

“One month before our first event there were 8-foot snow drifts on the field. Most of that melted but a cold snap 2 weeks before the first event turned what remained into a layer of ice.

“With a week to go before the season started, and the forecast looking grim, we spread a thick layer Milorganite (20 lbs/1,000 sq. ft.) to help melt the ice and warm up the soil, then we removed the rest of the snow. The infield skin, baselines, home plate area, and warning track were tilled up and left to dry, then we rolled and graded these areas. We removed the tarps from the mound and bullpens to start those areas drying. A plate compactor was used to firm up the clay, followed by height and slope corrections. We managed to squeeze all preparations into 7 days of heavy work to have the field ready for the team’s April 1 workout.

“Unfortunately this was only the start of what the weather had in store for us this year. The team opened the season on the road while the weather in Appleton was 60 degrees and sunny, great weather for us in early April since our average temperatures that time of year are more like 45 degrees. When the team returned, the cold weather came with them. The Opening Day high was 48 degrees and that was the warmest day of the week. We played all nine innings that day but the next five games were cancelled due to rain, snow or cold.

“The cold weather and snow caused many headaches however they were not our only concerns [last] year. After the snow came the rain;

we reached our yearly average rainfall by the beginning of August. We pulled the tarp 41 times this season, which was at least down from the 54 times we’d pulled it the previous season.

“Poor drainage in the outfield compounded the challenges that come with the rain. We had to be creative in order to maximize the drainage we did have. The tarp emptied to all fields this year instead of just right field. We worked to aerify as much as possible and deep-tined once to allow the water to infiltrate quicker and deeper into the soil profile. With the addition of drainage to the outfield [in the fall of 2008], we are hopeful it will greatly increase the amount of rain the field sustains without compromising the safety of our players.”

**ST:** What are you doing now to hold down costs in the economy?

**Warczak:** Fortunately this year the organization hasn’t felt the effects of the bad economy. I do however have to keep a closer watch on employee hours, as well as this year’s budget.

**ST:** Are you changing anything this year in your maintenance? Why?

**Warczak:** I was extremely pleased with last year’s results, however there’s always room for improvement so we’ll make some minor changes.

**ST:** What’s the best piece of turf management advice you’ve ever received?

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# FIELD OF THE YEAR



**Warczak:** I've received a lot of great advice from a variety of people. In particular, my previous boss Justin Johnson taught me a lot. The best piece of advice he gave would have to be, "Do it right the first time."

**ST:** What are your specific responsibilities?

**Warczak:** My general responsibility is to maintain the field, as well as the outside landscape. I coordinate the schedules and job duties for the grounds crew, prepare the field for games, and oversee the events that take place on the field. I also work with the coaching staff's team schedule to know when we need to set things up. Other responsibilities would include coordinating tarp pulls, along with a variety of other day-to-day tasks.

**ST:** How do you keep your engine charged to do your best every day?

**Warczak:** The beginning of the season is always difficult with the cold and unpredictable weather. Luckily by the end of spring we have a full grounds crew and we fall into a routine. We also try to have fun to keep ourselves sane during the season.

**ST:** How do you balance work and personal life?

**Warczak:** During the season it can be difficult, but I have a great family and girlfriend that understand my busy schedule. Despite the amount of hours I work I always try to make time for family and friends.

**ST:** What are your favorite things to do off the job?

**Warczak:** Even off the job I enjoy being outside. My favorite things to do, especially during the off-season is hunt and fish. When I'm not hunting or fishing, the off days give me time to hang with my friends and family. ■



## Time Warner Cable Field Maintenance Program

<b>January</b>	Building maintenance Stadium projects Snow removal
<b>February</b>	Building maintenance Stadium projects Snow removal
<b>March</b>	Building maintenance Stadium projects Snow removal Prepare stadium for season Turn on irrigation system and test Check height of cut and reel adjustments on equipment Field preparation: dry everything out, check height and slope of mound and bullpens Start fertility program
<b>April</b>	Games and events begin Continue fertility program Aerate with solid tines Overseed and topdress Begin mowing; at beginning of month mow as often as needed, near end of month 3x/week Edge 1x/week Toward end of month begin berm seating area mowing 1x/week, clippings are removed
<b>May</b>	Mow every game day and every other non-game day Continue fertility program with two additional applications of GroPower 0-0-10 at 1 lb./1,000 sq. ft. Prepare field for NCAA Div. III World Series Check mound and bullpen heights and slopes Aerate 2x with solid tines; once before World Series, once after Edge 1x/week Begin mowing program for common areas and outside landscaping 1x/week Clean outside landscape beds and mulch
<b>June</b>	Mow every game day and every other non-game day Continue fertility program with two additional applications of GroPower 0-0-10 at 1 lb./1,000 sq. ft. Check mound and bullpen slopes Aerate with solid tines before State HS tournament Aerate, pulling cores and removing them Topdress with sand after removing cores Edge 1x/week Outside landscape and berm mowing program continued
<b>July</b>	Mow every game day and every other non-game day Continue fertility program with two additional applications of GroPower 0-0-10 at 1 lb./1,000 sq. ft. Check mound and bullpen slopes Aerate with solid tines Edge 1x/week Outside landscape and berm mowing program continued Stadium playground is mulched
<b>August</b>	Mow every game day and every other non-game day Continue fertility program with two additional applications of GroPower 0-0-10 at 1 lb./1,000 sq. ft. Check mound and bullpen slopes Aerate with solid tines Edge 1x/week Outside landscape and berm mowing program continued
<b>September</b>	Season ends; mow 3x/week Continue fertility program with one application of GroPower 0-0-10 at 1 lb./1,000 sq. ft. Aerate with hollow tines; remove cores Overseed field Topdress with sand after cores are removed and field overseeded Check height, slope and table of mound and bullpens; cover for winter Strip the infield conditioner Edge 1x/week Outside landscape and berm mowing program continued Field projects Stadium projects
<b>October</b>	Mow as needed, usually 2x/week Fertility program continued Outside landscape and berm mowing program cut to 1x/2 weeks Outside landscape work includes pruning trees and cutting back shrubs and flowers Field projects Stadium projects Prepare stadium for winter
<b>November</b>	Mow if necessary Mow outside landscape and berm if necessary Prepare stadium for winter Stadium projects Snow removal
<b>December</b>	Stadium projects Take vacation

# Membership Application



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**This form is only valid for first time STMA National members through Sept. 30, 2009  
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### Membership Category:

- Sports Turf Manager \$55
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- Commercial \$148
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\*There must already be a National Sports Turf Manager from your facility or Commercial Member from your company before you may sign up in the Associate category.

Cut Here

## STMA Exhibition to be First Outside of National Conference in Years

Attendees will come to STMA's Midwest Regional Conference and Exhibition June 24-25 in Ames, IA to experience more than 12 hours of excellent education and networking opportunities. However, equally as important to some attendees, there will be more than 6 hours in the outdoor Exhibition area, viewing the latest and greatest products and services from STMA National and Chapter Commercial members. STMA hosted a Regional Conference in Philadelphia last year, but there was not an exhibition tied to that event. This will be the first event with an exhibition outside of STMA's annual event held each January in many years.

STMA expects more than 40 exhibitors for the event (see sidebar for current exhibitor list), and the Exhibition will be open from noon until 6pm on Wednesday, June 24, with several hours dedicated to the Exhibition alone.

However, it will be up to the exhibitors to stay open even later if they so choose. Exhibitors may remain open during the Bar-B-Que dinner and softball games, which are taking place in an area adjacent to the exhibition. These events run until 8pm, and Exhibitors may remain open, as long as they are able to move out of the area that night. This maximizes the amount of time attendees have to talk with their national, regional, or local distributor if they would like.

Other events on the 24th include tours of the Iowa State athletic facilities, Dr. Dave Minner's sports turf specific research plots, and demonstrations on topics including irrigation, logo painting, workplace safety and back-injury prevention by an OSHA approved instructor. All of these events, except for the ISU athletic facility tour, will be taking place in areas that are in close proximity to the exhibition area.

Education on the 25th will be at the Scheman Center, just northwest of the previous days' events and will include many nationally renowned speakers. Larry DiVito, Dale Getz, CSFM, Brad Jakubowski, Dr. Andy McNitt, and John Netwal, CGCS headline what will be a day packed with useful tips and tricks for sports turf managers, crew, coaches, and administrators alike.

Registration costs for the two-day event will be \$75 for a member of STMA National or one of the eight participating chapters (Gateway, Illinois, Iowa, Minnesota, MO-KAN, Nebraska, Ozark, and Wisconsin) and \$95 for a non-member. This price will include two days of education, entrance to the exhibition and demonstrations, and meals. Online registration is available at [www.STMA.org](http://www.STMA.org).

STMA has negotiated reduced rates at two Ames hotels. The AmericInn and The Country Inn and Suites, sister properties less than a five minute drive from Iowa State, each serve a daily hot breakfast, and have rates starting at \$79 and \$89 respectively. Both properties are taking reservations at these special rates through May 27. Call 515-233-1005 for the AmericInn or 515-233-3935 for the Country Inn and Suites, and mention that you are with the Sports Turf Managers Association to get the negotiated rate. ■

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# Join STMA for half price for a half year

Never been a member of STMA? Then you qualify to join STMA through this exclusive, pro-rated offer.

Join now and receive the next 6 months of membership at half price. Those who are sports turf managers and academics pay \$55, and commercial members pay \$148. We are confident that the value you receive from being a member of STMA for a partial year will convince you to join for the full 2010 year, and beyond.

STMA Membership benefits include:

- Access to the Members' Only section of STMA.org, which has a searchable membership directory, technical resources, and employment openings for you and résumés of potential employees and interns for easy recruitment.

- Discounted registration/exhibition fees to attend STMA's regional conferences and its Annual Conference and Exhibition—an event unmatched in the industry for sports field specific information and education.

- In 2009, STMA will be hosting a Midwest Regional Conferences on June 24-25 in Ames, IA, complete with equipment and cultural practices demonstrations, turf research plot tours, an outdoor exhibition, tours of the Iowa State University sports facilities, a full day of indoor classroom education with two concurrent sessions, a golf outing, a softball competition and a barbeque.

- A subscription to *SportsTurf Magazine*, the official magazine of STMA and the industry's leading publication (please allow 6-8 weeks for delivery).

- A monthly e-newsletter that communicates association, industry and career development information.

- On-line access to the Industry Sourcebook to quickly and thoroughly research product, equipment and service suppliers.

- Online access to Michigan State's Turfgrass Information File (TGIF), the green industry's greatest resource for up-to-date technical information (sports turf manager members).

- Discounts to the University of Georgia's distance-learning programs.

- Opportunity to take a leadership role through national committee service.

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nationally recognized Field of the Year Awards Program.

- Ability to apply for a scholarship through The SAFE Foundation, STMA's charitable arm (student members).

- Recognition as a professional and access to further validate your abilities through certification.

Our members tell us that the top three reasons they join STMA are to take advantage of our network of peers for ideas and best management practices, our sports turf management-specific education, and for quick access to information and resources.

Membership in STMA also enhances job security and may be the most economical "unemployment insurance" you can buy. STMA's programs and services help members to proactively strengthen their value to their employers. "I know I have been able to provide more value to my employer because of my membership in STMA. I have learned cost and time-savings ideas that were especially effective in the aftermath of Hurricane Katrina," says Kenneth Edwards, CSFM, City of Gulfport, MS. The knowledge, skills and abilities you gain by accessing STMA's education and information can also help you to prepare to take that next step in your career.

Another benefit of joining a national organization is its ability to advocate for you and for the profession through alliances with other organizations. An STMA board member serves on the National Turfgrass Federation board, which advocates for more federal funding for turfgrass research. STMA is an educational partner with the National Interscholastic Athletic Administrators Association (NIAAA) and works closely with the National Recreation and Park Association (NRPA) and other organizations whose members are the employers of sports turf managers. STMA actively works with these organizations and green industry associations to promote the professionalism of our members and to educate these groups about the high level of education and technical expertise needed to manage safe playing surfaces. We continually seek ways to provide recognition and garner respect for our members.

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**Sports Turf Managers Association of Arizona:** www.azstma.com.

**Chesapeake Chapter STMA (formerly Mid-Atlantic Athletic Field Managers Organization – MAFMO Chapter STMA):** www.cstma.org.

**Colorado Sports Turf Managers Association:** www.cstma.org.

**Florida #1 Chapter:** 954/782-2748

**Gateway Chapter Sports Turf Managers Association:** www.gatewaystma.org.

**Georgia Sports Turf Managers Association:** www.gstma.org.

**The Greater L.A. Basin Chapter of the Sports Turf Managers Association:** www.stmalabasin.com.

**Illinois Chapter STMA:** 847/263-7603.

**Intermountain Chapter of the Sports Turf Managers Association:** www.imstma.org.

**Iowa Sports Turf Managers Association:** www.iowaturfgrass.org.

**Keystone Athletic Field Managers Org. (KAFMO/STMA):** www.kafmo.org.

**Kentucky Sports Turf Managers Association:** www.kystma.org.

**Michigan Sports Turf Managers Association (MiSTMA):** www.mistma.org.

**Minnesota Chapter STMA:** www.mstma.com.

**MO-KAN Sports Turf Managers Association:** www.mokanstma.com.

**New England STMA (NESTMA):** www.nestma.org.

**Nebraska Sports Turf Managers Association:** 402/441-4425.

**North Carolina Chapter of STMA:** www.ncsportsturf.org.

**North Florida STMA Chapter:** 850/580-4026.

**Northern California STMA:** www.norcalstma.org.

**Ozarks STMA:** www.ozarksstma.org.

**Sports Turf Managers of New York:** www.stmony.org.

**Sports Field Managers Association of New Jersey:** www.sfmanj.org.

**Ohio Sports Turf Managers Association (OSTMA):** www.ostma.org.

**Pacific Northwest Sports Turf Managers Association:** www.pnwstma.org.

**Southern California Chapter:** www.socalstma.com.

**South Carolina Chapter of STMA:** www.scastma.org.

**Texas Sports Turf Managers Association:** 866/897-8621.

**Tennessee Valley Sports Turf Managers Association (TVSTMA):** www.tvstma.com.

**Virginia Sports Turf Managers Association:** www.vstma.org.

**Wisconsin Sports Turf Managers Association:** www.wstma.org.

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# Q&A



BY DR. GRADY MILLER

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# Is K Special?

*Can you tell me more about potassium (K) fertilization? I have read that it is good to apply in the fall for cold tolerance and summer application can help with drought tolerant.*  
North Carolina

Due to the 2007 drought in the Southeast any way to improve drought tolerance of turf was considered. And this time of year managers with bermudagrass are wondering how well their grass fared following the low winter temperatures. Application of fertilizer containing K (third ingredient listed on fertilizer label) is a cultural practice that has been suggested to turf growers to increase tolerance to stresses such as those caused by drought, winter temperatures, and diseases. So, perhaps it would be beneficial to review some of the previous research on K application, particularly as it relates to K rates.

A number of soil and turf scientists have spent years studying K and its influence on turf growth and health. Plant pathologists have also suggested there are positive benefits to K applications. Much of this research is complementary in terms of concepts and rates, despite the fact that all researchers do not agree how to use this information.

One premise behind using elevated K application rates is that high sand content in rootzones of athletic fields favors K loss through leaching during the long growing season in the southeastern US. Thus, efficiency of utilization of applied K is thought to be relatively low. Because K taken up by bermudagrass remains primarily in above-ground shoot tissue, much of it is removed when the turf is mowed and clippings are removed. Therefore, high K rates, or frequent K applications, may be necessary to maintain adequate K in turfgrasses. Rates of application of K required to maintain adequate tissue K concentrations depend on soil type, fertility status, and N rate.

About 15 years ago, I initiated a series of studies to evaluate the influence of K rates on drought and cold tolerance of Tifway bermudagrass. These were field studies evaluated over a 3-year period. Potassium chloride and potassium sulfate were applied at a number of N:K ratios with K rates from 0 to 8 pounds of K per 1000 square feet each month during the growing season. Note that I am reporting K rates, not  $K_2O$  ( $K \times 1.2 = K_2O$ ) as indicated on a bag of fertilizer.

A common question is how much K is needed to provide sufficient K in turfgrass? One way to judge sufficiency is to evaluate how much K needs to be applied to maximize K concentration in the plant. As more and more K

fertilizer is applied, more can be extracted from the soil. But this relationship does not hold in the plant. The maximum leaf tissue K concentration in Tifway was approximately 1.3% in my studies. This maximum concentration was reached with about 1.6 pounds of K per 1000 square feet. These maximums were reached with a 1 to 1 down to a 1 to 0.5 N:K ratio depending on soil and N rate.

At these K application rates, the soil had 50 to 90 pounds K per acre (Mehlich-1 extractable K). This amount would generally be considered in the low to medium range of most soil tests. This illustrates that soil test recommendations may not be well calibrated. I cannot remember seeing many soil tests in the Southeast that indicated potassium was "high" or "very high," regardless of fertilization practices.

So why do researchers and extensions specialists continue to encourage high K rates when applications of K do not usually cause differences in turfgrass color and growth? It is my opinion that we view K fertilizer as insurance. Soils often have a poor retention of K, so regular applications and/or elevated rates may be necessary to maintain adequate K in turfgrasses. Potassium has never been classified as an "element of impairment." Since, it is not considered an environmental pollutant we are not as concerned about it leaching compared to nitrogen or phosphorus.

Also, benefit may be realized that is not related to darker green color. In our study drought tolerance was measured using a single application of K fertilizer at rates from 0 to 2 pounds K per 1000 square feet. Under conditions of low soil K concentration (around 15 pounds per acre in this example) K fertilization can have a significant impact on the plant's ability to prevent leaf tissue damage brought on by drought. Plants that received K rates of 1 or 2 pounds per 1000 square feet were able to recover from drought stress more quickly than plants not receiving K. In this study there were no benefits of using the 2 pound rate. In other words, the 1 pound of K was sufficient to get a positive response and the 2 pound rate was no better.

The difficult aspect is determining how much K to apply and when to apply it. Because of limitations of the soil in retaining K, applications of K with frequencies similar to nitrogen are reasonable. You want the K in the plant before the plant is stressed. As for rates, most research suggests that an application rate based on a ratio to nitrogen is appropriate. Research suggests benefit to apply at least half as much K as nitrogen, with decreasing gains once you apply more K than nitrogen. So, somewhere within that range seems justified. ■



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