



The 2004 Minnesota Green Expo

Larry Vetter • MTGF Executive Director

The second annual Minnesota Green Expo is now history. One of the biggest challenges leading up to this year's Expo was to build on the success of the inaugural event held in January 2003. All reports indicate that this challenge was more than met!

The final financial figures are in and the MTGF revenue for the 2004 Expo exceeded that generated from the 2003 event. This will allow more money to be available for research, outreach and teaching support for the coming year. Given the budget situations at the University of Minnesota and elsewhere, this will be very meaningful.

The attendance at the Minnesota Green Expo this year was up 4.6% to 7,466. More booths were made available this year and there was still a waiting list after all spaces were sold. Overall there were 862 booth spaces purchased by 402 companies that filled over two acres of the convention center. We all need to thank the vendors who made such a huge contribution to the success of the Expo. Please remember them when it is time to make your 2004



purchases as the Expo could not be a success without their participation. In addition to the purchased exhibit spaces, all MTGF associations that wanted to have a display were given space in the lobby area and 20 non-profits were given space on the second level of the Convention Center.

Approximately 1,000 people attended the keynote address featuring Dick Beardsley on Wednesday morning. His presentation of "Nothing's Too Big To Beat" certainly got the Expo off to a great start. Over the course of the three days there was a full slate of speakers from around the country plus Great Britain that addressed virtually every area of the turf and grounds industries. The audiences for these educational sessions ranged from relatively small numbers for very specific topics to 600 to 700 attendees for some of the major presentations.

In addition to the general educational sessions there were multiple presentations for both equipment technicians and those who wanted to gain additional basic knowledge in turfgrass management. The two sessions presented for equipment technicians had 200 and 300 attendees. The Minnesota Green Expo is a great opportunity for these key staff members to stay abreast of the latest information for maintaining shop areas as well as the equipment needed to keep all turf and grounds areas in prime condition. The two sessions presented for basic turf management, "Turf 101" presented by MTGF President, John Hopko, had 150 and 250

attendees. Again, the Expo provides a tremendous opportunity for all to expand their knowledge base from the basics to the highly technical aspects of our industries.

This year Dr. Brian Horgan, U. of M. Turf Extension Specialist, conducted a pre-Expo workshop for phosphorus training. There were 90 attendees for this Phosphorus Workshop held as a pre-Expo event on Tuesday afternoon. The 2005 Minnesota Green Expo will feature even more pre-Expo workshops addressing a variety of topics that expand the educational value of attending this great event.

The Minnesota Green Expo is a joint effort between the MTGF and our partner the MNLA. Each is responsible for developing the educational offerings made to their respective members. All registrants, except for exhibitors, were asked to indicate their affiliation when registering. While there was a significant number of non-exhibitors who did not indicate any affiliation it was very gratify-

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University of Minnesota Turf and Grounds Field Day



The University of Minnesota Turf and Grounds Field Day will be held on July 29, 2004 at the TROE Center on the St. Paul campus. This is an excellent opportunity to see first hand the types of research projects being conducted by University faculty. The following are examples of research projects which will be showcased during the morning field day:

- **Pesticide runoff from bentgrass fairways:** come see the new rainfall simulator and hear from Dr. Rice about how to mitigate pesticide runoff through common cultural practices used on golf courses.
- **Use of colonial bentgrasses and fine fescues on golf course fairways:** This research project was recently funded by the GCSAA and is a collaborative effort with the University of Wisconsin-Madison. Dr. Horgan's goal is to evaluate alternative turf species for low maintenance golf course fairways. Fertility, wear and golf ball lie are all factors being evaluated.
- **Nitrogen leaching and gas emissions from fertilizers applied to a USGA putting green as effected by irrigation inputs:** This is a United States Department of Agriculture funded project. The research objective is to identify the environmental benefits of implementing water conservation strategies on USGA putting greens.
- **National Turfgrass Evaluation Program:** Last fall, we seeded over 100 different varieties of fine fescue and creeping bentgrass (greens and fairway height of cut). Also meet your new turfgrass faculty member, Dr. Eric Watkins.
- **Perennial ryegrass and Kentucky bluegrass breeding nurseries:** Dr. Nancy Ehlke continues to try and develop new varieties of Kentucky bluegrass and perennial ryegrass. She has some excellent prospects that she will show off.
- **Using remote sensors to help conserve irrigation water:** This is an exciting research project that will change how you irrigate.
- **Fertilizer runoff from Kentucky bluegrass:** Last year you were able to see the initial plot construction and this year, the research has begun. As the fertilizer use debate continues, this research will help identify the potential effects of fertilizers applied to turf and the impact of these fertilizers on surface water bodies.
- **No-mow grasses and alternative plant species:** Do you have any areas on your property that you don't want to mow, or would like to implement a reduced maintenance sched-

ule? Come meet Dr. Meyer and see her research on these new plant materials.

These are examples of the types of projects that you can see at field day on July 29, 2004. Following field day, we will offer a phosphorus fertilizer training program for golf personnel and other exciting educational opportunities. Please mark July 29, 2004 on your calendar and plan to attend this years Turf and Grounds Field Day. Watch for registration information the end of June. ■



The 2004 MTGF Board of Directors

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- Minnesota Association of Cemeteries*
- Minnesota Park Supervisors Association*
- Minnesota Sports Turf Managers Association*
- Minnesota Turf Association*

- Minnesota Golf Course Superintendents Association*
- Minnesota Society of Aboriculture*
- Minnesota Association of School Maintenance Supervisors*
- Northern Minnesota Forage and Turf Seed Advisory Committee*

INTRODUCING DR. ERIC WATKINS

Department of Horticultural Science

The University of Minnesota turfgrass science program is making great strides, and I am excited to be on board. I was raised near Sunburg, Minnesota, and completed my undergraduate degree at the University of Minnesota in 1998 in the Department of Agronomy and Plant Genetics. I recently completed my graduate work at Rutgers University, working with Dr. William Meyer in an internationally-renown turfgrass breeding program. The experience I gained at Rutgers will aid me as I develop a turfgrass breeding program in Minnesota.

Recently, the primary turfgrass breeding in Minnesota has concerned *Poa annua*. We are now initiating breeding programs in several other species including Kentucky bluegrass, perennial ryegrass, tall fescue, fine fescue, and a few native grass species. Some of these projects involve collaboration with Dr. Nancy Ehlike (Department of Agronomy and Plant Genetics). Currently, the majority of cool-season turfgrass breeding takes place in either New Jersey or Oregon; both of these locations have climates that are very different than Minnesota. By developing new varieties for use in our climate, we will be able to provide turfgrass managers with better options. Additionally, many of these new varieties should be able to be grown by grass seed producers in northern Minnesota, therefore, providing additional economic benefit to the state.

Kentucky bluegrass is currently the best option in most turfgrass situations in Minnesota. The majority of Kentucky bluegrass varieties are developed through a hybrid selection process. We have initiated a Kentucky bluegrass breeding program at the University and are hopeful that many promising hybrids result from these efforts.

A perennial ryegrass breeding project is currently underway that involves collaboration between Rutgers University and the University of Minnesota. The goal of this project is to develop a perennial ryegrass variety with high turfgrass quality that can survive our winters and is tolerant of the diseases common to Minnesota. Significant gains have already been made, and work will continue in the coming years. These efforts should result in elite perennial ryegrass varieties that can be used by turfgrass managers throughout the region

Turf-type tall fescue provides turfgrass managers with a high-quality turf that has the best drought tolerance of all cool-season turfgrass species. Tall fescue is currently used exten-

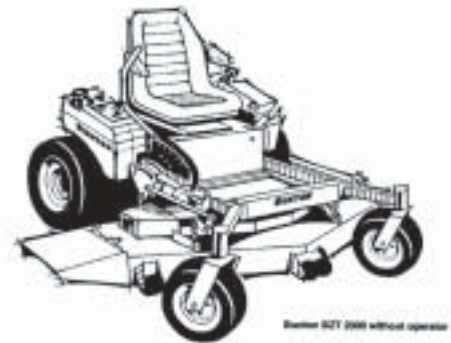
Editor: Larry G. Vetter
MTGF Office
 University of Minnesota
 422 Alderman Hall
 1970 Folwell Avenue
 St. Paul, MN 55108-6007
 Phone: (612) 625-9234
 Fax: (612) 624-4941
 E-mail: vette008@tc.umn.edu
 Website: www.mtgf.org



sively as a turfgrass in many parts of the country; due to concerns about winterhardiness, its use is limited in Minnesota. Research at the University of Minnesota will

examine the potential of turf-type tall fescue in Minnesota and will aim to develop winter hardy germplasm that can thrive in this climate.

Breeding programs in the other cool-season turfgrass species will focus on the development of germplasm that exhibits increased winterhardiness and disease resistance. My primary goal this year will be to collect germplasm to use in the turfgrass breeding program. This will involve making collections on old turf areas throughout the state. Once I have assembled a sufficient amount of germplasm, it will be evaluated and hopefully lead to the development of new varieties. The ultimate goal of my research program will be to provide turfgrass managers with high quality turfgrass varieties that thrive in Minnesota. I am excited about the research that will take place in the coming years and I look forward to interacting with the state's turfgrass industry. ■



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EXPO *continued from cover*

ing to see that most of the MTGF Allied Associations had increased attendance at the 2004 Expo compared to the 2003 event. While total attendance increased 4.6% in 2004 it is interesting to note that the percentage of those identified as "decision makers" increased as well. For those of you who are interested in numbers, of the 7,466 total registrants, 87% were from Minnesota with 8% of the attendees coming from Wisconsin. Iowa, the Dakotas and "other" made up the balance of the total. 5,154 attendees registered in advance with on-site registrations being 705 on Wednesday, 875 on Thursday and 732 registering on Friday. In the 7,466 total there were 1,010 that registered for one day, 3,567 registered for all three days and 2,235 registered for the Trade Show only. In addition there were 654 students in attendance at the 2004 Expo.



Again this past year the University of Minnesota put together a great display in a lobby of the Convention Center. This year it was more inter-active with a number of professors and staff scheduling specific times when they were available to answer questions and provide research, teaching and outreach updates. The combination of the formal educational sessions presented throughout the three days along with the expertise provided by University personnel in this informal setting offers attendees at the Minnesota Green Expo an unparalleled learning opportunity.

Plans are well underway for not only the 2005 Expo but 2006 as well. Next year's dates are January 5 - 7, 2005. The dates for 2006 will be January 4 - 6. Many speakers have already been confirmed for next year's educational sessions. However, it is not too late to make suggestions if you have a speaker &/or a topic in mind. All suggestions are welcome and we will do our best to provide the best possible educational opportunity for those attending the Expo. While 75 educational sessions were presented in 2004 along with three pre-Expo workshops, there is always room for improvement.

Next year there will be additional pre-Expo workshops. Dr. Horgan will again present his Phosphorus Training School. Others are in the planning stages and will be communicated as they are finalized. The required code portion of the Power Limited Technician recertification will be scheduled during the Expo at a time that will not conflict with other requirements such as Pesticide Recertification. The Pesticide Recertification portion of the 2005 Expo will again be held on Friday. Please note that the sponsors of the Minnesota Green Expo do not control the number of hours necessary to complete the requirement for Pesticide Recertification. The Minnesota

Department of Agriculture must approve the educational content for that portion of the program and also dictates the number of educational hours that are required to qualify for license recertification.

It's not too early to put January 5, 6 and 7, 2005 at the Minneapolis Convention Center in Minneapolis on your calendars. Everyone involved is already working to make the next Expo a great networking, educational and tradeshow event. As an attendee, the Minnesota Green Expo is the best value for your dollar anywhere in the country. ■

Important Dates For 2004 & Beyond

- U. OF M. FIELD DAY
JULY 29, A.M.
ST. PAUL CAMPUS
- PHOSPHORUS TRAINING SCHOOL
JULY 29 P.M.
ST. PAUL CAMPUS
- PESTICIDE RECERTIFICATION WORKSHOP
OCTOBER 20
MIDLAND HILLS COUNTRY CLUB
- MINNESOTA GREEN EXPO
JANUARY 5 - 7, 2005
MINNEAPOLIS CONVENTION CENTER

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ED'S NOTES

Larry G. Vetter
Executive Director

The stated mission of the Minnesota Turf & Grounds Foundation is “to promote the green industries in Minnesota through support of research, education and outreach at the University of Minnesota and elsewhere”. The MTGF is a partnership of eight Allied Associations and the University of Minnesota. The professionals who are members of these eight associations coupled with the faculty and staff of the University of Minnesota represent a vast array of expertise impacting the quality of life in Minnesota.

This is mentioned primarily because it is far too easy to get caught up in the day-to-day grind and consequently not give yourselves enough credit for the value you provide to so many others around you. Yes you are a professional. Yes you impact the quality of life. And yes, the world is a better place because of your efforts. Whether you strive to provide improved recreational activities, comfort to those who grieve, safety to those who play, aesthetics to all who enjoy turf and grounds areas or work to provide improved methods, materials or services, your contributions to those around you cannot be overstated.

2003 was a very active year for the MTGF. Hosting or co-hosting important events such as the Field Day, a Pesticide Recertification Workshop and the Minnesota Green Expo all provided educational opportunities for all MTGF members and others. Continuing the dialogue with the University of Minnesota administration regarding positions that are important to the Green Industry keeps our wants and needs front and center. Supporting research, teaching and outreach has reached levels that are meaningful, are noticed and are appreciated.

2004 will be even more active as the dialogue continues with University officials regarding positions and is expanded to include a building on the TROE Center site on the St. Paul campus. The Executive Committee of the MTGF met with University administration personnel and committed to providing the necessary funds for completing the pre-design plans for a TROE Center building. The Board of Directors has long felt that having a physical facility that our constituents can actually see and touch is one of our primary objectives in support of the turf program at the University. On-going financial support in 2004 will be even more meaningful as increased revenues for the MTGF permit the expansion of that support. All of the financial support provided in 2003 will be repeated again in 2004. In addition, support of Dr. Eric Watkins’ program will be added to the list as well as support for three research programs conducted by Dr. Jell Gillman in

the area of woody ornamentals. A detailed description of each of these projects is provided elsewhere in this issue so that you know what is being funded by your Foundation.

All of the educational activities mentioned above will be repeated in a new and expanded form. Additional offerings will be made with an out-state Pesticide Recertification Workshop and a metro Power Limited Technician Workshop. There will even be an expansion of the Minnesota Green Expo as plans for the 2005 event are nearly complete at the time of this writing.

Even though details on much of the above are noted elsewhere in this newsletter, they are important enough to repeat in this column just to make sure they are communicated effectively. The 2005 Expo will have three major changes that will enhance the quality of this major event. First the host hotel will now be the Hyatt Regency. This change will result in controlling costs as well as making the housing experience more enjoyable for our out of town guests. No longer will our overnight guests be tormented by hundreds of teenagers tying up elevators, running hallways at all hours and providing unexpected wakeup calls in the middle of the night. The second change is that there will be more pre-Expo workshops offered in order to expand the educational experience. The most notable change is that the MTGF Opening session, which historically has been held just prior to the Keynote speaker on Wednesday morning will be replaced by a MTGF/University of Minnesota Scholarship and Research luncheon on Wednesday. Making this change allows the official welcome to the Expo by the MTGF to be held at a more convenient time for attendees. It also allows MTGF members to have an opportunity to host a function of their own that will increase camaraderie. This will also give University of Minnesota faculty and staff the opportunity to update members on their current activities and future plans. Additional registration is required in order to cover the cost of the luncheon. This will be spelled out on the registration form for the 2005 Minnesota Green Expo.

Speaking of the Minnesota Green Expo, the original contract between the MTGF and the MNLA was for a three year period and was signed on November 14, 2001. This contract covered the Expo for the years 2003, 2004 and 2005. While both parties felt confident that combining the two events was a good business decision, there was no way to know for sure if this would be the case. It was felt at the time that co-sponsoring three events would provide enough history to verify if this in fact was the case. Since the 2005 Expo will be the third and last under that contract, negotiations for renewing or extending the current contract have begun. Both the MTGF and the MNLA Boards of Directors have expressed their satisfaction regarding the contractual arrangement that is currently in place. All indications are that this contract will be extended with only slight, if any, modifications being required. The objective will be to put in place a new three year contract that will have a “rolling”

U of M Gleanings



(Reprinted with Dr. Tong's permission from MFVGA Newsletter)

Rearrangements in educator (a long time ago, they used to be called “county agents”) positions in the University of Minnesota Extension Service have been made, and most of the new educators have started working from their new offices. There are now 6 Regional Extension Educators with responsibilities in horticulture. All educators have at least Masters degrees. They are either based out of:

Andover

Bunker Hills Activities Center
 550 Bunker Lake Boulevard NW, Suite L – 1
 Andover, MN 55304-4199
 Phone: 763-767-3836, 888-241-0719
 Fax: 763-767-3885

Farmington

Dakota County Extension & Conservation Center
 4100 220th Street W, Suite 100
 Farmington, MN 55024
 Phone: 651-480-7788, 888-241-0839
 Fax: 651-480-7797

The six educators are:

1) **Karl Foord**, based in Andover, with a Ph.D. in plant physiology and an M.B.A. degree, specializes in marketing and business plans. He can be reached at foord001@umn.edu.

2) **Anne Gachuhi**, based in Andover, has an M.S. from the University of Wageningen in the Netherlands, and worked at the Missouri Botanical Gardens. She is originally from Uganda, and will be focusing her efforts on landscape design and the Master Gardener program. Anne starts working in Minnesota on May 3.

3) **Robert Mugaas**, based in Farmington, specializes in turfgrass management. He can be reached at mugaa001@umn.edu.

4) **Terry Nennich**, currently serves on the MFVGA Board, and is well known to many fruit and vegetable growers. Terry works from Crookston, mostly with commercial fruit and vegetable growers, and he can be reached at nenni001@umn.edu. His address is University of Minnesota, Crookston, 251 Owen Hall, 2900 University Avenue, Crookston, MN 56716-5001. The phone number there is 218-281-8027 or 888-241-0781, and the fax number is 218-281-8686.

5) **Robert Olson**, based in Andover, will primarily be working with the New Immigrant Farm Program and

commercial fruit and vegetable growers. Bob used to be based in Wright County, and worked with many small-acreage fruit and vegetable farmers there. He can be reached via olson160@umn.edu.

6) **Nancy Rose**, based in Farmington, may be known to Twin Cities residents from her gardening columns in the Star Tribune newspaper. Nancy has worked for many years on the woody plant breeding project at the University of Minnesota Horticultural Research Center with Harold Pellett, and will mostly work on consumer horticulture problems. She can be reached at nrose@umn.edu.

Also, **Robert Olen** continues to work with Master Gardeners and commercial fruit growers in St. Louis county. He can be reached at olenb@co.st-louis.mn.us.

I met most of these educators at a recent meeting where Extension Climatologist Mark Seeley (you may have heard him on Minnesota Public Radio's Morning Edition) presented some information on the USDA Plant Hardiness zone maps. If you order seeds, you've probably seen this map. It's a map of the USA, with different colors for different zones. According to this map, zones 3 and 4 are found in Minnesota, meaning that only plants hardy in zones 3 and 4 can reliably survive in Minnesota. Well, according to Dr. Seeley, that map is based on 13 years (1974-1986) of climate data. This is not optimal, as the World Meteorological Organization mandates the use of 30 years of data for deriving climatic statistics. The reason that this is of interest is that there is a new map in the making, and it is based on only 15 years of climate data. The years that the maps are based on are important because minimum winter temperatures have been increasing over the past decade, due to natural variability, urbanization, and emission of greenhouse gases. This has an impact on plant variety recommendations you get. For example, let's say that you want to know what varieties of blueberries are going to survive year after year in Brainerd. If we based our recommendations on the past 5 years of data, you might have ended up planting blueberry plants that died this winter, because this winter has had lower minimum temperatures than what we've experienced in the previous 5 winters. So the source of data that recommendations are based on is very important. We of the University of Minnesota Extension Service don't like to give out misinformation, and try to be careful to give recommendations based on sound scientific data. This research base ensures that the information you get from us is of high quality. Yes, but what distinguishes good science from unsound information? This will be the subject of a future column. ■

MTGF & U of M News



Larry Vetter, MTGF Executive Director

There have been a number of developments that impact all members of MTGF in recent months. In somewhat chronological order, the first of these is that the Horticultural Science Department has a new Department Head, Dr. Thomas Michaels. He received his M.S. and Ph.D. degrees from the University of Wisconsin-Madison. Dr. Michaels comes to us from the University of Guelph, Ontario, Canada where he served for the past seven years as the Associate Dean of the Ontario Agricultural College. In this role Tom was responsible for the college's undergraduate programs which encompass four campuses, as well as continuing education programs. Since his arrival on the St. Paul campus, I've had the pleasure of meeting with him on a number of occasions. As a result of these meetings it has become very obvious that he will be a strong supporter of the turf and grounds industries in this area.

More recently, Dr. Don White's replacement is now on board and we are all very excited to have this position filled. Dr. Eric Watkins, originally from Minnesota, comes to us from Rutgers University with a specialty in breeding and plant genetics. Dr. Watkins officially started on February 1st of this year and is quickly getting up to speed. After graduating from the University of Minnesota, Eric began his Ph.D. program in plant biology at Rutgers University where he was able to study and experience all aspects of a world-class turfgrass breeding program under the direction of Dr. William Meyer. Eric hopes to use the skills and knowledge that he gained at Rutgers to effectively train students in turfgrass science as well as develop an extensive turfgrass breeding research program at the University of Minnesota.

While the staff additions mentioned above are very positive, the same cannot be reported for the turfgrass pathology position. The MTGF continues to look for ways to assist the University in filling this position. Given the current budget situation, it appears unlikely that this position will be filled in the near future. Dr. Chuck Muscoplat, Dean of COAFES, continues to state that filling this position is one of his highest priorities. However, until funding improves or retirements within the College take place, this position cannot be filled. Realizing how important this position is, particularly to the golf industry, the MTGF offered to assist in filling this position with a \$90,000.00 offer spread over three years. Unfortunately even this amount of financial support was not enough to bridge the gap between current funding and expenses. This offer of support remains on the table in the event that budget conditions improve at the University.

On a brighter note, the Board of Directors of the MTGF

at its March 2004 meeting approved an extensive agenda in support of research, teaching and outreach in various areas of the turf and grounds industries. Funding for several programs in the Horticultural Science Department were approved totaling \$60,000.00. This donation has been made in support of the following: a research technician for Dr. Brian Horgan's program; maintenance of the TROE Center; Dr. Eric Watkins' research activities in developing new turfgrass varieties; Brad Pedersen's landscape program; and three different research projects being conducted by Dr. Jeff Gillman that are associated with stem girdling roots.

Also at the March meeting a significant amount of funds were allocated for discussions with University officials in an effort to jump-start the planning stage for a building on the TROE Center site on the St. Paul campus. A meeting with the Executive Committee of the MTGF and University administration personnel is scheduled for early April to explore this possibility. This facility is now on the six-year University plan but the MTGF is hoping to help speed that process using this approach.

While the above addresses research activities and facilities, the MTGF Board of Directors also approved additional activities for the coming year. A Pesticide Recertification Workshop has been scheduled for October 20, 2004 at Midland Hills Country Club. Pending input from the MDA, an out-state workshop may also be added in the fall of 2004. In addition, the MTGF will be scheduling a Power Limited Technician recertification workshop in the fall of 2004. As a supplement to that workshop, the two-hour code requirement for this recertification will be scheduled during the 2005 Minnesota Green Expo. The scheduling of that session will definitely not compete with the Pesticide Recertification sessions at the Expo. The dates for the next Minnesota Green Expo are January 5, 6 and 7, 2005 with the Pesticide Recertification portion being January 7th. It appears that we've come up with a great list of speakers and topics for the '05 Expo. Taking advantage of this great education and networking event is one of the best investments you can make for yourself and the future of your profession.

Your MTGF continues to pursue its mission "to promote the green industries in Minnesota through support of research, education and outreach at the University of Minnesota and elsewhere". Each association that is a part of the MTGF is benefiting for the pursuit of that mission. Hopefully your turf and grounds areas have come out of winter with minimum damage and the coming season will be kind to all of you who work so hard to make the world a better place in which to live.

MTGF Approved Funding For 2004 Principals and Projects Approved



Bradley W. Pedersen

*Professor and Director of Undergraduate Studies
Department Of Horticultural Science
University of Minnesota*

The Landscape Design, Implementation and Management program is one of four programs that make up the Department's Environmental Horticulture major. An exciting change to the Landscape Program in 2004 is the development of two new program tracks for students: Landscape Design and Landscape Implementation and Management. The Landscape Design Program will be a joint program between the Department of Landscape Architecture and the Department of Horticultural Science where students will be eligible for a variety of courses in each college. The new Landscape Implementation and Management Program will focus on educating students for careers as owners, managers and supervisors in this area of landscape horticulture.

Other programs that make up the Environmental Horticulture major include: Floriculture / Nursery Production and Retail Management, Turfgrass Science, and an individualized program of study. The Landscape Program was the last to be developed (1992) by the Department and has suffered from a lack of funding support previously in place for other programs. According to surveys by the college, 22% of all internship and full-time positions are in the landscape and turf-related areas.

However, the increase in student numbers and technology required to build the landscape program have made it very difficult to continue a high quality program. In the past, the majority of funding for the landscape program has been associated with design fees paid by the University of Minnesota Facilities Management Landcare department for student design projects. Due to budget reductions, these funds will no longer be made available after June 30, 2003, creating a deficit in funding for the landscape program. The Landscape Program also lost all Extension base funding during the 2002 Extension reorganization and re-entrenchment.

Current income from the sale of the Plant Elements of Design CD is used for instructional support in the landscape program and students pay a lab fee each semester that supports approximately half of the cost of lab equipment (computers, software, scanners, printers) and supplies (paper, ink, toner). There is no line item budget for the SULIS website (Sustainable Urban Landscape Information Series) or the Display and Trial Garden other than for the part-time garden manager. According to 2003 WebTrends statistics, total visits to the SULIS website topped 302,952 with hits totaling 8,029,802. In addition, over 106,000 unique visitors spent an average of 11 min. 17 seconds surfing the SULIS site.

Brian Horgan, Ph.D.

*Turfgrass Extension Specialist
Department Of Horticultural Science
University of Minnesota*

The MTGF made a significant commitment to support my program during my first three years. To date, the MTGF has provided more than \$75,000. During this period, my program has been successful at leveraging these funds to attract major additional dollars in support from grants, private industry, in-kind contributions and other state associations. Moreover, the support provided by the MTGF has enabled me to hire a research technician. This technician has conducted field plot applied research and has been instrumental in the development of the TROE Center on the St. Paul Campus.

The University of Minnesota Turfgrass Science Program is well on its way to being recognized nationally for graduating quality undergraduate turf students, developing outreach programs and conducting research that not only affects our states turf industry but the turf industry nationally.

I can state unequivocally that without the support provided by the MTGF, we would not have a new research facility, new faculty or quality research that impacts our great turf industry in Minnesota.

I request that the MTGF continue to support my turfgrass extension and research program. I would use these monies to support a research technician and the TROE Center. As in previous years, I would request that others match the support for the TROE Center. In order to run a 16 acre research center I will combine this support with in-kind support from private industry for fertilizers, seed, and pesticides; in addition to support from the College of Agriculture, Food and Environmental Sciences in order to make running this center possible.

Thank you again for a great three years.

Eric Watkins, Ph.D

*Assistant Professor, Turfgrass Breeding and Genetics
Department Of Horticultural Science
University of Minnesota*

The goal of my research program is to develop new turfgrass varieties for use by the turfgrass industry in Minnesota. My focus will be to develop varieties that exhibit improved characteristics such as drought tolerance, disease resistance, and cold hardiness. The breeding program will consist of collecting and assembling plant material, evaluating turfgrass species and varieties, and developing turfgrass germplasm adapted to Minnesota.

The most important phase of a successful turfgrass breeding program is assembling plant material. Some of the material I use for breeding will come from cooperative efforts with other research institutions. Other material will come

from germplasm collections made in other countries with climates similar to Minnesota. A significant portion of the material I use will come from collecting germplasm in Minnesota and the surrounding states. The collections will focus on old turf areas that contain plants that have survived in the Minnesota climate for decades, thus taking advantage of the selection that occurs in nature. These collection trips have a significant cost in both time and money.

I am also eager to evaluate a wider range of turfgrass species than is currently used in Minnesota. These other species may be able to fill specific needs in the state. Although some of these species may not currently thrive in our climate, breeding efforts should be able to create germplasm that is adapted to Minnesota. I will also evaluate additional varieties of commonly used turfgrass species such as Kentucky bluegrass. I feel that it is important that turfgrass managers have access to as much information on turfgrass performance as possible.

Although I have been at the University for only a short time, I have been involved in initiating breeding projects for both Kentucky bluegrass and perennial ryegrass. In the very near future, I also plan on beginning projects with tall fescue, fine fescue, and several other cool-season turfgrass species. Because the development of turfgrass varieties can be a long process, it is important that these projects are started immediately. My experience as a graduate student at Rutgers University, working in the top turfgrass breeding program in the country, will be an asset as I work on building a world-class breeding program at the University of Minnesota. A successful breeding program will also enhance the undergraduate and graduate teaching component of my position. I hope to involve students in turfgrass research whenever possible. Meaningful research experience can be a valuable asset to students as they begin careers in turfgrass science.

A supportive turfgrass industry is a vital component of a successful turfgrass breeding program. The aggressive breeding program that I am beginning will require

FUNDING *continued on page 11*



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BACHMAN'S

FUNDING *continued from page 9*

a significant amount of supplies and labor.

Jeff Gillman, Ph.D.

Assistant Professor

Department Of Horticultural Science

University of Minnesota

The TRE nursery at the University of Minnesota's St. Paul campus has been a center for research and outreach for over twenty years. Research projects have been quite varied and have ranged from simple pesticide tests to cultivar trials and irrigation management techniques. One of the more recent concentrations of effort that we have embarked upon is an analysis of the effects of planting depth and technique on tree health and stem girdling roots (SGRs). This effort is being accomplished with the help of Gary Johnson, an urban forester and professor at the University of Minnesota who is one of the leading national authorities on SGRs.

With the decreased funding that University projects have had to face over the last few years the TRE nursery has had to diversify the sources from which it receives support. Last year a number of budget cuts reduced federal and state funding of the TRE nursery by roughly 60%. These cuts have directly affected projects that do not receive outside support such as the previously mentioned research on SGR's. Since these budget cuts occurred we have found limited support for these studies through a \$7,000.00 John Z. Duling grant from the International Society for Arboriculture. However, this grant only covers approximately one student for one year and will not be sufficient for us to complete our studies.

The TRE nursery requests funding from the Minnesota Turf and Grounds Foundation to help support three different research projects associated with stem girdling roots. These projects are listed below.

1. To better understand the effects of planting depth on the development of girdling roots an experiment has been designed to look at the effect of planting depth on *Acer saccharum* and *Tilia cordata*.

2. To address the question of whether a higher media aeration porosity can mitigate the effects of planting depth on SGRs and overall tree health three different species of trees are being tested including *Fraxinus pennsylvanica*, *Gleditsia triacanthos* var. *inermis* 'Skyline', and *Quercus macrocarpa*.

3. A third experiment that began late last year looks at various planting techniques currently used for container grown plants. This experiment looks at plants that are planted from containers without the rootball being disturbed, plants that are planted after the rootball has been teased out, plants that have been planted with their rootball "butterflied" (split into two equal pieces by using a machete), and plants that have been planed from containers after having their rootball treated using standard University recommendations. This research will reveal how appropriate these different practices are for allowing a tree to escape being "rootbound".

ED's note: Funding all of the requests listed above were approved at the March 3, 2004 MTGF Board of Directors meeting. These requests total \$60,000.00 for calendar year 2004. The MTGF is proud to support these worthwhile programs.■

NOTES *continued from page 5*

expiration date so that each year it will automatically be extended for another year barring written notice to the contrary by either or both parties. Given the success of the past two events, both parties have expressed their desire to continue this partnership. By the time the fall issue of this newsletter is published a new contract should be in place and will be reported in that issue.

It appears that most turf and grounds areas made it through another Minnesota winter with minimal damage. Hopefully that is true in your case. The 2004 growing season is now off and running. I hope the year is successful for you and don't forget to pat yourself on the back for the contributions you make to those around you, both personally and professionally. Have a great season! ■

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Environmental Horticulture Major at the U of M Features Exciting New Directions for Students

The University of Minnesota College of Agriculture, Food and Environmental Sciences (COAFES) announces a new joint **Landscape Design Program** between COAFES and the College of Architecture and Landscape Architecture (CALA). Approved in March by the Boards of Regents, the new program is a result of the re-structuring of the previous Landscape Design, Implementation and Management program in the Environmental Horticulture major in COAFES and the Environmental Design major in CALA. The Department of Horticultural Science in COAFES and the Department of Landscape Architecture in CALA jointly own the program. Students will have the choice of graduating from either CALA or COAFES with a degree in Environmental Horticulture or Environmental Design, but their transcripts will indicate that they completed the University of Minnesota Landscape Design Program. Students in either college will be able to pursue a Master of Landscape Architecture or Master of Agriculture in Horticulture degree.

The relationship of the new joint Landscape Design program between COAFES and CALA

In addition to the new Landscape Design program, another new program focusing on **Landscape Implementation and Management** has been created to give students a broad range of skills necessary to develop and manage landscaped areas as landscape contractors, owners of lawn and landscape maintenance firms, or managers of landscape departments for parks, schools, universities, cemeteries, and public gardens. As a stand alone program, the Landscape, Implementation and Management curriculum is now a balanced blend of courses in business, landscape horticulture, pest management and arboriculture, and will be much better suited to the needs of both program graduates and the industry.

Environmental Horticulture majors will also have the choice of selecting foundation requirements that focus on business or science as part of these new programs. Students choosing the science option take a second semester of chemistry, physics, biochemistry, and organic chemistry. The business courses include accounting, small business management, and business statistics and are part of the requirements which help students to fit a **Management Minor** from the award-winning **Carlson School of Management** into their four-year program.

“We feel that the changes to the Landscape Design and Landscape Implementation and Management programs as well as the addition of business and science foundation requirement options will provide our students

with a unique and highly marketable set of skills,” said Professor Brad Pedersen, Director of Undergraduate Studies for the Department of Horticultural Science. “This is great news for students wanting to study Environmental Horticulture at the University of Minnesota and great news for employers in the industry wishing to hire the most qualified, well-rounded horticulturists.”

Details of the New Joint Landscape Design Program

In the past, University of Minnesota students focusing on landscape design or landscape planning were asked to make the difficult decision between a major in Environmental Horticulture from COAFES and a major in Environmental Design from CALA. Sometimes the distinctions between the two majors were difficult to discern, and depending on their choice, students were somewhat locked into the courses, faculty and resources offered by the specific college.

Fortunately, faculty in both colleges saw that the separate majors were not providing students with a complete set of skills and knowledge. The former Landscape Design, Implementation and Management program featured information about sustainable residential and commercial design, and plant and soil sciences related to landscape implementation and management. The Environmental Design major emphasized design theory and representation, architectural history, site engineering and construction, and design practice related to larger scale landscape structure and function.

Faculty spent over two years collecting feedback from students, faculty, and the industry, and designed a joint program offering students the essential skills needed to be competitive in the design industry while maintaining the individuality and strengths of each major. One benefit to students in the Landscape Design program is that several of the Landscape Architecture and Architecture courses fulfill Liberal Education requirements. This allows students to take a greater number of design courses and still graduate within four years.

The restructuring of Landscape Design, Implementation and Management allowed for the creation of the new Landscape Implementation and Management program. The program includes fundamental coursework in landscape design as well as turfgrass science. Students may use elective credits to expand their understanding in nursery and floriculture production, public garden management, restoration and reclamation ecology, and organic production.

For more information on the new programs, please contact Brad Pedersen at peder006@umn.edu or 612-624-7407. ■

PRESIDENT'S REPORT

John R. Hopko
MTGF President

Ladies and Gentlemen, start your engines, spring has sprung. It seems like it was yesterday that we were attending the Green Expo in January. What a conference it has become. The growth has been tremendous at a time when most conferences and trade shows have seen declining attendance and participation. It definitely has become a regional conference. A big thanks goes to our conference committee and chair James Bade, the MNLA and executive director Bob Fitch and to Larry Vetter, Executive Director of the MTGF. As a golf course superintendent, my first turf conference was as a member of the MGCSA. It was at the Normandy Hotel in the early 1970's. What amazing progress we have made in the 30 plus years. The educational opportunities are broad and diverse, while the trade show is truly amazing. Congratulations to all who contributed, and thank you to everyone who attended.

As for current MTGF news, the news is good. First, at our last board meeting, we were able to fund \$ 60,500.00 for

research projects. This money will be distributed between Dr. Horgan, Dr. Watkins, Dr. Gillman and Brad Pedersen. Sound fiscal management from the early years of the MTGF has put us on a firm financial footing. This allows the board to make some good decisions about funding things that will benefit our industry.

Another exciting development was the recent meeting the Executive Board of the MTGF had with the University of Minnesota officials headed by Dr. Phil Larsen. The meeting was requested by our board to see if we could help accelerate the construction of the building at the TROE Center. The meeting was very positive and the MTGF agreed to fund the cost for the pre-design phase of the project. This will be followed by the final design phase. Once everything is designed and finalized, a major fund raising campaign will take place in an attempt to complete the project. The TROE Research Center, complete with this building and three professors at the University would give Minnesota a world class program. This will be a huge benefit to our industry and all those who follow in our footsteps.

In closing, I would like to say "thank you" to Greg Hubbard for his leadership and also to the rest of the board for the commitment they have given the Foundation. We have come a long way in a short period of time and the future looks even brighter. I look forward to my presidency this year and the potential progress that we can make. ■

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