

EVENTS

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MAY

16-18 "Practical Approaches for Effective Erosion and Sediment Control," "Bioengineering Techniques for Streambank and Lakeshore Erosion Control," and "Design Methods for Channel Protection and Streambank Stabilization" sponsored by the International Erosion Control Association. Boston, MA. Contact: IECA, (800) 455-4322 or (303) 879-3010.

17 "Sustainable Agriculture Conference Series, sponsored by the Committee for Sustainable Agriculture: a crop-specific workshop focusing on gardening and landscaping. UC Davis campus, Davis, CA. Contact: Holly Dumont, (408) 778-7366. Fax: (408) 788-7186.

JUNE

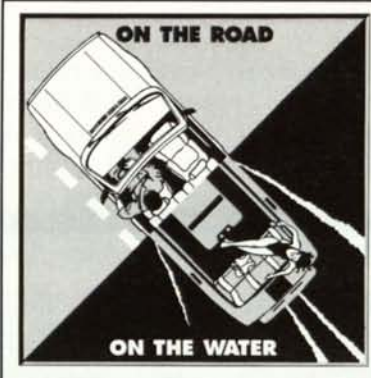
22-24 Sports Symposium and Trade Show, Baltimore, MD. Contact: Vince Angotti or Jim McIntyre, Towson State University, (410) 830-2384.

25-26 National Lawn and Garden Marketing Conference. Stouffers Renaissance Hotel, Denver, CO. Contact: Bob Mikulas, (719) 488-8050. Fax: (719) 488-8168.

27-29 "Practical Approaches for Effective Erosion and Sediment Control," "Bioengineering Techniques for Streambank and Lakeshore Erosion Control," and "Design Methods for Channel Protection and Streambank Stabilization" sponsored by the International Erosion Control Association. Toronto, ON, Canada. Contact: IECA, (800) 455-4322 or (303) 879-3010.

28 Modern Arboriculture: The Science Behind the Treatment, a daylong seminar led by Dr. Alex Shigo. Six ISA CEUs and seven PAC, QAL and QAC CEUs have been approved. Sequoia Conference Center, Buena Park, CA. Contact: Ted Stamen & Associates, (909) 656-3431. □

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Turf of the Month:

Common Bermudagrass



The San Diego State Aztecs football team practices on this field, which features a mixture of ryegrass, bluegrass, kikuyu, hybrid Bermuda and common Bermuda. Photo courtesy: Randy Frater, San Diego State University.

By Mike Augsdorfer

In a sense, common Bermudagrass isn't really common anymore, at least not for athletic fields. While it is found on many golf course fairways and some home lawns, common Bermuda is somewhat passé in sports turf applications. Hybrid forms of Bermuda, which are more difficult to maintain, are now *de rigueur* in the sports turf industry, primarily due to simple aesthetics: The hybrid Bermudas simply look better than common Bermuda. However, common Bermuda is still used by some schools and municipalities because common Bermuda is less expensive to develop and maintain than the hybrids.

Common Bermudagrass (*Cynodon dactylon*) shares many characteristics with its hybrid siblings [see "Turf of the Month: Hybrid Bermudagrass," March 1995 *sportsTURF*]. It is a warm-season grass that has been used on athletic fields in Florida, Arizona and California, where summer temperatures can soar into triple digits. However, it tends to go

dormant below 55 degrees. Although common Bermudagrass is highly drought-resistant, it can go dormant in summer if irrigation is withheld or neglected; but a simple weekly deep soaking is all the irrigation necessary to keep common Bermudagrass green and healthy.

Like the hybrids, common Bermudagrass is not shade-tolerant, but it can withstand heavy use. While most hybrid varieties of Bermudagrass are sterile [see sidebar], common Bermudagrass can be seed-propagated. Bermudagrass spreads very quickly via aggressive stolons. However, these aggressive stolons are among the factors that can contribute to heavy thatch production in common Bermudagrass.

Bermudagrass, also known as wiregrass,

couchgrass and devilgrass, was introduced to the U.S. in 1751 from eastern Africa. Common Bermudagrass, which is sometimes called Arizona common, has deep roots and is easily grown in most soils. As a result of its vigorous growth rate, common Bermudagrass often turns



This professional croquet court was established in 1989 with common Bermudagrass. Photo courtesy: Dr. A.J. Powell, Jr., University of Kentucky.

up as a weed where it is not wanted. Common Bermudagrass is susceptible to a number of diseases, including dollar spot, leaf spot, brown patch and pythium blight. Pests such as nematodes, armyworms, sod webworms and Bermudagrass mites can attack common Bermudagrass and cause problems. A conscientious program of turfgrass maintenance is ordinarily the best defense against any potential problems caused by disease or pests; but in severe cases, treatment with fungicides or pesticides may be necessary.

Common Bermudagrass seed germinates in two to four weeks under ordinary conditions. Recommended fertilizer ratios run up to one pound of nitrogen per 1,000 square feet each growing month. Since it grows rapidly, common Bermudagrass requires frequent mowing. Cutting height can be anywhere between a half inch and 1.5 inches.

A Very Hardy Grass

Despite the relative ease with which a common Bermudagrass field can be developed and maintained, its popularity as an athletic turf has diminished while

the popularity of hybrid Bermuda has accelerated. David Dymond of Duda & Sons, Inc., a turfgrass producer located near Orlando, FL, is among those who think that common Bermuda has seen better days. "Common Bermudagrass was originally a pasture grass in Florida," he relates. "It's a very hardy grass." Dymond points out that common Bermuda is no longer popular as a sports turf in Florida. Most athletic facilities have adopted hybrid Bermuda or other turfgrasses, and common Bermuda, says Dymond, is used primarily for erosion control along highways in Florida.

Edward Davis of R&D Sod Farms in Florida concurs. "People have only started using it in the last few years," he explains. "St. Lucie County is using it on a ballpark right now." Davis thinks that common Bermudagrass would be nearly obsolete except for its use to control erosion along the highways. "It just doesn't look as lush as the hybrids," he relates. "We've put it on some driving ranges, but there's no one who would use it on a high-class athletic field." Despite the aesthetic drawbacks, Davis likes

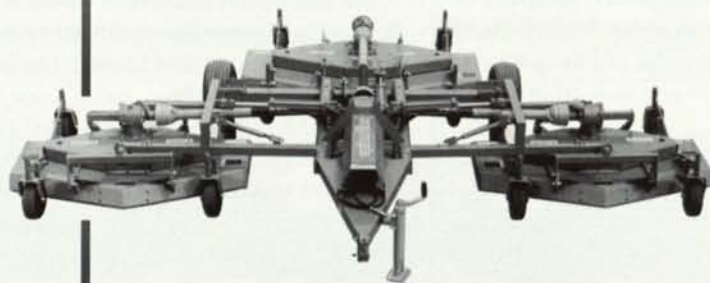
common Bermuda for its durability and easy maintenance. "It's easy to maintain," he notes. "It can be maintained with a rotary mower." Insects, says Davis, are generally not a big problem. "We haven't had a mite problem or anything like that."

Craig Slade, a turfgrass and IPM consultant with LVF Turf in Indio, CA, says that despite the overwhelming popularity of Bermudagrass hybrids, common Bermuda remains a viable athletic turf. "It's a strong, durable grass that, once established, is virtually impossible to get rid of," notes Slade. He cites the radical growth habits of common Bermudagrass as its most distinguishing characteristic. "It just wants to take over any place it's put," he says. Slade adds that common Bermuda is very popular as turfgrass for school athletic fields and city parks. "With proper maintenance you can have nice, healthy common Bermuda," Slade relates. Proper aeration and fertilization are important with common Bermudagrass, says Slade. "A lot of people feed it more than it

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Common Bermudagrass

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really needs," Slade admits. "It needs very low amounts of nitrogen."

Many of the practice fields at San Diego State University are overseeded with common Bermudagrass, reports Randy Frater, lead groundskeeper at the university. "We use quite a bit of it on the fields," he relates. The grounds crew at San Diego State uses a mix of common Bermuda, bluegrass and ryegrass to overseed the practice fields. "About five percent of the mix is common Bermuda," says Frater. "We have to overseed them quite often because they get quite a bit of wear." Frater plans to renovate one of

the main football practice fields this spring. "In most cases we cannot afford to sod an entire field, and my second choice would be to seed the field with common Bermudagrass," he reveals. "However, since our fields are used year-round, we always include blue- and ryegrass in with our seed mix; that way we can seed any time of the year and expect sufficient germination."

Success in Hawaii

Dr. Charles Murdoch, a turf specialist with the University of Hawaii, says that common Bermudagrass has enjoyed tremendous popularity as an athletic turf in Hawaii. "Most of the athletic fields in Hawaii were planted originally

with CB," he relates. Murdoch was involved with the reconstruction of an athletic field at Honolulu's Punahoa School. "We used common Bermudagrass because it's easier to plant from seed, and at that time there weren't any seeded varieties available," he explains. "Also, there aren't large sod farms in Hawaii, so it's difficult to get what you need."

In many cases turf managers are turning to some of the new seeded varieties of common Bermudagrass [see sidebar] for athletic-field applications. "You're going to see dominance of the new seeded hybrid," says John McShane, vice president of Stover Seed in Los Angeles. "I think we're selling more

Seed-Propagated Hybrids

If turf were ice cream, Bermudagrass might be the Baskin Robbins of turfgrasses. Crossbreeding has produced numerous varieties of this hardy grass. Most of the better-known varieties of Bermudagrass are sterile and must be propagated by planting plugs, but several seed-propagated varieties have been developed recently.

"Seed-propagated turf hybrids are new from a commercial standpoint," says Arden Baltensperger, Ph.D., director of turfgrass research for Farmers Marketing Corp. and emeritus professor of agronomy at New Mexico State University. "We have recently developed several intraspecific or fertile hybrids that appear to be promising."

Baltensperger explains that these new seed-propagated forms of Bermuda are quite different from the hybrids that were developed previously and are already popular on athletic fields. "Interspecific or sterile hybrids, such as Tifway, Tifgreen and Santa Ana, resulted from crosses of different species of *Cynodon* and are sterile triploids requiring vegetative reproduction. Intraspecific or fertile hybrids result from crossing two highly self-sterile clones of the same species — *Cynodon dactylon* in this case." He adds that the harvested seed is first-generation hybrid seed. "The 'fertile' intraspecific hybrids are possible because of the high self-sterility of some clones of Bermudagrass," Baltensperger explains. "We developed

clones by repeated intercrossing and selection of desirable turf-type plants from domestic and Australian material."

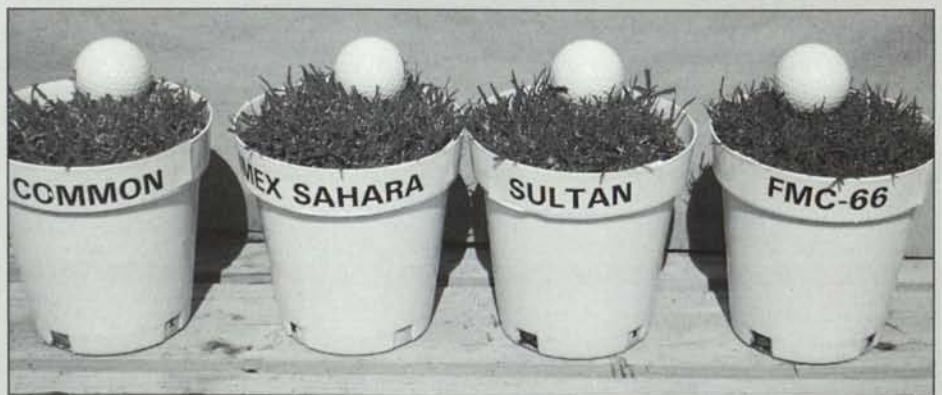
These new hybrids offer additional options for users seeking Bermudagrass with specific performance characteristics. "Two of our 'fertile' hybrids have significantly higher leaf and shoot density, lower shoot extension rates and finer leaf texture than the commercially available synthetic varieties such as NuMex Sahara, Sonesta, Primavera and Sultan," Baltensperger relates. He adds that these hybrids are similar to Tifway in density, texture and growth.

The seed-propagated versions of Bermudagrass are not widely used for sports turf yet. "The sterile, vegetatively propagated hybrids —

Tifway, Tifgreen, Santa Ana and some Midiron — are now most common," Baltensperger admits. "However, when seed of our new hybrids is available, some may use these because of desirable characteristics and ease of establishment."

While the new seeded hybrids have not yet been tested under sports turf conditions, Baltensperger expects good results when they come into common use. "We expect these new hybrids will have good wear tolerance," he says. "In experimental plots in Florida, Arizona, New Mexico and Australia, we have not observed any serious disease or insect problems."

If these seed-propagated versions of Bermudagrass are successful, users will have even more choices in selecting turf for athletic facilities.



Common Bermudagrass shown alongside three seeded varieties: NuMex Sahara, Sultan and the newest variety, Princess (labeled FMC-66). Photo courtesy: Dr. Arden Baltensperger.

than ever." Hybrids, he says, are much denser than common Bermudagrass. "You don't want to put Bermuda in places where you have flower beds — it has a very aggressive nature," McShane notes. Winter use is tough on a common Bermudagrass field, says McShane. "When you're using a field in the winter, you tend to destroy the grass. The Bermudagrass is dormant, and it can't replace itself." Many schools use their athletic fields for soccer right after football season. "Soccer really takes a toll," says McShane.

Nutri-Turf, Inc. of St. Louis, MO, is working extensively with a new seeded variety of Bermuda called Quickstand. "We're bringing a lot of Quickstand Bermudagrass in the St. Louis area," says Gary N. Bovard, a spokesman for the company. "We've done a number of high schools in Quickstand." Bovard reveals that Busch Stadium in St. Louis has plans to replace its artificial surface with seeded Bermuda. "This grass seems to have very high cold tolerance," remarks Bovard.

The Quickstand variety was first collected at the University of Kentucky by Dr. Harold Rice, and Dr. A.J. Powell, Jr., turf extension specialist at the university, began evaluating it for turf in 1982. "It was a material that we had observed growing in the mountains of Kentucky," explains Powell. Although Quickstand produces very little seed and is propagated primarily by vegetative means, it is considered a common-type Bermuda. "As far as we know, it was not hybridized," relates Powell. He adds that the grass is very aggressive and withstands cold temperatures better than some other varieties of Bermuda. "We're right on the edge of the transition zone, so it had to be winter-hardy," he notes. Powell adds that he has not seen any problems with disease in Quickstand Bermudagrass. "We have not had any spring dead spot with it," he admits. "We've got it on soccer fields and on croquet fields."

Turfgrass researchers continue to tweak common Bermudagrass in an effort to develop a better, more durable variety suitable for heavy use in sports turf applications. Each improvement offers turfgrass managers more choices. Despite the increasing popularity of hybrid forms, common Bermudagrass remains a staple for turfgrass managers, especially those on a tight budget. □

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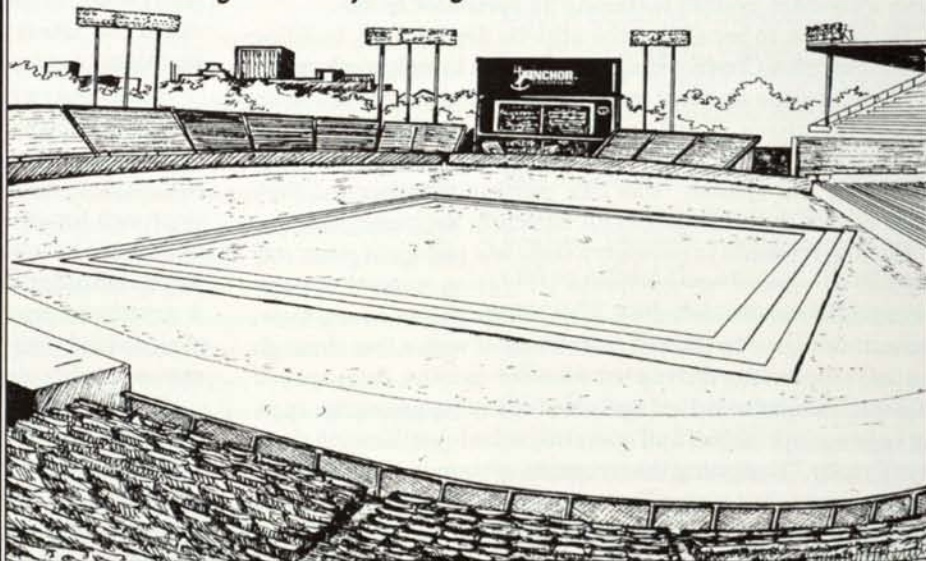


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SUNY-Cobleskill Students Build Irrigation System for Soccer Field

By Alan Ginsburg

The men's soccer team at the State University of New York at Cobleskill sustained fewer injuries last year. This may be attributed to an automated irrigation system designed and installed by students, which provided a denser turfgrass cover and softer playing field.

"Before, if it didn't rain or the field didn't get some kind of moisture, within a couple of days the ground was almost like concrete," says soccer coach John Price. "Now the field is much nicer and much easier on the players' legs, especially from the constant pounding. Players don't seem to get torn up as easily when they fall." Moreover, he says, while worn spots in the middle third of the field and in the goal areas were a common problem, now the grass seems to hold up longer.

The computer-controlled irrigation system replaces the college's labor-intensive, time-consuming and less efficient process of dragging hoses and portable sprinklers around the 220-by-360-foot field to irrigate. In cooperation with representatives from S.V. Moffett, a local irrigation equipment supplier and distributor, and Hunter Industries of San Marcos, CA, Plant-Science Professor George Crosby and undergraduate technology students in his irrigation course designed and built the six-zone irrigation system featuring 24 sprinkler heads.

In addition to benefiting the athletic department, building the system gave Crosby's students who plan to seek employment in the landscape and turf industry firsthand experience in an important phase of the industry: water management for maintaining quality turf. For the students, says Crosby, designing the system "was like putting together a 5,000-piece puzzle with the pieces all basically the same color."

Getting students to envision a complete picture of what was needed to ensure an adequate irrigation system for the soccer field meant including such puzzle pieces as soil type, amount of water in the soil, estimates of water loss through evapotranspiration during hot summer months, frequency of field use, product selection, sprinkler operating pressures, spacing between sprinklers and operating schedules. Nevertheless, says Crosby, "Designing the irrigation system in the classroom is one thing, but actually installing the equipment and finding out that your pieces of the puzzle fit and complete the picture is something else."

For the more than two dozen students who participated, the project offered a chance to draw on the know-how of a product dealer and a manufacturing representative as well as the expertise of their professor. For Jeff Hume of S.V. Moffett, a Rochester, NY-based supplier of irrigation products and equipment with a branch in Cohoes, NY, assisting the students



The SUNY-Cobleskill soccer team now plays on a softer field thanks to a newly installed automated irrigation system. Photo courtesy: Rose Mackiewicz, SUNY-Cobleskill.

in the project was part of an ongoing relationship he established with Crosby to offer his irrigation classes up-to-date information about the latest equipment, technology and techniques for installing automated irrigation systems.

According to Hume, that entails designing with students in the classroom an irrigation system from start to finish while reviewing industry standards and proper installation techniques. He agrees with Crosby, however, that the best approach for gaining expertise and know-how in irrigation systems is by actually installing one. After Crosby convinced college officials that an automatic irrigation system would mean a greatly improved soccer field that would be more easily maintained and would make more efficient use of water resources, his class had its hands-on project.

Hunter Industries donated 24 I-40 sprinklers and the PSC-600 controller. S.V. Moffett provided the use of a Burkeen pipe puller and trencher and irrigation products at reduced prices, such as pipe fittings, wire, gate valves and solenoid valves. Hume spent two days on the project, and Jeff Crean, Hunter Industries Northeastern regional sales manager, spent a day on the project to offer his expertise in programming the controller and setting the sprinkler heads.

After students completed flow and water-pressure checks from one of the quick-coupling valves of the older network of buried copper pipe and examined the condition of the field for areas needing special attention, they were ready to design their

automated irrigation system. Using AutoCAD and LANDCADD computer software, several students designed what they considered the most adequate automated system for the soccer field and determined the types of products to use.

With their knowledge of hydraulics and engineering from their course, the students selected and sized components and computed anticipated pressure losses through various components of the system, including a 1.5-inch water meter and a reduced-pressure principal backflow preventer, as well as pipes and valves. The completed design was then evaluated by Crosby and the class. Since installation of the system was part of laboratory exercise for the course, the project was completed within a week.

Hands-On Learning

The students participated in all phases of installation: pulling pipe and trenching; laying and solvent-welding PVC pipe; installing and setting sprinkler heads, backflow valves and concrete thrust blocks; wiring valve controls; and wiring and programming the controller. The project also included installing moisture-sensing devices.

Crosby says the system is an excellent model and teaching tool for his future irrigation classes. "It's like a working lab," he adds.



Undergraduate technology students Tom Welch (left) and Rus Myers install a valve manifold on SUNY-Cobleskill's soccer field as part of their class project to design and install an automated irrigation system. Photos by George Crosby.

David Robertson, who recently completed his internship at Lifescapes of Canton, GA, for his bachelor of technology degree, says that working on the college soccer field irrigation

project prepared him for his work with Lifescapes. He reports that the project gave him the opportunity to put into practice his knowledge of the most up-to-date equipment and technology in irrigation systems that he learned about in the class and to have closer contact with industry people whose product knowledge gave him a clearer picture of what he'd face on the job after college. At Lifescapes,



Undergraduate technology student Scott Gray wires a solenoid valve on a lateral line on the automated irrigation system.

Robertson worked on both commercial and residential irrigation systems for office complexes and private residences in the Atlanta, GA, area.

Scott Gray, who also recently completed his internship for his bachelor of technology degree, agreed that the soccer field project prepared him for his work with Irrigation Systems of Maine, a small company based in Yarmouth, ME. "Professor Crosby's class definitely gave me the knowledge for designing an automated irrigation system, and working on Cobleskill's soccer field gave me the practical experience I needed for the work I did in Maine," he relates.

Gray says that he was well prepared for his job designing and installing automated irrigation systems in several athletic fields, including a football field, soccer field, baseball diamond and practice field at the recently built Brunswick High School in Brunswick, ME. He also helped install automated systems in fairways, greens and tees at the Samoset Golf Course in Samoset, ME, in athletic fields at the University

of Maine at Orono and at the private home of novelist Stephen King in Bangor, ME.

Getting to know irrigation industry people from both classroom sessions and working on the project, notes Gray, was equally valuable, especially since he's currently trying to decide whether to work for an established company or start his own. "I think it's good that the industry people come into the classroom," he says. "They know me now, my name, and they call me when they find something that might interest me."

Companies Benefit, Too

Hume admits that working with the students has been a valuable experience for him and his company as well. "Those of us who have been in the industry can offer some approaches to what works and what doesn't," he says. "We can pass on some very productive techniques."

His company, he adds, gains as well from the relationship through recognition when the students graduate and are employed in some phase of the industry. "As a salesman, when I see one of these students on a golf course or as a landscaper, we already have somewhat of a rapport, so it's a little easier to get to know him."

Crean agrees. "If I were a student, I would love to have somebody come in and work with me, somebody who really knows the manufacturing process, somebody who can teach me something from a different perspective," he says.

According to Crean, teaching is the aim of Hunter's Fellowship Program, which provides selected college students majoring in a landscape or turf management program a chance to learn more about the industry by seeing firsthand Hunter's manufacturing process and to attend the annual distributors' meeting and the annual Irrigation Association Exposition as Hunter's guest. "We know we have to reach out and find people who, hopefully, will develop an interest in Hunter Industries and perhaps come to work for Hunter," he adds. "But we also know that someone in the field who is doing irrigation design someday will think about Hunter and their experiences with us." □

Alan Ginsburg is a faculty member of the humanities department at SUNY-Cobleskill.

PGRs Help Busy Sports Turf Managers

By Bob Hanvik and
Jimmy Johnson

Most sports turf managers aren't looking for things to add to their "to do" lists. However, some are penciling in, "Make plant growth regulator applications."

They are adding PGRs to their turf maintenance programs because these products can eliminate or speed up mowing, reduce clippings, free up labor for other duties, reduce the hassles associated with painted areas and improve the appearance of turf.

"I started using PGRs for the sake of convenience and to help me manage my turf areas better," says Bill Wolsfeld, grounds foreman at Wheaton

College in Wheaton, IL. "But last year with Primo® my turf looked so good that people were actually complimenting me for the appearance and asking what I'd done."

Wolsfeld manages 60 acres of turf, including 11 acres of athletic fields. All of these fields do double and triple duty and are in use nearly every day in spring, summer and fall, limiting when he can fertilize, irrigate and mow. Wolsfeld also faces the challenge of losing significant portions of his work force a couple of times a year.

"I applied the PGR for the first time last August 1 because I lose my summer help between the first and 15th of the month, and football starts August 15,"



Wheaton College in Wheaton, IL, reduced the need for mowing athletic fields by using growth regulators. Photo courtesy: Bill Wolsfeld.

says Wolsfeld. "My fall help doesn't start until a month later, so I need help managing my time."

Wolsfeld reduced his mowing to once a week during this period, and he was pleased with the results. "The turf looked great, and the staff we had weren't spending so much time on the mower."

PGRs also offer overseeding benefits. Wolsfeld overseeds twice a year in May and August to get a good turf stand before the fields get their heaviest use. He uses a 50-50 mix of Kentucky bluegrass and ryegrass. If he needs to overseed in season, he uses 100-percent ryegrass for quick germination. By applying a foliar-absorbed product like Primo, he could hold back existing

turf just enough to allow the seedlings to establish.

"Mid-April and early August are the ideal times for a PGR to work into my program," says Wolsfeld.

PGRs and Paint

Lanny Dixon, certified pest control operator for the school board of Broward County, FL, tried a PGR to minimize the problems she faced with her painted turf areas. "Normally our line-painting crews visit each field once a week, and even that's not often enough as we're mowing off paint within a couple of days," she says. "We'd often apply heavy coats of paint to keep the lines clean, but that leads to other problems like paint buildup in the soil."

In 1994 Dixon added Primo to her line paint for the first time. "We only tried it on half a football field, but the results were phenomenal," she says. "After one week the lines looked as good as they did the day they were painted, and after two weeks they still looked quite clean. We

found that the product worked for six weeks with minimal touch-ups."

Dixon notes several other benefits from adding a PGR to turf paint. She used less paint; with no need to apply heavy coats of paint, soil buildup was eliminated; her crews didn't have to lay string lines

every time they painted, and the painters were able to perform other functions instead of striping fields. "There were no negatives," she says.

Based on her experience, Dixon offers several suggestions for sports turf managers considering using Primo in line paint:

- Add water to the product before mixing it with the paint.
- Mix and measure the chemical carefully, and test it on a small area before applying it to an entire field.
- For multiuse fields (e.g., where soccer follows football) the PGR-paint combination must be used early in the football season so its effects will be gone by the time soccer starts. Also do not apply to soccer lines, as the growth of the grass will have slowed naturally by then.

PGRs can make a difference for sports turf managers, both for specific uses like line painting and for broad applications to reduce mowing and maximize the efficiency of crews. It's one of the few items from a to-do list that can eliminate others! □

Information for this article was provided by Ciba Turf & Ornamental Products, Greensboro, NC.



Grounds crews in Broward County, FL, mixed growth regulators with paint used for marking athletic fields. Photo courtesy: Lanny Dixon.

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COMMENTS

Please rate the format:
 1-day school ___ 2-day ___ 3-day ___

What do you consider the best time of year for training

What do you feel would be a fair cost per person?
 1 day ___ 2 day ___ 3 day ___

If offered, you would take advantage of:
 ___ CEUs ___ Academic Credits ___ Pesticide
 Recertification ___ Credits/Hours _____

How far would you be willing to travel? _____ Miles
How many people at your facility besides yourself might attend? _____ Do you prefer:
 Classroom ___ Hands-on ___ Combination _____

If combination, what percentage?
 Classroom ___ Hands-on _____

To assist in tabulation, please provide your type of facility: (i.e.: municipal, private, school, semipro, pro, etc.)
 Facility Type _____ State ___ Zip code _____

Name (optional) _____
 Facility (optional) _____

Please return to: Trusty & Associates, 12 Rolling Hills,
 Council Bluffs, IA 51503 or fax: (712) 366-9119
 THANK YOU, Education Committee:
 Mike Trigg, Chairman, Mary Owen and Steve Trusty

Get Serious With STMA

Application for Membership

The Sports Turf Managers Association (STMA) is an organization of professionals representing all segments of the sports turf industry. Our members work to combine the science of growing grass and the art of maintaining sports turf to produce playing fields that are both safe and aesthetically pleasing.

STMA provides members with a variety of benefits, including: Education through regional institutes and conferences; support for sports turf research; facilities tours; a national awards program; access to the STMA National Conference and Exhibition; complimentary subscriptions to *Sports Turf Manager* and *sportsTURF Magazine*; and much more.

If you're serious about the sports turf industry, then it's time to become a member of STMA. Join today!

Member Information

Name _____
 Title _____
 Employer _____
 Type of Business _____
 Address _____
 City _____ State _____ Zip _____
 Phone _____ Fax _____
 Signature _____
 Referred by _____

Membership Category (please check one)

<input type="checkbox"/> Professional sports turf facility manager	\$75
<input type="checkbox"/> Additional members from same facility	\$45
<input type="checkbox"/> Four-year colleges and universities	\$75
<input type="checkbox"/> Additional members from same facility	\$45
<input type="checkbox"/> Other schools, parks, ext. agents, municipal	\$50
<input type="checkbox"/> Additional members from same facility	\$30
<input type="checkbox"/> Student	\$20
<input type="checkbox"/> Commercial affiliate (U.S. or International)	\$175
<input type="checkbox"/> Additional members from same company	\$45
<input type="checkbox"/> International other than commercial affiliate (must be in U.S. dollars)	\$50
Total amount enclosed	\$ _____

Please enclose payment (check or money order) and send to:

Sports Turf Managers Association
 PO Box 809119
 Chicago, IL 60680-9119

For more information, contact STMA Headquarters at 312/644-6610

— "Promoting Better and Safer Sports Turf Areas" —