

necessary to use a thinner layer of mulch. Shredded bark is preferable on slopes, as it won't slip as easily as bark chips.

- **Tree guards, grates, and paving:** In areas of high pedestrian traffic, tree grates may be used to protect your new trees. The grates are available in a variety of materials, but the most durable and aesthetic — and most costly — are cast iron.

Trees will often outgrow their grate holes. This can cause serious stress and structural problems for the plants. Make sure the materials you choose allow your trees to expand over time.

Bricks offer an alternative method of protection. Lay a pattern of bricks on a two-inch bed of washed sand around your trees. As their trunks increase in diameter, individual bricks can be removed. Brick paving should be generally sloped away from the tree trunk so excess runoff does not drain toward the tree in winter.

- **Pruning:** Prune established trees annually. However, avoid topping trees at all costs! Topping trees destroys tree beauty, tree defense systems, and tree dignity.

Proper pruning eliminates diseased or damaged growth. It removes narrow, V-shaped forks that lack strength, and reduces toppling and wind damage by thinning the crowns. Pruning helps maintain growth within space limitations, and it preserves trees' natural appearance.

For more information on proper pruning techniques, visit www.greenindustry.com, and review the March issue of *Arbor Age* magazine on-line.

- **Staking and guying:** Staking and guying serve as support systems for new trees, but they are not always necessary. Proper nursery conditions give trees enough space to grow, and they allow them to blow freely in wind

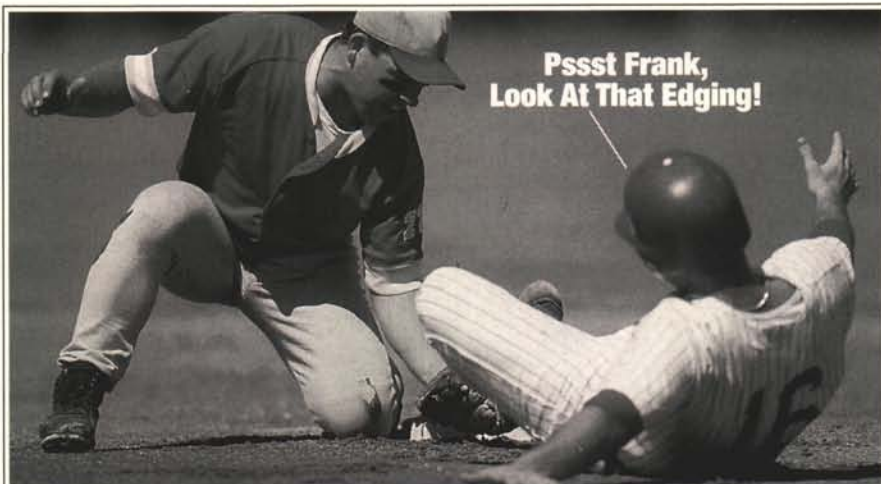
to develop natural strength without artificial support. When deciduous trees don't grow in proper conditions, they have difficulty developing trunk taper, and they're incapable of holding themselves up.

Two stakes should be placed on a tree's trunk, one on either side and both as low as possible. For lines, use rubber or another material that won't damage the trunk.

Stakes should never be left on a tree for more than two growing seasons. At the end of this period, the tree should be fully established. If it's not, there's a problem with the landscaping.



Colleen Heraty is editor of Arbor Age magazine. For more information, contact: cheraty@mail.aip.com.



Great Fields Get Noticed.

Turfco offers you a strong team of turf building equipment. They're the fastest and most versatile equipment to let you build hardier and healthier turf. Your sports fields become safer to play on and easier to maintain. Originators of Mete-R-Matic® top dressers in 1961, Turfco's professional equipment gives your field a look that gets noticed.

Pro Turf Edger

Special design makes it easy to follow any edge. Eliminates spade work around the diamond. Oscillating blade action cuts fast and clean. Leaves no mess or no thrown debris to clean up.

Economy Aerator

Now you can afford to breathe life into any sports field. This low cost, 62" aerator has no hydraulics or mechanical linkages for easy use and low maintenance. Hooks up to any vehicle in seconds.

Precision Top Dresser

Fast, uniform, versatile. Patented chevron belt lets you handle top dressing, lime, crumb rubber, gypsum, calcine clay, compost and even overseeding with precision. Level fields and amend soil consistently.



For details and the name of your local dealer, call

1-800-679-8201

Turfco Manufacturing Inc.
1655 101st Avenue Northeast
Minneapolis, MN 55449-4420

*Choice Performers,
Choice Fields.*



Call 1 (800) 817-1889 use **Fast Fax #1110999** and/or Circle 111 on Inquiry Card

Harbin Field

by Bob Tracinski

1998 STMA

College/University

Soccer Field of the

Year

Harbin Field, STMA's 1998 College/University Soccer Field of the Year, sits at the center of Georgetown University's urban campus in Washington, DC. The University, often referred to as "The Hilltop," is essentially landlocked. Development has gradually filled the open areas on campus, and space is a major issue.

Currently, seven acres of natural-turf athletic fields cluster in the lowest spot on campus. Sports Turf Manager Bob Shumate explains, "Packed clay and over 150 years' accumulation of fill soil and construction debris make up the subgrade of the athletic fields and parking lots. A minimal layer of top soil, six inches or less, forms the workable profile of Harbin Field.

"The field itself is 100,000 square feet, with 30,000 square feet of additional maintained turf inside the fenced enclosure. There is no subsurface drainage, nor

does the field have a crown. A swale around two sides of the field intercepts runoff from higher ground, but the lack of both surface and internal drainage creates problems in both the maintenance and use of the field.

"Irrigation is supplied through nine zones utilizing Toro 640 heads linked to a Rainbird ESP-MC controller."

Maintenance "crew"

Shumate started at the University in April 1995, and is essentially the one-man crew for the natural-turfgrass athletic fields. He works within the University's landscape department, reporting directly to the superintendent.

Other departments do pitch in here and there. The athletic department support staff lines the fields, and the baseball coaching staff cares for the infield skinned areas.

In summer, a landscape department

EVERGREEN THE PROVEN TURF GROWTH BLANKET

- Earlier spring green-up
- Faster seed germination
- Deeper root development
- Delays dormancy in fall
- Ideal winter blanket
- Best for quick turf repairs
- Available in any size
- Longest lasting - 7 year warranty

 CALL TOLL FREE 1-800-387-5808
FOR SAMPLES AND LITERATURE

COVERMASTER™
COVERMASTER
COVERMASTER
MASTERS IN THE ART OF SPORTS SURFACE COVERS

30
YEARS
1969-1999

MEMBER
Sports
Turf
Managers Association

Visit our Website!

WEB: www.covermaster.net

E-MAIL: info@covermaster.net

Turf Management Made Easier!



Easy to install



Anchor pegs supplied



Deeper root development



Any size cover

COVERMASTER INC., 100 WESTMORE DR., 11-D, REXDALE, ON, M9V 5C3 TEL 416-745-1811 FAX 416-74-COVER (742-6837)

Circle 113 on Inquiry Card

crew member helps Shumate three days a week. The department also provides additional help for special projects. Shumate generally gets a summer intern, but this year's worker couldn't handle the job and only lasted two days.

Field use

Because space is such a premium, softball must share its field with other sports. Men's lacrosse hits Harbin Field when the snow clears in mid- to late February. Games begin in mid-March, and the field hosts approximately six home games before the end of April. The team also practices on the field every day, weather permitting.

In mid-August, men's and women's soccer converge on Harbin Field. Both teams use the field for games and practices, and play can stretch into November if either team qualifies for post-season play.

Shumate says, "The 17 games within this period are no problem. It's the daily, two-hour practices by one or both teams that create the major wear."

Maintenance program

Shumate's field rejuvenation window follows the last men's varsity lacrosse practice, which occurred just prior to Memorial Day this year. He has until the second week of August to get his fields in shape.

During this window, he aerates heavily, transitions out the overseeded turfgrasses, promotes bermudagrass, fertilizes, and spot topdresses.

Shumate explains, "Agronomically, the University is located in the transition zone, which makes growing quality turfgrass problematic. Vamont bermudagrass was installed on Harbin Field in 1984 and continues to be the turf of choice. Though it performs best in the hot summer months while the field gets little use, it forms a solid cushion for play, and a base for overseeding during the rest of the year. The Vamont also holds up well during our winters, which can range from mild to severe."

During the prime playing season, Shumate has traditionally overseeded with a blend of perennial ryegrasses to provide green cover for the bermudagrass base. In fall 1998, he used a mix of 85 percent perennial ryegrasses and 15 percent poa trivialis by weight. He notes, "Because the poa seed is so much smaller, the mix actually is almost 50/50 by seed count."

"I tried the poa mix because so many of the new perennial ryegrasses are so aggressive and heat and drought tolerant, it's been difficult to get them to transition out in the spring. I liked the results."

"The turf was uniform in color, texture, and growth pattern, and held up well during the playing season. The transition out was smooth — not all at once, but gradual, yet steady. The poa blows out in hot weather — almost like poa annua, but without the seed heads. I'll use it again this year."

In spring 1998, Shumate reseeded the worn areas in front of the lacrosse goals with bermudagrass rather than resodding. He says, "By that late in the season there are bare sections, and the bermudagrass that's left has taken quite a beating while dormant, so it's pretty weak."

"The seed took well where the turf was



Courtesy: Georgetown University

worn away, and there was good seed to soil contact. I was disappointed in the results of the overseeding over the existing turf. It may be the seed was so fine — almost dust-like — that it was trapped by the existing turf, rather than filtering through it to the soil during the broadcasting procedure. We also may be a little too far north to allow enough grow-in time before field use begins again."

Shumate skipped the regular pre-emergent application because of the seeding. He had to fight goosegrass and crabgrass with less-effective and more time-consuming post-emergent controls. He explains, "This year I put down pre-emergent control in the spring, and had Southern Turf come in to sprig bermudagrass into all three of the fields. Because of budget constraints, I used sprigging as an effective, lower-cost alternative to sodding."

"The fields were sprigged on June 15, and in such great shape at the end of July, they'd have been playable. For the first seven to 10 days, I ran the irrigation system three times a day to keep

**If they could,
they would...**

Play their game on Thomas Bros. Grass

That's because they know Thomas Bros. grows and installs the finest quality turf grass for golf courses and sports fields. With 17 different turf varieties, Thomas Bros. can provide durable, attractive playing surfaces for any grass field (sorry, hockey!)

Call Today 888-New-Grass

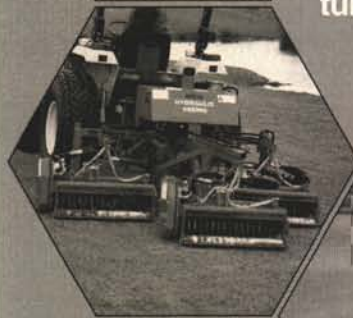
Call 1 (800) 817-1889 use **Fast Fax #1120999** and/or Circle 112 on Inquiry Card

sisis[®]

Europe's leading designer and manufacturer of golf course and sports ground maintenance machinery for more than 65 years



Wide range of turf maintenance machinery



Robust engineering for a long working life



Superb spares service



Please contact us for full details or to arrange for your SISIS Area Representative to call.
SISIS Inc., PO Box 537,
Sandy Springs, SC 29677
Phone (864) 261-6218
Fax: (864) 261-6932
E-mail: fdc@sisis.u-net.com
Website: www.sisis.com

Circle 132 on Inquiry Card



STMA President Steve Guise (left) presents Sports Turf Manager Bob Shumate (right) the Field of the Year award. Courtesy: STMA

the sprigs moist until rooting could occur. Then I backed off the irrigation gradually until rooting was solid enough to go to the regular nightly irrigation schedule."

In 1998, Shumate began working with a soils consultant. Rather than simply adjusting the pH, he attempted to balance the soil nutrients in the proper ratios for optimal growing conditions based on soil testing.

He has used both calcite and dolomitic lime to adjust the calcium and magnesium levels in the soil. He has also experimented with organic fertilizers on his sand-based fields. Based on continuing results and cost factors, Shumate may use them on Harbin Field in the future.

Future

Already challenged by field use demands, the campus athletic surfaces face further downsizing. Shumate explains, "We're soon to lose a third of our natural-turfgrass fields. That leaves just two fields for all varsity games and practices, intramural activities, and anything else that might need outdoor, open space.

"We'll have a semi-normal 1999 season during the preliminary stages of a massive building project slated to begin late this fall. During the construction phase, either the soccer or baseball field will become the parking lot.

"The exact land-use configuration is still under consideration. Harbin Field may disappear. Then we'd need to reconfigure the baseball field for soccer and lacrosse. Or, it's conceivable we'd lose only one-third of Harbin Field to construction, and convert part of the adjacent baseball field to make up the difference.

"None of it will be easy. Since the baseball field is between 10 and 12 feet higher than Harbin Field, some excavation and engineering will be involved no matter which option is chosen."

Shumate continues, "It's tough to keep the fields in shape now, and it may be impossible to maintain year-round grass when we lose that space.

"If our daily usage keeps going up, in the next four or five years, we may need to convert to all artificial surfaces. It's not my preference, but may become a reality of life in this landlocked, urban setting."

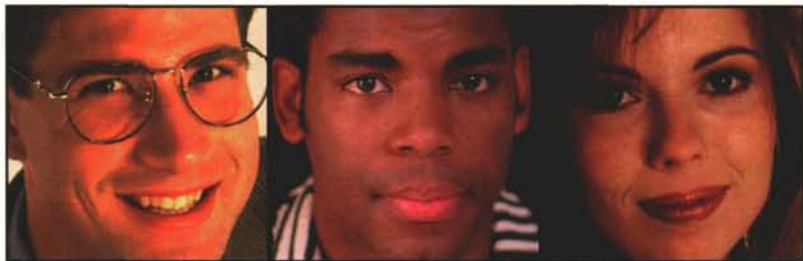
Shumate's immediate goal is to explore all options to keep those natural-turfgrass fields not only functioning, but thriving. He's already proven himself a master of transitions.

Bob Tracinski is business communications manager for John Deere in Raleigh, NC. He is public relations co-chair for the National STMA.

Product Information

for every

Tom, Dick, and Harriet.



In every issue of our magazine, you can choose from more than 100 brochures covering the latest products, services, and company information.

Looking for the information is easy. Visit the Reader Service area on [greenindustry.com](http://www.greenindustry.com), and place your order today!

<http://www.greenindustry.com>

The fast way to get what you need.

Category Blast Service

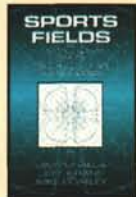
Use this new Category Blast Service to get FREE information on the products or service categories listed below which you are planning to purchase within the coming nine months. You will receive information, and possibly other follow up contact, from appropriate companies advertised not just in this issue, but throughout the year in *sportsTURF*. Just circle the number(s) on the reader service card (opposite) corresponding to the product or service categories below and drop the card in the mail!

- 9001 **Aeration equipment**
- 9002 **Baseball Field grooming equipment**
- 9003 **Drainage**
- 9004 **Fertilizer / soil amendments**
- 9005 **Field covers**
- 9006 **Field marking paint / equipment**
- 9007 **Infield mixes**
- 9008 **Irrigation supplies**
- 9009 **Mowers**
- 9010 **Seed**
- 9011 **Site amenities**
- 9012 **Sod**
- 9013 **Turf equipment**

Use the ADAMS FASTFAX SYSTEM*

Simply dial our 800# and follow the simple instructions; when you hang up, the information you requested will be faxed immediately and directly to the fax number you entered.

Find the professional references you need at the **adams book guild**



Feature of the Month:

Sports Fields: A Manual for Design, Construction and Maintenance, by Jim Puhalla, Jeff Krans, and Mike Goatley,

This book covers every important aspect of planning, design, construction and turfgrass maintenance with hundreds of illustrations and step-by-step procedures to help you get the job done right. No other book provides such intricate detail, combined with easy-to-understand guidance. Sports Fields is unparalleled in quality, practicality, and scope. In Part 1, you will learn the basics of turfgrass science and culture. Part 2 provides complete instruction on facility design, construction and renovation - for football, soccer, field hockey, lacrosse, and more. Part 3 covers other facilities such as playground surfaces, and volleyball courts. Procedures for equipment use, quality assurance, and safety are covered in Part 4. In Part 5, you will learn about stadium management, sand fields, turf paints, and many more useful topics. 600 pgs.
4084 \$74.95



Sports Turf Management Program-Maintenance & Renovation Planning Guide, by Ashman & Associates

This manual was developed to provide a coherent plan for the management of the baseball field playing surface and provides operational guidelines for the grounds crew to use as part of the maintenance plan. Enhances the "playing conditions" of the field by elevating the maintenance standards to the highest level possible. Complete descriptions of the maintenance protocol and identification of key issues to be discussed before starting objective maintenance procedures. This book provides a plan of action outlining the tasks to be completed and benchmarks to measure the progress of the program. 160 pgs. **4024 \$105.00**



NEW! Fine Art of America's Fairways, by Mike Ventola, Jr.,

This coffee table book, featuring 48 of America's finest golf courses, showcases golf course architecture and legends of the game. Featuring 138 pieces of artwork, this book guides the reader on a unique golf journey from the majestic mountains and stark deserts of Arizona and California to the vast wetlands along the coasts of Georgia and the Carolinas. The book examines the work of celebrated golf course architects, such as Trent Jones, Tom Fazio and Jack Nicklaus. 256 pgs.
4209 \$59.95



Destructive Turfgrass Insects: Biology, Diagnosis, and Control, by Daniel A. Potter,

This book has the answers you need to control white grubs, mole crickets, fire ants, and other pests. Stinging and biting insects such as yellow jackets and ticks are included, as well as nuisance wildlife such as moles, raccoons, and more. Covers the biology, diagnosis, and control of virtually all of the insects and mites that attack warm and cool season turfgrasses. Over 250 full color photographs. 400 pgs. **4150 \$65.00**



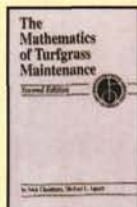
Maintain It Easy(Keep It Safe), by Grounds Maintenance Services

Learn from hundreds of instructional photos featuring all aspects of softball field groundskeeping. Explains: Lip reduction; setting of multiple bases and pitching plates; dragging equipment and patterns; base line options; unique complex ideas; dugout design; batting cage and hitting station; layout; water removal and much more. Unique field ideas from across the country. **4023 \$37.00**



Superintendent's Handbook of Financial Management, by Raymond Schmidgall,

Written specifically for golf course superintendents, managers and owners. Official certification textbook of the Golf Course Superintendents Association of America. The book presents useful methods and techniques for understanding and using income statements, balance sheets, accounting procedures, financial statements, operating budgets, capital budgets, record keeping and much more. 150 pages.
4006 \$34.95



The Mathematics of Turfgrass Maintenance, 2nd edition, by Nick Christians and Michael L. Agnew,

This book provides you with basic mathematical principles of budgeting, fertilizer and pesticide application, the ordering of top-dressing, irrigation, and many other parts of golf course operations. 149 pgs.
4149 \$34.95



Shop Service Manuals Set, by Intertec Publishing Corporation,

This comprehensive 14 book set totals more than 4,500 pages of service and repair information. Covers adjustments, maintenance, overhaul, and reassemble procedures. Titles included: Small Air Cooled Engines Volumes I and II; Chain Saw; Walk-Behind Lawn Mower Service; Riding Lawn Mower; Large Air Cooled Engine, 1988 and Prior, Volume I; Large Cooled Engine, through 1992, Volume II; Yard & Garden Tractor Single Cylinder Models; Small AAC Generator; Yard & Garden Tractor for Multi-Cylinder Models; String Trimmer and Blower; Rotary Tiller. **4043 \$219.95**

Please indicate quantities of each publication

___ 4023	Maintain It Easy(Keep It Safe)	\$37.00
___ 4149	The Mathematics of Turfgrass Maintenance, 2nd edition	\$34.95
___ 4006	Superintendent's Handbook of Financial Management	\$34.95
___ 4150	Destructive Turfgrass Insects: Biology, Diagnosis, and Control	\$65.00
___ 4084	Sports Fields: A Manual for Design, Construction and Maintenance	\$74.95
___ 4209	Fine Art of America's Fairways	\$59.95
___ 4024	Sports Turf Management Program-Maintenance & Renovation Planning Guide	\$105.00
___ 4043	Shop Service Manuals Set	\$219.95

Payment Must Accompany All Orders

Payment Enclosed To charge your order by phone call 1-800-396-3939

Charge my Credit Card Visa M/C Amex Signature
Card Number _____ Exp Date _____

IL residents add 8.25% sales tax.

Name _____
Title _____
Company _____
Type of Business _____
Street _____
City _____ State _____ Zip _____
Country _____
Telephone: _____ Fax: _____ E-mail: _____

NO P.O. BOXES PLEASE ALL SALES ARE FINAL NO PURCHASE ORDER ACCEPTED

INCLUDE SHIPPING & HANDLING 1-2 bks \$7.50 3-6 bks \$10.00 7-10 bks \$15.00 10+ bks \$21.00 Intern. Ship. \$20.00

ADAMS BOOK GUILD • 2101 South Arlington Heights Road, Suite 150 Arlington Heights, IL 60005-4142 • Tel: 1-800-396-3939 • Fax: 847-427-2037 **ST 9/99** Please allow 4 weeks for delivery

Visit us at www.industrybooks.com for our complete catalog listing

PRODUCT SHOWCASE

STADIUM VAC

"Cleans up on the competition"



- Parks & Rec.
- School Districts
- Municipalities
- Beaches
- Commercial
- Residential
- Industrial

Heavy Duty Steel Construction
Powerful 11HP Honda Elect. Start Engine
10" Diameter Suction Hose
Re-usable Liner

Broyhill ...over 50 years of excellence.
800-228-1003

One North Market Square Box 475 Dakota City, NE 68731
www.broyhill.com email: broyhilsal@aol.com

Circle 114 on Inquiry Card

Vigaroot

It is in the Bag with Vigaroot



Heat stress, insect and disease pressure all take their toll on your turf. Vigaroot is a new turfgrass management tool designed to help reduce stress and stimulate root growth through enhanced water and nutrient uptake. Vigaroot's dry formulation combines humic acid, seaweed and yucca extract, beneficial bacteria, and fully chelated iron, zinc and manganese. Vigaroot is packaged in a premeasured foil bag to provide easy use and ensure longer shelf life and stability.

Becker Underwood, Inc.

800-232-5907

801 Dayton Ave

Ames, IA 50010

www.bucolor.com Vigaroot is a trademark of
Becker Underwood, Inc.

Circle 116 on Inquiry Card

Earth&Turf



A topdresser that can green up your bottom line!

MultiSpread™

There's nothing else like it for
COMPOST and other topdressings.

- Capture profits in the exploding Green Trend market by spreading environmentally friendly turf care materials.
- Unique narrow design permits access to previously inaccessible areas, yet provides spread pattern up to 66".
- Affordable; one-person operation; no-tools adjustment.

Earth&Turf
Simple, Well-built Products
TOLL FREE 1-888-693-2638

Circle 115 on Inquiry Card

Water Reels



Kifco has introduced two models to their popular line of Water-Reels. The new B110 and B180 extend the product line to ensure there is a Water-Reel to fit your needs. Machines are compact, easy to use, operate unattended, and shut off automatically. They are suitable for all types of sports turf and are easily transported from one area to another. Water-Reels combine outstanding features that come from more than 25 years of traveling sprinkler engineering.

Kifco, Inc.

P.O. Box 290, Havana, IL 62644

PH: (309) 543-4425 FAX: (309) 543-4945

<http://www.kifco.com>

Circle 117 on Inquiry Card

PRODUCT SHOWCASE

Affordable Topdresser



Starting under \$5,000, the Millcreek Topdresser/Spreader will spread 2 cu.yds. in 7 minutes and topdress a football field in 2 to 3 hours.

- Rugged construction, built to last.
- Adjustable spread pattern, 3 ft. to 10 ft. wide.
- Unsurpassed for compost, clippings and more.
- More versatility — simple, safe operation.

The Millcreek Topdresser/Spreader spread topdressing, infield mix, compost mixes and more with just one operator. Plus, you never pay too much for quality turf equipment from Millcreek.

Millcreek Manufacturing Company

2617 Stumptown Road, Bird-in-Hand, PA 17505
TOLL FREE: 1-800-879-6507

Circle 118 on Inquiry Card

12-Volt Field Markers



The Tru Mark Athletic Field Marker is designed for convenience, safety and economy. Uses efficient 12-volt Shurflo pump to deliver field paint at 45 p.s.i. Folding or removable handles for transport or storage. Powder coated finish, zinc plating, and stainless steel fasteners provide maintenance free life.

TRU MARK

Atheletic Field Markers

P.O. Box 1662 • Norfolk, NE 68702-1662
Phone: 1-800-553-6275

Circle 120 on Inquiry Card

Fence Guard™ — Is Now available in 6 colors!

Fence Guard™
Protective Covers
for chain link fencing
are now available in
six colors - Safety
Yellow, plus Dark
Green, Red, White,
Blue, and Orange.
These heavy-duty,
UV-resistant, poly-



ethylene covers protect players from chain link fence injuries and provide a neat/distinctive look to fencing. **Fence Guard™** has a 5-year manufacturer's limited warranty and ships by UPS.

Fence Guard™ plus windscreen, ball netting, and wall padding are among the more than 200 baseball and softball products available from "Your One-Stop Source for America's Leading Sports Surfaces & Supplies":

PARTAC®/BEAM CLAY®

Kelsey Park
Great Meadows, NJ 07838
800/247-BEAM • 908/637-4191 • Fax: 908/637-8421

Circle 119 on Postage Free Card

Stabilizer Solutions, Inc.



TurfGrids are polypropylene fibers used to stabilize sports turf and high vehicle traffic areas such as turf parking areas. TurfGrids reinforce the base soil and root structure of natural turf surfaces, increasing the load bearing and shear strength of the rootzone, for complete field coverage or selected high-use areas.

Stabilizer Solutions, Inc.

205 South 28th Street • Phoenix, AZ 85034
(602) 225-5900 • Fax: (602) 225-5902
(800) 336-2468

Website: stabilizersolutions.com
E-mail: lphubbs@stabilizersolutions.com

Circle 121 on Inquiry Card