VOL. XIX, NO. 2

SUMMER 2001

That Elusive Nitrogen

By Wayne Kussow, Department of Soil Science, University of Wisconsin-Madison

So you tried a new fertilizer this spring and the results were disappointing or the fertilizer you've used for years didn't perform as well as in the past. Is it time to change fertilizers? Probably not. This was the Spring of the "elusive" nitrogen.

What happens to fertilizer N once it is applied to turf is very much weather dependent. At the Noer Facility we had rain on 11 days each in April and May and began June with additional excess rainfall. This was great for the grass and the irrigation system was idle. But this did not bode well for the fertilizer N applied.

There are two principle ways that fertilizer N can be lost from turf and never become available to the grass plants. One mode of loss, volatilization, is most prevalent when urea is applied. But you say you didn't apply urea? Better check the fertilizer label once again. Even IBDU and methylene urea fertilizers contain some urea and many slow-release N fertilizers have urea added to provide a quick green-up.

Volatilization of fertilizer N results from the chemical reactions that happen within a day or two after the fertilizer is applied. These reactions cause the pH at the site of fertilizer application to increase. Should the pH exceed 7.3, the ammoniacal N is converted to gaseous ammonia that is lost to the atmosphere,

sometimes burning the turf in the process.

Volatilization loss of N can be substantial - as much as 1/2 of the N applied. Many factors influence the actual amount of N lost, Included among these are the rate of urea-N applied, soil surface wetness, soil surface pH and air temperature. Volatilization loss of N can be reduced to 5% or less if the fertilizer is watered in immediately after application. All it takes to dissolve urea and move it into the soil is 0.2 to 0.4 inches of water. That was a problem this Spring with all the rain. Soils were already wet when the fertilizer was applied and so it didn't get watered in. Instead, the fertilizer remained on a wet soil surface, setting up conditions for abnormally high volatilization losses. The solution is to use slow-release N fertilizers. In a study we recently completed, N volatilization loss was reduced by 40% or more by applying coated urea or methylene urea rather than urea when the potential for N volatilization loss was very high.

As already pointed out, soil surface pH is also a factor in volatilization loss of N. Turfgrass growing on soil with pH values above 7.0 is a prime environment for volatilization loss of N when urea-based fertilizers are applied. Even worse are acid soils that have recently been limed. The pH around the lime

particles is around 8.3, which promotes extensive volatilization loss of N. On one of the bentgrass fairway trials conducted a few years ago at the Noer facility where the soil pH was 5.8 and lime was applied annually, recoveries of N in the clippings indicated that about 50% of the urea-N was volatilized each year over a 3-year period.

The rains this Spring set us up for a second mode of fertilizer N loss, that of denitrification. Denitrification results when soils contain excessive moisture. Under this condition, soil microorganisms run out of oxygen and are forced to use nitrate-nitrogen instead as an electron acceptor. When this happens, the nitrate-nitrogen is converted to gaseous forms of N that then cannot be utilized by the turfgrass and escape into the atmosphere. Researchers are finally getting a clear idea of how much denitrification can occur in turf. Data from the University of Illinois indicate that losses of 3 to 25% of the N applied are far more common than previously thought.

A common assumption is that extensive denitrification loss of N happens only when soils are excessively wet for several days. We've found otherwise in our research. We wet a soil to 125% of its field capacity for just two days and then estimated how much fertilizer N was deni-

The Wisconsin Turfgrass News

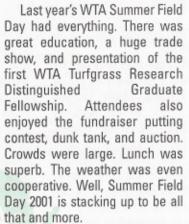
is the official publication
of the Wisconsin
Turfgrass Association,
edited by Tom Schwab.
O.J. Noer Turfgrass
Research and
Educational Facility.

trified. The values ranged from 22 to 45% of the N applied.

Putting this all together, applying a urea-containing fertilizer this past Spring to turf could have easily resulted in a combined volatilization and denitrification loss of 25 to 50% of the N applied. If at some time after fertilization you noted a variegated color pattern in your turf, the most likely culprit was denitrification and not the fertilizer. If the overall color response was less than desired or the duration of the response was shorter than you've come to expect, chances are the problem was not the fertilizer but the weather. This was a Spring of elusive nitrogen.

Check Out What Field Day 2001 Has To Offer

By Tom Schwab, O. J. Noer Turfgrass Research and Education Facility University of Wisconsin-Madison



The date is August 14th and the site is, as always, the O.J. Noer Facility in Verona. So much has been happening at the Noer Facility and in Wisconsin's turf industry on the whole that you'll want to get the latest news during Field Day. Results from the Wisconsin Turf Survey are anticipated to be ready for distribution by Field Day so you can discover what an important impact you make on Wisconsin's economy. Get the latest perspective from the professors about the DNR NR151 Regulations for non-point pollution and how it will affect your business. You can also find out about the Noer Facility expansion. Learn what additional research will be conducted, or give your own input on projects you'd like to see performed when the available research land is doubled.

Not that the current 105 research plots aren't turning out great information. The current investigations are producing superb information and that

knowledge will be shared during the Field Day research tours. Field Day starts out with two different research tours. One focuses on golf subjects and the other is for lawn care, sod, and sports turf interests. There is a great variety of presentations throughout the day including:

- Putting green management issues.
- Management of the homelawn.
- Control of troubling turfgrass diseases.
- Control of troubling turfgrass insects.
- Management of the new bentgrasses for putting greens.
- Athletic field line painting strategies.
- Using Supina bluegrass for athletic fields.
- 8. Better control of weeds.
- Bentgrass competition with Poa annua.
- Finding better Kentucky bluegrass blends.
- Contributions of lawn care pesticides and fertilizers to urban runoff.
- Using Kentucky bluegrass for golf course fairways.
- Strategies for growing turf in the shade.
- Maintaining ornamental grasses.
- 15. Audubon sanctuary tour.

In addition to the tours, the researchers will make themselves available all afternoon to answer your individual questions one-on-one at the ask-the-expert table. The research tour is the highlight of the Field Day, but there is also much more! There is a huge trade show featuring over 50 companies that supply every piece of turfgrass equipment, product, or service that you would ever need. Many of the vendors let you test drive and compare their mowers and other vehicles during the trade show hours. Or if you prefer, sit back and take notes during the equipment demonstration period where factory representatives demonstrate all the latest features of their equipment.

The vendors also sponsor a silent auction where attendees can bid and get deals on needed supplies with the proceeds going to support turf research. The auction is going to have a new feature this year. Your name will be entered in a drawing for \$200 cash every time you place a bid. And remember that if your auction bid wins, you can pay later. You don't have to bring cash to the show. The fun doesn't stop with the auction. There will be a putting contest and a radio controlled offroad toy truck race with the winners taking home other prizes.

If that isn't enough fun and education, then come to one of the afternoon workshops. Immediately after lunch there will be a workshop on pregerminating seed and one demonstrating painting equipment for striping athletic fields and installing logos.

Lastly, don't forget the lunch. The lunch is always superb and almost worth the admission price





The research tour is the cornerstone of Field Day but attendees also learn much and have fun at the trade show and equipment demonstrations.



in and of itself. Lots of good networking and comradeship is shared over lunch and throughout the whole day. And speaking of the admission price, it can be waved by becoming a new WTA member. Every new member in 2001 gets free admission to the show. WTA memberships cost \$125. Call 608-845-6536 for more

information.

Here is a recap of the highlights and the reasons why you must make plans now to attend this important event in August:

- Coffee, juice and donuts at morning registration.
- Eight to ten presentations during the research tour.
- · Lunch that will make your

- mouth water.
- . Two afternoon workshops.
- Ask-The-Expert tent (one-onone discussions with the researchers).
- Equipment demonstrations (on your own or with factory representatives).
- . Huge trade show.
- Auction with \$200 cash drawing.
- Games with valuable prizes for the winners.
- All proceeds go to turf research at the UW-Madison to benefit your profession.
- Free registration to new WTA members.

It's really a fun day and well worth the small registration cost. Also bring a friend who hasn't ever attended Field Day before. They will be impressed. Field day chairperson Jim Trzinski and the rest of the planning committee guarantee good weather and a good time. Contact Audra at 608-845-6536 or by email at ajander2@facstaff.wisc.edu if you have any other questions. Others on the UW Turf Team would also be glad to answer your questions and we all hope to see you there.

Please make note of the adjacent construction update for driving instructions to this year's field day. Unfortunately in August the road just North of the Noer Facility will be closed to all through traffic. But the rewards will be worth the little extra drive.



Construction Update!

The intersection of Midtown Road and Highway M
(Which is the intersection just North of the Noer
Facility) will be closed to all through traffic in August.

Please follow these driving instructions when coming to this year's Field Day.

- From the Madison South Beltline/Hwy 12-18.
- Take the Dodgeville/Verona Road/151 South Exit.
- . Go South for 2 miles to Hwy PD/McKee Rd.
- . Take PD West 3 miles to Hwy M.
- . Go North on M for 1/2 mile.
- . The O.J. Noer Facility is on the left.

Get Rid Of Waste Pesticides and Chemicals At Agricultural Clean Sweep 2001

By Amy Vosberg, Wisconsin Department of Agriculture Trade and Consumer Protection

It's time to check those sheds, basements, or warehouses to see if you have any unwanted chemicals for disposal. Because, if you do, the Agricultural Clean Sweep Program has many disposal opportunities for you in 2001. Thirty-seven counties have collection sites, so there is a pretty good chance that one or more sites are close to your business location.

Ag Clean Sweep will provi its standard 50% discount for agricultural pesticides in 20 So, if you happen to have a old insecticides, fungicid herbicides, fumigants, le paint, etc, your disposal bill v be cut in half. These savings a on top of the savings that y will see by driving your unwa ed chemicals to a drop-off s Normally waste haulers char anywhere from \$100 to \$300 a private party pickup. Cle Sweep can be a very good d for businesses!

One new service Ag Clean Sweep is offering in 2001 is sludge disposal. If your business location generates sludge from loading areas or weigh-scale pits, Clean Sweep can accept this waste for a 50% discount. Sludge can pose difficult disposal problems, so this option should be checked out.

To find out how much you can save by using Ag Clean Sweep for disposal, contact the county

coordinator listed below. The
county coordinator can let you
know how to get
your no-obligation price quote
from the program's waste
hauler. If you like
what you hear, a
location will be

determined and a time assigned. It normally takes only 10 to 15 minutes to unload chemicals and complete final paperwork.

If you have questions about Wisconsin Ag Clean Sweep, call Roger Springman, Ag Clean Sweep Program Manager, at 608-224-4545 or check out the Clean Sweep website at http://datcp.state.wi.us/static/arm/csweep/

* These counties will hold individual Clean Sweep events that will be announced at a later date. Businesses in these counties can also take their unwanted chemicals and pesticides to the permanent collection site in Spooner, Washburn County. Call William Welter to make an appointment.

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COUNTY	DATE (S)	CONTACT	TELEPHONE
Ashland*	TBA	William Welter	715-635-2197
Barron	Sept. 7-8	Dale Hanson	715-537-6315
Bayfield*	TBA	William Welter	715-635-2197
Brown	Jan Dec.	Wess Damro	920-492-4950
Buffalo	July 14	Carl Duley	605-685-6256
Burnett*	TBA	William Welter	715-635-2197
Chippewa	Aug 29-30	Renee Yohnk	715-726-7999
Dane	June 13 and 27	Dale Cardwell	608-294-5358
	July 18		
	Aug. 15		
	Sept. 19		
	Oct. 27		
Douglas*	TBA	William Welter	715-635-2197
Green	May 11-12	Mark Mayer	608-328-9440
lowa	June 22-23	Rhonda Gildersleeve	608-935-0391
Iron*	TBA	William Welter	715-635-2197
Jefferson	Sept. 11	Bob Mueller	920-674-7130
Kenosha	April 4	Rose Skora	262-857-1945
Kewaunee	June 15-16	Lori Hucek	920-487-2940
Langlade	June 23	Kenneth Williams	715-627-6236
Lincoln	Apr Nov.	Mary Slazas	715-282-4942
Manitowoc	May 18-19	Jeff Beyer	920-683-4085
Marathon	Apr Nov.	John Schlicker	715-848-9060
Oneida	Apr Nov.	Mary Slazas	715-282-4942
Outagamie	April 20-21	Jill Haygood	920-832-5277
	Sept. 14-15		
Pierce	Sept. 15	Troy Gansluckner	715-273-3092
Polk	June 9	Debbie Peterson	715-485-9278
n	Sept. 29	NACIE NAC II	715 005 0107
Price*	TBA	William Welter	715-635-2197
Racine	April 5	Rose Skora	262-886-8460
Richland	Aug. 17	Steve Kohlstedt	608-647-6148
Rusk*	TBA	William Welter William Welter	715-635-2197
St. Croix*	TBA	William Welter	715-635-2197
Sawyer*	TBA	Kevin Struck	715-635-2197 920-459-3060
Sheboygan	Jan Nov.	William Welter	
Taylor* Vilas	TBA		715-635-2197
Washburn*	May 17 TBA	Mary Slazas William Welter	715-282-4944
Washington	April 6-7	James Pamperin	715-635-2197 262-335-4399
Waukesha		Karen Fiedler	262-896-8300
Waupaca	May - Dec. April 27-28	Roger Holman	715-258-6240
Wood	May - Oct.	Nancy Eggleston	715-421-8911
vvoou	Iviay - UCL	Manch Eddinaron	/13-421-0311

AG CLEAN SWEEP COUNTY CONTACT LIST - 2001 EVENTS



CALENDAR OF EVENTS

July 16	WGCSA Monthly Meeting	Evansville CC, Evansville
July 19-21	TPI Summer Convention & Field Day	Toronto, Ontario, Canada
Aug 14	WTA Summer Field Day	OJ Noer Facility, Verona
Aug 17	WNA Summer Field Day	Evergreen Nursery, Sturgeon Bay
Aug 18	UW Extension Homeowner Turf Field Day	OJ Noer Facility, Verona
Aug 22	NGLGCSA Monthly Meeting	Pinewood CC, Harshaw
Sept 5	WLCA Ed Fitting Memorial Golf Outing	Western Lakes Golf Club
Sept 10	WGCSA Monthly Meeting	Oshkosh CC
Sept 6	WSTMA Fall Chapter Meeting	UW-Eau Claire and Carson Park
Sept 13,14	75th Anniversary Celebration	Lawrence, KS
Sept 15	Certified Landscape Technician Testing	M.A.T.C. North Campus, Mequon
Sept (TBA)	NGLGCSA Monthly Meeting	Antigo Bass Lake CC, Deerbrook
Sept 28-30	WNA/ Great Lakes Leadership Council	Grand Rapids, MI
Oct 5,6	WGCSA Couples Dinner Dance	Trout Lake Golf & CC
Oct 10	WTA Scholarship Fundraiser Golf Tournament	Grand Geneva Resort, Lake Geneva
Oct (TBA)	NGLGCSA Crew Outing	Minocqua CC, Minocqua
Oct 15	WGCSA Monthly Meeting	West Bend CC, West Bend
Oct 21-25	ASA Annual Meeting	Charlotte, NC
Nov 13,14	Wisconsin Golf Turf Symposium	American Club, Kohler
Dec 11,12	WGCSA/ GCSAA Chapter Seminar	Fond du Lac
Jan 8,9,10	Wisconsin Turfgrass & Greenscape EXPO	Marriott, Madison West
Jan 16-18	Mid-Am Trade Show	Navy Pier, Chicago
Jan 16-20	STMA National Convention	Las Vegas, NV
Feb 3-10	GCSAA International Conference & Show	Orlando, FL
March 4	WGCSA Spring Business & Education Meeting	Fond du Lac

WTA Members — If you have an important date you'd like to share with other members call 608-845-6895 or Fax 608-845-8162 and let us include it in the next calendar.

Abbreviations and Telephone Numbers

ASA	American Society of Agronomy Annual Meeting	608-273-8080
GCSAA	Golf Course Superintendents Association of America	800-472-7878
Mid-Am	Mid-Am Trade Show 2001	847-526-2010
NGLGCSA	Northern Great Lakes Golf Course Superintendents Assoc	800-785-3301 ext. 4013
STMA	Sports Turf Manager Association	
Super / Pro	Super / Pro Golf Tournament	414-786-4303
Symposium	Wisconsin Golf Turf Symposium	414-786-4303
TDL	Turf Diagnostic Lab	
TPI	Turf Producer International	800-405-8873
UW Ext	UW Extension Homeowner Turf Field Day	608-845-6895
WGCSA	Wisconsin Golf Course Superintendents Association	414-786-4303
WLCA	Wisconsin Landscape Contractors Association	800-933-9522
WNA	Wisconsin Nursery Association	
WSTMA	Wisconsin Sports Turf Manager Association	608-845-6895
WTA	Wisconsin Turfgrass Association	608-845-6536

New APHIS Restrictions May Delay Roundup Ready Turf

By John Stier, Department of Horticulture, University of Wisconsin-Madison

The O.M. Scotts Company has been diligently working to develop genetically modified (GM) turf-grasses that are resistant to Roundup (glyphosate). After several years of laboratory work, field-testing must be completed to ensure the turfgrasses have desirable agronomic traits and

are environmentally "safe". The USDA-Animal Plant Health Inspection Service (APHIS) administers the field-testing and approval for commercialization of GM crops. This spring APHIS extended the field-testing monitoring period from one to three years. Initially, it seemed likely

that Roundup-ready creeping bentgrasses might be offered for sale as early as 2002-03. Roundup-ready Kentucky bluegrass was expected to follow shortly thereafter. It is unknown how long the new APHIS regulations will prolong the release of genetically modified turfgrasses.

Timing Means Everything!

By Chris Williamson, Department of Entomology, University of Wisconsin-Madison

> Regardless of the product applied to turf (fungicide, herbicide, or insecticide), effective results depend on several factors. Application timing is one important factor! Although this seems like a simple concept. many factors in the turf environment can cause a product to perform poorly. Even when the product selection, rate of application, and timing are correct, products may be deactivated in a spray tank, degraded by heat and sunlight on the turf surface, trapped in the thatch, or broken down by soil microbes before thev reach their target.

Treatments may also fail because pests have become resistant.

Most pests have a "window of vulnerability," that is a period in their life cycle whereby they are easiest to control. For example, dandelion physiology is different depending on the time of year. In the spring, dandelion plants are putting their energy or resources into developing flowers that are needed for reproductive purposes, while in the fall they place their resources into the development of their root system. As a result, the most effective time to apply a

selective broadleaf herbicide is in the fall just after the first "killing" frost. The same approach applies to white grub control. Japanese beetle grubs typically hatch in late July and early August. Because insects are generally easier to kill when they are small or "young", application of an insecticide is most effective if applied to grubs soon after they have hatched from eggs (i.e., early-August). Thus, by understanding the biology (life cycle, behavior, etc.) of a pest, accurate timing of a control product can be made to attain optimal results.

Coming in October!

The Wisconsin Turfgrass Association Scholarship Fundraiser Golf Tournament

Grand Geneva Resort

October 10, 2001

Details will be mailed in early September Or Call 608-845-6536



WTA Golf Outing at Grand Geneva Spa and Resort: The Highlands

By Jeff Gregos, WTA Golf Outing Committee

The place to be on October 10, 2001 is at the WTA Golf Outing supporting the Wisconsin Distinguished Fellowships Graduate Turfgrass Research. Your attendance will ensure that the University of Wisconsin-Madison's turfgrass program will continue to grow and become one of the best, if not the best in the country.

The WTA has three fundraising events during the year: WTA EXPO, WTA Summer Field Day, and WTA Golf Outing. The revenue generated from these events is the lifeline for much of the turforass research done at the University. So, in order to maintain the quality research and generate the funds for the Wisconsin Distinguished Graduate Fellowships in Turfgrass Research. fundraising efforts must be kicked up a notch or two.

I have been told that during the time of the fund drive for the O. J. Noer Turfgrass Facility, events such as the golf outings were filled to capacity. Our current fundraising effort is probably as momentous as the building of the O. J. Noer Facility. It will ensure that funding is always available for graduate students in turfgrass research. Being the first major event for

the Fellowships, it is important that we set the precedence for other fundraising events in the future.

We understand that it has already been a long summer and many budgets are depleted more than you would like at this time of year. But, it is important that we get a full house at this event to guarantee that our goal of

\$1,000,000 is raised to support four graduate fellowships, one in each of the disciplines of turfgrass research: soils, horticulture, entomology, and plant pathology. This might require some recruitment on behalf of each WTA member. Many members of your club or business acquaintances may have an interest in participating in this event, and should be encouraged to do so.

Fellowships

The primary objective of this fellowship is to ensure that the University has the resources available to attract the nation's most talented students and enable them to pursue their studies in the Turfgrass Sciences at the University of Wisconsin-Madison.

The Fellowships will provide selected graduate fellows, in both master's and doctoral programs, with stipends and professional development funds derived from sources independent of traditional government funding. Annual support for one graduate student currently requires approximately \$24,000, including a stipend and fringe benefits of \$22,000 and professional development funds of \$2,000. To attain this level of support, an endowment of

\$500,000 is necessary for each fellowship.

The WTA's current goal is to establish four Fellowships in turfarass research. endowment requires a contribution of \$250,000, which will be matched by the Wisconsin Alumni Research Foundation (WARF). This goal would require a fund-raising effort of \$1,000,000 over the next several years on behalf of the WTA. This golf outing and other events hosted by the WTA, as well as the financial assistance from WARF, will provide a significant portion of the funds needed to obtain this goal.

The Course

Set amidst the breathtaking beauty of a rolling, naturally grassed terrain, the par-71 Highlands has a slope rating of approximately 130 and offers a degree of resistance from the back tees. Tough birdies will test even the most avid golfer...while the easy bogies will entice the occasional player.

Originally designed by Pete Dye and Jack Nicklaus, the 20year-old course was recently renovated by renowned Golf Course Designer Robert Cupp. His goal was to create a course that provides golfers with a challenging game regardless of their playing level.

The Event

Where: The Highlands at Grand Geneva Spa and Resort Lake Geneva, WI

> When: Wednesday, October 10, 2001

Watch for mailing and further information in the near future, but be sure to reserve the date on your calendar.



WSTMA Goes To The Big Leagues

By Chris Brindley, Building and Grounds Superintendent University of Wisconsin-Stevens Point

The first WSTMA Seminar On Wheels was a huge success despite a few glitches. Attendance was in the big leagues and we went to visit the big leagues at the new Miller Park. It was our largest attended event to date, with 104 people. If it wasn't for a couple short rainstorms and a cancelled Brewer

game do to electrical problems in the stadium, the day would have been exceptional.

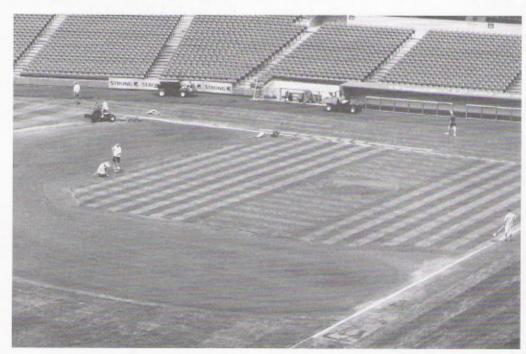
The seminar started out with a tour of Spring Valley Turf fertilizer plant. Bill Vogel and his staff were wonderful hosts. It was interesting to see how a fertilizer plant works from beginning to end. We were able to see each ingredient in its bin, and the recipe used to make the proper nitrogen-phosphorus-potassium ratio, as well as how it was mixed together, screened, bagged and labeled. We also saw one of their hightech fertilizer spreader trucks that ensures accurate product distribution for all athletic fields, golf courses, corporate properties, and other lands it works on.

Next we went to Heidel's

Banquet Facility and had Dr. Wayne Kussow from the University of Wisconsin-Madison Soil Science Department speak to us about managing soil water. He talked about the ability for water to go into and through the soil, water retentions in soil, managing excess water, and irrigation



WSTMA members enjoy the impressive outside view of Miller Park.



Miller Park grounds crew prepping the field during our field tour.



The arrangement chairman and author who organized our fun day.

management. WSTMA is extremely fortunate to have professors like Dr. Kussow who are dedicated to our organization. Before we left the facility, we ate a wonderful lunch at Heidel's paid for by Spring Valley and Pro's Choice.

Our next stop was Miller Park, home of the Milwaukee Brewers. There we were treated to a behind-the-scenes tour of the stadium. It was such a beautiful site. Some of the highlights included being in Bob Uecker's broadcast booth, the luxury boxes, the 300 club area, the dugouts, and in the bullpen where the pitchers warm up. We were extremely fortunate to

have field superintendent Gary VandenBerg and assistant superintendent and UW-Madison alumni Raechel Sager talk to us after the tour. They talked about their field and all of the new challenges of the new stadium. Next Steve Trusty, Executive Director of STMA, spoke to us about the benefits of becoming a chapter and national STMA member.

John Anderson, from Simplot Partners was our next speaker and he did a superb job. John spoke about the importance of having a proper fertilizer program for your fields. He also did a great job in dodging foul balls that came his way from the bat-

ting practice and with all the background noise.

After those presentations, we went to one of the Miller Park pavilions for a catered dinner. We tried to attend a Brewer game, but that was unfortunately canceled due to a power outage after the first inning. Attendees were told to save their ticket stub to use as a rain check for any other game this season.

All in all, it was a good day. We saw great facilities, heard terrific speakers, toured the new Brewer Stadium, and had an opportunity to network with other professionals. It was truly a big league day.



Field superintendent Gary VandenBerg tells us about his new park experiences while Raechel Sager waits to add her comments.



Bill Vogel hosted an informative tour of the Spring Valley Plant.

NCR-192: A Meeting of the Minds

By John Stier, Department of Horticulture, University of Wisconsin-Madison

Each year the turfgrass researchers from the Midwest gather to discuss regional turf research projects. The meeting is organized as the North Central Region (NCR)-192 project. The 2001 meeting was held June 19-20 in Manhattan, Kansas. The three regional turf projects discussed included *Poa annua* seedhead control, Low Input Sustainable Turf (LIST), and a lawn problem solver website for homeowners.

The *P. annua* control study was coordinated by Dr. Bruce Branham and conducted in Wisconsin, Illinois, Indiana, Michigan, Ohio, South Dakota, and Missouri. The objective was

to determine the best combination and timing of various plant growth regulators (PGRs) to control P. annua seedheads on golf course fairways and greens. Though the data have not vet been formally analyzed, the Embark-Proxy combination provided good control with little to no phytotoxicity. A Primo-Proxy combination also provided excellent control without phytotoxicity. The final results will be presented in the 2001 Wisconsin Turf Research Report, which will be available at the 2002 Turfgrass and Greenscape EXPO in January.

The LIST study was intended to determine the best combina-

tion of tall fescue or fine fescue with white clover, red clover, and/or birdsfoot trefoil for low maintenance areas. Three and one-half years after seeding, there is little if any clover in the plots. Birdsfoot trefoil has achieved a stasis with the fescues and comprises about half of the turf area.

This spring Tom Voigt (U. Illinois) and I received a grant to develop an interactive website to assist consumers with diagnosing and managing turf problems. The project, the Lawn Problem Solver, is expected to be on-line by summer 2002.