to not damage the carpet and not apply so much down force as to dislodge the rubber or fibers. Permanent damage can be easily done. It is not uncommon to have a large pile of fibers to remove from the melted snow.

- Skin abrasions are much less of a problem on the Infills than on the older synthetic surfaces. But they can still occur. However, because of a concern for infections, it may be necessary to spray periodically with a disinfectant.

- Increased security is necessary with synthetic Infill. Random access must be prohibited. Vandalism by fire, paint or graffiti is very costly to repair or replace. The Synthetic Infill will not 'grow out of it'.

Just as natural grass fields are scrutinized concerning pesticides used for weed control, there is increasing concern relative to the chemical safety of crumb rubber and silica sand amendments. Certainly there is a rubber odor, especially on hot days, and there will always be some inhaled dust that is associated with infill wear. The bagged silica sand, used to blend with crumb rubber, carries a silica dust WARNING; suggesting that breathing silica dust can cause silicosis and cancer. Hopefully future research will conclude that there is no risk.

Some grass shear in natural grass is important and safe for the athlete. A surface that does not absorb energy of a cut or stop by shearing can be very hard on joints and muscles, and may be very difficult for some athletes to get comfortable with. Also on some of the soft Infills, the foot tends to slightly shift sideways, just like it does on a thatchy zoysiagrass surface.

**Turf problems**

In no way do we want to highlight problems with synthetic Infills without also reminding the reader of long experienced problems with natural grass fields. The most obvious problems with grass has always been excessive wear, sod shear on sand based fields, irrigation needs, maintaining management expertise, marking/painting the field mostly before every major game, laborious use of rain or grow tarps, year-a-round maintenance, the constant need to rotate practice areas, etc.

It certainly makes sense to consider the Infills for:

- Landlocked campuses that must transport classes and teams off site.
- Municipal stadiums that are forced to use the game field for numerous teams, little league events, band days, concerts, etc.
- Campuses that hold numerous summer camps, exhibition games, etc.
- Campuses that need an all-weather practice field and for practice when preparing to play an away game on a similar field.

It makes little sense to consider the synthetic Infills for:

- Replacement of a grass field that only gets center of field wear by season's end. (Grass field wear is usually non-consequential as related to player performance or safety. It mainly becomes an aesthetic issue, even if the field becomes totally worn out.)

(continued on page 34)
Titan Removable synthetic turf paint allows you to easily switch between sports and create temporary custom logos. The product dries to a flexible coating unlike most synthetic turf paints that dry stiff. Product has no harsh solvents or potent chemicals. Pioneer offers custom color blending.

Pioneer Manufacturing/800-877-1500
For information, circle 084 or see http://www.oners.ims.ca/2916-084

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Circle 165 on card or www.oners.ims.ca/2916-185
Circle 168 on card or www.oners.ims.ca/2916-168
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Nu-Gro Technologies/888-370-1874
For information, circle 094 or see http://www.oners.ims.ca/2916-094

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**FERTILIZER FROM SIMPLOT**

Nitra King is a cool-season formulation of homogeneous fertilizers for the proper feeding of turfgrasses, ground cover, trees, shrubs, flowers and other landscape areas. The added iron, zinc and sulfur improve plant hardiness and vigor.

Simpot/800-552-8873
For information, circle 081 or see http://www.oners.ims.ca/2916-081

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**TURF FOOD**

ROOTS Turf Food 12-2-12 from Novozymes Biologicals offers nourishment for turf as well as increased microbial activity in soil or sand. Derived from plant and animal meals, this organic-based specialty fertilizer improves turf density and root mass while producing outstanding and consistent color. With both slow-release and quick-release soluble nitrogen, the high-product solubility levels of ROOTS Turf Food reduce roller and mower pickup and prevent floating of fertilizer particles while the low soluble salts minimize any burn potential.

Novozymes/800-788-9886
For information, circle 082 or see http://www.oners.ims.ca/2916-082

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**Mission Nutrition**

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For more information visit our website www.LebanonTurf.com click on Technology and look for our article on Fall Fertility, Plain and Simple!
HERE'S A LAUGH

This is a copy of the photo that currently is running in consumer magazines as part of an advertisement for West Coast Turf. That's Arizona Diamondbacks' turf manager Grant Trenbeeth and his dog, Mattingly, enjoying a blanket of turf.

(continued from page 31) • Replacing a soil based grass field because the maintenance cost for the Infill would be less. It would take dozens of years to make up the difference between an increased maintenance cost and the initial cost of a synthetic infill, but you will also have an added replacement cost of the synthetic infill in a few years.

As the infill system becomes more competitive many of the problems mentioned in this article will or already have been corrected. Many new companies are already manufacturing and/or installing these systems, measuring surface hardness, and supplying infill maintenance equipment.

Synthetic Infills are here to stay and they are serving an important clientele, our kids. As pointed out in this article, there are many unanswered questions that need justification and scrutiny. There is little to no research and few evaluations reported by independent testing companies/consultants. Decision-makers, along with sports turf managers, need to ask all of these questions before signing the bottom line.

Just as we need more research to improve sand-based grass fields, more research is needed with these ‘new’ Infill systems. The Sports Turf Managers Association (STMA) has endorsed independent research of Synthetic Infill products. As new research results become available the STMA is committed to publishing or otherwise reproducing the findings to its members and the public. ST

Dr. A. J. Powell, Jr., is an Extension Turfgrass Specialist, University of Kentucky; Mike Andresen, CSFM, is Athletic Turf Manager, Iowa State University. The authors would like to acknowledge the following for contributing to this article: Aaron Boggs, University of Louisville; Jeffrey Bruce, Jeffrey L. Bruce & Company; Bob Campbell, CSFM, University of Tennessee; Darian Daily, Cincinnati Bengals; Amy Fouty, Michigan State University; Patrick Maguire, Geller Sport Inc.; Gilbert Pulley, Brigham Young University; Doug Vesco, Vesco’s SportsFields; Steve Wightman, Qualcomm Stadium; and Frank Williams, Brigham Young University.

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Turf managers face money, manpower issues

In a recent email survey of 31 properties representing more than 4,000 acres, the Professional Grounds Management Society (PGMS) found money and manpower issues to be the two biggest challenges facing its members.

"The survey was primarily conducted in order to assist one of our members who needed to make a costs/salary presentation to management," said Thomas Shaner, PGMS Executive Director.

Comments received included: "Working with less endowment monies. Managing new buildings and landscapes while maintenance budgets are cut," "Low wages for permanent staff leading to high turnover," "General budget and maintenance," "Keeping good staff," "Motivating employees to care about more than a paycheck," "Achieving desired results with time constraints due to other duties," "Finding conscientious, qualified manpower," "Lack of sufficient summer maintenance crews," and "Not enough staff to get it all done."

Reflecting a current trend in the green industry as a whole, several respondents also recognized the need to be able to better communicate with Hispanic workers, and meeting deadlines with fewer workers and less money.

On average, survey respondents managed 129-acre properties, the largest being 650 acres and the smallest five acres. Excluding one private estate which represented more than 2 million square feet of gardens, the respondents manage an average 38,500 square feet of ornamental flower beds and use, on average, 506 cubic yards of mulch each year. They also oversee an average 75,240 square feet of sidewalks, patios and terraces.

On average, each property has 1.5 supervisors who earn $19.33 an hour (range $10.40 - $36.46). They have 2.5 foremen earning $13.39 (range $9.00 - $23.07) and 11.07 full time employees earning $11.22 (range $7.00 - $14.35).

Among the other challenges noted by the PGMS survey respondents were: time to deadhead and care for annuals, weeds and water, using less pre-emergence chemicals leads to more weeds, keeping nice turf around campus, equipment maintenance, issues of winter, and droughts and water rationing.

http://www.sportsturfmanager.com • STMA
Tee it up for charity in Phoenix

The Foundation for Safer Athletic Field Environments (SAFE) was created by the Sports Turf Managers Association to provide research, educational programs, and scholarships geared to sports fields. For the 5th consecutive year, Jacobsen, a Textron Company, is sponsoring the SAFE/Jacobsen Golf Tournament. This event will be held in conjunction with the 16th Annual STMA Conference & Exhibition, January 19-23, 2005 in Phoenix, AZ.

The shotgun-start, scramble format tournament will be played Wednesday, January 19, at the magnificent Lookout Mountain Golf Club at Pointe Hilton Tapatio Cliffs, where you can enjoy challenging play and spectacular scenic beauty. Visit the site www.pointehilton.com for more information. Registration fees include greens fees, cart, and lunch. Proceeds from this tournament help support the SAFE scholarship, education, and research funds. Last year, this Jacobsen-sponsored event brought in $12,000 to the Foundation.

The SAFE Foundation believes in pro-active research and education. We are dedicated to fund the kind of research that sports turf managers need to improve the playing surfaces they oversee. SAFE also recognizes that research must be effectively disseminated to professional turf managers and volunteer turf practitioners. Thus, our goal is to fund sports turf research and education.

Also, as part of our mission, SAFE is dedicated to supporting students focused on the profession of sports turf management through our scholarship program. Scholarship funds are earmarked for students of 2-year and 4-year programs, and for graduate students.

The SAFE Foundation has much work to complete before it can supply the sports turf industry with the desired level of programs. And we are truly thankful to Jacobsen for their continued support of our cause. Your willingness to consider the SAFE Foundation’s request for funding is also truly appreciated.

For more information on the SAFE/Jacobsen Golf Tournament, check out the STMA website at www.sportsturfmanager.com or contact the STMA Show Office at STMA@newportevents.com or call Andrea Dillinger at 1-866-84 STMA3.

For information on the SAFE Foundation, contact Kim Heck at SAFE Headquarters at either kheck@sportsturfmanager.com or at 800-323-3875.

Auctions Combine Fun with Funding

Now is your chance to help the future of our industry, STMA, and the SAFE Foundation by helping to fund the scholarship program through your contribution of items for the SAFE Live and Silent auctions and the Raffle. These events all will take place at the STMA Conference in Phoenix January 19-23, 2005.

Tom Curran, STMA member and Florida STMA Chapter President, also is an award-winning auctioneer. Tom has been organizing and running this auction for SAFE and urges everyone in the sports turf industry to contribute something to these great fund raising events. Items such as memorabilia, autographs, clothing, vacation packages, and equipment all help raise funds for this great cause. The 2005 Live Auction will be held January 20 from 8:00-9:00 PM at the close of the trade show. The Silent Auction will take place on the trade show floor on Thursday, January 20 and Friday, January 21. Join in for the Fun.

Raise Funds for the future of the industry.

Information on the SAFE Scholarship program is posted on the STMA website: www.sportsturfmanager.com. Click on “About Us,” go to the SAFE Foundation, and visit the Scholarship section for the link.

All items that you donate to SAFE are tax deductible. Items should be sent to STMA Show Office, 28 Pelham St., Newport, RI 02840. Or, to save on shipping and handling, send a description of your donations Tom Curran at CTomSell@aol.com, and bring them with you to the Conference. If you have any questions, please don’t hesitate to contact Tom via email.

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Conference season kicks off

BY MIKE SCHILLER, CSFM

November marks the beginning of the state and regional turfgrass conferences. Many of these conferences offer sports turf educational tracks developed in conjunction with the area’s Sports Turf Managers Association (STMA) Chapters. Some of these are highlighted in the Chapter information blocks below. Take advantage of these educational advantages and the opportunity to network with your peers and encourage participation in local and regional Chapter activities.

Expand your horizons by attending the STMA 16th Annual Conference and Exhibition. It will be held at the Phoenix Civic Plaza Convention Center and the Hyatt Regency Phoenix hotel, January 19-23, 2005. This is an event packed with opportunities to fine-tune your sport turf management program, including: Seminar on Wheels visits to area sports fields, the SAFE/Jacobsen Golf Tournament fundraiser, networking sessions, educational sessions and workshops, the MLB/NFL offsite Seminar, round-table discussions, the Awards Banquet, keynote speaker Ron Santo, and the sports turf focused trade show. Check out www.sportsturfmanager.com for complete information.

Kentucky Sports Turf Managers Association: The Kentucky Chapter will participate in the Kentucky Turfgrass Council Conference and Trade Show November 9-11. A special Sports Turf Track will take place November 10. For more information on the chapter or upcoming events, check out the website: www.kystma.org or contact Tom Nielsen at Tnielsen@batsbaseball.com or Donnie Mefford at dbmeffo0@email.uky.edu or call him at 859-257-1451.

Florida Chapter #1: The Chapter will hold a November 16 meeting at Sable Pines Park in the City of Coconut Creek. The topic is Total Park Maintenance from Fence to Fence. Equipment demonstrations also will be showcased.

For information on the Chapter, or pending activities, contact John Mascaro at 954-341-3115 or STMA@Turf-Tec.com.

South Carolina Chapter of STMA: The Chapter will meet November 16 in Myrtle Beach at Coastal Federal Field, home of the Myrtle Beach Pelicans. Featured on the program will be Weed Identification and Control presented by Dr. Bert McCarty and Baseball Infield Preparation demonstrated by Chris Ball. Following the meeting, participants may visit the Carolinas Golf Course Superintendent Trade Show from 4:30-7:00 PM for an additional charge. Golf casual attire is required for the trade show event.

For information on the chapter or upcoming events, contact Dr. Hale at 843-662-3526 extension 206 or by email at tchale@clemson.edu or on the chapter’s website www.scstma.org.

Midwest Chapter STMA: The Chapter is offering scholarships and Field/Facility Awards to its members. Applications for each were sent out in the August Newsletter. Copies are available by contacting Libby Baker as shown below. The scholarship is $750 and can be used for attending the National STMA Conference in Phoenix in January. The awards and scholarships will be presented at the Illinois Professional Turf Conference (IPTC) November 30 to December 2.

For information on the Chapter, or pending activities, visit the Chapter’s website http://mcstma.org/, or call Libby Baker at 847-263-7603 or email Bake60ff6@aol.com.

Sports Turf Managers Association of Arizona: The Chapter will hold its Annual Sports Turf Show December 2 at the Yuma Civic Center. Program highlights will include: Aeration Principles presented by David Kopiec; Playground Safety presented by Landscape Structures; Seven Deadly Sins of Tree Care presented by Tina McKeand, City of Yuma Arborist; Selecting the Right Sprinkler

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Chapter will participate in the Minnesota Turfgrass Foundation Annual Conference and Trade Show, the Minnesota Green Expo which will be held at the Minneapolis Convention Center January 5-7, 2005. Pre-Expo Workshops will be offered January 4. For the most up-to-date details, visit the website: www.minnesotagreenexpo.com.

For information on the Chapter, or upcoming events, contact Jeff Hintz, Bethel College & Seminary, St. Paul, at tel. 651-638-6076 or e-mail: jhintz@bethel.edu or check out the Chapter website: www.mstma.com.

**Georgia Sports Turf Managers Association:** For information on the chapter or upcoming events, contact Skip Kirby at 770-929-1580 or email skip@sports turfmanagement.com

**The Greater LA Basin Chapter of the Sports Turf Managers Association:** For information on the Chapter or pending events, call Eric Johnson, University of Southern California, at 213-821-5654 or email ejohnson@busaff.usc.edu.

**Indiana Chapter:** For information on the Chapter, or pending activities, contact Stan Moscrip, Indiana University, at 812-856-2256 or moscrip@indiana.edu.

**Keystone Athletic Field Managers Organization (KAFMO/STMA):** For information on the KAFMO/STMA Chapter or upcoming events, contact Dan Douglas, Reading Phillies Baseball Club, at tel. 610-375-8409, ext. 212; or e-mail to: kafmo@belcom.com.

**Michigan Sports Turf Managers Association (MISTMA):** For information on the Chapter or pending events, contact: MISTMA Headquarters at 517-712-3407, or email Amy Fouty, Michigan State University, at fouty@asth.msu.edu, or go to www.mistma.org to visit the chapter's website.

**MO-KAN Sports Turf Managers Association:** For information on the Chapter, or upcoming events, contact Mike Green at 913-888-8055 or email him at: mgreen865@earthlink.net.

**Nebraska Sports Turf Managers Association (MSTMA):** For information on the Chapter or upcoming events, call Loren Humphrey at: 402-461-2324 or email to lhumphrey@cityofhastings.org.

**Pacific Northwest Sports Turf Managers Association:** For information on the chapter or upcoming events, contact: Bob Christofferson at bcchristo@mariners.org.

**Tennessee Valley Sports Turf Managers Association (TVTMA):** For information on the Chapter, or upcoming events, call Chapter President, Bob Elliott, Tieco. at 800-239-9547 or Glenn Lucas at 800-837-8062; email to Glenn@tvstma.org, or visit the chapter’s website: www.tvtma.org.

**Texas Sports Turf Managers Association:** For more information on the Chapter or upcoming events contact the TXSTMA office at the Phone/Fax number: 866-TXSTMA1 (866-897-8621) or email T. J. Thompson, Treasurer, at TXTurfManager@prodigy.net.

**Wisconsin Sports Turf Managers Association:** For more information on the Chapter, or other pending events, contact Chris Brindley at 715-346-3622 or cbrindle@uwsp.edu.

**Forming Chapters:**

**North Florida STMA Chapter:** For information on the newly forming North Florida Chapter, contact: Mark Clay at 904-633-6116 or Jay McCord at 904-448-2583.
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