

JOHN MASCARO'S PHOTO QUIZ

Answers from page 17

The white lines on this golf course fairway are in fact painted here on purpose. They are not the result of a run-away state DOT crew nor were they painted here for a model airplane runway. This golf course is located at the University of Mississippi and since this course is at a college, they have many different events on campus including this Southeastern Conference regional cross country race. For the event, it was decided to have the race directly on the golf course. The path was first laid out by the university track coach and then the maintenance department converted a spray machine to spray two paint lines at a time, 16 feet apart. The Sports Turf Manager then followed a golf cart with

the track coach in it, spraying the course as they drove through producing these lines down the 17th fairway. The cross country course snaked through six fairways and two green slopes as well as several rough areas on the course. The sports turf crew also painted an SEC logo on one of the fairways for the event. After the Golf Course Assistant Director saw the logo, he liked it so much that the crew may be asked to paint it again for one of the clubs future golf tournaments.

Photo submitted by Gary Morris, Golf Course Superintendent at Ole Miss Golf Club, Oxford MS. Barry Arrington is Sports Turf Manager at Ole Miss and assisted in painting the course the logo on the fairway.

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@turf-tec.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.



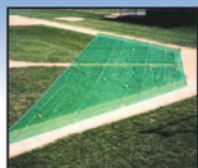
Keep your bases loaded

...with FieldSaver™ Protective Rain Covers and FenceMate™ Wind and Privacy Screens.

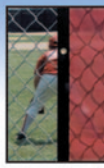
Only from CoverSports USA



Use FieldSaver™ over real grass or artificial turf



FieldSaver™ mesh protects during batting practice



FenceCrown™ tops chain link fences



Custom numbered and colored outfield distance banner



SafeFoam™ padding in 4 colors protects players

COVER SPORTS USA

A Division of Humphrys Manufacturing

Your All-American Advantage

5000 Pachall Ave., Phila., PA 19143
800.445.6680 Fax: 215.724.8706

www.coversports.com
email: sales@coversports.com

GSA Contract # GS-07F-6052P

© 2006 CoverSports USA

CoverSports offers a full line of products to protect and enhance your baseball fields. And we manufacture everything, so we can customize to your specifications.

New to the game

BUT ALREADY A LEGEND

Introducing the PM-3084, engineered for the sports turf market. Durable, easy to maneuver and cost effective, this rookie mower is making a name for itself - thanks to its legendary Locke® reels. Locke® reels provide a higher quality of cut for better playing conditions on every field.

Visit Gravely Turf at the Sports Turf Managers Association Conference, booth #1113



FOR LOVE OF THE FIELD

GRAVELY Turf

Ariens AN ARIENS® BRAND

800-472-8359

www.gravelyturfproducts.com

for wear tolerance in perennial ryegrass. N rates in excess of 5 lbs N/1000ft²/yr promoted rapid recovery but greater wear injury while N rates less than 3 lbs were too slow to recover. Potassium rates in excess of 5 lbs caused a significant loss in wear tolerance and leaf cell wall content. Sponsor: Massachusetts Turf and Lawngrass Association.

Wear Tolerance and Associated Morphological Characteristics in Kentucky Bluegrass.

One hundred and ten cultivars of Kentucky bluegrass are being compared for wear tolerance and various morphological characteristics in field trials. Visual ratings for wear injury, growth habit (horizontal versus upright), shoot density, leaf texture (width) and disease were evaluated in the spring of 2009. Wear tolerance in the field increased with higher shoot density, greater resistance to leaf spot and a more upright leaf and shoot orientation. Leaf texture (fine or coarse leaf appearance) was not important in Kentucky bluegrass wear tolerance. Greater leaf spot resistance was associated with better spring wear tolerance by providing less thinning from disease and greater shoot density. Sponsor: National Turfgrass Evaluation Program.

Differentiating Between the Influence of Wear and Soil Compaction and Their Interaction on Turfgrass (with William Dest, PhD, University of Connecticut). This recently completed study differentiated between the effects of wear and compaction on turfgrass performance and soil physical and surface properties. Kentucky bluegrass and perennial ryegrass were planted in mixture on both sand and silt loam soils. Both soils were compacted to a uniform hardness before planting. Treatments



included a compaction and non-compaction treatment with a wear and non-wear treatment. Wear was applied with a steel brush set into a frame so no compaction was imposed. Compaction significantly inhibited establishment compared to non-compaction. Compaction treatments increased perennial ryegrass content in the stand over non-compaction. The sand promoted greater Kentucky bluegrass and thatch tendency. Rooting in response to compaction increased in the 0 to 3 inch zone and decreased in the 3-6 inch soil depth when compared to non-compaction. Wear accounted for 90% of the total variation in traffic injury with soil compaction effects accounting for the balance. Soil and wear effects were the principal factors affecting turfgrass quality. Wear treatment did not affect soil physical properties while compaction altered aeration porosity, percent of maximum dry density, and internal drainage (saturated hydraulic conductivity).

Wear Stress Mechanisms in Cultivars of Creeping and Velvet Bentgrass. Seven cultivars of velvet bentgrass were compared with seven cultivars of creeping bentgrass in wear tolerance and anatomical, morphological and physiological characteristics. Bentgrass species and cultivars were maintained at greens height of cut and wear injury was imposed using walk behind mowers fitted with grooming brush. Cultivars of velvet bentgrass were found to exhibit significantly better wear tolerance than creeping bentgrass. The greater wear tolerance with velvet bentgrass entries was due to their greater leaf cell wall content, upright tiller and leaf orientation, and greater shoot density. Sponsors: New England Regional Turfgrass Foundation and National Turfgrass Evaluation Program.

Wear Trials in Bentgrass Maintained as Fairway and Putting Green Turf. Nineteen cultivars of creeping and velvet bentgrass maintained as putting green turf are being compared for overall performance under wear stress. This 5-year evaluation was established in the fall of 2008. In 2009 Villa velvet bentgrass and Alpha creeping bentgrass exhibited the best wear tolerance. In fairway trials, creeping bentgrass entries exhibited significantly better wear tolerance than colonial bentgrass. Authority, Benchmark DSR, Declaration, L-93, T-1 and 007 creeping bentgrass provided the best wear tolerance under fairway height of cut. Sponsor: National Turfgrass Evaluation Program.

Increasing Water Use Efficiency by J. Scott Ebdon, PhD: Efficient Irrigation for Recreational Turf in New England: Evapotranspiration and Crop Coefficients. This new study planted in the fall of 2009 will measure evapotranspiration (ET) losses from pure stands of Kentucky bluegrass (Touchdown), perennial ryegrass (Exacta) and creeping bentgrass (Memorial). Different mowing heights and N fertility will be compared. Monthly crop coefficients along with reference ET val-

MULEMIX.COM
1.800.837.8062

- ◆ MuleMix Field Conditioners
- ◆ MuleMix Sure Dry
- ◆ Infield Mix
- ◆ Mar Mound Clay
- ◆ SAF Coat
- ◆ SAF Trac
- ◆ Field Accessories
- ◆ Field Consulting

Southern Athletic Fields
DIRT
YOU GOTTA LOVE IT

ues from weather stations will be determined for low- and high-maintenance turf. These values can be used to assist turf managers in applying irrigation water more efficiently to sports and golf turf in the cool-humid New England region. Sponsor: New England Regional Turfgrass Foundation.

Increasing Water Use Efficiency by Michelle DaCosta, PhD:

Evaluation of Wetting Agents on Drought Resistance and Irrigation Requirements of Bentgrass Species. The objective of this field study slated to begin in the summer of 2010 is to quantify the influence of wetting agents on improving turf performance of three bentgrass species that vary in drought sensitivity and irrigation requirements under golf course fairway conditions.

Environmental Protection and Applicator Safety by J. Marshall Clark, PhD:

Optimization of Vegetative Filter Strips for Mitigation of Runoff from Golf Course Turf. The loss of pesticides and nutrients into surrounding bodies of water and the resulting decreases in water quality have led to the use of best management practices such as the use of vegetative filter strips (VFS) to intercept runoff water and thus prevent its loss and the loss of any associated pesticides and nutrients to surrounding water bodies. This three year project, begun in 2008, will evaluate selected plants for their effectiveness in removing pesticides and nutrients from turfgrass runoff waters. Preliminary data indicates that the vegetative filter strips have the potential to intercept pesticides.

Utilizing Reduced Risk Pesticides and IPM Strategies to Mitigate Golfer Exposure and Hazard

This 3-year project, initiated in 2007, seeks to determine actual levels of exposure to "reduced risk" pesticides following application to turfgrass. The fate of pesticides after application largely determines how much of it is available for potential human exposure.

Pesticide residues in the air and on turfgrass (dislodgeable foliar residues, DFR) using either chlorpyrifos, carbaryl, cyfluthrin, chlorothalonil, 2, 4-D, MCPP-p, dicamba, imidacloprid, carfentrazone or azoxystrobin have been analyzed. In 2009 two applications of the "reduced risk" insecticide halofenozide were made. Analyses of these samples are in progress.

This study is also evaluating best management practices for reducing exposure to "reduced risk" turfgrass pesticides.

To determine precisely how much of the environmental residues are actually transferred to people, we measure exposure to volunteer golfers using dosimetry (measuring pesticide residues on full body cotton suits and personal air samplers) and biomonitoring (measuring urinary metabolites). Dosimetry and biomonitoring, together with concurrently collected dislodgeable foliar and airborne residue data, provide a unique database on exposure and have allowed us to develop an exposure model. We will compare the biomonitoring and dosimetry results for these "reduced risk" compounds, such as halofenozide, with those previously determined for chlorpyrifos, carbaryl, cyfluthrin, 2,4-D, MCPP, dicamba, chlorothalonil and imidacloprid.

To date, Hazard Quotients (HQs), using the EPA Hazard Quotient criteria, determined for chlorpyrifos, carbaryl, cyfluthrin, 2, 4-D, dicamba, MCPP, chlorothalonil, imidacloprid and carfentrazone have been 20- to 1.25 million-fold below 1.0, indicating safe exposure levels. HQs less than or equal to 1.0 indicate that the exposure resulted in a pesticide dose at which adverse effects are unlikely. Sponsor: New England Regional Turfgrass Foundation.

Integrated Pest Management by J. Scott Ebdon, PhD:

Resistance of Perennial Ryegrass Cultivars to the Ingress of Annual Bluegrass. This recently completed study assessed perennial ryegrass resistance to the ingress of annual bluegrass over a 4-year period. Visual percent Poa in 120 cultivars of perennial ryegrass was assessed annually beginning in the 2nd year after establishment. Percent Poa increased with age of the stand from 12.6% in 2006 to 17.6% in the last year of the test in 2009. Significant genetic variability was observed between cultivars with % Poa ranging from 6.7% to 70% in the last year of the test. Cultivars with the lowest Poa (6.7%) in 2009 included Accent II, Exacta II GLSR, Manhattan 5, Pianist, Secretariat II, and SR-4600. Only one entry, an experimental (SRX 4682), was found to have no Poa by the last year of the test. Sponsor: National Turfgrass Evaluation Program.

Tolerance of Kentucky Bluegrass Cultivars to the Herbicide Certainty (with Prasanta

**It Ain't
Just Dirt!**

**Louisville
Slugger®**

Field Conditioners, Mound & Batters Box Clay,
A-Turf® Louisville Slugger® Synthetic Fields,
Patented Infield Mix, Field Marking Powder,
Superior Quality, Unmatched Performance,
125 years of baseball tradition.

**It's time to bring your field
to a whole new level!**

800-520-0512

GAMETIME
Sports Systems, LLC

www.gametimesportssystem.com

Louisville Slugger is a registered trademark of Hillerich & Bradbury Co.

Bhowmik, PhD): This study assessed Kentucky bluegrass tolerance to the herbicide sulfosulfuron in 173 cultivars of Kentucky bluegrass. Sulfosulfuron was applied at 1.5 ounces per acre in July 2009. Visual injury was assessed and rated (1 to 9, 6=minimum acceptable, 9=no injury) weekly following treatment, with the greatest injury occurring 3 weeks after treatment (WAT). The following cultivars exhibited good tolerance to sulfosulfuron (ratings 7 and higher) at 3WAT: Baronie, Bluemax, Eagleton, Langara and Serene. Some cultivars showed significant and unacceptable injury (ratings approaching 4) including: Avalanche, Champagne, Champlain, Chelsea, Chicago II, Misty, North Star, Princeton 105, Rampart, and Washington. Sponsor: National Turfgrass Evaluation Program.

Integrated Pest Management by Geunhwa Jung, PhD:

Assessing the In Vitro Sensitivities of Dollar Spot to Fungicides and Plant Growth Regulators.

This study investigated the effect of fungistatic PGRs on development of DMI resistance in populations of *Sclerotinia homoeocarpa*. The effective concentration (EC 50) and single discriminatory concentration (EC 50(D)) for six demethylation inhibitor (DMI), two dicarboximide, one anilene, one benzimidazole fungicide, and three plant growth regulators (PGRs) were conducted for 64 selected *Sclerotinia homoeocarpa* isolates in vitro. A significant correlation of in vitro sensitivities was confirmed among the 6 DMI and 2 PGRs (paclobutrazol and flurprimidol) which indicated that the PGR applications might increase development of DMI resistance and facilitate a shift toward resistance. Multiple resistance was confirmed between benzimidazole and DMI as well as between benzimidazole and dicarboximide fungicides.

The Effect of Demethylation Inhibitor Fungicides on Dollar Spot, *Sclerotinia homoeocarpa*, Population Structures. This project investigated the effect of propiconazole (DMI) rates on changes in dollar spot population structure using in-vitro fungicide assays and field efficacy tests. *S. homoeocarpa* samples were collected from existing dollar spot populations at sites in MA and CT in 2009 and assayed for DMI resistance. The preliminary results indicate that each site has a unique dollar spot population structure with differing levels of DMI resistance depending on cultural management and history of fungicide uses at that site.

Reduced field efficacy using propiconazole was observed at sites with preexisting DMI resistance, whereas complete control was observed at sites with total DMI sensitivity. A repetition of this study will take place in 2010 and 2011 to confirm the existence of the site-specific population structures and to study how the structures have changed after two years of DMI application at different rates and intervals.

This research has directly contributed to the formation of a Fungicide Sensitivity Assay diagnostic service for turf managers who have difficulty controlling dollar spot. The assay is conducted at the UMASS Turf Pathology lab using all commonly used fungicide classes to test levels of fungicide resistance to each. Results of the assay give clients a holistic understanding of their dollar spot populations along with effective cultural and chemical control options saving some thousands of dollars in misapplications of chemicals to dollar spot populations with fungicide resistance.

Reverting DMI-Resistant Dollar Spot Populations with the Use of Non-DMI Fungicides (boscalid, Emerald[®]; chlorothalonil, Daconil Ultrex[®]; iprodione, Chipco 26GT[®] and Ipro SE[®]; vinclozolin, Curalan[®]; and more) at a Golf Course on Cape Cod.

This experiment began in 2007 and is intended to identify non-DMI fungicides capable of reverting DMI-resistant populations back to sensitive populations so that the DMI fungicides can be used again. This experiment is also examining the length of reversion time while maintaining acceptable turf quality. Based on 3 years' careful monitoring of the populations using laboratory assays and evaluating field control, we did not observe any significant shift of the resistant populations

QTL Mapping of Resistance to Gray Leaf Spot (GLS) in Perennial Ryegrass. This project aims to research the interactions between the GLS pathogen variability and host resistance. The ultimate goal is to produce perennial ryegrass plants having a broad spectrum of gray leaf spot resistance by pyramiding various resistant genes originated from different *Lolium* species and cultivars. The gray leaf spot resistant cultivars being studied showed only moderate resistance to the 13 geographically diverse isolates of the disease causing organism. This result may indicate non-race specific resistance in perennial ryegrass. Sponsor: United States Golf Association.

Disease Management Trials: Trials investigating the effectiveness of specific fungicides are

being conducted at the UMass Joseph Troll Turf Research Center as well as at field sites. These include evaluation of: 1. twenty-nine different fungicide treatments for preventative control of dollar spot (caused by *Sclerotinia homoeocarpa*) on a mixed stand of creeping bentgrass and annual bluegrass; 2. 34 different fungicide treatments with variable timing for preventative control of Typhula blight (caused by *Typhula ishikariensis* and *T. incarnata*) and pink snow mold (caused by *Microdochium nivale*); and 3. fungicides for preventative control of foliar Pythium blight (caused by *Pythium aphanidermatum*) on a seedling stand of perennial ryegrass (*Lolium perenne*).

Disease Management Trials by Robert Wick, PhD:

Alternatives to Fenamiphos for Controlling Plant Parasitic Nematodes in Golf Greens Biological controls, botanicals, conventional and unconventional chemistry are being tested as alternatives to fenamiphos for controlling plant parasitic nematodes in golf greens. Sponsors: New England Regional Turfgrass Foundation and the United States Department of Agriculture.

Disease Management Trials by Patricia Vittum, PhD:

Management of Turfgrass Damaging Insects

Various studies concentrating on the management of turfgrass damaging insects are underway at field sites in the northeast. These include: seasonal control of white grubs with neonicotinoids; efficacy of biological control agents (*Bacillus thuringiensis* buibui, another strain of BT, and entomopathogenic nematodes) against white grubs; identification of distribution and behavioral differences of white grubs in New England (Japanese beetle, oriental beetle, European chafer, Asiatic garden beetle); and mating disruption as a means to reduce oriental beetle grub populations.

Disease Management Trials by Michelle DaCosta, PhD:

Winter Injury of Cool-Season Turfgrasses. Several studies are underway to determine the physiological basis for differences in freezing tolerance among cool-season grasses, with an emphasis on understanding mechanisms of cold acclimation and deacclimation. Sponsors: New England Regional Turfgrass Foundation, United States Golf Association, and Adirondack Golf Course Superintendents Association.

Compiled by Mary Owen, Extension Turf Specialist ■

Membership Application

SportsTurf MANAGERS ASSOCIATION

Experts on the Field, Partners in the Game.

Fax to: (785) 843-2977

Or mail with payment to:
Sports Turf
Managers Association
P.O. Box 414029
Kansas City, MO 64141

Name _____ Title _____

Employer/ Facility _____

Business Home

Address _____

City _____ State _____ Zip _____

Home phone _____ Work phone _____ Cell phone _____

Fax _____ Email _____

Signature _____

Direct Supervisor Name _____

Membership Category:

- Sports Turf Manager \$110
 - Sports Turf Manager Associate* (Additional member(s) from the same facility) \$75

Please select the primary facility type where you are employed:

- Professional Sports Higher Education Schools K-12 Parks and Recreation

- Academic \$95
- Student (verification of enrollment) \$25
- Commercial \$295
 - Commercial Associate* (Additional member(s) from the same commercial company) \$75

- Affiliate (Person who is indirectly or on a part-time basis, involved in the maintenance/management of sports fields) \$50

- Chapter Dues (contact headquarters for amount)
Chapter name) _____ \$ _____

- Contribution To SAFE Foundation (research, education and scholarship): \$ _____

Total Amount Enclosed: \$ _____

Payment Method:

- Check Money Order Purchase Order #: _____

- Credit Card: Mastercard Visa American Express Discover

Name on Card _____

Card #: _____ Exp. Date: _____

Signature _____

*There must already be a national sports turf manager from your facility or commercial member from your company before you may sign up in the Associate category.

New Members*

Did someone refer you to STMA? We would like to thank them, and enter them in our Member Get A Member Rewards Program.

Person who referred you:

Facility name:

*Not been an STMA national member since 2004. All categories of membership are eligible to recruit; new student memberships do not qualify for this program.

Phone: 800-323-3875

www.STMA.org

Cut Here

Prepare for using pre-emergent products

Celsius™ A HIGHER DEGREE OF WEED CONTROL

Celsius herbicide

Celsius, the newest generation post-emergent herbicide from Bayer Environmental Science, delivers the highest degree of weed control on warm-season turf, allowing turf managers to maintain the highest quality fields for their players. It is safe for use year round on the most important warm-season turf types to keep turf in play all the time, and the reduced risk of significant phototoxicity at high temperatures allows fields to always look ready for action. Celsius provides exceptional control of more than 150 troublesome broadleaf and grassy weeds, as well as application convenience, flexibility and long residual. Available in wettable granular formulation, Celsius gives turf managers the freedom to make post-emergent applications on their own schedule.

www.bayerprocentral.com

Oxadiazon professional herbicides

Get the long-lasting grass and broadleaf weed control you demand and the dependable results you expect with pre-emergent herbicides from Quali-Pro. Products are university tested and offer formulation quality. Oxadiazon SC (Ronstar Flo equivalent) controls annual grasses and broadleaf weeds and comes in a case pack (2 x 2.5 gal). Oxadiazon 2G (Ronstar G equivalent) is a selective pre-emergent herbicide in 50-lb. case pack; and Oxadiazon 50 WSB (Ronstar equivalent) is pre-emergent herbicide for turf and ornamentals in a case pack (5 x (2 x 1 lb)).

www.quali-pro.com



Systemic grub control

Imidacloprid 0.5G and 75 WSB from Quali-Pro provides systemic control of soil inhabiting pests in turf-grass and landscape plantings. This great value product features low use rates, application flexibility, broad spectrum control, and long-term control of white grubs, European crane fly, Japanese beetles and more. Low use rates, designed specifically

for soil application. Available in convenient granular formulation for broadcast application to turf and ornamentals or convenient pre-measured water soluble bags.

www.quali-pro.com



Barricade herbicide

Barricade herbicide from Syngenta has excellent residual and performance to last throughout the season. A single fall application of Barricade will control next season's crabgrass, as well as many other broadleaf and grassy weeds. A spring application will last until fall of the same year.

Barricade is one of the featured products in The Syngenta GreenTrust 365 Purchase Program, a new simplified year-long program that is designed to provide maximum flexibility to sports turf managers. It went into effective Oct. 1, 2009 and will provide incentives through September of 2010, with additional bonuses for purchases made through Feb. 26, 2010. As with all products, it is important to read and follow label instructions when using Barricade.

www.syngenta.com

Acelepryn insecticide

More than 550 independent university trials prove that one application of DuPont's Acelepryn insecticide delivers excellent control of the 10 toughest grubs at the lowest application rate ever used for white grub control. Plus, Acelepryn offers more than just grub control. One early application also provides excellent control of key surface-feeding pests, including cutworms, webworms, and billbugs. In addition, research and field use show that Acelepryn is an effective option for use in an annual bluegrass weevil control program. Acelepryn has been classified as reduced-risk for turf applications by the US EPA.



www.proproducts.dupont.com



Specialty herbicides from Dow AgroScience

For effective control of crabgrass, Dimension specialty herbicide offers a wider application window because it provides both preemergence and early postemergence control. In addition, Dimension provides season-long control of more than 40 grassy and broadleaf weeds, including goosegrass, spurge and [START ITAL]Poa annua[END ITAL]. With multiple formulations, including the water-based Dimension 2EW, Dimension in non-staining, has a low odor and is labeled for use on sports turf.

LockUp specialty herbicide is now available through distributors as a formulated product for superior postemergence control of dollarweed in the South and white clover dandelion in the North. LockUp provides activity at extremely low use rates and can be applied to wet or dry cool-or warm-season turf.

www.dowagro.com

Echelon and Dismiss

Echelon herbicide from FMC Professional Solutions provides preemergence and early postemergence control of sedges, crabgrass, and goosegrass in sports turf, golf courses, as well as other multi-use turf environments. Used in typical spring preemergence applications, Echelon offers control beyond that of traditional pre-emergence herbicides, saving the applicator time and money on weed control later in the season. Echelon is also used as a preemergence in the fall for control of poa annua, as well as sedges present at that time of year.

Dismiss turf herbicide and Dismiss South herbicide provides fast visible sedge control through contact activity and long residual sedge control by penetrating the tubers and destroying the reproductive structures. Both products provide visible control of sedges and green kyllinga in 24-48 hours, and Dismiss South offers enhanced control of purple nutsedge in warm season turf types (excluding St. Augustine grass). Dismiss is available in 6-oz bottle (lower price in 2010) and a new, 1/2 gallon container. Dismiss South is available in pints.

www.fmcprosolutions.com



Sign up
**for ST Insider
newsletter**

**It's
FREE**

Bi-weekly newsletter emailed to you
from the editors of *SportsTurf* magazine

ST Insider brings latest news and information from around the
USA for sports turf management professionals

Visit www.sportsturfonline.com and
click on "E-newsletter" to register quickly

TWO MANUFACTURERS' OPINIONS ON MAINTAINING SYNTHETIC TURF

We asked Jim Dobmeier, president of A-Turf, a manufacturer, supplier and installer of synthetic grass systems, and Tom Moore, national sales manager for GreensGroomer Worldwide, their thoughts on maintaining and grooming synthetic turf systems.

SportsTurf: What type of maintenance is required for an A-Turf field?

Dobmeier: Some maintenance is required to keep the field in ideal playing condition. An A-Turf field should be groomed once every 3–4 weeks during periods of active use. Regular grooming ensures the fiber strands are standing upright and that the infill is level. Several different grooming devices are acceptable for use in grooming the field. The GreensGroomer, which attaches to the back of a Gator or similar type of vehicle, is used to periodically groom the fibers and infill. A Parker Sweeper can also be purchased to remove trash and debris from the field before grooming the field with the GreensGroomer.

ST: How important is maintenance for a synthetic field in terms of the life of the field, performance and aesthetics?

Dobmeier: A-Turf fields offer a life expectancy of 12-15 years. Like any long-term investment, proper care is required to prevent damage and premature aging. Grooming once every 3-4 weeks will prevent fibers from becoming matted over time and keep the infill level across the field—especially in high usage sections, such as the corner kick area or mid-section of a field. Proper grooming not only helps keep the field looking good, it also helps to ensure safety (Gmax rating) is not compromised. For some fields under constant use, testing the Gmax at the 6 to 8 year mark is advisable. In addition to grooming, it's important to conduct regular visual inspections to check for issues such as loose seams or tears, some of which may be covered under the A-Turf warranty.

ST: Is it possible to over-groom a synthetic field?

Dobmeier: Yes, it is possible to over-groom a synthetic turf field. Over-brushing can cause premature aging of the fibers. The amount of grooming should be proportional to the use of the field. A multi-use field will require more attention than fields that get less action.

Tom Moore, GreensGroomer

Since the advent of synthetic surfaces, there has been a subtle over-statement concerning maintenance savings compared to natural surfaces. In fact, most facilities would admit that their maintenance strategies have had to focus considerable efforts on surface consistency and safety.

While the growth of synthetic, infill surfaces has been significant, maintenance routines and techniques have struggled to keep pace, leaving many facilities with less than optimal conditions and far below performance benchmarks.



Image courtesy of istockphoto.com

While many facilities perform required maintenance in-house, there has been an increase in external service contracts for field grooming and conditioning. Augmenting a facility's normal efforts, service contracts can off-load critical maintenance routines to knowledgeable specialists that efficiently deliver playability and safety benchmarks.

A reliable provider will offer the following services:

- Visual inspection. Includes a walk of the entire playing surface, identifying loose seams and hash marks, infill distribution, and general condition of the turf.

- Brushing/grooming. Re-level and re-distribute infill material, stand up turf fibers.

- De-compact. De-compacting the infill improves drainage, Gmax, safety, and playability.

- Debris removal. Sweeping the playing surface, removing broken fibers, litter, and other contaminants.

- Turf magnet. Removal of ferrous materials left on the playing surface from equipment, players, and general public.

- Final grooming. Final process for that professional appearance that makes your investment stand out.

- Antimicrobial spraying. Long-lasting protective layer to guard against infectious bacteria, mold,

mildew, and germs.

- Gmax testing. The hardness or softness of the field surface is key to player safety and field owner liability. This test will determine the risk a field might have so action can be taken.

- Anti-static spraying. Static is controllable and spraying adds to player comfort and reduces infill migration.

Gmax is the benchmark for the shock absorbing properties of sports surfaces. It expresses the ratio of maximum acceleration experienced during impact, to the normal rate of acceleration due to gravity. As the Gmax value increases, the shock-absorbing properties of the surface decrease. The harder the playing surface is the more impact a player's body will absorb during impact with the surface. These measurements are a fundamental tool for field safety testing and also prove useful in managing playability. Defining a regular schedule of field grooming and Gmax testing should be an integral part of any maintenance program, regardless of synthetic or natural turf.

When considering whether to augment your maintenance efforts with an external service provider, you'll need to evaluate their range of services, equipment used, prices and packages offered, and whether they meet ASTM certification for Gmax testing. ■



GreensGroomer for infill synthetic fields

The Synthetic Sports Turf Groomer and Spring Tine Rake's brush design moves infill material three different directions for every three feet of forward movement, working the infill into low spots and depressions left after play. The Groomer is equipped with 14 blue brushes made from synthetic fiber that retain their original shape, resist wear, and will not deteriorate. The Spring Tine Rake attached to the rear of the Groomer consists of 3 rows of 28 tines for thorough coverage. Each row of tines may be adjusted to the desired level of aggressiveness for rubber or sand/rubber infill sports fields. The Spring Tine Rake combs through the infill, relieving compaction, releasing trapped turf fibers, and assuring a level playing surface.

www.greensgroomer.com



Beacon cocoa mat drag

Give your infield skin the finished look of a professional's with Beacon's Cocoa Mat Drags. These virtually float across infield surfaces without displacing the soil or topdressing materials while providing a highly professional finish. They are also valuable for dragging topdressing into turf. Available in hand drag size (4'W x 2'L or 6'W x 2'L") and tow-behind size 6' x 4', available with or without leveling bar. Leveling bar option shown.

www.beaconathletics.com

Verti-Top tow behind

The Verti-Top Tow Behind is a smaller version of the highly successful tractor mounted unit. It uses a brush to gently sweep dirt and debris from the surface of the playing surface. The new machine now includes vacuum technology that efficiently removes the finest dust, allergens and other small particles that are lifted from the turf.

www.redexim.com 



Gravelly Turf introduces Base Runner

Gravelly Turf offers the Base Runner, an infield conditioner that features 3x3 Hydrostatic all-wheel drive and zero-turning radius features allow maneuverability with speeds up to 12 mph. With an 18-hp Briggs & Stratton Vanguard V-Twin air-cooled engine that includes an engine kill switch, this new conditioner is designed to perform multi-functional tasks for turf and athletic field maintenance. Additional features include a low-profile fiberglass body, ergonomic seat, headlight, 12-volt power source, improved operator controls and exclusive wrap-around rear-hinged cargo box for operator accessibility while seated. Mid- and rear-hydraulic lifts accommodate a variety of attachments to include a front plow, mid mount chisel blade, mid mount versa tine, mid mount finger blade scarifier, rear mount infield conditioner and rear mount sand rake.

www.ariens.com 



Pioneer Athletics introduces artificial turf sweeper

Standard care procedures for synthetic turf athletic fields have evolved tremendously in recent years, including the need to remove foreign debris and litter on a regular basis. Pioneer Athletics' new Field Crewzer affectively accomplishes this task without the need for a large tractor or vehicle to pull or power a sweeper. The Field Crewzer features a robust counter-rotating brush that lifts surface debris into a hopper while evenly returning infill back into the field. The Field Crewzer's components are powered independently by a Honda GX 240 engine, as opposed to depending on a power take off (PTO) system. The entire unit can be pulled by any golf cart or utility vehicle.

www.PioneerAthletics.com

Deere 1200A field rake

The three-wheeled, self-propelled John Deere 1200A Bunker and Field Rake features a 9.5-hp, air-cooled Kawasaki engine, simple mechanical transmission with no hydraulic leaks, and a one-piece cowling design allows for easy access to all service locations, no tools required. With a 41.5-in.-wide wheel-base, high-back adjustable seat and 8:3:1 steering ratio that minimizes turning effort, the 1200A is comfortable and easy to handle. The optional front blade and the optional mid-mount cultivator/scarifier have a spring-assisted lift with ergonomic handle for easy operation. Also has standard electric power lift for rear attachments - simply flip a switch to raise and lower the rake.

www.johndeere.com 



Terra Clean by Wiedenmann

The Terra Clean M by Wiedenmann is a self-contained artificial turf sweeper that efficiently collects debris on the surface and can also be adjusted to reach the top layer of infill. The infill is then separated from the debris with a vibrating sifter and is redistributed back onto the field. The debris is collected in an easily removable hopper. The Terra Clean M is powered by a Honda GX 240 gasoline engine and can be pulled by most vehicles.

www.wiedenmannusa.com



Tools & Equipment



Triple-Play infield groomer

TurfTime Equipment introduces the Triple-Play Infield Groomer that loosens compacted dirt, levels the uneven field and brings a professional look to the playing surface. The Triple-Play 60P can be pulled by any ATV or lawn tractor between 14 to 20 hp. The larger Triple-Play 78 is attached to the 3 point hitch for 20 to 30 hp tractors. The unique frame of the Triple-Play has been enlarged from front to rear to enable greater degree of leveling while the multi blades carry more material with each pass. The ripper teeth are closer together and longer to increase loosening of the soil.

www.turftimeeq.com



Smithco sports truck

The Smithco Sports Truck is a totally new idea; it's the only utility truck that provides complete ball field maintenance. It can: finish, scarify and plow; create a finish on the field with the proper amount of smoothness and consistency for safety and playability; and be maneuvered easily with its 4-wheel design for safety and versatility. Also features a unique dust suppression system for additional operator safety and improved working conditions. Lift off the dust suppression system and in minutes you have a rugged utility truck. Dry line marker and field paint lining systems available. Versatile hydraulic dump box for carrying tools, hauling dirt, sand, field amendments.

www.smithco.com



Kromer introduces Field Commander

Kromer is proud to introduce an evolutionary and revolutionary product that will save time and money on athletic field maintenance. The Field Commander is a fully hydraulic riding unit that grooms, paints and remove lines, sprays, applies logos, conditions, and does all the necessary functions to maintain both natural turf and synthetic turf fields. Available with 32+ attachments (that can quickly and easily attach or detach), the Field Commander can be customized to meet your needs and budget.

www.kromerco.com



Legacy SPORT® field maintenance vehicle

Broyhill's Legacy SPORT® turf maintenance vehicle is designed to perform multi-functional tasks for turf and athletic field maintenance. Legacy Sport's AWD, 16-hp air-cooled engine, and zero-turning radius provide ultimate maneuverability and speeds up to 12-mph. Standard features: low-profile fiberglass body, ergonomic seat with engine kill switch, headlight, 12-volt power source, improved hand controls location, and exclusive wrap-around rear-hinged cargo box for operator accessibility while seated. Mid- and rear-hydraulic lifts accommodate a variety of attachments.

www.broyhill.com



Jacobsen® Groom Master™ II

Jacobsen's Groom Master II combines great ergonomics, maneuverability and plenty of power into one reliable machine. With a standard series-parallel 3-wheel drive traction system that won't slip on the loosest infield dirt, the Groom Master II is available with either a Briggs & Stratton® 18-hp gas engine or a 19-hp, 3-cylinder liquid-cooled Kubota® diesel. Featuring power steering, tilting steering wheel, convenient 12-volt accessory power outlet and a redesigned hydro pedal, it is easy to operate and comfortable to drive. The Groom Master II is available with several attachment options, including a plow, cultivator, rake, scarifier with leveling blade, ball field conditioner, and box blade among others.

www.jacobsen.com



Synthetic/artificial turf groomer

Go Groomer Go is a synthetic/artificial turf groomer that maintains a professional look and feel on all synthetic/artificial turf surfaces. Four rows of light synthetic straight-line brushes are used with or without one row of adjustable spring loaded grooming tines to flip the turfs infill and repair ghost markings, disperse wear patterns, and prevent rubber pellets from traveling to the side lines. Go Groomer Go also increases eye appeal, improves safety on the playing field, extends playability, decreases maintenance, lowers risk management and is a must have for all synthetic / artificial turf surfaces.

www.GoGroomerGo.com



Baseball and softball infield groomer

The FieldMaster Infield Groomer is available as a four or six foot wide 3-point hitch groomer which can easily be converted into a pull behind groomer. After more than 15 years of industry experience, the Men's College World Series in Omaha, NE, the Women's College World Series stadium in OK and the National Baseball Congress have all relied on their FieldMaster to maintain a professional look and feel on their infield surface area. The FieldMaster was used at the 1996 Olympics and currently resides in all 50 states and Canada. Designed and engineered to correct your problem areas in minutes, not hours and leave the skinned area tournament ready the first time and every time.

www.FieldMaster.com