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Cover Story

Field of the Year
Legion Field Stars as STMA 1999 Football Field of the Year in the College Division.

Main Events

The Best Cool Season Turf Grasses for Your Field
Find which grass is right for your field as Dr. John Stier discusses the pros and cons of several cool season species.

The Key to Success—Quality Athletic Turf
Tip-master Floyd Perry shares helpful hints on how to keep turf safe and healthy.

Surviving Special Events
Murray Cook talks about hosting extracurricular events, without destroying your field or your mind.

Web Site Content
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Legion Field, the 1999 STMA Football Field of the Year, College Division. Courtesy Legion Field
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Circle 103 on Inquiry Card
Help Make the World a Greener Place

I recently received a note from Den Gardner, executive director of the Turf and Ornamental Communicators Association. In addition to his duties with TOCA, Gardner is the development director for the Evergreen Foundation, a non-profit foundation dedicated to promoting and funding the creation of a national greenway system.

The foundation was originally formed in 1998 to marshal the resources of the Green Industry in bringing the healing power of growing things to communities across the country. The foundation fosters greenways, trails, neighborhood parks and other green spaces for public use in order to help improve the quality of life in America.

The foundation intends to select greenway projects around the country, fund those community projects with cash or in-kind support of work, machinery or materials, and foster a greater appreciation for green spaces in our nation’s cities and towns.

To help raise funds for these projects, the Evergreen Foundation is holding a fund-raiser to give away, courtesy of John Deere Worldwide Commercial and Consumer Equipment Division, a Trail Gator utility vehicle. Only 400 tickets will be sold, at a price of $50 per ticket, giving each entry a 1 in 400 chance of winning the Gator. The money raised through the ticket sales will be used to fund grants to communities and organizations seeking to build greenways.

To participate, send a $50 check paid to the order of the Evergreen Foundation and send it to Den Gardner at the following address:

Evergreen Foundation  
c/o Den Gardner  
120 W. Main St.  
P.O. Box 156  
New Prague, MN 56071

Because the Evergreen Foundation is a non-profit organization, your contribution is tax-deductible.

When your check is received, you will be sent a ticket with your raffle number clearly indicated. The drawing will be held at the Green Industry Expo in Indianapolis on Nov. 7. Don’t fret if you will not be in Indianapolis that weekend-participants need not be present to win.

For more information, call Den Gardner at 877-758-4835 or e-mail your inquiries to evergreenfound@aol.com. For additional information about the Evergreen Foundation check the Web site at www.evergreenfoundation.com

Michael SanFilippo
(847) 882-1942

Causes for Poor Turf

by Art Wick, Lesco Inc.

Much of the poor turf in recreation areas and on athletic fields results from poor planning or management. The following are the principal causes for poor turf:

Improper design or construction: Many fields have been laid out almost table-top flat and poor soils have been used. Such conditions provide neither surface nor internal drainage of excess water from the field. As a result, a saturated condition may persist for several days. If play is permitted on the field when it is wet, the result is severe compaction and loss of soil structure, both of which interfere with air, water and nutrient movement in the soil.

Overuse of fields: Wherever possible, an extra practice field should be provided. Not more than about 10 football or soccer games or their equivalent should be played on a field during one playing season. Marching band practice can also be detrimental to good quality turf on playing fields. Baseball fields can tolerate more frequent use, however, practice sessions should be held on practice fields.

Mowing too close: Enough green leaf area should be left on the grass plants to support the plant and provide food for a well developed root system. The actual height varies with the type of grass being used.
Today's world is international in feature and function, much more so than ever before. You hear political candidates from all parties proclaim our need to monitor global affairs and participate in the global economy. TV, radio and newspaper advertisements, placed by airlines and communication companies, offer their services to help us connect with the global marketplace. Audiences world-wide observe such sports competitions as the 2000 Olympic Games via TV broadcasts and catch the latest results over the Internet.

STMA members are going global, too. In early September, two STMA Board members, President-Elect L. Murray Cook, and Secretary Tim Moore, were part of the team in Sydney, Australia, working at Palm Meadows Baseball Park, the Team USA training facility and assisting the Sydney Olympic staff with the preparation of the baseball facilities and fields at Sydney Olympic Park.

While the Olympic preparations were taking place, STMA Executive Director Steve Trusty was in England, attending the IOG’s SALTEX 2000. This is the Institute of Groundsmanship’s Sports, Amenities & Landscaping Trades Exhibition. SALTEX attracts more than 15,000 attendees each year from “all those responsible for the development and maintenance of outdoor spaces: groundsmen, leisure and parks officers, contractors, landscape architects, play managers, horticulturists and other industry professionals.”

Trusty was invited by his counterpart at the IOG, Patrick Gosset, to serve as a stand (exhibit booth) judge and see how they operate their major event. His team member for stand judging was Gordon McKillop, who had taken the position as Chief Executive of the Sports Turf Research Institute (STRI) only six weeks earlier. This offered another great opportunity to increase the STMA’s international connection. STRI has more than 60 employees that are responsible for research, education and consultancy in the sports turf field.

And, keeping in this international mode, two of STMA’s featured speakers at the 2001 Conference, Upward and Onward, to be held in Tampa, Fla., on Jan. 17-21, are from the United Kingdom. One of these individuals, Turfgrass Consultant John Souter, of Braco, Perthshire, Scotland, is well known to STMA members and was the recipient of the STMA Harry C. Gill Memorial Award in 1998. He will speak in the Saturday morning session on “New Technologies in Construction & Maintenance of Soccer Pitches.”

Our second featured speaker from across the pond is Eddie Seaward, Head Groundsman for The All England Lawn Tennis & Croquet Club Wimbledon. Also during the Saturday morning session, he will provide a behind the scenes view of “The Wimbledon Year.”
Legion Field was a star in the City of Birmingham, Alabama, when it was built in 1927 in honor of the American Legion, as a memorial to U.S. Armed Forces members who gave their lives in service. Legion Field also starred in the 1996 Summer Olympics when it served as one of four soccer venues. And it's a star now, as the STMA 1999 Football Field of the Year in the College/University division.

Legion Field is a city-owned facility that has been expanded and renovated several times over the years to its current seating capacity of 80,673. Three city departments play a role in its management. The Park and Recreation Board schedules and oversees events; the Street and Sanitation Department provides cleaning and maintenance crews; and the Department of Horticulture and Urban Forestry provides all the technical staff and crew personnel for maintenance of the playing field, the surrounding turf and the landscaping outside the stadium.

As Deputy Director of the Department of Horticulture and Urban Forestry, one of James E. Horton, Jr.'s duties is management of Legion Field's turf and landscape. Because “good enough” is not in his vocabulary, perfection is always the goal. His annual management plan includes three improvements to make the program better. These improvements were never more evident than in the 1999 field renovation.

The original Legion Field hosted hundreds of football games on its native soil and natural turfgrass. As field use increased, artificial turf was installed in 1970 and remained on the field until 1995. Then a major renovation was undertaken for the Olympic games.

Horton says, “The football field was expanded to 2.7 acres to accommodate soccer. The artificial turf materials..."
Shallow root development resulted in repairs being needed from 1995 to 1998. Courtesy: Legion Field

and soil profile were removed. A Power Drain system was installed, as was a Big Gun irrigation system. This was topped with a 12-inch base of USGA approved sand covered with a 4-inch layer of 80 percent sand and 20 percent Canadian sphagnum peat. To achieve this surface layer, pure peat was spread over the sand layer and tilled into a 4-inch depth. The turf was Tifway 419 bermudagrass.

"While the return to natural turf was welcomed by most, especially the athletes, the field was not without problems. Each year, from 1995 to 1998, we made field repairs that were attributed to the layered profile. It caused shallow root development, poor gas exchange, slow water infiltration and percolation, and higher than desired water retention at field capacity. Rapidly changing winter conditions and temperatures, combined with heavy field use on the shallow-rooted turf, contributed to poor turf density during spring green-up. The problem literally grew worse as roots developed and decayed in the top layer of the profile despite aerification. By the end of the '98 season, we sought funding for removal of the problematic 4-inch organic layer."

Dr. Coleman Ward of Ultimate Turf served as consultant for the renovation. From January through March of 1999, Horton and Ward wrote and revised the specifications for the new sand-based root zone mix tailored to meet specific water percolation and retention rates. They worked with Dr. Powell Gaines of Tifton Physical Soil Testing Laboratory to test sands and sand-peat blends to match their criterion.

Horton says, "We decided on a blend of 90 percent sand matching that of our existing 12-inch sand layer and 10 percent Dakota Reed Sedge Peat. Ideally our profile would meet this 90:10 blend. However, we could not financially afford to start over by removing the entire profile. We decided to take the next best option. The materials would be blended off-site, with the specifications actually heavier in peat. Following the removal of the existing sod and 4-inch top layer, the 12-inch sand base was laser graded. The new blend was hauled in, spread over the field, laser-graded, and then tilled.
into the sand base to a 7- to 8-inch depth. This brought some of the existing sand into the new material, giving us a 90:10 blend with the percentage of peat gradually diminishing until it becomes pure sand at the base of the profile. So, while we do have some variation within the profile, top to bottom, it’s a gradual change rather than a distinct layer. This method was determined to be our best solution without total removal and replacement of the entire existing sand profile.”

Bids for the project were solicited with an opening date of April 21, 1999. The target completion date was June 1, 1999, with the first game scheduled for September 5, 1999. Southern Turf Nurseries was awarded the bid.

“Once the project began, it proceeded without problems,” says Horton. “After the new blended material was tilled, the field was then fumigated with methyl bromide to eliminate any pathogens, nematodes, weed seed, insects and any remaining Tifway 419. Following the final laser grading, the field was sprigged with certified Tif-Sport bermudagrass. Due to a delayed starting date of May 25, 1999, the work wasn’t completed until June 18, 1999. The field was turned over to our department at that point to manage the grow-in. Our first game was just 79 days away.”

Prior to the renovation, Horton’s staff had modified the irrigation system, installing ball valves between the existing gate valves and the Big Guns to facilitate their use. There are six of these units, one oriented in all four corners of the field and one at each side of the field at the 50-yard line. All are removed for games and other on-field events. With irrigation nozzles similar to water cannons, each unit can deliver 380 gallons of water per minute with a 205 foot radius. Two units can be operated at one time with only a slight loss of performance. To open or close the gate valves required from 19 to 20 turns of a valve key, each turn taking approximately a second. Opening or closing the ball valves cuts the time to approximately 2 seconds, making the job easier, faster and keeping the operator drier. This one of the trio of improvements for 1999 was much appreciated during the multiple irrigation cycles necessary for establishment of the sprigs.

Horton says, “During the grow-in process, we found that Tif-Sport was slower to establish, and slower to close and knit together than our 419 had been, despite our aggressive fertilization and a total maintenance program fine-tuned to sprig development and weather conditions. But it really took hold in late July and by mid-August matched our expectations. The field was not only in great shape for that first game, it performed well for the heavy schedule that followed within the first 35 day span—which included six college and two high school games, 10 team practices and one band competition—and for the remainder of the season.”

That “remainder of the season” included four college and six high