market today. Many of the new products available today do not require much or any effort above and beyond traditional installation practices and offer a reasonable timeframe for return on investment.

While exploring any upgrade solutions, strong consideration should be paid to getting site pressure as close to optimum as possible for the sprinkler types to be used. Pressure is as important as proper spacing to achieve the greatest possible efficiency in any system. High pressure is as much an enemy to efficiency as low pressure and should be a priority regarding initial design or existing system evaluations. There are a wide variety of solutions on the market today to address high pressure. Pressure can be easily adjusted at the valve with an addon regulator that allows the installer to select the ideal pressure the sprinkler requires. Additionally, many manufacturers offer pop-up spray sprinklers with built-in pressure regulators pre-set to optimum nozzle requirements or a simple add on pressure regulator at the valve can be an easy solution.

The simplest form of water conservation upgrade can be a wireless rain sensor, which saves an average 10% of water use. On the high end of control upgrades are "smart" irriga-

tion controllers that adjust irrigation schedules on a daily basis depending on weather conditions. Studies have shown smart controllers can save up to 30% of water use depending on prior management practices. New products are arriving on the market that are more cost effective and user friendly, making smart controllers an easier sell, especially on residential projects.

Replacing existing spray nozzles with rotary nozzles, such as MP Rotators, or incorporating them into a new system design provides greater water savings and drastically increased efficiency. In many cases, rotary nozzles can be successful in improving poorly performing spray systems due to low pressure. Because rotary nozzles require less water to operate, they have the advantage of reducing friction losses in an existing system and improving the operating pressure at the head. Additionally, due to lower water requirements of the nozzles, more area can be irrigated with fewer zones, reducing system costs with fewer valves, smaller controller sizes, less pipe, wire, fittings, and labor.

Drip tubing with pre-installed, in-line emitters offers substantial advantages over traditional irrigation methods in not only water savings, but also time and cost considerations. In many cases the tubing can be simply "snaked" through planters and then mulched over. Winterization can be a snap by incorporating threaded caps on line ends that can be removed for blow out.

On any projects with elevation changes, check valves should be installed, at the very minimum, on the lowest heads. One hundred feet of 1-inch pipe on single zone can waste 4 gallons of water per zone cycle through low-head drainage. On a 12-zone system, that equates to 48 gallons per irrigation day. Beyond saving water, check valves will also protect the sprinkler from the water hammer that occurs every time the valve turns on and water rushes to fill the empty lateral line, greatly increasing sprinkler longevity.

One last note when working on improvement of older existing systems: sprinklers should be reset to proper grade level, screens cleaned, and nozzles replaced. Nozzles on both spray heads and rotors will wear over time and lower the ability for water to be sprayed efficiently. It is a good idea to check with your local irrigation distributor to see if there are newer, more efficient nozzles available for existing, installed sprinklers.



www.stma.org SportsTurf 41

### Choosing the right high-efficiency nozzle for turf applications

PECIFYING, designing or upgrading an irrigation system can be a time-consuming process filled with many important decisions. The decisions made about even the smallest and deceivingly simple components, like spray nozzles, can have a major effect on a system's performance and the landscape's appearance.

Nozzles are responsible for dispersing water to the landscape in different amounts and at varying distances of throw. The ideal nozzle for a particular application will deliver the right amount of water to the area of the landscape for which it's intended in an acceptable amount of time. A less-than-ideal nozzle may apply water unevenly, leaving some areas too dry and others too wet. Other nozzles may apply water too slowly, a problem for sites with short watering windows.

Choosing the right nozzle can also reduce water consumption. The wrong nozzle may apply water too quickly, creating run-off that flows into the gutter rather than soaking into the soil. Or, at sites with high water pressure, it may create a mist that simply blows away in the wind instead of landing on the turf.

Because of the significant impact that nozzles have on irrigation system efficiency, choosing the best nozzle for an application is crucial. However, it's one of the most commonly overlooked elements of irrigation system design.

#### **TYPES OF NOZZLES**

Spray nozzles typically fall into one of three basic categories: fixed arc, rotary and variable arc. Today, irrigation system manufacturers are developing new high-efficiency versions of these nozzles with advanced features that overcome challenges like wind, compacted soil, high water pressure and elevation changes. They're designed to provide greater distribution uniformity and a lower scheduling coefficient than the nozzles of the past.

Fixed arc nozzles are available in a variety of models based upon throw distance (the maximum distance the nozzle can cover with water) and a fixed arc pattern. Most fixed arc nozzles come with arc patterns ranging from a maximum full-circle to the minimum onethird circle. Throw distances range from eight to 15 feet.

Rotary nozzles emit rotating streams of

water rather than a constant spray. Because their throw distances range from 13 to 24 feet, they're intended to cover larger areas than other fixed arc nozzles. Their greater throw distance makes it possible to use fewer nozzles to cover the same area. Like all fixed arc nozzles, rotary nozzles also come in fixed arc patterns of 45 degrees (one-third circle) to 360 degrees (full circle). These unique nozzles also feature a low precipitation rate and highly uniform distribution.

Rotary nozzles are often good choices for sloped areas and landscapes with compacted soil. Because of their low precipitation rate, (e.g., 0.6 inches per hour for Rain Bird rotary nozzles); these nozzles apply water slowly so that it can soak in rather cause run-off and erosion.

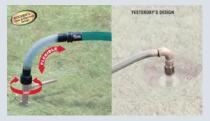
Variable arc nozzles (VANs) are also available in various throw distances, but their arcs are adjustable from 0 to 360 degrees. As a result, VANs give landscape architects the freedom to design landscapes of almost any shape and size. Furthermore, because VANs can be adjusted to any angle, contractors can keep fewer nozzles on hand and specifiers can specify a single nozzle in multiple scenarios.

With all of the high-efficiency nozzles available today, choosing the right one can seem overwhelming. The best way to approach the process is by answering a series of questions about a site's particular needs and its inherent characteristics:

- How large is the area, or zone, to be wa-
  - What is the zone's shape?
  - What's the degree of slope?
  - What soil type is present?
- Is the area frequently subject to high winds?
  - How much water pressure is available?
  - Is there a limited watering window?

A landscape's overall health and water efficiency depends greatly on the type of spray head, rotor or nozzle that you choose. By taking the time to carefully analyze your landscape and the various product choices available, you can design a system that provides efficient irrigation for years to come.

Lynette Von Minden is a public relations counsel for Swanson Russell, a marketing communications agency in Lincoln, NE.



#### Sprinkler head converter

As part of Kochek's Water Movement line, this product converts a sprinkler head from any manufacturer into an instant hose adapter or quick coupler. The PVC braided hose rotates 360° supporting movement in any direction. The hoses are made of stainless steel reinforced clear poly braid. Designed to be used with Kochek products for hand watering localized dry spots, equipment washing, or any hose application where only a sprinkler head exists. This adapts the sprinkler head to create the hose connection you need. Comes with 1-in. Full Time Swivel aluminum connection. Available in 4 sizes Toro 730/830, Toro 750/850, Rain Bird 700 Series, and Rain Bird 900 Series.

#### Kochek



#### Kifco Water-Reel

The Kifco® T180 Water-Reel® can irrigate a football field in an un-attended single pass and automatically shut down upon completion. It requires no in-field plumbing to install, maintain, winterize, cause injury or affect play. Typically the T180 is set-up and started after evening activities, runs unattended through the cooler evening hours and easily put away in the morning. The traveling irrigation pattern is more uniform than a solid set pattern and evening operation improves efficiencies. It is compact, simple, reliable and very portable and can be used on multiple fields or locations. The reel mounted booster pump option allows successful operation even with low water pressure.

#### High-tech sprinkler control

The Vision House features a high tech sprinkler control system that monitors weather conditions daily and then automatically resets each sprinkler zone so that the correct amount of water is applied to lawns, trees and flower beds as needed. "Smart-Line adjusts the system 365 times a year and takes the guesswork out of landscape irrigation scheduling," says Brodie Bruner, VP for sales and marketing at Weathermatic. SmartLine promotes water conservation by preventing runoff and erosion and completely turns off the system during rain or a freeze. Additionally, it meets new water conservation standards mandated in many communities today. Smart-Line features two components: the SLW Series On-Site Weather Station and the SL1600 Modular Controller. The SLW monitors the weather, including high/low ambient air temperature and rain or freeze conditions, and is mounted to a fence.

Weathermatic

#### Products you can see

#### at STMA Conference in Long Beach



# New versatile outdoor adhesive

NORDOT Adhesive #34P-4 from Synthetic Surfaces Inc. is a new, one component outdoor adhesive that was designed to install and/or repair synthetic turf and other outdoor surfaces in widely variable and sometimes hostile weather conditions. It fills the need for a versatile adhe-

sive which allows the outdoor installation and repair season to expand from only "fair weather" days to year-round. It can be applied to a dry or damp surface at any outdoor temperature and humidity in which an installer can work. It is particularly useful in cold weather, when turf installations and repairs usually stop because, the company says, no other adhesive can be used for installation from hot desert temperatures down to below freezing. After curing, it has durability both above ground and under water.

Synthetic Surfaces Inc.,



#### Lighter weight Terra Groom model

This year at the STMA in Long Beach, Wiedenmann will display the new, lighter weight Terra Groom with stiffer front brushes

which act as rake fingers, without the additional cost of the rake fingers and without the risk of catching a seam. In addition, by exchanging the front row of brushes, this same brush works really well on natural turf fields. Wiedenmann will also be exhibiting their Terra Clean M artificial turf sweeper and a variety of turf aerification, verticutting, and sweeping equipment for natural turf surfaces.

Wiedenmann North America, LLC



Pro Mound packing clay

No baseball field is complete without properly installed batter's boxes and pitcher's mound. Pro Mound alleviates common wear problems created by hitters and pitchers. This unique blue gumbo packing clay is used to form a solid subsurface when building these areas, allowing players to "dig in" and establish footing without

leaving large holes. It is highly durable, helps reduce maintenance, and gives players more solid footing season after season.

Step 1: Remove the top 4-6 inches of infield.

Step 2: Lightly water and allow to soak in.

Step 3: Apply 1" Pro Mound and tamp to compact. Repeat steps 2-3 to within 1/2" of finished grade.

Step 4: Cover with infield mix, tamp and finish with Pro's Choice infield conditioner.

**Pro's Choice** 

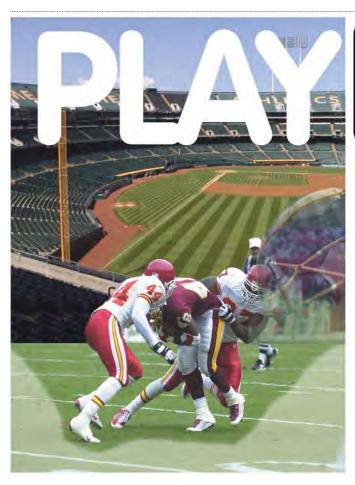


# "Line Expert" walk-behind striper

Kromer introduces the LINE EXPERT airless, high-pressure walk behind line striper that is designed for budget conscious buyers. The unit is a multipurpose liner for natural & synthetic turf as well as asphalt and it features

freely adjustable (no tools required) high pressure from 200 to 3,000 psi. Paint your athletic fields, parking lots, track and field events, and logos/stencils with just one machine. The unit is priced under \$2,000 delivered!

Kromer



# BALL!

#### FOOTBALL, BASEBALL, SOFTBALL, SOCCER

Any sport played on natural grass is a natural for TifSport Bermudagrass. If you're looking for a sports turf that can handle non-stop action, a transition zone climate and heavy overseeding, TifSport's your answer. It's ideal for intramural fields, practice fields and gameday venues, where everything has to be perfect.

Coaches and players love the way it looks and plays and you and your crew will appreciate how easy it is to manage. TifSport can only be sold as certified sod or sprigs and only by licensed members of the TifSport Growers
Association. For more information visit us at www.tifsport.com, or call 706 552-4525.



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#### at STMA Conference in Long Beach

## Revolution soil surfactant

Revolution makes it easier to protect your team by protecting your turf. This patented soil surfactant technology provides better moisture access and gas exchange in the root zone, improving overall turf health and making it much more resilient under all types of stresses. Revolution moves 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. **Aquatrols** 

#### Turfplaner machine to debut in Long Beach

g2 turftools, inc. will be introducing its newest piece of equipment, the turfplaner, at the STMA show in Long Beach. The 84-in. turfplaner is a patent pending device that is capable of resurfacing and removing the surface irregularities of existing turf in a single pass to a grade tolerance of +/- 1/16 in. Through the use of dual proportional lasers and/or the patent pending auto grade technology, lip removal on baseball and softball fields is now a simple one hour, one step process that is cost effective, time efficient and most important, within the reach of every maintenance budget. If the existing turf is unacceptable, the turfplaner can also be used to prepare the existing surface to receive new sod or seed in a single pass, removing the existing turf and laser grading the field at the same time with out disturbing the underlying soil.

q2 turftools

### AERA-vator is versatile

The AERA-vator uses a patented vibrating tine action to fracture the hardest soil with very little surface disruption. The AERA-vator is used for incorporating athletic field conditioners on the skinned area of a baseball fields and aeration on the turf areas. If you want to lower equipment cost and uses one of the most versatile pieces of equipment on the market; the AERA-vator is the right choice in equipment for you.

First Products

#### **Evergreen turf cover by COVERMASTER**

**TODAY,** groundskeepers rely on the use of a turf cover in the maintenance of natural grass sports fields. A turf cover can prevent desiccation (winter kill); it can speed germination of seed, promote stronger root development and delay dormancy in the fall or have the turf green-up quicker in the spring.

There are a number of turf covers on the market today that promise various levels of results in these areas. One is a spun bond geotextile. Others are permeable and non-permeable polypropylene covers. Then there is a cover that is made of woven polyethylene with a liquid lace coating that binds the polyethylene strands together. This is the most widely used cover because it results in superior performance.

EVERGREEN is such a cover and has been on the market for more than 20 years. Its open weave lets air, moisture and sunlight penetrate the cover resulting in a greenhouse type of effect, yet it allows excess heat to escape. That's the basic premise and it works.

EVERGREEN is available in three color models, white, green and silver, each providing a specific function. The white cover allows full penetration of the three important elements—air, moisture and sunlight—that promote healthy turf. The green cover is identical except that it draws more heat to the soil because of the dark green coating.

Silver takes the cover to the next level of performance by reflecting heat that rises from the soil



underneath the cover back into the turf. In fact, a soil temperature increase of as much as 15 degrees has been recorded under the silver cover when compared to the other colors.

In addition to the properties of the various colors, all EVERGREEN models are manufactured with SMART EDGE technology, which means that the cover can be cut to any shape or size. No hems or grommets are required because the patented lace coating keeps the material intact. This special feature means that to keep the cover in place, anchor pegs can be used without limitations anywhere on the cover. This is not the case with polypropylene covers that can only be anchored in grommet locations or else the material will unravel and separate.

In selecting a turf cover, performance, longevity and proven success are the best criteria. With so many different covers on the market, the best advice is to get feedback from current users. While many covers will help take natural turf through the winter, the question to ask is which one has the best results in all aspects.

#### CoverSports USA FieldSaver winter turf blankets/growth covers

**FIELDSAVER COVERS** keeps turf protected all year long, from harsh winter conditions to promoting

faster spring growth and green-up. FieldSaver is also a budget-saver; Josh Slayback, athletic field technician for the City of Clayton, MO calculated the savings impact of FieldSaver:

"Winter turf blankets are an excellent investment, especially when considering that sodding two 60 x 60-foot soccer goal mouths each spring over an 8-year period would cost us over \$16,000. To purchase two 60 x 60-foot winter turf covers, seed and preventative fungicide over an 8-year period (the life expectancy

of the blankets) will cost us an estimated \$2,500."

The Shaw Park 2010 winter renovation plan was:

- Core aerate 6 directions
- Seed with a turf-type tall fescue/Kentucky

bluegrass mix @ 15# per 1000 ft<sup>2</sup>

- Apply a granular preventative fungicide
  - Cover the goal mouths with 60 x 60-foot winter turf blankets
  - Run the last irrigation cycle of the season

FieldSaver winter turf blankets/growth covers feature Woven Polypro, translucent fabric with 90% light pass-through for better, quicker growth; hems and brass grommets means the cover can be secured with staples or stakes that stay put; and optional yellow safety color stakes mean more visibility, reduces tripping hazards and prevents loss of stakes in

turf. More and more experts are including winter growth blankets/growth covers in their turf protection plan. Can your turf and budget handle passing on this small investment for another year?



>>> BEFORE/AFTER photo taken at Shaw Park, Clayton, MO on 12/2/2010.



# Rest easy.

Grant has it figured out. Just trust West Coast Turf to provide exceptional sod and world-class installation. And he's not the only one. More groundskeepers every day discover that West Coast Turf delivers the same quality pro venue sod and services to universities, high schools and municipal parks. Think of it this way, by next season you can be resting easy, too. For details call 888-893-TURF or visit www.westcoastturf.com.



#### at STMA Conference in Long Beach













#### New Workman UV with diesel engine

The new Toro Workman MDX-D marks the company's first mid-duty utility vehicle featuring a diesel engine. Incorporating all of the innovative features of the Workman line, this new diesel unit provides powerful performance and durable operation, boasting higher torque, greater fuel efficiency and exceptional operator comfort through the SRQ (Superior Ride Quality) suspension system. The 36.55 cu. in. Kubota diesel engine is liquid cooled providing longer engine life than gas engine models. And with the continuous variable transmission belt-drive transmission design, this unit delivers high compression rates, resulting in greater power, improved towing capacity and better fuel economy. The MDX-D can travel up to 21 mph and has a 6.5-gal capacity fuel tank.

**The Toro Company** 

#### Ultra friendly colors

Pioneer Athletics knows that ingredients matter. It's what led them to develop their environmentally conscious Ultra-Friendly line of field marking paints that are completely free of Volatile Organic Compounds (VOCs) and include more readily biodegradable components. Ultra-Friendly Brite Stripe, Star-Line and Game Day paints will now be available in an expanded range of colors: blue, yellow, orange, red and black. Blue and White Ultra-Friendly colors are already the world's first and only EPA-recognized paints. Pioneer and the EPA are in discussions on recognition for the expanded line of colors as well. **Pioneer Athletics** 

#### **Gator TX Turf**

John Deere Gator TX Turf was designed with the turf care professional in mind, featuring special turffriendly tires, improved operator comfort and the quietest operation. With all-wheel suspension and allwheel hydraulic disc brakes, the Gator TX Turf can handle a variety of terrain. The frame-isolated engine and exhaust system, a large-volume muffler and improved foot-pedals, allow it to operate at the quietest level. More powerful than the previous generation of Gators, the TX Turf features a 401 cc Kawasaki FJ400 engine, increased payload capacity and improved braking capabilities. From performance to comfort, the Gator TX Turf specifically meets the ever-expanding needs of turf care professionals.

John Deere

#### STEC Equipment

STEC Equipment is an industry leader in Specialized Turf Equipment distribution, offering the highest quality turf equipment from around the world, and several STEC brand products, including the Ground Quake Sand Injector and Dump Trailer. With a direct sales model, we make the latest European technologies available to the turf professional. Since 2011, STEC Equipment has been the North American distributor for RotaDairon, a company with a rich history dating back to 1958. RotaDairon has been a staple in the seed bed preparation market with the legendary Soil Renovator. With the ability to bury the top layer of turf, as well as any rocks and debris, the Soil Renovator is able to create a perfect seed bed in one pass.

**STEC Equipment** 

#### IncrediSeal hems mean no stitches

IncrediSeal reinforced hems and seams are a new standard feature on all ArmorMesh products. All sewing and stitching eliminated with zero possibility of thread breaks, open seams or hems. Clean look with no pleats, no black webbing on hem, no stitches and there is web reinforcement inside the 3-ply heat bonded hem. IncrediSeal is standard on all ArmorMesh field covers, batting practice infield protectors and collar protectors, football sideline tarps, jump pit covers and windscreens.

CoverSports USA

#### Diamond Pro Professional Mound Clay

Diamond Pro Professional Mound Clay is a screened heavy clay with a natural yellowish-brown color. This heavy clay has a higher clay content than our red Mound Clay and will require more attention for application. For example, it is imperative that this product be hydrated at least one day before use in order to have the right moisture for compaction and ultimate performance. This clay can be used to construct, rebuild or repair pitcher's mounds, catcher's and batter's boxes. Diamond Pro Professional Mound Clay recently received very high marks in an independent Mound Clay study performed at Virginia Tech University.

**Diamond Pro** 

#### Newstripe introduces NewRider 5000 HPA

The NewRider 5000 HPA is the first true ride-on airless striping machine for athletic fields. Front wheel drive with rear steering quickly produces straighter, brighter looking lines on multiple fields with the 0-3000 psi pump and 50-gallon tank. The NewRider 5000 features a Hydrostatic drive, 14 hp Subaru engine, high back seat with tilt steering column, 2.5 gallon on-board purge tank and removable gun with 25-foot hose for painting stencils.

Newstripe

#### **Turf Stripper**

The Turf Stripper is a rugged, economical and efficient machine used to mow, level, de-thatch and renovate turf areas using a rotary action that removes material and deflects it onto a conveyor to be carried away. The Turf Stripper 2000 is equipped with custom blades that allow the machine to be highly productive, yet can be adjusted in small increments. An option verticut blade kit can be installed in place of the standard blades when the machine is to be used for dethatching golf courses, sports-fields or common areas. The machine is also a highly effective method of harvesting sprigs when trying to introduce bermuda and other grasses to new areas.

#### **Redexim Charterhouse**

#### Barenbrug keeps innovating

RPR won the innovative award last year at the STMA conference. After several years we have many happy customers from all over the USA and other parts of the world. If you are using perennial ryegrass under high traffic areas you need to stop by our booth at the STMA show and learn more. Barenbrug USA will have another new program to introduce at the STMA show; it will be worth your time to find solutions for your turf grass fields. We will also have information available on our other successful programs like SOS, Turf Blue, Supercharged bermudagrass, Yellow Jacket and Turf Saver RTF. And we will have a raffle for an iPad as usual!

Barenbrug USA

#### Turfco CR-7 topdresser

The Turfco CR-7 topdresser and material handler is designed to handle the mid-range level of topdressing and renovation. The CR-7 is the perfect choice for sports complexes with multiple fields or for completing renovation work. The CR-7 uses Turfco's patented WideSpin technology, which gives operators the most accurate spread from light to heavy and patterns as wide as 40 feet, making it easy to topdress multiple fields. An adjustable spinner angle allows operators to drive topdressing into the turf for better integration with a total range of 26 degrees up and down. A patented three-position switch always ensures a clean application by guaranteeing that the attachments turn on prior to the main conveyor, and an adjustable flow control sets the speed.

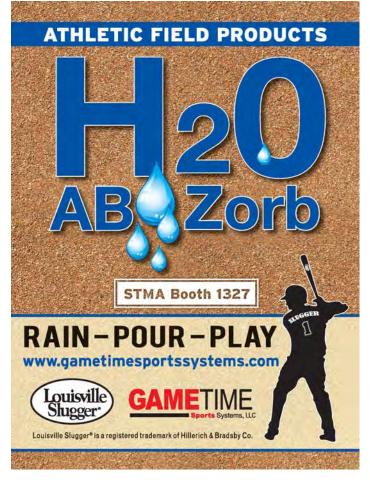
**Turfco Manufacturing** 











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Save time and money! These specially formulated red polyurethane pads bury 2" below the surface and eliminate deep holes!

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#### U.S. Postal Service Statement of Ownership, Management and Circulation (Required by 39 U.S.C. 3685)

- I. Title of publication: SportsTurf
- 2. Publication No. 0000-292
- 3. Filing Date: September 27, 2011
- Issue Frequency: Monthly
- 5. No. of Issues Published Annually: 12
- . No. of issues Published Affidally. 12

  Annual Subscription Price: Free to Qualified Subscribers
- Complete Mailing Address of Known Office of Publication: 1030 W. Higgins Road, Suite 218, Park Ridge, IL 60068 Contact person: Joanne Juda, 630-543-0552
- Complete Mailing Address of Headquarters or General Business Offices of Publisher: M2MEDIA360, 1030 W. Higgins Road, Suite 218, Park Ridge. IL 60068
- Suite 218, Park Ridge, IL 60068
  9. Full Names and Complete Mailing Addresses of Publisher and Editor:
- Group Publisher: Charlie Forman, SR. Vice President, M2MEDIA360, 1030 W. Higgins Road, Suite 218, Park Ridge, IL 60068 Editor: Eric Schroder, M2MEDIA360, 1030 W. Higgins Road, Suite 230, Park Ridge, IL 60068
- 10. Owner: Bev-Al Communications, 500 S. Palm Canyon Dr., Suite 218, Palm Springs, CA 92264
- Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None
- 12. Has Not Changed During Preceding 12 Months
- Publication Name: SportsTurf
- 4. Issue Date for Circulation Data Below: September 2011
- 15. Extent and Nature of Circulation:

15.	Exterit and Nature of Circulation.		
		Actual No. Copies Each Issue During Preceding 12 Months	Actual No. Copies of Single Issue Published Nearest to Filing Date
a.	Total No. of Copies (net press run)	23,151	23,397
b.	Legitimate Paid and/or Requested Distribution		
(1.)	Outside County Individual Paid/Requested Mail Subscriptions Stated on		
	PS Form 3541	17,291	17,542
(2.)	In-County Copies Requested by Employers for Distribution to Employees		
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	and Other Paid or Requested Distribution Outside USPS®	-	-
(4.)	Requested Copies Distributed by Other Mail Classes Through the USPS		
	(e.g. First-Class Mail®)	-	-
C.	Total Paid and/or Requested Circulation	17,291	17,542
d.	Nonrequested Distribution	-	-
(1.)	Outside County Nonrequested Copies Stated on PS Form 3541	5,495	5,289
(2.)	In-County Nonrequested Copies Stated on PS Form 3541	-	-
(3.)	Nonrequested Copies Distributed Through the USPS by Other Classes of Mail	-	-
(4.)	Nonrequested Copies Distributed Outside the Mail	83	300
e.	Total Nonrequested Distribution (Sum of 15d (1), (2), and (3))	5,578	5,589
f.	Total Free Distribution (Sum of 15d and 15e)	22,870	22,131
g.	Copies Not Distributed	282	266
h.	Total (Sum of 15f and g)	23,151	23,397
i.	Percent Paid and/or Requested Circulation (15c divided by f times 100)	75.60%	75.84%

- 16. Publication of Statement of Ownership: Publication required will be printed in the November 2011 issue of this publication.
- 17. Signature and Title of Editor, Publisher, Business Manager, or Owner: Joanne Juda-Prainito, VP Audience Development, 09.27.11

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American Sports Builders Association	15	www.sportsbuilders.org
Barenbrug USA	52	www.barusa.com
Beacon Athletics	37	www.BeaconAthletics.com
Beam Clay	48	www.beamclay.com
Color Biotics	41	www.CushionFallSport.com
Covermaster	17	www.covermaster.com
CoverSports USA	33	www.CoverSports.com/ST
Ecolawn	48	www.ecolawnapplicator.com
Ewing Irrigation	9	www.ewing1.com
Game Time Sports Systems	47	www. game time sports systems. com
GreensGroomer	10-11	www.greensgroomer.com
Hydraway Drainage Systems	14	www.hydraway.net
John Deere	5	www.johndeere.com/SportsTurf
Kochek Co., Inc.	48	www.kochek.com
Krylon	28-29	www.ki-lineup.com
Natural Sand Company	36	www.naturalsand.com
Newstripe	37	www.newstripe.com
Penn State World Campus	2	www.worldcampus.psu.edu/STMA
Pioneer Athletics	51	www.pioneerathletics.com
PROFILE Products	31	www.Turface.com
Ready Play Sports	35	www.ReadyPlaySports.com
Sports Turf Managers Association	13	www.stma.org
Stabilizer Solutions	27	www.StabilizerSolutions.com
SubAir Systems	39	www.subairsystems.com
Synthetic Surfaces Inc.	3	www.nordot.com
TifSport Growers Association	43	www.tifsport.com
Turfco Manufacturing	21	www.turfco.com
TurfTime Equipment , LLC	48	www.TurfTimeEq.com
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# A&O



BY DR. GRADY MILLER

Professor, North Carolina State University

#### **Questions?**

Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady\_miller@ncsu.edu

Or, send your question to David Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011 or email dminner@iastate.edu.

# First timer

I work for an American-based engineering and construction company. I am project manager for a soccer stadium that is being built in west central Africa. A subcontractor from China is putting in the field and they are considering planting bermudagrass from seed for the turf. Given the equatorial climate, I think this is a good choice. However, there is no equivalent to an extension service here and this is the first playing surface I have ever installed and the subcontractor is not familiar with grasses for this area. Needless to say, I am a bit nervous! I was able to obtain a recommendation of a local "expert." He recommends a mixture of 90% bahiagrass with 10% bermudagrass. Based on my readings, this seems to be an inferior turf than 100% bermudagrass. The climate is similar to Southern Florida and we have the ability to irrigate during the dry season and fertilize as needed. Also, when would you recommend having the first cut? How long until the bermudagrass can be ready for play? Your thoughts would be much appreciated.

First, I would strongly encourage you to NOT include the bahiagrass. That would be a significant weed in a bermudagrass field. The bahiagrass would only have advantages if you were building a low-budget field without irrigation. The same is true in southern Florida. With irrigation and fertilizers available, stick with 100% bermudagrass.

I would suggest a single bermudagrass cultivar for maximum uniformity. To help ensure a long-term quality playing surface, great care needs to be taken when selecting the cultivar. There are a number of suitable cultivars available, so you may want to find out what is being supplied by the subcontractors. Please contact me again once you know more about the grass they are planning to use. I

would suggest you exert some influence on this decision if the subcontractor wants to plant a turfgrass that has not been commonly used on athletic fields. You do not want your first field to be a test subject for a new grass.

I think you just learned that one must be careful who they listen to or there may be significant penalties. I constantly tell sports turf managers to network locally to find out what is working or not working for other sports turf managers. If you are new to the area, this is even more important. It helps to know whom to listen to for advice. This is why the USA's extension service (or Cooperative Extension Service) is so valuable. Even if the state's extension turf specialist is not well versed in athletic field management, they have contacts and can provide names of people that can help. And they often host regional STMA meetings.

If someone does not know who to ask and happens to ask the wrong person, the advice can be bad. In your case it was good that you questioned the advice of the "local expert" and kept seeking information from other sources.

As for your other questions, my recommendation is to start cutting as soon as there is adequate root and stolon growth to support a

mower. If you have lightweight mowers then you can get out there sooner. Mowing promotes lateral growth, so you will want to mow as early as possible. There are too many variables that prevent me from giving you a concrete time before mowing is recommended. My advice is to try an area just off the field playing area. If the mower is easily supported, start clipping. If it causes even small ruts in the soil, then hold off and try again in a three or four days.

Most bermudagrass fields can be used for play in three months if the grass is "pushed" and it is responding. Realize it may take upward to 21 days after planting before most of the grass seedlings emerge. That is the slowest part of establishing bermudagrass from seed—slow germination and low seedling vigor. Once it begins to emerge, growth rates can be increased with high nitrogen fertilizer applications combined with irrigation. Good growing conditions, i.e., warm temperatures and ample sunlight, are paramount for rapid bermudagrass establishment.

Someone famous once said, "A man begins cutting his wisdom teeth the first time he bites off more than he can chew." As you work on this project, I hope you stay hungry!

