad of other things affect us all regardless of our occupations and where we live. Juggling personal and professional responsibilities may seem like a never-ending battle which may or may not change with the season. While all of this is not likely to change any time soon, most strive to deal with the stress and uncertainties as best they can.

Each of us can probably relate to some, or all of the above. A great deal of this also applies to your respective professional association as well as the MTGF. There have been some uncertainties, challenges, successes and disappointments throughout 2006. While spring brought a good start for turf and grounds professionals, the Minnesota Green Expo in January signaled a great start of the year for the MTGF. Record crowds, excellent feedback for the trade show and educational sessions and a healthy financial result all bode well for the 2007 event. At the time of this writing, the trade show is officially “Sold Out” and a waiting list is in place for new &/or expanded display space. Your continued support of this event, whether as an attendee or an exhibitor, allows us to continue funding education, research and outreach at record levels that will benefit all who make a living in the Green Industry. This is becoming even more apparent by the fact that more states and regional shows are copying what Minnesota has done to make our Expo such a huge success. Everyone can be very proud that we have officially reached the milestone of 1,000 booths - 965 on the trade show floor and 35 associations, academic and non-profits in the lobbies. All of the MTGF Allied Associations’ booths will be located in the main lobby near the registration desk this year.

The educational sessions are essentially in place and all indications point toward another successful Expo. There are nearly 100 educational sessions this year with over 65 of those having either direct, or indirect application for MTGF members. For the first time there will be some sessions offered in Spanish in order to broaden the value to many of our member operations. More details on the 2007 Minnesota Green expo are provided elsewhere in this newsletter. Complete, up-to-date information can be found at www.minnesotagreeneexpo.com.

Part of the funding that was approved by the MTGF Board of Directors for 2006 was an Economic Impact Study that was approved in 2005 and carried over to the current year. Committee Chair Greg Hubbard, along with President Mark Stennes, Brian Horgan and Dave Kemp have been very diligent in the preparation work needed to conduct this survey. The three biggest challenges in this process were to identify a firm to conduct the survey, determining who should receive the questionnaire and determining the content of the questionnaire so that the data compiled would be meaningful, complete and accurate. As of the date of this writing, a firm has been retained to conduct this survey, the questionnaire has been developed and mailed, the mailing list has been refined and several companies that could develop the marketing materials generated by the data has been identified. The questionnaire went through a number of drafts before the final version was determined. The mailing list started with a consolidated list of all of our Allied Associations of nearly 3,000 recipients. It became obvious very quickly that there would be major duplication if everyone filled out and returned the questionnaire. In addition, not every association has their list formatted the same. Since our goal was to have this be as complete and accurate as possible, many names were eliminated to avoid duplication of responses and data. By the time you receive this newsletter this survey questionnaire will be in the hands of many of you. Given the importance and cost of this survey, please be sure to fill it out and return it so that it will be as complete and accurate as possible.

Earlier this year a great deal of optimism was generated when it appeared that a location may have been found for our “home” for turf and grounds activities here on campus. This involved updating an existing structure located on the main part of the St. Paul campus. Following the disappointment of having our effort of erecting a new building on the TROE Center site taken away, and with this new possibility appearing to be very workable, Brian and Eric, along with the great staff they have in place, began installing various research plots and trials immediately adjacent to that building. The MTGF Board of Directors approved funding the pre-design study that would be necessary in order to proceed. However, it now appears almost certain that the cost of completing everything that would be necessary to meet code and other requirements will be cost-prohibitive. While bricks and mortar may appear doubtful at this time, we are very fortunate to have such talented people continuing to devote their time and effort for the benefit of our industry.
GREEN EXPO  continued from cover

SEMINARS FOR TURF AND GROUNDS PROFESSIONALS

You won’t want to miss out on these great educational seminars. Be sure to register for the Minnesota Green Expo today!

### Wednesday, January 3

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<th>Time</th>
<th>Title</th>
<th>Speaker</th>
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<td>7:30-8:25</td>
<td>MNDOT Compliance Seminar</td>
<td>Safety Council</td>
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<td>8:40-9:35</td>
<td>Keynote</td>
<td>RT Rybak</td>
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<td>9:45-10:45</td>
<td>New Rare and Underused Plants</td>
<td>Rita Randolph</td>
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<td>9:45-10:45</td>
<td>Turf 101, Part I</td>
<td>John Hopko</td>
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<td>9:45-10:45</td>
<td>A-Z of Turf Care for Amateur Fields</td>
<td>Floyd Perry</td>
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<td>9:45-10:45</td>
<td>Problem Solving Techniques</td>
<td>Bob Vavrek</td>
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<td>9:45-10:45</td>
<td>Playground Safety</td>
<td>Paul Edwardson</td>
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<td>9:45-11:00</td>
<td>The Dark Side of Dendrology</td>
<td>Guy Sternberg</td>
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<td>2:00-2:50</td>
<td>Turf 101, Part II</td>
<td>John Hopko</td>
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<tr>
<td>2:00-2:50</td>
<td>The Truth About Garden Remedies, Part I</td>
<td>Jeff Gillman</td>
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<td>2:00-2:50</td>
<td>Spraying Techniques to Improve Plant-Protectant Performance</td>
<td>Lukas Dant</td>
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<td>2:00-2:50</td>
<td>Program Budgeting: How Not to Get Your Budget Cut</td>
<td>Gary Grigg</td>
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<td>2:00-2:50</td>
<td>The 21 Oaks of the Midwest</td>
<td>Guy Sternberg</td>
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<td>2:00-2:50</td>
<td>Fertigation</td>
<td>Carmen Magro</td>
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<td>3:00-3:50</td>
<td>What’s the Problem with OM in Greens</td>
<td>Roch Gausson</td>
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<td>3:00-3:50</td>
<td>Innovative Homemade Tools</td>
<td>Floyd Perry</td>
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<tr>
<td>3:00-3:50</td>
<td>The Truth About Garden Remedies, Part II</td>
<td>Jeff Gillman</td>
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<td>3:00-3:50</td>
<td>Tree &amp; Shrub Planting &amp; Selection</td>
<td>Mark Stennes</td>
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<td>3:00-3:50</td>
<td>Syringing</td>
<td>Carmen Magro</td>
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<td>3:00-3:50</td>
<td>Managing Trees in a Turf Environment</td>
<td>John Ball</td>
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### Thursday, January 4

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<tr>
<th>Time</th>
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<th>Speaker</th>
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<tr>
<td>7:00-7:55</td>
<td>Plant Combinations for Wet Sites</td>
<td>Jim Calkins, Mike Heger</td>
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<tr>
<td>8:00-9:00</td>
<td>Professional Irrigation Design – the Smart Approach</td>
<td>Eric Davis</td>
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<td>8:00-9:00</td>
<td>Tough Native Trees for the Landscape</td>
<td>Guy Sternberg</td>
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<td>8:00-12:00</td>
<td>Foliar Feeding</td>
<td>Roch Gausson/Garry Grigg</td>
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<tr>
<td>8:00-8:50</td>
<td>Effective Shop Layout</td>
<td>Carl Osterhaus</td>
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<td>8:30-9:30</td>
<td>Principios Basicos de Poda de Árboles y Arbustos</td>
<td>Manuel Jordan</td>
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<td>8:30-10:30</td>
<td>PLT</td>
<td>Ed Lethert</td>
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<tr>
<td>9:00-10:30</td>
<td>Diesel Engines</td>
<td>Carl Osterhaus</td>
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<td>9:10-10:30</td>
<td>Diagnostics – This Isn’t CSI</td>
<td>John Ball</td>
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<td>9:10-10:30</td>
<td>Managing Your Three Greatest Assets, Customers, Employees &amp; Equipment</td>
<td>Tony Bass</td>
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<td>9:10-10:30</td>
<td>Permeable Pavers I</td>
<td>Chuck Taylor</td>
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<td>9:10-10:30</td>
<td>If Looks Could Sell</td>
<td>Robert Hendrickson</td>
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<td>9:10-10:30</td>
<td>Transplanting Trees &amp; Shrubs: Panel</td>
<td>Kleinhuiizen, Johnson, Kelly, Starbuck</td>
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<td>9:40-10:30</td>
<td>Spanish: Safety</td>
<td>Robert Moreno</td>
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<tr>
<td>Time</td>
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<td>9:40-10:30</td>
<td>Do I have to Rebuild My Field?</td>
<td>John Mascaro</td>
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<td>9:40-10:30</td>
<td>Chemical &amp; Pesticide Safety</td>
<td>Carmen Magro</td>
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<td>2:00-2:50</td>
<td>Spanish: Turf 101, Part I</td>
<td>Raphael Barajas</td>
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<td>2:00-2:50</td>
<td>Sun Safety for Outdoor Workers</td>
<td>Sherri Gahring</td>
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<td>2:00-2:50</td>
<td>Aquatics Recertification</td>
<td>Steve Enger</td>
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<td>2:00-2:50</td>
<td>Comparison of Phosphonate Products for Disease Control and Stress Management</td>
<td>Lane Tredway</td>
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<td>2:00-2:50</td>
<td>Turfgrass Variety Selection: 2006 NTEP Update</td>
<td>Eric Watkins</td>
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<td>2:00-3:15</td>
<td>Permeable Pavers II</td>
<td>Chuck Taylor</td>
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<td>2:00-2:50</td>
<td>Introduction to Pollution Prevention</td>
<td>Caitlin Rood</td>
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<td>2:00-4:00</td>
<td>PLT</td>
<td>Ed Lethert</td>
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<td>3:00-3:50</td>
<td>Shop Pollution Issues</td>
<td>Caitlin Rood</td>
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<td>Multiple Target Principles to Maximize Golf Course Insect Control</td>
<td>David Shetlar</td>
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<td>3:00-3:50</td>
<td>John Mascaro’s Photo Quiz Comes Alive</td>
<td>John Mascaro</td>
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<td>3:00-4:00</td>
<td>Aquatics Recertification</td>
<td>Steve Enger, et al</td>
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<td>3:00-4:00</td>
<td>Improving Transplanting Success</td>
<td>John Ball</td>
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<td>3:00-4:00</td>
<td>Phosphorus Runoff from Turfgrass: Effect of Clippings Management and Fertilizer Inputs</td>
<td>Brian Horgan</td>
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<tr>
<td>3:00-4:00</td>
<td>Spanish: Turf 101, Part II</td>
<td>Raphael Barajas</td>
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**Friday, January 5**

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<tr>
<th>Time</th>
<th>Title</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>8:00-8:40</td>
<td>Futuristic Plants I: New Plants &amp; How to Find Them</td>
<td>Mike Yanny</td>
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<tr>
<td>8:50-9:20</td>
<td>Futuristic Plants II: Elms &amp; Carpinus</td>
<td>Jeff Gillman &amp; Mike Yanny</td>
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<tr>
<td>12:30-2:00</td>
<td>Ornamental Grasses</td>
<td>Rick Darke</td>
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**Friday, January 5: Pesticide Recertification**

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<tr>
<td>7:30-8:20</td>
<td>MDA talk</td>
<td>Ruth Marston</td>
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<td>8:30-9:20</td>
<td>Management of Anthracnose Diseases of Turf</td>
<td>Lane Tredway</td>
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<tr>
<td>9:30-10:30</td>
<td>MDA Update</td>
<td>Steve Shimek</td>
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<td>9:30-10:30</td>
<td>New Insecticides Modes of Action &amp; Use Strategies</td>
<td>David Shetler</td>
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<tr>
<td>1:00-1:50</td>
<td>Nuisance Insect Pests on Golf Courses</td>
<td>David Shetler</td>
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<td>1:00-1:50</td>
<td>Dutch Elm Disease</td>
<td>Mark Stennes</td>
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<tr>
<td>2:00-2:50</td>
<td>Update on Insect Issues and Insecticides</td>
<td>Vera Krischik</td>
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<td>2:00-2:50</td>
<td>Integrated Weed Management in Low Input Turfgrass</td>
<td>Bob Mugaas</td>
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<tr>
<td>2:00-2:50</td>
<td>Diagnosis and Management of Turfgrass Root Diseases</td>
<td>Lane Tredway</td>
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***Green Industry Career Fair, January 5, 2007, 10:00 a.m. – 1:00 p.m. Students from five states invited. Recruit your future employees.***

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For complete information and forms, visit www.minnesotagreenexpo.com.
There are workshops scheduled in November for both Pesticide Recertification and Power Limited Technician Recertification. You should have received a mailing for these workshops. In case you missed it, details and registration forms are available on our website which is www.mtgf.org.

The annual Turf and Grounds Field Day in July was well received by all who attended. Lunch catered by Famous Dave’s was a welcome change from the menu of previous years. Again, attendance was not what was hoped for and a great deal of planning will take place before next year’s event in an attempt to overcome that problem. The faculty and staff devote a great deal of time and effort to host this which provides an opportunity to see the latest in research as well as network with fellow professionals in the Green Industry.

Thanks to all faculty, staff and students who worked so hard to make this event happen. Also thanks to all who attended and were so complimentary of the program content and presentations. Descriptions of the various presentations made are in a separate article in this newsletter.

The MTGF Board of Directors had a very unusual challenge this spring and summer. Given the current climate of it being difficult to find people to volunteer and serve on committees and boards, the field of candidates to fill the second vendor member on the board had such good candidates that it took several attempts and a By-Law change to elect the new member. Congratulations to David Oberle of BASF who is our new vendor member on the Board of Directors. David had previously served on the board of MGCSA and will undoubtedly bring some new ideas and a great deal of enthusiasm to the Board.

In another article in this newsletter, two new Regional Extension Educators who have joined the University this year are introduced. Both come with great credentials and will help bolster the level of expertise available to all members of the MTGF. Both have agreed to participate in the Pesticide Recertification Workshop in November, so they are quickly jumping in with both feet to help educate our members. Welcome aboard to Michelle and David.

We will miss the happy face and the talent of Brad Pedersen who retired from the University September 1. See a more complete offering of some of the highlights of Brad’s career in a separate article in this newsletter. Also, see the article on Don White’s latest well-deserved honor being named to the Minnesota Section of the PGA Hall of Fame. Many sincere thanks and congratulations to both of these individuals who have done so much for the MTGF and the Green Industry for so many years.

As 2006 draws to a close, most are busy blowing out irrigation systems and preparing their grounds for another Minnesota winter. I hope to see many of you at one of our workshops this fall and many others at the Minnesota Green Expo in January. Best wishes for the remainder of the year from your Minnesota Turf and Grounds Foundation.
the incidence of dollar spot on field test plots when mowed at 0400 h when compared to those plots mowed at 2200 h and 1000 h. Dollar spot incidence was also lower when dew was removed daily than when dew was removed on alternate days. Disruption of leaf moisture at a time that minimized uninterrupted leaf wetness duration appeared to be the most effective in reducing dollar spot incidence and severity.

The grounds track began at the Display and Trial Gardens and was hosted by Manager Karyn Vidmar. She discussed the purpose and history of the garden as well as the most recent design change and construction techniques. Faculty and staff involve students in all aspects of Garden development and use. The Garden has been designed and installed by students through assignments associated with graduate and undergraduate classes, and individualized directed studies. Horticulture work-study and other students maintain the garden during the growing season and students aid in the development of the management plan for the garden. Sixteen courses within the Department of Horticultural Science are associated with the garden.

The next stop on the grounds track was hosted by Dr. James Calkins. During a walking tour of campus, site survey and analysis were discussed as they relate to a number of factors in the development process. The ultimate goal for any landscape should be sustainability. Sustainable landscapes are functional, maintainable, environmentally sound, cost effective and visually pleasing. As part of this tour, Dr. Calkins pointed out some of the unique plant materials on campus including a number if very interesting shrubs and trees.

The last stop on the grounds tour was hosted by Dr. Jeff Gillman. Elms for the Twin Cities was the primary focus of this session. Dr. Gillman presented data on sixteen different elm selections that he is studying with reference to Dutch Elm Disease resistance. A number of characteristics of these selections were discussed, including DED resistance, growth rate, hardiness, insect resistance, form, maintenance requirements, storm breakage and their adaptation to boulevard use.

Overall there was a great deal of timely information presented for all turf and grounds professionals. There are many companies that support this research, either with direct cash contributions or in-kind donations. Those companies deserve consideration when members are making their buying decisions for their turf and grounds activities. While space does not allow listing all of these supporting vendor companies in this article, a complete list can be found on the MTGF web site which is www.mtgf.org under “Field Day”.

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On September 1, 2006 Brad Pedersen officially retired from the University of Minnesota. On the 28th of September, 310 Alderman Hall and the lobby outside that room was crowded as the Hort Department hosted a reception honoring Brad's retirement. There were a number of humorous remembrances, a few tearful good byes and some interesting factoids shared by those in attendance.

Brad is a native of South Dakota and received his B. S. degree in Parks Management from South Dakota State University in 1973. Brad began his appointment at Waseca in 1973 and, while working there, he completed his M. S. degree at the University of Minnesota in 1977. He moved to a full-time academic appointment as Instructor in Hort Technology in 1978. Tom Michaels, Department Head of Horticultural Science, started the program by telling the story of Brad's wife, Diane, sending in Brad's resume' to the U. of M. Waseca without Brad's knowledge, applying for a job that had been advertised. Brad was subsequently called to come in for an interview, not having a clue what had generated the phone call. It would appear that this is another example of mysterious happenings when things are just meant to be!

Larry Vetter, MTGF Executive Director, then read a letter which was given to Brad on behalf of the many professionals in the Green Industry who have benefited so greatly from Brad's contributions throughout his career. The letter is used as the close of this article.

Gary Gardner, Professor and former Department Head then continued with a history of Brad's contributions to the University and the Green Industry. Holding up reams of paper filling several files, he offered to read all of it to the group but relented when told that the party had to conclude before the weekend, so only excerpts could be read. He did, however, jokingly invite everyone to feel free to read the entire contents if they so wished at a later time.

As reported by Gary, Brad became an Assistant Professor at the University of Minnesota Waseca campus in 1982 and was promoted to Associate Professor with tenure in 1987. When the Waseca campus closed in 1982, his tenure home was transferred to the Department of Horticultural Science on the Twin Cities campus. When Brad came to St. Paul, his appointment was 51% teaching, primarily in the landscape area, and 49% extension, in the area of turfgrass science. His primary extension responsibility was to provide turfgrass information and educational programs to the various professional component groups in the turfgrass industry.

The University had a strong teaching program in turf for many years under Don White's leadership, but it was not realistic to expect that one person could meet the extension needs of a large and growing industry such as ours while being the primary teacher and researcher in the state as well. Brad understood that, for him to succeed, he would need the full cooperation and support of the industry. In early 1992, after Brad had accepted our offer but before he actually moved up to the St. Paul campus, we met in Alderman Hall with a small group of turf leaders in Minnesota. There is no record of everyone that was at that meeting, but the group included, among others, MGCSA Past Presidents Greg Hubbard and Joe Moris.

When Brad formally joined the Horticultural Science Department in July, 1992, he wasted no time in organizing the various groups that constituted the turf and landscape industries in Minnesota. The first meeting of what was to become the MTGF was held in Alderman Hall on February 3, 1993, and included Greg, Joe, John Hopko and Larry Vetter, along with a number of other industry leaders including representatives of several of the major vendor companies serving the turf industry. The first Minnesota Turf and Grounds Conference and Show was held in December, 1994. At MTGF, Brad functionally served as Executive Director of the organization from its inception until Bob Mugaas took over those responsibilities in an official capacity in 1998.

One of Brad's most important contributions was his leadership in the creation of the Minnesota Turf and Grounds Foundation. As Bob Mugaas pointed out, “This was a matter of bringing together nine different professional organizations and developing a common mission and vision for the organization.” MTGF was a new educational organization whose mission was “to promote the green industries in Minnesota though support of research, education and outreach at the University of Minnesota and elsewhere,” and the educational program at the MTGF Conference, organized by Brad through 1998, was one of depth and breadth that reached over 1500 professionals each year. That Conference was combined with the MNLA show with the contract signing on November 14, 2001 forming the Minnesota Green Expo which, in 2006, attracted nearly 8,000 turf and grounds professionals, filled the two largest domes of the Minneapolis Convention Center with displays.
by vendors serving the Green Industry and featured nearly 100 educational sessions over the course of three days. The Department of Horticultural Science has been home to many outstanding interdisciplinary outreach programs (e.g., the Minnesota Landscape Arboretum, the Master Gardener Program). According to Gary Gardner, the most important new extension contribution in horticulture in the 1990’s was the creation of the Minnesota Turf and Grounds Foundation.

Don White wrote, “(Brad’s) successful development of the (MTGF) is probably the most striking example of tangible collaboration that anyone could ever expect to see. Bringing together the many clientele groups, as he did, to form a successful union was no small accomplishment.”

Rob Panuska wrote in 2001, “I can say without a doubt that the only reason (MTGF) is still going today is because of Brad Pedersen’s early leadership in pulling together a group of industry people that would NEVER have come together on their own. In my opinion as a member of the MGCSA board of directors for the past 6 years, this is Brad’s greatest accomplishment in his extension career.”

Brad’s next major contribution was his development of the Sustainable Urban Landscape Information Series (SULIS) website and the accompanying Plant Elements of Design CD. This project is essentially an interactive, computer-based textbook in landscape design. It serves students in the classroom, homeowners, and professionals in the landscape industry.

Another major contribution that Brad made is the Department of Horticultural Science Display and Trial Garden across from the Horticulture Greenhouses. When Brad came to the St. Paul Campus, he took responsibility for the Garden and developed a new course, Hort 3040, Landscape Design and Implementation. As a consequence, the Display and Trial Garden went from a planting of annual flowers to a living laboratory for landscape design. His class designed a five-year plan for the garden, and each year’s class implemented one section of the final design. When the Garden plan was completed, the class then turned to the entire Twin Cities campus. Brad’s students have designed landscape areas throughout the campus, some to be implemented by Facilities Management and some by the class itself. This unique partnership was highlighted in President Yudof’s “Beautiful U” campaign.

Teaching is, of course, Brad’s greatest strength. His student evaluations have been outstanding, both in classroom teaching and in his extension presentations. Brad’s own estimate is that he functioned as advisor to approximately 1,300 students during his career. If you do the math, this alone would be considered a full time job for most normal people. Brad’s former students can be found in nearly every phase of the Green Industry throughout this area and beyond.

BRAD PEDERSEN continued on page 15
You’re Busy Managing The Perfect Turf... Let Gertens Manage The Rest.

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Wow, what a year! With every year that passes it becomes clearer and clearer to me that I am nowhere near as smart as I used to think I was. Just when you think you have just about seen it all, something new stirs up the sediments and releases a whole new set of bubbles. This year started out wonderfully wet and green and the turf blasted enthusiastically onto the scene. But by the second half of May it seemed like half of my clients thought their bur oak trees were dead. In some cases they looked dead, with nearly every leaf torched to dry cinder by the oak anthracnose fungus. I spent the better part of several days assuring my clients that their trees would put on a new set of leaves and be okay, but sometimes it was a hard sell. It was the worst anthracnose season I have ever witnessed since I started noticing back in 1976. And then the heavens dried up and I went scrambling to drag hoses and pump enough water to keep my garden arboretum green. It was quite a challenge. While the rain returned and the landscape greened up again (at least in the southern half of the state), the hot dry stress did take its toll on some trees. Drought stressed oak trees that gave it up to two lined chestnut borer infestation, for example, were commonly diagnosed as infected by the oak wilt fungus. The more I learn, it seems, the more uncertainty I face. “I don’t know” was too often the only answer I had this season.

As Larry Vetter mentions in “ED’s Notes,” we have commissioned an economic impact study to ascertain just how much the green industries contribute to Minnesota’s economy. When and if you get a questionnaire, it is critically important to you, and the industry that employs you, to find the time to fill it out and send it back, either by first class mail or through cyberspace. We as green industry professionals need the political clout that a well prepared and credibly supported economic impact study would provide.

I recently had the opportunity to peruse the educational content of the Green Expo ’07, and I am pleased to report that the program is stronger than ever. The only drawback for me is the fact that I cannot be in two or three places at once. Attending the Expo is important enough for that reason alone. There are very few similar opportunities for professional educational growth. In addition, the Expo provides some of the best social schmoozing opportunities you are likely to get in any given year.

As important as all of that is, however, the MTGF depends on the success of the Expo to continue our financial support of education, research and outreach, particularly at the University of Minnesota. I could pick any of a number of examples, but I am most familiar with the research we are supporting on the shade tree disease front. One study will be contributing substantially to our knowledge of how or why propiconazole is or can be affecting control of oak wilt in our indigenous oak trees. Although we use it as a fungicide, the mystery may lie more in what the compound does to the tree as a plant growth regulator, and less in what it does to inhibit the fungal pathogen. Another exciting project for me is research into Dutch elm disease tolerance in cultivars of American elm. Preliminary indications are that a very large and old individual growing the St. Croix River valley near Afton may be as tolerant as any cultivar yet discovered. The tree has been deep frying in Dutch elm disease for at least 30 years without the benefit of any kind of pathogen or vector suppression program, and still prospers among dozens of younger companions that continue to become infected and die. Our hope is that we will some time in the near future to have a local provenance, Dutch elm disease tolerant cultivar of American elm.

Pick a reason, any reason – see you at Expo ’07.
Economic Impact Study

In 2005 the MTGF Board of Directors approved funding for an Economic Impact Study. This carried over into 2006 and is nearing completion. It is hoped that we will be able to present the final results at the Minnesota Green Expo in January.

This study will put a value on our operations so that we can demonstrate the size of the impact that members of our Allied Associations have on the economy of the State. We also anticipate that the data generated by this survey will assist with efforts to define and refine educational offerings to better serve the Green Industry professionals that the MTGF represents. Some of the questions asked include number of workers (jobs), purchases, revenues, operating expenses, staff educational achievement, acres managed, acres irrigated, sources of information and the type of operation (profit, non-profit). This was not intended to be a cumbersome survey to complete and may well lay the foundation for a more detailed survey in the future.

All surveys should have been received in the second week of October. Hopefully there will be a good response so that the data generated will be as accurate as possible. If you received this survey, or know of someone within your organization that received it, please make sure that it is filled out and returned if it hasn't been already so that we get the best possible data from this effort. It can also be completed electronically for those who would prefer to respond in that manner. Instructions for doing so are included in the survey. We also plan to develop a very attractive and informative brochure along with a Power Point presentation so that the results of the survey will be widely available to our members.

This has been a major undertaking involving hiring a firm to help determine the questionnaire content as well as administer the survey. Another firm will tabulate the data generated into the brochure and other forms for presentation. All of this information is strictly anonymous, so please don't feel that you might compromise your operation by completing the survey.

Look for the completed data at the Minnesota Green Expo as well as on our web site. You have known all along that you and your peers have a major impact on the quality of life in this area as well as playing a role in job creation, commerce and all of the other things that occur as a result of your efforts. It is our hope that we can finally put an actual value to those efforts which could be very valuable to each member individually as well as collectively. Please help by completing and returning the survey if you haven’t already done so.

DR. DONALD WHITE HONORED

On October 1 Dr. Don White was elected to the Minnesota Golf Association’s Hall of Fame. With very sporadic and limited assistance until recently, Don was the turf program at the University of Minnesota for many years, starting at the University of Minnesota in 1961. While teaching and conducting research, he still somehow found time to make many on-site visits when called upon by turf managers who were experiencing problems. There are many individuals currently serving in the turf industry who were mentored by Don.

In 1999 Don received MGCSA’s Distinguished Service Award and in 2002 he also received their President’s Lifetime Achievement Award. Don’s many other awards, published articles and program appearances throughout the world would take up far more room than space permits in this issue of our newsletter, but will be chronicled in a future edition.

In recent years much of Don’s research efforts have been directed toward the development of creeping bluegrass varieties and improved selections of Poa annua. While the latter may raise a few eyebrows with those who battle “Poa” on an annual, if not daily basis, this is the type of research that those in the private sector most certainly shy away from. Yet there are some very interesting possibilities in this work.

Even though Don began a phased-in retirement a few years ago, he still is very active on campus and continues his work both in the field and in the lab on a fairly regular basis.

Congratulations to Don for this well-deserved honor. No one deserves to receive recognition more than Don for his many years and many contributions to the turf industry in Minnesota and beyond.
Key to Brad’s success in teaching is that students learn by doing, and that complete student involvement is central to his ability to attract and stimulate students and to help students in their intellectual growth and in developing a philosophy of leadership.

He received the COAFES Distinguished Teaching Award for tenured faculty in 1999, the NACTA Award of Merit in 1992 and 1999, the Distinguished Teaching Award from the South Central Education Association in 1991, and an Honorary Degree from Minnesota FFA in 1999. Brad also was awarded the MGCSA President’s Lifetime Achievement Award in 2005, one of only three recipients of that award.

In the Horticultural Science Department, Brad chaired the Undergraduate Studies Committee after semester conversion and served as our Director of Undergraduate Studies. In the College, he was Major Coordinator for the Environmental Horticulture major and served on the COAFES Curriculum Committee. In recent years, Brad has developed Landscape Options within the Environmental Horticulture major. These include: Landscape Design jointly with the Department of Landscape Architecture and Landscape Implementation and Management.

As indicated by the first part of the title of this article, in addition to many other outdoor activities, Brad loves to hunt and fish. With retirement comes a great deal more time to enjoy those treasured activities. The latter part of the title above refers to Brad’s estimate that since being transferred to the Twin City Campus, he has driven over 250,000 miles commuting between home and work, fortunately with no accidents. Doing the math assuming an average of 50 miles per hour, which as most know who travel in the Metro area, is probably very generous, that represents 5,000 hours of windshield time. No doubt beginning on September 1, 2006 there will be far less windshield time for Brad. In addition to all of this travel, there are a number of stories around the Department of how many nights Brad didn’t even go home, but spent the night sleeping in his lab in Alderman Hall while he was spending so many hours working to form the MTGF.

The letter presented to Brad on behalf of the MTGF follows:

“Today you are being recognized for your many years of service to the University of Minnesota. However, your contributions are certainly not limited just to the University, but go far beyond these hallowed halls.

You were the hub of all of the activities that led to the initial formation and early growth of the Minnesota Turf and Grounds Foundation back in the early 1990’s. Many realize that this involved a number of near-sleepless nights as the trials and tribulations of gaining consensus and cooperation of a number of independent groups was attempted. In addition to your duties as a professor in the Department of Horticultural Science, you handled communications, business operations and many other items that were key to what has become a significant financial contributor to teaching, research and outreach at the University of Minnesota, a major resource for the Green Industry and one that will hopefully forever contribute to your legacy of serving the University and all of the professionals that make up the Green Industry throughout this area.

Consequently, on behalf of the Board of Directors of the MTGF, your many successful students who are a part of the Green Industry and all of the professionals in that industry, congratulations and many, many thanks to you for all that you’ve contributed over the years. Best wishes for a long, happy and healthy retirement.”

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