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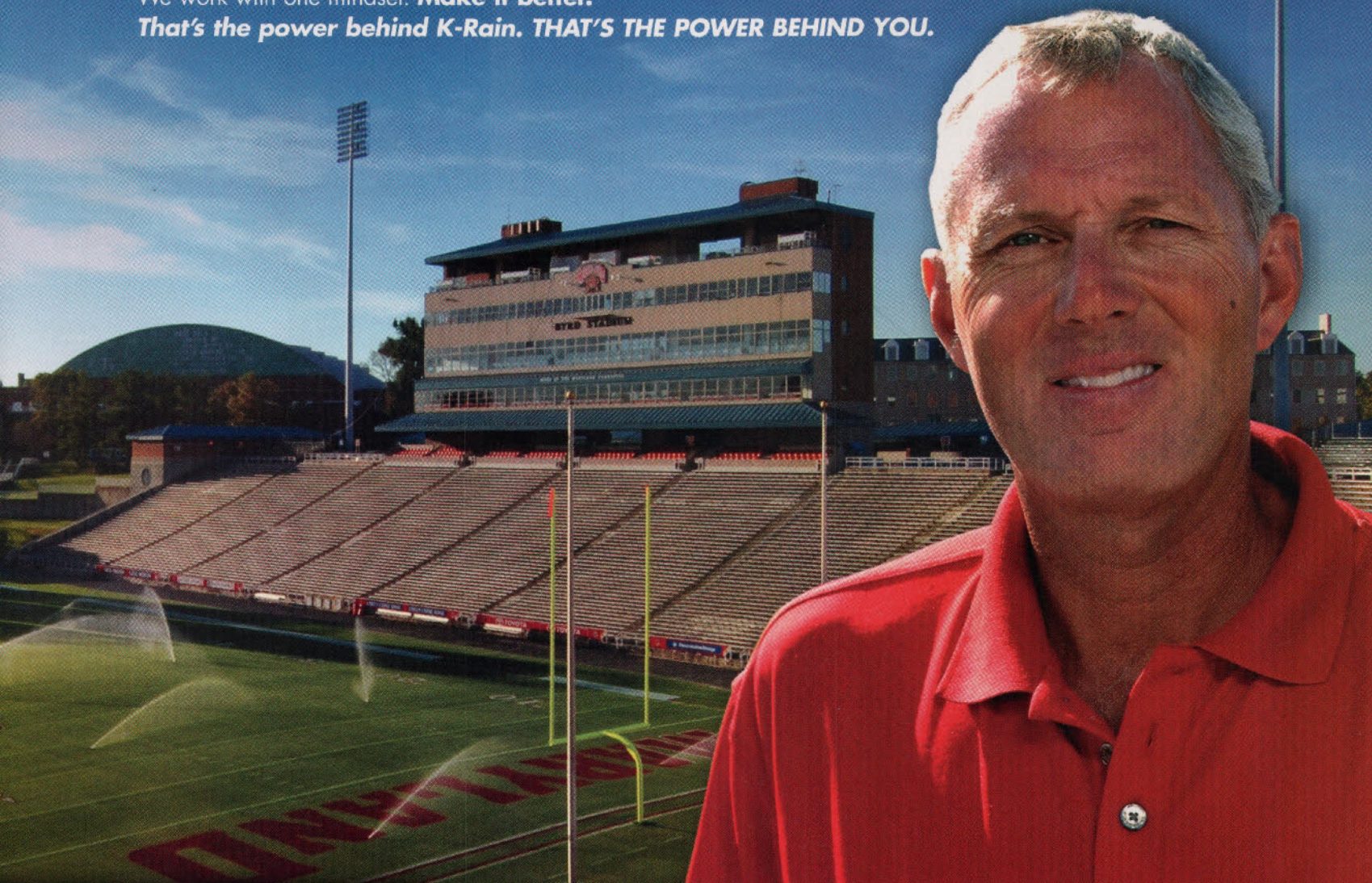
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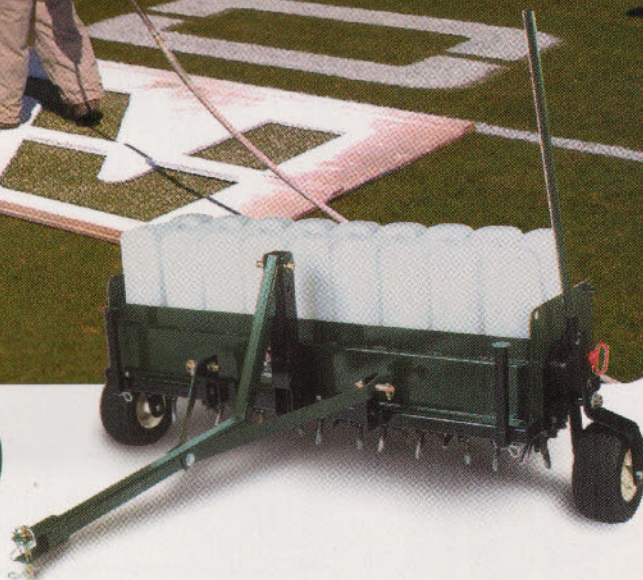
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On the cover: Michigan State prepares to take the field at Spartan Stadium. Amy Fouty, CSFM, won the 2005 STMA College Field of the Year award for managing the turf.

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## Umpire saves the day!



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**A** storm with 84-mph winds and blowing rain forced a two-hour, 12-minute rain delay before the July 19 game at Busch Stadium. Later Cardinals manager Tony LaRussa praised the work done to get the field ready to play. "You have to give a high-five to [umpire crew chief] Joe West," he told the St. Louis Post-Dispatch. "He knew exactly what needed to be done. He told the grounds crew exactly how they needed to prepare the plate for the game."

I found this interesting. Although LaRussa in the same interview said, "We have a terrific staff," the manager is crediting an umpire with knowing how to repair the home plate area after a storm so severe it shredded parts of the field tarp and demolished the FOX studio (good shot, Mother Nature!)? I called the head turf manager at Busch a few times to get his reaction but we never connected.

The newspaper reported that after a meeting between the umpires, grounds crew, and the Cards' general manager determined the game could be played, "the grounds crew cleared the field and spent about 15 minutes fixing the drenched home plate area, easily the worst part of the field." This was some storm; reports said 30 people suffered injuries at the ballpark and five were taken to the hospital. The storm tore through the new park, flooding the dugouts and some clubhouse areas. The paper credited "Cardinals personnel" with containing the flooding. I guess Joe West wasn't available.

### Welshans honored by KAFMO

The Keystone Athletic Field Managers Organization (KAFMO) presented its 2006 Fowler Founders Award to Jim Welshans at the 10th annual Athletic Field Conference. KAFMO is the Pennsylvania chapter of STMA.

Welshans is a founding father of KAFMO and a Penn State Cooperative Extension educator. He served as the organization's treasurer for 10 years. The award named in honor of Don Fowler, a retired PSU extension agent who is credited with organizing the group who formed KAFMO in 1994. The award itself is one of Fowler's worn-out workboots that has been bronzed. It is given to an individual the KAFMO Board recognizes for his or her dedication not only to KAFMO but also for doing something to make a difference in the sports turf industry of Pennsylvania.

Welshans is going strong after 37 years with Penn State Extension, still providing recommendations to hundreds of turf managers in the state's Capital Region. He also volunteers annually for the grounds crew at the Little League World Series in Williamsport, a crew that is headed up by Don Fowler and staffed by KAFMO members. Congratulations Jim, you deserve the recognition.

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# President's Message

## Cotton or China?



**STMA HQ staff (L to R): Patrick Allen, Nora Dunnaway-McIntire, Leah Craig, and Kim Heck.**

**H**appy 2nd Anniversary to us, Happy 2nd Anniversary to us." A traditional second anniversary gift is cotton and the modern gift is china. As your headquarters staff marks its second year with STMA, we'd like to thank the membership for a rewarding 2 years. We appreciate the kindness and confidence you have shown us. Like cotton, it has been refreshing—filled with energizing business interactions and, like china, we value more each day the trust you place in us. Our focus has been to deliver great customer service while implementing the Board's strategic plan.

As we commemorate our second anniversary, we have been reflecting on what has surprised us the most about our work for the STMA:

Leah Craig: "I find it refreshing how easy STMA members are to work with and how they are so willing to offer their help to each other and to headquarters!"

Patrick Allen: "I have found the members' dedication, love of the green industry, and enthusiasm for the association to be incredible assets to the association as a whole. I have also noticed that STMA members share a passion for conversation, especially at the cocktail hour."

Nora Dunnaway-McIntire: "As the newest member on the STMA team, I am excited to work with a group that has such great camaraderie within the staff and within the entire organization. Even board members are so approachable."

For me, I am still amazed by the involvement and dedication of STMA's committee members. I work every single day with committee members as they advance projects and programs on behalf of the membership. STMA has a very healthy committee system, and its work is testimony to the projects that have been completed in the association's plan: developing and executing the membership survey, improving *SportsTurf*, growing the STMA conference and show, expanding the association's membership, and addressing and completing dozens of other objectives.

Thanks for a great two years. We're looking forward to the next two (and beyond!)

Kim Heck, CEO

President's Note: On behalf of the STMA Board of Directors, I would like to thank Kim, Leah, Patrick and Nora for their commitment to the association and their continued recognition of the sports turf management profession. Their work on behalf of the membership has been excellent. The Board of Directors has tremendous confidence in the headquarters staff and appreciates all they do. Here's to a great future together!

Mike Trigg, CSFM, STMA President

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# Best practices: fertilizer programs

By Cale A. Bigelow, PhD

Cool-season grasses like Kentucky bluegrass, perennial ryegrass, turf-type tall fescue and to a certain extent, cold-hardy bermudagrass cultivars, grow best during the spring and fall and generally remain green year round.

Bermudagrass by contrast is a warm-season grass that grows best during the summer, turns straw brown following the first hard frost and remains dormant during the winter months. For this reason bermudagrass is sometimes overseeded with ryegrass to extend the use period, sustain favorable surface playing conditions, improve

aesthetic appearance, and to a lesser extent provide some protection against traffic.

Regardless of the species being grown, the overall goal for any athletic field manager is to provide a consistently dense, attractive, and safe turf for athletic competitions. The two major cultural practices that you have the most control are mowing and fertilization. Most fields will respond favorably to regular mowing, at least twice per week, during the growing season. Regular mowing provides a smooth, even surface and increases stand density due to enhanced tillering.

**Above: the exact fertilizer needs for individual turf areas and species will vary by site.**

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## Cool-season fertilization

Turfgrasses require 16 essential macro and microelements to maintain proper health. Simply because a nutrient is classified as a macronutrient, do not assume that this nutrient is more important than a micronutrient. Macronutrients are simply required by the plant in greater amounts. For micronutrients like iron or manganese, very small deficiencies can result in poor turf color and slow growth. Whenever the topic of fertilization arises the discussion usually revolves around three major plant nutrients: nitrogen (N), phosphorous (P) and potassium (K), which are contained in a complete fertilizer. In reality, however, most fertilizer programs are constructed around an annual N requirement because N is the most abundant nutrient in the plant tissue, normally 3-5% by dry weight and elicits the strongest growth and greening response. Generally, the higher the tissue N content, the more green the leaves appear. Turf with a high leaf tissue N content will require more N to sustain that level and greenness. The major questions with respect to N applications are often, how much and when should you apply fertilizer?

For cool-season grasses the most beneficial time to apply N is during the fall months. Therefore, the bulk (50-75%) of the annual N needs should be applied using several applications, the first occurring in late summer (e.g., first week of Sept.) and continuing at least once or twice more through the autumn months. Some of the reported benefits of this practice are that you extend the greening period later into the fall, spring green-up occurs as much as one month sooner, it stimulates tillering and rhizome activity which increase stand density and reduces weed pressure and most importantly increases root growth. Furthermore, N applications during this period generally do not result in unwanted growth surges like they would if N heavy N levels are applied in the spring.

One of the most important N applications for facilities with a limited fertilizer budget is the late fall N fertilization. This is an application of a readily soluble N source like urea or ammonium sulfate that is applied just prior to winter dormancy when the turf is still green but very little shoot growth is occurring. In many regions this occurs sometime between Nov. 1 and Dec. 1.

Although fall fertilization is generally positive one possible negative is the potential for increased winter disease injury. The main disease associated with this practice is *Microdochium* patch, also referred to as pink snow mold. It is most severe in succulent turf going into winter. Although this disease sometimes occurs it can be cured with fungicide applications and the benefits of fall fertilization strongly outweigh this potential negative. In fact, turf properly fertilized in the fall generally has fewer spring and summer disease problems.

The remaining 25-50% of annual N needs should be applied during the growing season and during periods of intense use, generally middle to late spring (mid-May-early July). These N applications help maintain greenness and promote plant vigor. If possible, little to no N should be applied during the peak summer months to minimize disease incidence and prevent possible damage where turf may be under heat and/or drought stress.

When subjected to intense traffic and wear though, mowing alone is not enough to maintain stand density. You need regular fertilization. To maintain a high quality, dense turf requires multiple nitrogen (N) fertilizer applications applied throughout the year. These periodic N applications maximize and maintain green color, shoot density and result in consistent controlled shoot growth. Apply more frequently, and at lighter (1/2 lb. of N per 1000 ft<sup>2</sup>) rates, which help them monitor turf health and enhance nutrient recovery, especially in heavily trafficked areas. Additionally, this practice allows you to minimize unwanted growth surges and unnecessary mowing.

**WE OFTEN FORGET  
THAT AS FERTILIZER  
APPLICATIONS  
INCREASE TO MAINTAIN  
GREEN COLOR,  
SO DO MOWING  
AND IRRIGATION  
REQUIREMENTS.**

The exact fertilizer needs for individual turf areas and species will vary by site, prevailing weather conditions, and intensity of use. In any given growing season a fertilization program may need to be adjusted to apply slightly more or less nutrients depending on the following factors:

**Desired appearance.** A dark green, vigorous turf will require more fertilizer than a thin, lighter colored turf. We often forget that as fertilizer applications increase to maintain green color, so do mowing and irrigation requirements. Choosing naturally dark green turfgrass species and cultivars may be one solution for reducing nutrient applications while ensuring a dark green turf.

**Turfgrass species.** Compared to Kentucky bluegrass and perennial ryegrass, deeper rooted species like turf-type tall fescue, and bermudagrass may perform adequately with fewer annual fertilizer applications because they are able to extract nutrients from