irrigation for cleaning and cooling. There are new rotors on the market that can provide the radius and flow required to do these jobs. Care needs to be taken in the initial design to ensure there is enough water and pressure available.

EFFICIENT INSTALLATION
After the design has been created and the products have been selected, the field manager needs to do his or her homework to find a professional contractor. When searching for a contractor, be sure to ask for references, referrals, and their certifications. When it comes to installation, it is of the utmost importance to ensure that the installers closely follow the installation specifications provided by the manufacturers. Additionally, sprinklers should not be buried too low, operating pressure should not be too high, and the valve box should be filled with gravel and wired with the correct waterproof wire connectors. Make sure to have the contractor provide an “as built” design (how it was actually installed/the built), and put a copy of this in the controller cabinet for maintenance of the system. This can come in tremendously handy, as site observations are cheap insurance policies during the installation process.

EFFICIENT MAINTENANCE/MANAGEMENT
After the design and installation has taken place, the final step to an efficient, safe playing field is in the hands of the manager. This person needs to understand what the products do and how to troubleshoot all of them, if required. Also, understanding the specific site is very valuable when it comes to the water supply, quality and available pressure. Many turf managers have taken classes on plant/soil/water relationships, and this knowledge is imperative when it comes to scheduling the amount of water the turfgrass needs and how quickly it might infiltrate through the different soil types.

Education is probably the most important issue when it comes to maintenance and management. Basic irrigation classes on hydraulics, precipitation rates, distribution uniformity, and electricity are just a few topics that are offered by various associations both nationally and locally.

It’s imperative that all sports field managers become members of STMA, Sports Turf Managers Association and then complete their certification. By becoming a CSFM (Certified Sports Field Manager), they add a professional endorsement to their resume and location of employment.

Lynda Wightman is Industry Relations Manager for Hunter Industries and the 2004 recipient of STMA’s prestigious Harry C. Gill Memorial Founders Award.
**ON-FIELD DRAINAGE**

There are different choices of drainage systems, with multiple options on the market. All have their advantages and disadvantages, as well as cost differentials to be considered. The choice of which system to use is ultimately that of the owner, who should make the decision in consultation with industry professionals. All sites are different, and while there is no ‘right’ answer across the board, there is always a right answer for a particular situation. An owner should talk with industry professionals, as well as with colleagues in the area who have comparable climate and facilities, as well as similar amounts of activity. There is no such thing as too much information, in this case.

The purpose of a good irrigation system is to water the field. Perhaps that sounds self-explanatory, but consider this: water should be going only on the field. The system should not overspray and hit the encircling track, benches, spectator stands or other areas. And ideally, the field should be constructed so that the only water the in-field drainage system needs to handle is that which falls onto the field from the sky, or onto the field from the irrigation system. The field should not be getting wet from runoff from the bleachers or from surrounding hillsides or other areas. Proper sloping of such facilities to direct water, correct placement of perimeter drains (and regular care of these drains, such as keeping them free of sediment and debris) can, and should keep problems to a minimum.

Assuming these types of issues (with the exception of maintenance) have been addressed in the design phase of the project, the drainage system beneath the surface of the field should be adequate to move a normal amount of rain or water from irrigation off the surface and keep it playable.

The owner or manager, however, should be proactive in making sure the system is functioning correctly. Builders often recommend watching the field during a rain to see if water collects in any spots, whether there is any subsurface bubbling to indicate a lack of drainage, or whether water seems to be percolating through. Problems should be noted in detail and reported to the contractor who installed the field, or to a field specialist who has worked with similar facilities. Some problems may be easily addressed by a professional, while some take more extensive work. Often, it is impossible for the owner or manager of the field to make that call.

Which leads to the final point, say the pros: if a problem is suspected, make the call for service immediately. An irrigation and/or drainage problem is not likely to fix itself, and if anything, is made worse (and possibly more extensive) by waiting.

Note: The American Sports Builders Association (ASBA) is a non-profit association helping designers, builders, owners, operators and users understand quality sports facility construction. The ASBA sponsors informative meetings and publishes newsletters, books and technical construction guidelines for athletic facilities including sports fields. It also offers voluntary certification programs in sports facility construction and maintenance, including sports fields. Available at no charge is a listing of all publications offered by the Association, as well as the ASBA’s Membership Directory. Info: 866-501-ASBA (2722) or www.sportsbuilders.org.
Answers from page 17

THESE GREEN ARCS by the fence line on this municipal soccer field were caused by a sprayer operator. In this part of the country, bermudagrass is overseeded with ryegrass for winter soccer play and then it is often sprayed out in the springtime in order to allow a quicker transition back to healthy bermudagrass. As you can see the sports turf manager instructed his crew to carefully hand spray the area with a sulfonylurea ALS inhibitor herbicide right near the fence line and then use the spray rig to spray the remainder of the field. This field is odd-shaped and the crew was trying to get it sprayed without having to mix another tank; however the tank ran out when they got to their clean up lap. Instead of mixing another tank and because this area was not within the playing surface of the field, they decided to leave this area as a “check plot” to see how quickly the ryegrass would respond to the application. This photo was taken about 2 weeks after the application. When the crew was spraying another field, they went back in and removed the remaining ryegrass.

Photo Submitted anonymously

If you would like to submit a photograph for John Mascaro’s Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL 32303 call (850) 580-4026 or email to john@turftec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of SportsTurf magazine and the Sports Turf Managers Association.
New synthetic turf maintenance equipment
A new line of artificial turf maintenance, rejuvenation and turf removal services has been launched. Xtreme Turf Makeover offers advanced diagnostic testing and three levels of synthetic turf maintenance from decom-paction to complete field removal. Xtreme Turf Makeover offers three levels of service: decom-paction, deep cleaning and con-ditioning; infill extraction, separation, cleaning and reinsertion; and turf removal, disposal and site inspection. They also provide Xtreme Cleaning, a process which extracts the rubber and sand infill from the turf, and removes all dust and debris before returning the infill to the field. With Xtreme Turf Makeover, there is no waste during the makeover process. The rubber infill and turf are either reused or recycled, nothing goes to the landfill.

Xtreme Turf Makeover

Parker Estate Master for synthetic turf maintenance
The Parker Estate Master is a tow-behind turf sweeper with cast iron wheels, sintered pinion gears, and tubular steel frame to keep your synthetic or natural turf looking and performing great for years. The Estate Master gives you a 100-inch wide sweeping path where 24 steel-backed, staggered brushes give the turf a light grooming while throwing debris into three 17 cubic feet baskets. The optional mesh bottom allows infill to fall back down into synthetic turf while keeping debris in the basket. Single unit versions also available. 614-456-3502

Gardner of Florida

TurfTime Equipment's upgraded Thatch Master
The newest improvements to the THATCH MASTER dethatcher/verticutter are designed to add convenience and flexibility to this popular dethatching and surface aeration equipment. Turf managers know what makes grass grow and what practices they can use to keep their turf healthy. However, there are significant variables that effect how those practices can be applied, and which equipment is more suited to the job. Blades and tines respond differently to sandy soils, as compared to soils with clay and stones, and Northern grasses present a different set of challenges than their Southern counterparts. The ideal turf maintenance tool allows operators to make choices that adapt the machine to their unique set of circumstances. Now TurfTime Equipment engineers, responding to input from customers, are providing additional settings and choices to allow the Thatch Master to be adapted to its surroundings.

TurfTime Equipment

AERA-vator
Aerate and loosen compacted soil in less time with less labor compared to walk-behind or pull-behind aerators even in the tightest of spaces with a Grasshopper AERA-vator coreless lawn aerator. The PTO-driven AERA-vator works without slicing or cutting, improving turf development and water absorption with little surface disruption. The patented vibrating tines deep-frac-ture soil instead of plugging cores, which means turf areas are immediately available for use. The AERA-vator attaches in place of the out-front mower deck for zero-turn maneuverability to improve tee boxes and compacted cart paths, or aerate large turf areas, such as athletic fields and parks, quickly and efficiently.

Grasshopper

Ecologel introduces new Hydretain Granular OD
Ecologel Solutions, LLC introduces the all new Hydretain ES Plus Granular OD. Hydretain is a patented rootzone moisture management technology that effectively reduces the overall watering requirements of plants, shrubs, trees, turf and agriculture by as much as 50% or more. A liquid blend of hygroscopic and humectant compounds, Hydretain acts like microscopic “water magnets” drawing vapor molecules together to form plant useable droplets from moisture which would otherwise be lost to evaporation. Hydretain ES Plus combines Hydretain’s rootzone moisture management with an advanced naturally derived soil surfactant designed to improve penetration into and throughout hydrophobic soils. The new granular form puts the power of Hydretain in an easy to spread, quickly dissolvable granule that is convenient for dry spreader applications where liquid applications are impractical or labor intensive.

Ecologel

Stop wearing down synthetic fibers!
Stop wearing down the fibers on your synthetic turf field by scrubbing with brushes. The World Class Hover Washer Turf Cleaner is the tool of choice to remove paint, and clean your artificial turf surface. It cleans without the abrasion of brushes and gives your field a renewed look. Also perfect for use in cleaning up bleacher seating areas, ramps and concourses around the stadium.

World Class Athletic Surfaces

Talstar XTRA featuring Verge granule technology
Talstar XTRA granular insecticide featuring Verge Granule Technology is a new product combining Talstar XTRA with the Verge granule’s performance benefits, including a more uniform product distribution and less dust. It will be available for pur-chase beginning August 2012. A unique, clay-based granule developed exclusively for FMC, Verge breaks down quickly to re-lease the active ingredient and disappear into the landscape. Virtually dust- and odor-free, the new formulation is better for the applicator since it reduces exposure during application. Verge granule technology was developed by Oil-Dri Corporation, an in-dustry leader in micro-particles and mineral processing.

FMC Professional Solutions
TurfEx electric-powered topdresser

The TurfEx 1.4 cubic-yard capacity MS4500 topdresser features polyethylene construction, fully electric operation and precision spreading. It has the ability to spread standard topdressing sand for golf courses, crumb rubber for synthetic turf fields and a variety of other bulk materials including compost and soil conditioners. The MS4500's heavy-duty polyethylene construction eliminates the corrosion and maintenance concerns associated with similar steel built models, while also making the unit up to 40-percent lighter. Furthermore, it features large flotation tires and exerts only 18 psi when fully loaded, allowing safe operation on delicate surfaces such as golf greens. The lightweight construction also lessens fuel consumption for the towing vehicle.

TrynEx International

Turf Teq Power Broom

Turf Teq offers a de-thatching kit for the 1305BR Power Broom. The 46 inch wide brush makes it the most productive de-thatcher on the market. Easily adjustable brush pressure, brush depth and brush angle allow the operator to match turf conditions while winnowing the thatch for quick clean up. These features also make the Power Broom ideal for stripping turf, spring clean up in lawns and installing “in-filled” synthetic turf. Multiple brush heights make our Power Broom the perfect tool for installing and maintaining your synthetic turf. The Power Broom features a hydrostatic transmission, differential lock and 13 horsepower Honda engine. The multi use capability or our tractor allows the unit to be converted into a Power Edger, Power Rake or Brush Cutter.

Turf Teq

Thatch-O-Matic power rakes with tine reels

Gravely now offers durable Thatch-O-Matic Power Rakes with tine reels to remove lightly compacted grass and leaf debris. With a 19-inch sweeping width and a 6hp 169cc Subaru engine, the power rake can be used for dethatching and to prepare for re-seeding. An 11-position height of cut moves in 0.25-inch increments from 1- to 4-inches with a locking collar. For operator safety, the power rake has a manual operated clutch lever. Additional features include a handle with a vibration absorbing comfort grip. Accessories include a knife reel assembly, flail reel assembly and a debris catcher.

Gravely Turf

Bison ShootOut goals have No-Tip feature

Bison ShootOut No-Tip portable aluminum soccer goals set new standards for durability and safety. ShootOut goals of 18 1/2', 21' and 24' have molded polyethylene rear drums that provide anti-tip ballast and double as 12' wide transport wheels. No-Tip ballast meets NCAA, NFHS, FIFA and ASTM F-2056 rules and specifications. These goals have 4' square or round tubing, QwikTrack net attachment and Torque Tested backstay attachment that eliminates corner weld failure common on other portables. Official-size goals adjust to fit under gooseneck football goals.

Bison, Inc.

Topdresser from Earth & Turf

Earth & Turf Products, LLC introduces a hydraulic-drive option for its MultiSpread Model 320, 1-cubic yd. topdresser with exclusive, wide-spread beater. The capacity of the Model 320 can be increased to 2 cu. yd. by adding optional light material sides. The hydraulic option offers benefits for owners with tow vehicles with remote hydraulic valve and minimum of 6 GPM flow. With the hydraulic-drive option, apron and beater speeds are independent of ground speed, and each is infinitely adjustable independent of each other, providing excellent spreading flexibility. In addition, ground traction in slippery conditions, already excellent with standard, dual-wheel ground drive, would not be an issue.

Earth & Turf Products, LLC

Cushman introduces Hauler line of utility vehicles

Cushman introduces the Hauler line of utility vehicles, offering an optional limited slip differential and standard steel brush guard and integrated front bumper to protect the body, finish and vehicle components from the wear of daily use and abuse. The Hauler line’s top and tubular-steel struts were designed to offer maximum visibility and protection from the elements, and also offer a modern, stylish look. Large headlights integrated into the vehicle’s cowl are specially designed and positioned for maximum light dispersion in front of and around the vehicle’s front, for high visibility at dawn and dusk. The vehicles can be equipped with optional high-output LED headlights. The Hauler line features five different models, offering a variety of payload capacities and power train options.

Cushman Haulers

VersaTow variable width aerator

The Plugr VersaTow by SourceOne Outdoor Power Equipment is a pull-behind turf aerator that features 12’ self-storing wings on each side of the 36” main frame, allowing operation at 36’, 48’, or 60’ widths. The wings fold independently for excellent results on uneven terrain. VersaTow is compatible with a Category 1 3-point hitch or a standard tow bar. You’ll achieve approximate 6” x 7” core spacing up to 4” deep from 80 heat treated 5/8” tubular tines. The 13” x 6” pneumatic tires easily lower for transport with a trouble-free hand-operated actuator.

SourceOne

STEC Equipment topdressers and spreaders

STEC Equipment offers a wide variety of topdressers and spreaders to meet any need. With hopper sizes ranging from 1 cubic yard to 6.5 cubic yards, the equipment can spread a range of materials, wet or dry. You can choose from a selection of power options, completely self-contained units driven by engine or PTO, or use the tractor’s hydraulics. Options include a conveyor, spinners and wireless remote.

STEC Equipment
THE JUNGLE,
LOUISA COUNTY PUBLIC SCHOOLS, MINERAL, VA

- **Level of Submission:** Schools/Parks
- **Category of Submission:** Football
- **Head Sports Turf Manager:** Michael Hopkins
- **Title:** Turfgrass Science Instructor/Sports Turf Manager
- **Education:** Bachelor’s degree in Agriculture Education
- **Work History:** Through my excavation company, I have worked with a local turf grass consulting firm for the past six years building sports fields. In 2009, I started teaching Turf Grass Science at Louisa County High School and, as a result, took over management of the athletic fields.
- **Full-time staff:** Bill Pelott, Joe Bradford and Jimmy Null. And the Advanced Turf Science class known as “The Jungle Turf Crew.”
- **Original construction:** 1995
- **Turfgrass variety:** Patriot bermudagrass
- **Rootzone composition:** Native soil (clay)
- **Overseeding:** We are overseeding this year with 1500 lbs. per acre of rye grass, 1/3 in early Sept., 1/3 in early Oct. and 1/3 in late Oct. I was able to spread the first application after 6” of rain and before a varsity game with the idea of the seed being incorporated by the players. With the other two applications, I will use a slicer to work the seed into the soil. I have found with Patriot that the mat is so tight and thick it is hard to get good germination without some type of mechanical incorporation.
- **Drainage:** Crowned with a 1.5 % slope and side drains.

The Jungle Turf Crew created a motto that was announced at the game that night: Neither earthquakes, hurricanes, vandalism, nor tropical storms can keep the Jungle Turf Crew from preparing the field for the mighty Lions.
CHALLENGES

The “Jungle” has always been known as the place to be on Friday nights in Louisa because of championship play by our Lions, fireworks, sky divers, a real lion and many more side shows. It took on a totally new meaning on Sept. 23th when a 5.8 earthquake struck our school causing it to be condemned. During the next three weeks, while the middle school was being turned into a temporary home for our 1500 students, we had two home games scheduled for our varsity football team. The Principal, Athletic Director, and I got together and decided that the school and community, which had also been devastated by the epicenter of the quake, needed something to inspire hope and rally the community. We decided it would be our beloved Jungle, since that was one of the only structures not affected by the quake. We planned a Community Pep Rally on the Thursday night before the first game. To complicate things, Hurricane Irene came up the East Coast the weekend before, dumping over 5” of rain on the field. The Jungle Turf Crew showed up for 3 days to prepare the field for the game. We completed all work on the field before the pep rally, which drew over 1000 people, thinking that we would have an easy day on Friday. To my surprise, I arrived on Friday to a field that had been vandalized by four students from the visiting team. They had spray painted graffiti from one end of the field to the other, on the press box, and score board. I called the Jungle Turf Crew and we went to work. We sprayed the field with a turf dye first and then repainted all lines, numbers and logos; completing the task just in time for the paint to dry enough to play one of the most important games in our history. That night we had over 6,000 people in attendance, which was the second biggest crowd ever to watch a game in the Jungle. No one in the stands could tell that any vandalism had taken place. The following week we had another challenge just as big. A tropical storm came up the coast dumping over 6” of rain on the field Tuesday through Thursday. Every time we started painting the sky would open up and wash the paint away. On Friday the sun came out and for the second week in a row, we painted the entire field on the same day as the game. The Jungle Turf Crew created a motto that was announced at the game that night: Neither earthquakes, hurricanes, vandalism, nor tropical storms can keep the Jungle Turf Crew from preparing the field for the mighty Lions.

www.stma.org

SportsTurf 37
F.O.Y. So when the opportunity arose to teach Turf Science 3 years helped him build, grade, or install irrigation on athletic fields. I also have an excavating business through which I have start a business 10 years ago servicing and grinding reel mow-...
ago, it seemed to be a natural fit for me. I requested to have a major roll in managing the fields because I felt that that was the only way to effectively teach my students.

SportsTurf: What changes if any are you implementing for the winning field in 2012?

Hopkins: Last year we changed all the paint schemes and logos, installed new goals, switched brands of paint, and changed most of our management plan. We also changed schools three times because of an earthquake. This year I am hoping our changes are not as drastic. We are laying sod on the area where spectators enter the bleachers and are making some small changes in the paint schemes. We are also looking at doing some landscaping that will promote school spirit. As always, we are constantly looking for ways to improve what we are doing and make it more efficient. I try to instill in the students that they should never be satisfied with the status quo but should always be looking for ways to improve.

SportsTurf: How do you see the sports turf manager’s job changing in the future?

Hopkins: I think education and research will play a major role in the future of sports turf managers. As the field gets more technical, sustainable management practices become more of the norm and not the exception. Also managers are going to have to educate themselves more in the future than ever before as they decide between synthetic or natural fields.
SAFE Scholarships Offer Free Money

WITH THE NUMBER OF FINANCIAL AID APPLICATIONS ON THE RISE (for 2010-11, quarter 1, saw a 17.5% increase over the same period in 2009-10, about 1.2 million students applying), students in turfgrass management have the opportunity to apply for and receive free scholarship dollars.

STMA’s charity, The Foundation for Safer Athletic Fields for Everyone (SAFE), awards at a minimum each year $12,500 in pure scholarship dollars to qualifying student members of STMA. These awards, unlike financial aid, do not need to be paid back. Scholarships start at $1,000 and each winner receives a complimentary conference registration and three nights lodging at the conference.

As part of the program, SAFE awards three named scholarships: the Dr. James Watson Graduate Scholarship, the Dr. James Watson Undergraduate Scholarship, and the Dr. Fred Grau Scholarship. The Watson Scholarships, named in honor of long-time green industry researcher and consultant Dr. James Watson, are funded by the Toro Giving Program, and are presented to the top graduate and undergraduate scholarship recipients. The top recipient from a two-year program receives the Dr. Fred Grau scholarship, which is named in honor of the first turfgrass extension specialist in the United States. There is not a separate application for these named scholarships; they are awarded to the top graduate and undergraduate applicants.

The scholarship application packet must be received at the SAFE/STMA Headquarters by Oct. 15, with all materials included in one packet. Fax and emails components will not be accepted. The process is being redeveloped into an on-line process for 2013.

In addition to scholarships, SAFE also awards two grants: one for practitioners and one for interns.

The Terry Mellor Continuing Education Grant is funded by Turface Athletics, and is awarded to a sports turf manager who is a member of an STMA local affiliated chapter. The chapter member must be nominated by a national STMA member. The grant funds that persons travel and on-site costs associated with the STMA national conference. In addition, STMA provides a complimentary conference registration. This grant is named in honor of Terry Mellor, brother of long time professional groundskeeper David R. Mellor, to recognize the brothers’ commitment to professional development through continuing education.

The Gary Vanden Berg Grant is awarded in late fall each year for an internship completed during the spring or summer of that year. This grant honors Gary Vanden Berg, CSFM, for his contributions to the industry in promoting internships. Gary was the Director of Grounds for the Milwaukee Brewers until his death in October 10 last year. His commitment to creating an excellent learning experience for interns was legendary throughout the MLB and the entire sports turf industry. The grant is intended to offset the costs a student may have incurred while interning including, but not limited to, transportation, lodging, and food, or as a subsidy to wages. In addition to receiving the grant, the winner will also receive a full conference registration and three nights lodging at the next STMA National Conference and Exhibition.

The deadline to submit for the grants or scholarships is October 15. For a copy of the application and required materials to apply for a grant or scholarship, go to STMA.org, and click on Scholarship Program under the Professionalism tab.

The SAFE Foundation is a 501 (c) (3) charity that funds scholarship, research and education. It focuses on educational outreach and its mission is “To enrich communities through championing safe, sustainable sports and recreation fields for all athletes.”

New Timing for Several Conference Events

AT ITS JULY BOARD MEETING, the STMA Board approved the recommendations of the Conference Education Committee, chaired by Jeff Fowler; the Commercial Exhibition/Membership Committees, co-chaired by Rene Asprion and James Graff; and the Seminar on Wheels Committee, chaired by Jeff Salmond, CSFM.

The education program is very robust, offering 60 educational sessions that form 11 tracks: Industry Development, Water, Synthetics, Agronomic, Pest Control, Baseball, Research, Construction, Professional Development, Facility Management and Sustainability. CEUs from peer organizations and Florida Pesticide Credits will be available.

The conference and exhibition has much to offer and incorporates many of the suggestions from members in our post-conference survey.

Here are the main timing and program changes:

TUESDAY (JAN. 15)
- The SAFE Golf Tournament at LPGA International (was typically on Wed.)
- Full Day Seminar on Wheels to Jacksonville Jaguars & Sun, and Daytona International Speedway (typically one full day was held on Tues. and one on Wed.)
- ½ Day Seminar on Wheels - NEW - Jackie Robinson Ballpark & Daytona International Speedway (both tours will meet up and tour the Speedway)
- STMA Academy - NEW

WEDNESDAY (JAN. 16)
- Conference officially begins with a full day of educational opportunities
- First Timers Reception - will be a dessert reception following lunch
- Keynote Address - will be just prior to the Welcome Reception & Casino Night (typically was Thursday a.m.) Features Ian Hill, internationally known speaker who inspires change

THURSDAY (JAN. 17)
- Exhibition starts at 1:30 p.m. (typically started at 4:15 pm)
- Committee meetings will be held on the Trade Show floor
- No change to the Annual Meeting & Lunch

FRIDAY (JAN. 18)
- Trade show opens at 10 and closes at 1 (typically started at 10:45 and closed at 2:45)
- Trade show floor will have Lunch, Innovative Sessions, Race Car Driver Autographs & Sports and Race Simulators
- Closing Session - NEW 1:15 pm - Features Dr. Michael Mann, climatologist - winner of the Nobel Peace Prize
- STMA Academy - NEW
- No change to the STMA Awards Reception and Banquet