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"Seven weeks after it was laid, our TifSport bermudagrass had put down roots 10 to 12 inches deep thanks to Launch® applied every four weeks. When the NFL inspected our field they couldn’t believe a rain game was played only a day before! We’re using Focus® this fall to maintain our turf condition.”

Terry Porch
Tennessee Titans

MINNEAPOLIS

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Dale Wysocki
Minnesota Vikings

KANSAS CITY

"Due to stadium construction, portions of our field were sodded only a week before the opening game. I applied Launch® and the sod was knit down and playable. The massive root development I get with Launch enables me to maintain my entire bluegrass field at 1.25 inches mowing height. I haven’t had to use a lot of fungicide, and it really gets hot down here in the stadium."

Trevor Vance
Kansas City Royals

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**Cover Story**

**Wildcats Wild About Home Field**
Bob Tracinski talks with Head Groundskeeper Dan Bergstrom about the 1999 STMA/Beam Clay/sportsTURF Diamond of the Year—College Division.

**Main Events**

**Modifying Rootzones with Sand**
Dave Minner discusses the economic and agronomic factors involved in constructing sand-based fields.

**Drainage System Diagnostics and Troubleshooting**
Take an in-depth look at drainage design from François Hébert.

**Common Sense Cultivation**
Tony Koski looks at different cultivation practices and how they might help your field.

**Web Site Content**
www.sportsturfonline.com

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**On the Cover:**
Shively Field at Cliff Hogan Stadium, Lexington, Ky.
Some time back the University of Utah installed an irrigation system using Toro 640 Series Sprinklers. Heck, “some time back” was 26 years ago and counting. That kind of performance and reliability is what makes the 640 Series a great value and the number one choice for athletic fields in America, including one of the most famous: Rose Bowl Stadium. With its heavy duty body, and rugged stainless-steel-encased riser, the 640 is built to perform flawlessly year after year after year. All in all, the 640 Series is a sprinkler you can buy, bury and forget. For more information contact your Toro distributor or visit www.toro.com.
How Dry We Are

Last year much of the United States suffered through extreme drought conditions, forcing turf managers to alter their usual practices and, in some cases, stop watering their fields altogether. Unfortunately, things are looking grim for 2000.

Following the warmest winter on record, the United States is in the midst of a worsening drought, according to the National Oceanic and Atmospheric Administration’s (NOAA) National Weather Service.

In response to last year’s drought, the NOAA, United States Department of Agriculture and the National Drought Mitigation Center created the Drought Monitor, which includes a weekly national map displaying dryness divided into five categories, or levels of intensity. The categories are based on readings from a number of drought indices, giving the user a composite picture of many indicators. Drought information is updated daily through the use of thousands of observations available from cooperative weather observers. The Drought Monitor map can be seen on the Internet at enso.unl.edu/monitor/monitor.html.

NOAA Administrator D. James Baker attributes the drought to La Niña, which has dominated the United States for the past two years and has created serious moisture deficits in several areas. This year, Louisiana, Mississippi and Alabama experienced their driest February in 106 years, and much of the United States is behind in average rainfall totals.

Whatever the reasons for these dry conditions, turf managers need to be prepared to handle shortages in water and possible restrictions imposed on them from local governments.

Dan Douglas, head groundskeeper for the Reading Phillies in Reading, Pa., was one turf manager who struggled through last year’s drought. Early in the summer, he received a letter from the local water authority informing him of the drought and asking him to cut his water use by 30 percent. By mid-summer the state had declared an emergency and asked that all water use by reduced by 50 percent. Then, in late July, they asked Douglas to stop watering his field altogether.

“As a professional, and for the safety of the players, I still watered the field right before a game,” Douglas said. “But it wasn’t nearly enough, and it showed.”

Pennsylvania’s high schools suffered as well. As students returned for school and fall practice, they encountered fields of dead grass and baked dirt on which they were supposed to play. Some schools banned spikes and encouraged extra stretching to prevent injuries on the concrete-like fields.

Douglas, who serves as President for the KAFMO Chapter of STMA, met with officials from the Department of Environmental Protection soon after watering was banned and began to work on updating the state’s drought restrictions. A draft has been prepared and is currently being reviewed, and should be ready for the summer.

I would encourage other turf managers to meet with local government officials to review and perhaps update their water use restrictions to make sure that all fields can receive enough water to remain safe and playable. Also, to keep open the lines of communication, I would encourage you to send me updates on how the drought is affecting you and your fields, and any questions or advice you might have about dealing with a drought. I will include updates throughout the year, either in this column or on our Web site (www.sportsurfonline.com).

In addition, I’d encourage you all to pray for rain, do a rain dance, whatever it takes to get that water falling again, and maybe we can avoid a drought in 2000.

Michael SanFilippo
(847) 427-2083

The Blame Game

Documentation can keep you in the clear

Was it a bad hop? Was it an act of God? Or was it a lack of maintenance?

These are the questions that are being asked daily across the country, not only on the fields where the bad hop occurred, but also in courtrooms and judge’s chambers where the question is being challenged.

Lawyers and parents today don’t believe a ground ball off the chest or a sudden fall while chasing a soccer ball is part of the game anymore. They are pointing fingers at the parties responsible for the daily care and maintenance of the fields.

Who is responsible for the fields when the correct equipment is used in the proper manner? Is the maintenance staff prudent, reasonable and consistent with their daily maintenance techniques? Does someone walk the property daily, weekly, bimonthly to inspect the playing surface, the outfield turf, the bleachers and backstop areas as well as check irrigation heads, fence sections and base receptacles? Has the staff integrated their infield mix with soil additives such as calcined clay to avoid wind drifts, reduce compaction and aid in water absorption? Does the staff actively solicit information on how to handle some of their pressing technical problems through extension services and professional groups?

This short check list for baseball and softball fields is just a sample that maintenance groups should use to document their maintenance procedures.

The ground ball off the chest or the slip at midfield may still occur

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Calendar of Events 2000

April 5
NYSTA's Adirondack Regional Conference, Hilton Lake Placid Resort, Lake Placid, N.Y. Contact NYSTA: (800) 873-8873 or (518) 783-1229.

July 22-24

October 4-5
Southern California Turfgrass Council's (SCTC) Turfgrass Landscape and Equipment Expo, Orange County Fairgrounds, Costa Mesa, Calif. Contact SCTC: 7100 Sunnyslope Ave., Valley Glen, CA 91406; (800) 500-SCTC (7282) or (818) 764-5016; fax (818) 764-3363; e-mail expo@turfcouncil.org. Web site www.turfcouncil.org.

November 4-7

November 14-16
Turf and Grounds Exposition, OnCenter, Syracuse, N.Y. Contact New York State Turfgrass Association: (800) 873-8873 or (518) 783-1229.

STMA MESSAGE
Expanding Our Horizons

We're expanding the horizons in sports turf management, seeking better ways to accomplish our goals. This is evident in the increased levels of professionalism among sports turf managers and in the new technologies, products and services within the industry. It's reflected in such reports as Dr. Dave Minner's article in this issue on the break point between sand-based and soil fields for field function and economic issues.

We need more industry-specific research to address important issues. And we need to keep the information flowing through the fellowship, idea exchange and networking among sports turf managers. That will happen because STMA is expanding its horizons, too, with the development of exciting new programs.

First, there's certification. That program is up and running, and doing well. There were five Certified Sports Field Managers as of March 1. Congratulations go to: Ross Kurcab, CSFM; Dale Getz, CSFM; Eric Adkins, CSFM; Ted Baker, CSFM; and Mike Schiller, CSFM. Several more individuals are in various stages of the qualification or testing process as I write this column.

Those who have achieved the title of CSFM all have excellent backgrounds in sports turf management and excellent reputations within the industry, and have proven their abilities on the job. Yet each one of them will tell you the process made them put themselves to the test. They'll tell you the test itself is tough, and that's exactly the way it should be. The CSFM designation is a symbol of excellence, and the power of that designation will grow even stronger as we spread the word on its significance to the entire green industry and the general public. If you have questions about the CSFM program, please contact STMA Headquarters.

The second important program is in the developmental stages. It's the Sports Turf Foundation to focus on research and education specific to the sports turf industry. As a 501(c)(3) corporation, the Foundation will be separate from STMA, with its own board of directors, but will have synergy with STMA in achieving industry-wide objectives in research and education.

The third important new program for STMA is strategic planning. In the last five years the association has grown from around 500 national members to nearly 2,000; our affiliated chapters have grown from four to 18. We've improved communications with a toll-free 800 number that serves the United States and Canada, an association e-mail address (SportsTMgr@aol.com) and Web site (www.sportsturfmanager.com). We've expanded the newsletter, the annual conference and the awards and scholarships programs and we've developed the certification program. We're excited about what has been accomplished and want to keep that forward progress, so it's time to develop a more defined plan for the future with both immediate and long-range goals.

STMA is an important industry resource right now. My $85 membership fee has allowed me to utilize the resources of STMA to save my facility thousands of dollars and elevate the quality of our fields. And even better things are on the horizon.

Rich Moffitt
STMA President
(314) 977-2956
The Wildcats are wild about Shively Field at Cliff Hagan Stadium, the 1999 STMA/Beam Clay/sportsTURF Diamond of the Year in the College Division. Located on the University of Kentucky's campus in Lexington, Ky., it's a source of pride for the school, athletic department and the UK Wildcats baseball team.

The native soil field profile is maury silt loam. Shively Field was opened in 1969 and, other than some minor grade work over the years and sand topdressing of the infield, remains in its original state. Several facility renovations and upgrades have brought the stadium to its present seating capacity of 2,500. Lights were added to the complex in 1983 to allow night games and a 33-foot tall scoreboard was installed in 1997 above the right-center field wall.

Dan Bergstrom, head groundskeeper for the University of Kentucky Athletics Association, says, "Cliff Hagan Stadium is in use 235 days each year for baseball events only. It's the Wildcat's home field. The team's spring practice begins in January with sessions on the field whenever weather conditions allow it. The spring season begins in February and we hope it runs through the College World Series in June. Several high school games are played each spring and the state high school championships are held here each June. Baseball camps move in for about six weeks in June and July. August often brings several touring AAU and other youth leagues to the field. The UK baseball team fall practice season runs from mid-September through October."

"The University of Kentucky is the northern-most school in the Southeastern Conference (SEC). With Lexington at the northern edge of the transition zone, bermudagrass struggles at times to make it through our winters. We opened the '97, '98 and '99 seasons in the snow and usually have to cancel at least one spring game due to low wind chill factors."

Bucky Trotter became the university's first turf manager in 1991. Bergstrom joined the staff in 1996, after earning his BS degree in Horticulture with a major in turfgrass management from Iowa State University in 1995 and serving as assistant groundskeeper with the Cleveland Browns from 1995 to 1996. Bergstrom moved up to his present position eight months later, when Trotter accepted the position of director of sports fields and facilities maintenance at the University of South Carolina.

Full-time crew members are: Assistant Superintendent Tommy Davis, with 21 years of service; Mechanic Dave Thomas, with 17 years of service; Chuck Stivers and
For Tough Turf Tasks.

For more than 30 years, Kubota has been building diesel powered equipment to handle tough turf and landscaping projects.

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The compact sized B21/L35 TLB’s are designed to work in tight places and are easy to transport from one job site to the next with a 1/4 ton pick-up and trailer. Versatility is provided with Kubota’s quick-attach backhoe, Category I, 3-point hitch and rear PTO.

Kubota Grand L-Ten Series from 30 to 46 net engine HP offer a variety of transmission choices — fully synchronized main and shuttle transmission (FST), clutchless glide shift transmission (GST) and the new “FeatherStep” HST.

The F60 front mowers increase a crew’s productivity with ease of operation and precision cutting. The Auto Assist 4WD with dual-acting, over-running clutch system delivers turf saving traction, in forward and reverse.

When you have tough turf and landscaping jobs to get done, get Kubota.

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Financing available through Kubota Credit Corporation.
Matt Divine, both with four years of service; and Ryan Hix with two years. This staff, along with seven part-time employees, is responsible for 53 acres of Athletic Department grounds.

Bergstrom says, "This crew does a tremendous job of keeping up the standards Bucky established and putting in the extra effort for our players and coaches. We rotate our staff members as needed to handle the different fields but, in the early spring, conditioning the baseball field surface for the team takes priority. In-season routine maintenance is scheduled in the mornings so the crew can work elsewhere when practice begins. A five-person crew works the field at game time and performs a quick fifth-inning drag for college games. As much field preparation as possible is accomplished post-game."

Bermudagrass is the base turf for the field, despite the transition zone challenges. Vamont bermudagrass is used on the infield. The outfield was converted from Kentucky bluegrass to Quickstand bermudagrass during the summer of 1996 to better accommodate the heavy field use during the hot summer months.

Bergstrom notes, "We selected Quickstand because it grows quickly when conditions are right. If it's sunny and 75 degrees Farenheit, we'll not only get growth, but also lateral development from it. The Vamont needs the full 80 degree temperatures coupled with the sun to grow well. It may be mid- to late June before temperatures are consistently in the 80s here."

"The winter of 1997 was a tough one and we lost 90 percent of the Quickstand. When we transitioned out the perennial ryegrasses that spring, we had little remaining bermudagrass to get us through the camp season. We resprigged the outfield with Quickstand in July. Then we purchased enough geotextile blanket to cover the entire field to protect the bermudagrass from the winter and to keep the overseeded perennial ryegrass actively growing. We choose the white cover to increase the light factor. There are 14 sections of cover, and each is labeled for placement on the field."

The bermudagrass are overseeded in late October with a three-way blend of perennial ryegrasses: Prism, Brightstar II, and Stallion. The blend was selected for its excellent germination rate, great color, and performance under the geotextile cover. The college baseball season is played on the perennial ryegrass. Summer camps and the Wildcats fall practice season are played on the bermudagrasses.

Managing the transition has been a learning curve for Bergstrom and crew. Initially, they wanted the perennial ryegrasses out by the second week in June for the high school games, but the bermudagrasses weren't active enough at that point. Now the transition back to the bermudagrass starts during June, shortly after the Bermuda has broken dormancy and begins aggressively growing as days near 90 degrees F and the nights hold in the upper 70s. There may be some perennial ryegrass lingering into August.

After the college season, the crew steps up cultural practices to wipe out the ryegrass and encourage the bermudagrass. Fertilization rates increase and infield mowing height drops from 7/8 to 5/8-inch. They may aerify at a rate of 30 holes per square foot on a hot June or July day, then top dress and drag the area with the chain drag. Bergstrom has even...