PROTECTION is his job.

It's yours, too.

Player safety is your number one concern and all the helmets and shoulderpads in the world can't make up for a poor playing surface.

Aquatrols makes it easier to protect your team by protecting your turf. We move water and water-soluble inputs off the surface and into the soil more uniformly, which helps you produce more uniform playing surfaces that can stand up to (and recover quickly from) the rigors of play.

From localized dry spots to excess surface moisture, Aquatrols has got you covered.

Scan here to find out more:





www.aquatrols.com



WHILE YOU'RE THERE, DON'T FORGET TO CHECK OUT OUR

Online Store!

WE UNDERSTAND WHATFIELD MAINTENANCE PROFESSIONALS NEED



VISIT KI-LINEUP.COM

TO LEARN A LITTLE MORE ABOUT KRYLON® INDUSTRIAL ATHLETIC PAINTS AND A CHANCE TO WIN

Follow us on:













Contents

JULY 2012 | VOLUME 28 | NUMBER 7

Features

Field Science

- **8** Is tall fescue right for your field?
- **12** Improving our nation's front lawn
- **18** Managing natural turf football fields "on a dime"
- **19** Turfgrass breeders' test provides extensive trial data

Facilities & Operations

- **20** From dirt to turf: 7 steps for successful construction of a synthetic field
- **24** Overseeing synthetic turf installations
- **26** Getting USC ready for some football
- 37 Kennesaw State builds 88-acre sports & rec park

Field of the Year

28 2011 STMA College Football Field of the Year: Ryan Field, Northwestern University, Evanston, IL

Irrigation & Drainage

30 How water pressure can affect irrigation system efficiency and performance

Professional Development

32 Notes on becoming a Certified Sports Field Manager

Tools & Equipment

36 Improving parks helps West Park, FL to "Playful City USA" title

Departments

- 6 From the Sidelines
- 7 STMA President's Message
- 17 John Mascaro's Photo Quiz
- 40 STMA in Action
- 43 STMA Chapter Contacts
- 44 Marketplace
- 45 Advertisers' Index
- **46** Q&A



On the cover: Ready for some football: Ryan Field on the campus of Northwestern University, just north of Chicago, was named College Football Field of the Year for 2011 by the Sports Turf Managers Association. Maintenance is mainly handled by Randy Stoneberg, Joe Berube and Rich Thorn.

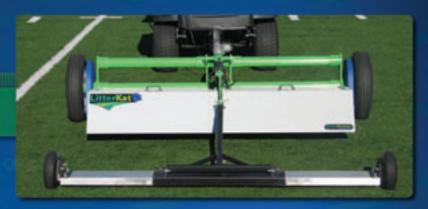
SWEEP, GROOM, STERILIZE

The GreensGroomer line of synthetic turf care products has never been more relevant for today's infill turf systems. A regular maintenance routine will improve consistency, playability and safety while helping to extend the life of the surface. With the addition of the GreenZapr*, field sanitation can now be an easy and convenient process with an unbeatable cost per application.

The hallmark of these patented designs is simplicity and durability. Each is loaded with the right features turf professionals require for improved turf performance and labor efficiencies while delivering ease of use and a lower total cost of ownership.

LitterKat® Sweeper with Tow-Behind Magnet

Fast, Easy Removal of Surface Debris Magnet Removes Unwanted Ferrous Objects





Synthetic Sports Turf Groomer w/ Spring Tine Rake

Scands Turf Fibers Up & Relieves Compaction Insures a Level Playing Surface

GreenZapr® with UVC Eradication

Powerful UVC Microbe Eradication Simple, Cost-Effective, No Chemicals



For detailed product information, product inquiries and dealer demos visit us on the web or contact us toll free - 888-298-8852

From the Sidelines



Eric Schroder Editorial Director

eschroder@m2media360.com

717-805-4197

Football's future: 2nd down and long

IKE MANY OF YOU and probably a few hundred thousand other Americans, I am anxiously awaiting the beginning of football season. Punt returns for TDs, goal line stands, trick plays, perfectly timed long passes—it sure seems a long time since the Super Bowl. I miss America's 21st century pastime, from Friday night lights through Monday Night, September through January.

But to fill the time between training camps and tailgate parties, there is always off-season news. This year the focus is on bounties, injuries and concussions. (Where's that clown Terrell Owens when you need him to make news?) Coaches and players are suspended for putting money on the table to knock guys out of the game—did I miss something or isn't that what pro football's all about? Anyone believe only one team in the league was doing this? Sheesh.

And former players are suing the league because they now have physical problems, as if they had been forced to have the snot knocked out of them, over and over. Mike Golic, the dumb half of the "Mike and Mike" radio show on ESPN, says knowing what he knows now about concussions, etc., he'd still have played in the NFL as long as he could. He says that's what football players do, which is great but now they want it both ways-"you paid us to knock each other senseless and now we want you to pay us because we knocked each other senseless."

This lawsuit is akin to the lung cancer patient suing a cigarette company; why blame someone? You made a personal decision and you deal with the consequences. There's information available on football injuries; this isn't 1955. The video of former NFL center Jim Otto's taking 20 minutes just to get out of bed in the morning has been around for a long time.

The violent hits in football are producing more serious injuries due to the ever-increasing size and speed of the players at the professional level. All the light now being shed on how repeated blows to the head can affect players' health as they age is opening up eyes at lower levels. A teacher and school board member in suburban Philadelphia recently called for her district to ban football. "It's no longer appropriate for public institutions to fund gladiators. I am very concerned about putting these student-athletes in the position of getting a concussion," she said. "Football has gotten faster, harder and more dangerous with each passing year. I'm extremely scared we will eventually be sued over injuries suffered in sports."

I doubt any school districts are going to stop playing football—yet. Lots of small town Americans probably gather together these days for only one thing, the local high school's Friday night football game. But the lawyers are circling. All of us who love football need to encourage those in power to find ways to improve the safety of the game before it's too late.

Correction from June issue

All products listed for ArmorTech (www.utaarmortech) in the Chemical Resource Guide in our June issue are in fact products of SipcamAdvan (www.sipcamadvan.com). We regret the error.

Jungeluson.

SportsTurf

1030 W. Higgins Road Suite 230 Park Ridge, IL 60068 Phone 847-720-5600 Fax 847-720-5601

The Official Publication Of The Sports Turf **Managers Association**



President: James Michael Goatley, Jr., Ph.D. Immediate Past President: Troy Smith, CSFM President-Elect: Martin K. Kaufman, CSFM Secretary/Treasurer: David Pinsonneault, CSFM, CPRP Vice-President Commercial: Rene Asprion Professional Facilities: Allen Johnson, CSFM Academic: Jeffrey Fowler Parks & Recreation: Debra Kneeshaw Higher Education: Jeffrey Salmond, CSFM K-12: Michael Tarantino, CSFM Commercial: James Graff At Large: Jay Warnick, CSFM At Large: Ron Hostick, CSFM

CHIEF EXECUTIVE OFFICER Kim Heck

STMA Office

805 New Hampshire Suite E Lawrence, Ks 66044 Phone 800-323-3875 Fax 800-366-0391 Email STMAinfo@STMA.org www.STMA.org

EXECUTIVE VICE PRESIDENT Charles Forman **EDITORIAL DIRECTOR** Eric Schroder TECHNICAL EDITOR Dr. James Brosnan ART DIRECTOR Brian Snook PRODUCTION MANAGER Karen Kalinyak

STMA Editorial Communications Committee

Jim Cornelius, CSFM, Jason Henderson, PhD, Paul Hollis, Clayton Hubbs, Joshua McPherson, CSFM, Brad Park, David Schlotthauer, & Grant Spear





SportsTurf (ISSN 1061-687X) (USPS 000-292) (Reg. U.S. Pat. & T.M. Off.) is published monthly by m2media360, a Bev-Al Communications company at 1030 W. Higgins Road, Suite 230, Park Ridge, IL 60068. POSTMASTER: Send address changes to Sportsturf, PO Box 4290, Port Jervis, NY 12771. For subscription information and requests, call Subscription Services at (845) 856-2229. Subscription rates: 1 year, \$40 US & Poss.; 2 years, \$65 US & Poss.; 1 year, \$65 Canada/Foreign Surface, 1 year, \$130 Airmail. All subscriptions are payable in advance in US funds. Send payments to Sportsturf, PO Box 4290, Port Jervis, NY 12771. Phone: (845) 856-2229. Fax: (845) 856-5822. Single copies or back issues, \$8 each US/Canada; \$12 Foreign. Periodicals postage paid at Park Ridge, IL and additional mailing offices. COPYRIGHT 2012, SportsTurf. Material may not be reproduced or photocopied in any form without the written permission of the publisher.

President's Message

Dr. Mike Goatley
Goatley@vt.edu



M2MEDIA360 PRESIDENT/CEO Marion Minor

VP OF FINANCE AND OPERATIONS
Gerald Winkel

VP OF CIRCULATION AND COLLATERAL SALES
Joanne Juda-Prainito

PRODUCTION & OPERATIONS DIRECTOR Mary Jo Tomei

DIRECT MAIL LIST SALES Cheryl Naughton 678-292-6054 cnaughton@m2media360.com

SUBSCRIPTION SERVICES
Phone 845-856-2229 Fax 845-856-5822

REPRINTS
Cheryl Naughton 678-292-6054
cnaughton@m2media360.com

Account Representatives:

Leslie Palmer 16267 W. 14 Mile Rd., Ste 202 Beverly Hills, MI 48025 Ph: 248-530-0300, ext. 1402 lpalmer@m2media360.com

Bruce Loria

626 Wilshire Blvd., Ste 500 Los Angeles, CA 90017 • Ph: 213-596-7226 bloria@m2media360.com

Classified Sales/Marketplace:

Glenn Datz

Phone: 213-596-7220 Fax: 213-624-0997 gdatz@m2media360.com

PUBLISHER'S NOTICE: We Assume No Responsibility For The Validity Of Claims In Connection With Items Appearing In Sportsturf. Reader Service Numbers Are Given To Facilitate Further Inquiry. Commercial Product Names Are Used For The Convenience Of The Reader. Mention Of A Commercial Product Does Not Imply Endorsement By Sportsturf Or M2MEDIA360, Or Preference Over Similar Products Not Mentioned

Professionalism

WAS HONORED with the opportunity to return to my hometown in Kentucky in June to address the KSTMA chapter at St. Catherine College. My suggested topic was "Professionalism and the Sports Turf Manager." This was certainly not a typical topic for an agronomist, but one that I decided to tackle as an "I can do this" presentation. My wife, Lisa, gives these types of talks all the time and had a worksheet on the subject already developed, but she encouraged me to develop my own concepts of professionalism before reviewing her materials. That is what I did and this is what I came up with regarding my thoughts on professionalism and the sports turf manager:

Professionalism doesn't necessarily mean "being the best," but instead, "giving your best."

Can you be a professional and still be yourself? It is pretty easy to spot a phony, and I think it is important to remain true to your identity, values, etc. But there are times and places where we must consider our surroundings and how we present ourselves and our opinions. I remember a quote, "It's great to be yourself, as long as your self can pay the bills."

Respect everyone. Every person I encounter has skills, talents, or knowledge that I don't have and there is always something to learn.

Professionals are good listeners. Slow down and L-I-S-T-E-N.

Try to keep the job away from home. Find and/or make time to unwind from the stresses of your job.

Don't be afraid to resolve conflicts. Address problems promptly rather than waiting for problems to take care of themselves.

Establish a network with professionals from within and outside your industry.

Use professional terms when speaking. For instance, you are a "sports turf manager," not a "grass cutter." Take advantage of educational opportunities whenever you can and don't be afraid to throw in some scientific terminology when the opportunity presents.

Give something back. It doesn't necessarily have to be money (although SAFE's Grass Roots Initiative, discussed in this month's issue on page 40, would be a great place to designate a regular contribution) as your time and attention to others is more valuable than any financial contribution. You can't contribute to everything and the needs of others certainly extend beyond sports turf management, but hopefully you can find one aspect of the sports turf industry where you can devote some of your time or talents.

Put your resources to work. One of the KSTMA attendees told me he would if he knew what was available! Please take a look at our ever-expanding STMA website (www.stma.org) and its wide variety of topics and informational bulletins. Members also have access to the Playing Conditions Index (PCI), the Turfgrass Information File (TGIF), and the Plant Management Network and its e-journal, *Applied Turfgrass Science*.

I hope your summer is off to a great start. Take care.

Mile Godley

www.stma.org SportsTurf 7

Is tall fescue right for your field?

HOULD YOU CONSIDER OVERSEEDING TURF-TYPE TALL FESCUE (TTTF) on high school fields during the slower play summer months? We know it can handle heat and drought better than Kentucky bluegrass or perennial ryegrass, but we've seen it get clumpy after being exposed to traffic. The other question is how long does it take before it becomes more traffic tolerant than perennial ryegrass? Are the few summer months of establishment long enough?

We conducted a 2-year research project at Penn State to try to answer some of these questions.

On sports fields, tall fescue has been traditionally thought of as an aesthetically and sometimes functionally inferior turfgrass species compared to perennial ryegrass and Kentucky bluegrass. However, advances in breeding have resulted in new TTTF cultivars with improved characteristics compared to older cultivars. TTTF cultivars have a medium leaf texture (similar to perennial ryegrass), dense canopy, and dark green color. These aesthetic improvements have allowed TTTF to gain popularity in the lawn industry, especially in and around the transition zone. TTTF provides home owners a lawn that is typically both visually pleasing and functionally superior to other cool-season species in hotter and drier regions of the country. So why hasn't this "buzz" been as popular in the sports turf industry? Especially when high-use, low-budget athletic fields could benefit from a turfgrass that requires less irrigation, fertilizer, and other inputs?

One of the main concerns about TTTF is its unknown traffic tolerance shortly after seeding. Although tall fescue has been touted as being traffic tolerant, this traffic tolerance has been observed in turfgrass stands that have been established for at least 1 year. Most practitioners suggest field use should be delayed 6-12 months after seeding. In most high school athletic scenarios, fields are used continuously during the spring and fall. Major renovations must take place when fields are in the lowest demand: between the late spring and end of summer. This limited time frame has made seeding with perennial ryegrass a logical choice. Perennial ryegrass germinates in 5-7 days and can provide a playable athletic field 2 months after seeding. How does TTTF compare when established during a similar period?

TRAFFIC-TOLERANT ALTERNATIVE?

At Penn State's Center for Sports Surface Research (ssrc.psu.edu), we wanted to evaluate if TTTF cultivars could provide a traffic tolerant alternative to summer renovation using perennial ryegrass. Specifically, could TTTF be seeded late in the spring and be ready for play by the beginning of fall? We conducted two experiments. The first evaluated the traffic toler-

	10-Week Establishment	14-Week Establishment
Cultivar	% Ground Cover	
Flesta IV (P.rye)	64,0	63.3
Turbo	39.7	68.7
Rembrandt	28.3	63.3
Rebel IV	27,3	58.7
FIK4	26.7	63.0
ATF 1376	25.7	58.7
Justice	25.0	56.7
Falcon V	24,3	61.3
Shenandoahl	24,3	60.7
Firecracker LS	22,0	53,3
Faith	21,7	57.3
K-31	9.3	30.0
(Sec. 19.		11/1/1/1
LSD (0.05)	9.1	9.1

>> PERCENT GROUND COVER RATINGS for 10- and 14-week establishment periods: TTTF cultivars and perennial ryegrass (Nov. 17, 2010)





>> Left: KENTUCKY-31 tall fescue: Coarse-textured, light-green leaf blades. >> Right: TTTF: Dense canopy with medium-texture, dark-green leaf blades.



>> TTTF: Visual ground cover. 14-week establishment period (left) resulted in higher ground cover than 10-week establishment (right) (Nov. 17, 2010)



WATER. FEED. PREPARE. PROTECT.

Take care of your field. We'll take care of you.

FIND US: www.ewing1.com/locations TALK TO US: 800.343.9464







ance of 10 TTTF cultivars, Kentucky-31 tall fescue, and 'Fiesta IV' perennial ryegrass. The TTTF cultivars included RK4, 'Falcon V', 'Rebel IV', ATF 1376, 'Turbo', 'Shenandoah III', 'Justice', 'Firecracker LS', 'Rembrandt', and 'Faith'

Both experiments were established from seed in late spring. We compared two establishment time periods: 10 weeks and 14 weeks. We wanted to see if there was any difference in traffic tolerance between these two establishment time periods. The difference we constructed somewhat mimicked starting traffic during high school pre-season or waiting until a week or so into the season before allowing play. Once the establishment periods ended, simulated field use began using the Brinkman Traffic Simulator (BTS). We trafficked the plots 3 times per week with 4 passes of the BTS per day. We measured traffic tolerance by assessing percent ground cover in late November. It's important to remember that on this date, plots established for 10 weeks received 4 additional weeks of traffic simulation compared to the plots established for 14 weeks.

In Experiment I, our late-November ratings showed traffic tolerance differences between perennial ryegrass and TTTF. When the two species were given only 10 weeks to establish prior to simulated field use, perennial ryegrass exhibited greater traffic tolerance than all TTTF cultivars. However, when species were allowed to establish for 14 weeks before traffic simulation. all TTTF cultivars had at least equal to, and at times, superior traffic tolerance to 'Fiesta IV' perennial ryegrass. Thus we are suggesting that TTTF can be successfully used as an alternative to perennial ryegrass for summer renovation of sports fields if you can restrict play for at least 14 weeks. If you can only restrict use for 10 weeks or less after seeding perennial ryegrass will likely perform better.

Of the TTTF cultivars we tested, Turbo, Rembrandt, Falcon V, and Rebel IV consistently performed better than the other cultivars tested. However, the separation between the best and worst TTTF cultivars was not large in either year. Kentucky-31, which is widely regarded as a utility turfgrass, always had the lowest traffic tolerance.

SEEDING RATES AND N FERTILITY

In Experiment II, we wanted to evaluate how seeding rates and nitrogen fertility affect fall traffic tolerance of TTTF after spring establishment. We looked at four seeding rates: 6, 10, 14, and 18 lb/1000 ft.2. We also looked at the following nitrogen rates: 2.0, 4.5, and 7.0 lb of N /1000 ft.2. Our goal was to determine an optimum seeding rate and nitrogen fertility that would maximize traffic tolerance.

Multiple researchers have shown that when traffic is initiated shortly after seeding, it's beneficial to seed perennial ryegrass at very high seeding rates. However, our results indicate that no differences exist when seeding TTTF at rates between 6 and 18 lb/1000 ft.2 if traffic is delayed for at least 10 weeks after seeding. Thus 6 lb/1000 ft.2 is adequate. Although seeding rate had little effect, our nitrogen regimes appeared to significantly influence traffic tolerance, but the results might not be what you would expect. Regardless of the establishment time, traffic toler-





>> Left: TTTF: 7 lb N/1000 ft.2 treatment after traffic simulation (Nov. 8, 2010) >> Right: TTTF: 2 lb N/1000 ft.2 treatment after traffic simulation (Nov. 8, 2010)





>> Left: PERENNIAL RYEGRASS: 10-week establishment after traffic simulation (Nov. 17, 2010)

>> Right: TTTF: 10-week establishment after traffic simulation (Nov. 17, 2010)





>> Left: PERENNIAL RYEGRASS: 14-week establishment after traffic simulation (Nov. 17, 2010)

>> Right: TTTF: 14-week establishment after traffic simulation (Nov. 17,