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Courtesy: UC-Davis Grounds

ue play and practice through August. In July, we have some of the Northern California Softball League tournament games, and their finals are held here. We have a third short window for maintenance at the start of September.”

The crew overseeds the common bermudagrass with a perennial ryegrass blend at 10 pounds per 1000 square feet in October, as weather conditions dictate. Team play continues, and players help work in the seed.

If temperatures haven't dropped sufficiently, the crew applies Primo to

slow down the bermudagrass and give the ryegrass a chance to outgrow the competition. If there's time, they core aerate before overseeding, and top-dress with a 50-percent peat moss / 50-percent native-soil mixture following seed application. They fertilize in fall with 21-0-0 Sulfate of Ammonia.

Ortiz says, “We aerify with the slicer during the season, usually in late February or early March, and then again in late August or early September. The spring aerification is followed by an application of 6-20-20 fertilizer and an application of Dimension as a pre-emergent to control annual grasses and the listed broadleaf annual weeds.

“The heat usually makes the summer transition back to bermudagrass fairly easy. If necessary, we'll go in with a flail to cut down the perennial ryegrass to lessen the competition for the bermudagrass.

“We also make an application of 15-15-15 fertilizer (Endure Polycoat and Sulfur coated). Because of our high-pH water source, we do monitor the soil pH. We use glyphosate to control weeds in the warning track and to spot treat in any other areas.

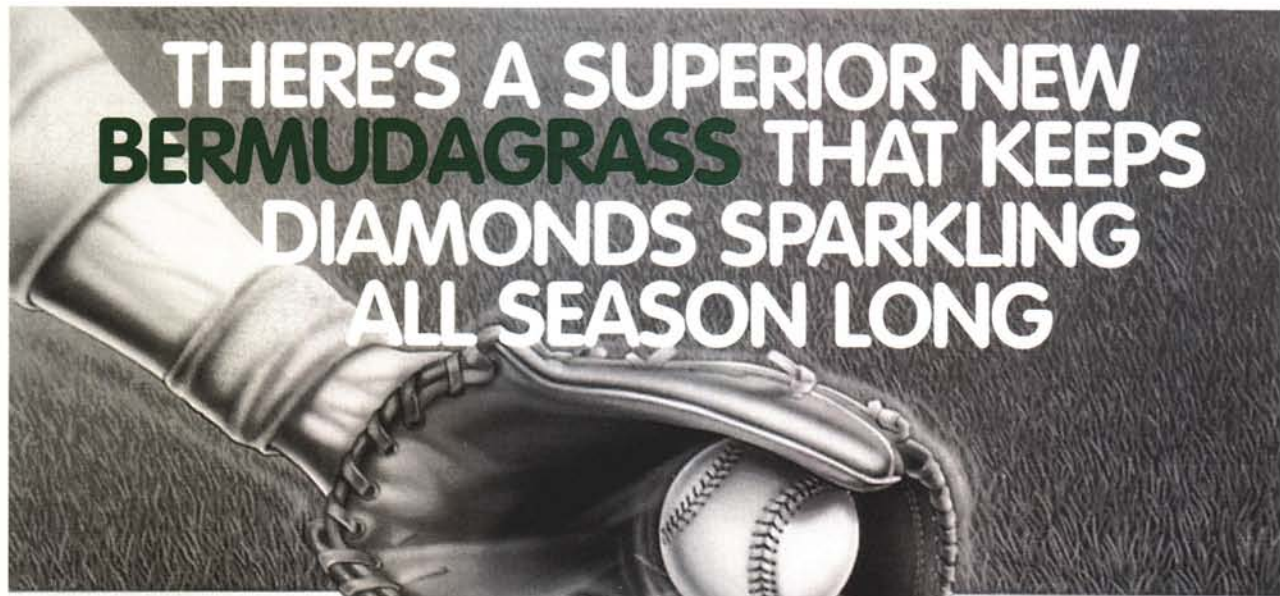
“We keep the turf mowed at 1-1/2 inches during the playing season because the team likes a faster field. During the summer, we raise the height of cut to 2 inches to produce a better canopy to keep the soil cool and reduce water needs.”

The skinned area surface of red cinder and clay and the underlying sandy-loam provide good drainage. Surface water infiltrates quickly. The crew has never had to cover the infield or cancel a game because of rain.

Ortiz explains, “With athletic field maintenance, you're more likely to be recognized for what you didn't do, than for what you did. Our motivation is meeting the high standards we've set: giving our players a safe, great-looking field so they can concentrate on their game.”



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



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Sodding Sports Fields



by Jim Puhalla

The sports field manager obviously has a variety of choices for establishing turfgrass. You can seed, plug, or sprig, but when the budget permits, sodding provides the most immediately playable surface. Seeded Kentucky bluegrass needs a full year to develop the root system required to support competition. Ryegrass and bermudagrass require about four months. But mature sod can be ready in weeks (or even days!) because it's already 12- to 18-months old.

Like anything else, there's a big difference between a good installation and a poorly planned installation. Let's look at the steps required for a good installation.

Planting times

In the South, sodding can be done almost anytime, as long as temperatures won't dip much below freezing for the first few days after installation. In the North, sodding can be performed between mid-April and mid-November.

It's better to install turf during the growing season, but it's possible to achieve a successful installation using dormant sodding (sodding with plants that are in a dormant phase). With this second method, remember that dormant sod still needs water to root and establish. With no irrigation, the sod will desiccate.

Soil preparation

Soil preparation is just as critical for sodding as for seeding. The first step is to conduct soil tests. Send in the soil sample at least two weeks before you plan to sod. Mark the package "TO BE PLANTED," so

the testing laboratory can provide the best recommendation for maximum deficiency correction.

Carefully apply the recommended lime or sulfur and mix it into the soil. If the soil needs potassium and potash, you can mix 10 pounds per 1,000 square feet of 0-20-20 agricultural-grade fertilizer into the top six inches of soil. Then spread another five pounds of 18-24-12 turf-grade, slow-release fertilizer on top of the soil, but underneath the sod.



Sample of a heavy thatch layer used at the former Cleveland Stadium, where native-clay soil could easily cause the field to turn to mud during rainy conditions. Courtesy: Jim Puhalla

Sod establishes better if you loosen the soil to at least six inches so the roots can develop. If you choose to till, go over the area only once or twice. Excessive tilling destroys soil structure, and the soil tends to resettle in a denser, harder form. You'll get better results with an agricultural cultivator (a.k.a. scarifier or earthcavator).

After loosening the soil, keep construction equipment off the field, especially when it's wet or damp. Heavy equipment causes enough compaction to inhibit root growth. This causes water to run off

instead of reaching the roots, and it cuts off the flow of oxygen to the roots. Ultimately, over-compaction can promote disease and force you to do a lot of corrective aerating.

Usually, the tracks of the bulldozer that grades the field will give you all the compaction needed for a healthy field.

Selecting sod

Select sod that was grown on soil that's similar to that of the installation field. That's especially important if the new field is a modified, sand-based facility. Sod grown on clay or organic soils and installed on a sand-based growing medium won't root properly, and will be a constant maintenance headache. The layering effect of the dissimilar soils reduces water infiltration and percolation rates.

For a sand field, specify sod that has been grown in a similar sand-based material. Some suppliers will also wash the sod to remove any existing soil before installation.

You may have a choice between big rolls and sod supplied in slabs or small rolls. Big-roll sod is nearly always installed by outside contractors because of the equipment needed to handle it. However, some contractors can supply the sod and install it cheaper than you could with your own crew.

Thick-cut sod is another option, and it's ready for play immediately. But most thick-cut sod is supplied in big rolls only. Normal sod comes with 1/4 to 1/2 inch of soil, but thick-cut sod can be specified with one to 1-1/2 inches of soil.



A machine maneuvers heavy big-roll sod pieces into position. *Courtesy: Don Uber*

If you have a choice, get the oldest sod available. Young sod with netting can be a problem on sports turf, especially for football fields since cleats can snag in the net. Mature sod has a more developed

thatch layer, which means a more playable turf right away.

Advantages of thatch

Excessive thatch can be a problem, but for some sports, a thin,

uniform thatch layer can improve turf performance. A limited thatch layer can add resiliency, wear tolerance, and impact absorption to turf.

Vince Paterozzi specified Kentucky bluegrass sod with an unusually thick layer of thatch for the football field at Cleveland's old Municipal Stadium. The center of the field was periodically replaced with sod that had at least one inch of thatch. At the 1996 Olympics in Atlanta, thatched zoysiagrass sod provided cushioning and enhanced wear resistance for the throwing events in track and field competition.

It may be hard to find sod with the desired thatch thickness. Bluegrass takes about two years to develop 1/2 inch of thatch, and bermudagrass takes 1-1/2 years. If you regularly re-sod your high-traffic areas, you can give your sod farm plenty of advance notice so they'll have it available when you need it.

If you install sod with a good thatch layer, pay close attention to watering and mowing, and keep an eye out for pest problems. Thatch layers enhance field playability during bad weather, but they also make management more complicated.

Installation

Square-cut and small-roll sod are installed manually. Big-roll sod comes in rolls 24 or more inches wide and up to 40 feet long. This is why it must be installed using special equipment.

The tightness of the seams is a critical installation factor in installing sod. Keep the seams tight, but don't make the mistake of pulling on the sod to position it. This stretches the sod, and it eventually shrinks back to its original size, leaving troublesome gaps.

Water liberally for the first two weeks after installing your sod. Letting the sod dry out too much contributes to shrinkage and inhibits rooting.

After a week or so, inspect the job for gaps. Even with a good installation, there are usually a few. Fill gaps with matching soil, and hand-seed or plug with matching turfgrass.

Establishment

New sod needs to be kept wet for two weeks to allow the roots to

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Strip sodding on a field in north-east Ohio. *Courtesy: Jim Puhalla*

catch. Then it can be watered like typical established turfgrass.

You can start mowing when the field supports mower weight without rutting. With moderate irrigation and/or rainfall, the field can be considered fully established and ready for use in six to eight weeks. One pound of nitrogen a month for the rest of the growing season gets the sod solidly established (As mentioned, thick-cut sod can be used right away).

Strip sodding

One option is to sod only the high-traffic areas. For instance, sodding a 25-foot wide band down the middle of a field will usually give you one to three seasons of very playable conditions, depending on the number of events held on the field. Remember to get a mature sod if you can, one with a thatch layer. In my experience, this practice gives you better field performance than slit-seeding fields. These fields often revert to mud bowls by the end of the season.

In strip sodding trials, the thatch layer was still intact and keeping players up and out of the mud after more than 100 events (practices and games). However, with that many events, the sod can be expected to last only one season before soil becomes mixed into the thatch layer and muddy conditions re-appear. Although strip-sodding requires an investment, it's much cheaper than sodding the whole field, and it can provide a playing surface that's just as good as a completely re-sodded one.

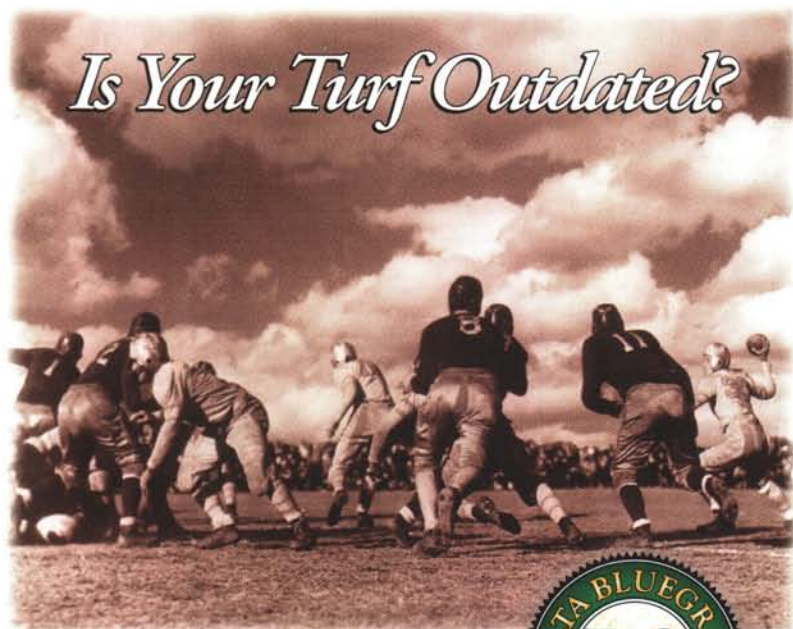
The secrets to good sodding are really not secrets at all: thoughtful soil preparation and sod selection, careful installation with no

stretching of the sod, and diligent follow-up to make sure the sod is adequately watered until it's established. If you patiently work your way through all these details, you'll end up with a highly playable field that stands up well to weather and competitive stresses.



Jim Puhalla is president of Sportscape International, Inc., of Boardman, OH, and Dallas, TX. He is author, with Mississippi State University Professors Jeff Krans and Mike Goatley, of a forthcoming book: Sports Fields — a Manual for Design, Construction and Maintenance. Material in this article was adapted from that book.

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Cold, Rainy Weather Won't Keep Us Down

STMA in Action

On May 5, 28 people came to Saint Albert High School in Council Bluffs, IA for a workshop sponsored by Iowa STMA. Unseasonably cold weather and nearly steady precipitation prevented some of the planned outdoor demonstrations, but the rain could not dampen all of the day's activities.

Participants did get to see a new piece of equipment for skinned area preparation used on the softball field. They also received some excellent on-site tips from "Q&A" Columnist Dr. David Minner of Iowa State University. He reported on some of his research with infield mixes, and demonstrated why the one in use on Saint Albert's field was performing so well. He answered questions on drainage and on avoiding rain outs.

At the start of the meeting, attendees introduced themselves and told the group what they hoped to gain from the event. Two high school baseball coaches were there to get field maintenance pointers. A high school athletic director came to get information to pass along to coaches and the janitor. Several parks and recreation department personnel wanted to learn from their peers and share information on their experiences.

Approximately half of the attendees traveled across the river from Nebraska to attend. During the meeting, some attendees expressed interest in getting a chapter started in Nebraska.

Presentations

- Julie Smith of Big Bear Equipment (formerly assistant groundskeeper with the Iowa Cubs) talked in detail about the various

steps of skinned area care. She discussed pre-game prep and post-game procedures. She stressed moisture management, and discussed the use of covers to control moisture levels.

- Dr. Roch Gaussoin of the University of Nebraska discussed weed control. He cautioned that using some of the new, long-lasting pre-emergents on athletic fields may require reseeding, and that the seed will be wasted on areas that are still protected by an active weed-control barrier.



Unseasonably cold and rainy weather couldn't keep attendees inside at an ISTMA Workshop at Saint Albert High School in Council Bluffs. Courtesy: STMA

He suggested doing a pot test before reseeding. Take some soil from the top inch of the test area and place it in a Styrofoam cup. Sprinkle some ryegrass seed on top, and keep it moist for five to seven days. If the seed doesn't germinate as it should, don't waste your dollars by applying any seed on that field.

Gaussoin also discouraged using broad spectrum products when only one or two species of weeds are present. These problems can be better controlled with less expensive products specially designed for specific weeds.

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Representative Bruce Bates gave a presentation on grub control. He detailed different grub life cycles in the Midwest, and explained methods of control.

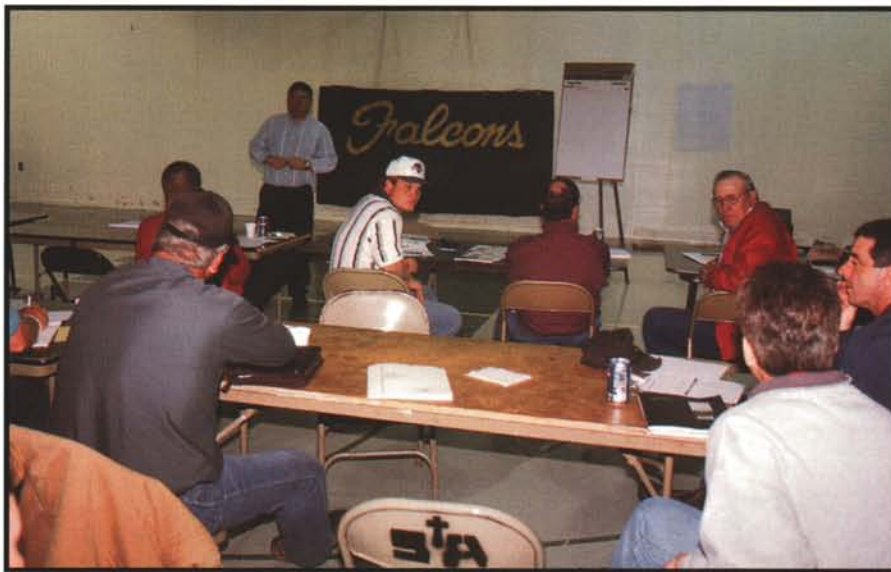
- Mike Grooms of United Seed talked about selecting seed. He cautioned against looking at price over quality, and provided information on how to determine seed quality.

- Dr. David Minner talked about quick fixes, aerification, and top-dressing. He also suggested that those who are on very tight budgets, or who need certain pieces of equipment very sporadically, should get acquainted with their local Golf Course Superintendents. A good working relationship can lead to equipment loans or cost sharing.

Minner also provided information on an infield mix database he's developing. He asked that attendees complete and return a form along with samples of their infield mixes. He offered to analyze and identify each mix and to log the provided information into his database. Eventually, Minner plans to rate mixes in terms of percentages of people who like and dislike them, and to explore their reasons.

This project is not limited to Iowa. Anyone who would like to participate should contact Dr. Minner at Iowa State University, 106 Horticulture, Ames, IA 50011; phone: (515) 294-5726.

Despite the weather, those questioned felt it was a very informative day. Attendees said they had gotten as much or more out of the experience as they had expected, and that they looked forward to more sessions like this one. ISTMA plans to hold two more of these workshops in other parts of Iowa.



ISTMA Workshop attendees freely contributed and received answers to pressing questions. *Courtesy: STMA*

Chapter news

Florida Chapter #1: The Florida Chapter will meet at the Orange Bowl in the City of Miami Jun. 15. Meeting Host Dale Sandin will conduct a tour of the facility. The meeting will focus on sports field fertilization, and Dr. George Snyder will be the featured speaker.

An Aug. 17 meeting at Rodger Dean Stadium in Palm Beach is in the planning stages.

For information, contact John Mascaro: (954) 341-3115.

Great Lakes Chapter: GLSTMA will sponsor a Family Fun Day Jun. 15. Participants will tour Munson Stadium in Canton, OH, and will head to Canal Park for a tour and an Akron Aeros game. Children of GLSTMA members can attend free of charge.

GLSTMA will hold an Athletic Field Day at Ohio State University 9 am - 3 pm, Jul. 7. Head Groundskeeper Brian Gimbel will lead tours of the grounds and maintenance facility. Speakers will include Dr. John Street, OSU Agronomy; and Steve Trusty, STMA.

GLSTMA will hold a general meeting for the membership along with the Jul. 27 Board Meeting. This event is in the planning stages.

A Fall Field Day at Sylvania Pacesetter Park, 9 am-3 pm, Sept. 14, will feature equipment manufacturers, turf product manufacturers, and speakers.

GLSTMA has introduced a \$250 scholarship program for students

pursuing a career in turf. For application materials, contact: (419) 885-1982.

In cooperation with Profile Products, GLSTMA will again sponsor Field of the Year Awards. Interested members can obtain application materials at the web site, or by calling (419) 885-1982.

For general information, contact Joe Zelinko: (800) 897-9714, or Boyd Montgomery: (419) 885-1982, or visit <http://members.tripod.com/~glstma>.

KAFMO Chapter: The Keystone Athletic Field Managers Organization will hold a Grounds Seminar at Hershey Stadium Sat., Jun. 19. Morning educational sessions will include presentations by Bob Hummer of Hummer Turfgrass Systems; John Tshudy, Director of Buildings and Grounds for Hershey Park; and Steve LeGros, Superintendent of Hershey Stadium. To help make this a family day, KAFMO has put together a package that includes full-day reduced admission to Hershey Park and admission to a Hershey Wildcats Soccer game.

For information, contact Dan Douglas, Reading Phillies Baseball Club: (610) 375-8469, ext. 212.

Iowa Chapter: ISTMA will hold a Seminar on Wheels tour in the Ames area Jun. 23. Sites will include Iowa State University, Ames Youth Complex, Reiman Gardens, and Ames High School. Speakers will include Dr. Dave Minner, Richard

Moore, and Mike Andresen of Iowa State University; and Don Larson of Ames High School. Registration begins at 9 am.

For information, contact Lori Westrum at the Turf Office: (515) 232-8222, or fax: (515) 232-8228.

Tennessee Valley Chapter: TVSTMA will hold a workshop Jun. 23 at the University of Tennessee. Featured speakers will include Bob Campbell, Dr. Gil Landry, Dr. Jim McAfee, Dr. A. J. Powell, Dr. Tom Samples, and Dr. Coleman Ward.

For information on this event, contact Bob Campbell: (423) 974-2977, or call the chapter contacts listed.

For general information, contact Tom McAfee, Nashville Sounds: (615) 242-4371; or Bob Hogan: (888) 224-6426.

Colorado Chapter: The Colorado Chapter will hold its first-ever Seminar on Wheels tour Jun. 23. Sites will include Coors Field, Mile High Stadium, and the Denver Broncos Practice Facility. Participants will attend a Colorado Rockies game that evening.

CSTMA's annual golf tournament, the Lawnmower Man Open, will be held Jul. 20 at Westwoods Golf Course.

An August event in Grand Junction, CO, and a Sept. 15 event at Jackie Robinson Field of Lawry Air Force Base are in the planning stages.

For information, call the **NEW** chapter hotline: (303) 346-8954.

Mid-South Chapter: A joint meeting this spring between the Mid-South Chapter and the Tennessee Valley Chapter is in the planning stages. The date and a mid-state location will be announced soon.

For information, contact Jim Calhoun: (901) 755-1305, or Robert Bodi: (901) 383-2414.

Wisconsin Chapter: The Wisconsin Chapter's Summer Meeting will be held Aug. 10, during the Wisconsin Turfgrass Association's Summer Field Day at the O. J. Noer Facility in Verona. Highlights will include research, demonstrations, equipment, and products designed specifically for athletic field use.

Sept. 14, WSTMA will meet at the University of Wisconsin-La Crosse. Field Supervisor Pete Bemis will conduct a tour of his facility.

For more information, contact



Despite the weather, some of the equipment demonstrations continued as planned. Courtesy: STMA

Rich Riggs, R. H. Rettler & Associates: Inc.: (715) 341-2633.

Indiana Chapter: For information, contact Terry Updike, B & B Fertilizer: (219) 356-8424; or Pat Hickner: (800) 672-4273.

Michigan Chapter: For information, contact Rick

Jurries, West Ottawa Public Schools: (616) 395-2364.

MAFMO Chapter: For information, contact the hotline: (410) 290-5652.

Midwest Chapter: For information, call the chapter hotline: (847) 622-3517.

Minnesota Chapter: For information, contact Connie Rudolph: (651) 646-1679.

Nor-Cal Chapter: For information, contact Janet Gift: (530) 758-4200.

North Texas Chapter: For information, contact Rene Asprion, Diamond Pro: (800) 228-2987; or Tom Welch, CSM, Central Garden and Pet: (800) 788-9581.

So-Cal Chapter: For information, contact the chapter hotline: (888) 578-STMA.

Chapters on the grow

New Chapter: A new chapter is taking shape in the Kansas City MO/KS area. For information, contact Trevor Vance: (816) 504-4271, John Cundiff: (816) 525-7600, Bill Tritt: (816) 941-4424, Jody Gill: (913) 681-4121, Gary Custis: (816) 468-6215, or Jay Sutton: (816) 795-8873.

Arizona Chapter: For information, contact Bill Murphy, City of Scottsdale Parks & Recreation Department: (602) 312-7954; or Kris Kircher, City of Chandler Parks & Recreation Department: (602) 786-2728.

Nevada Chapter: For information, contact Ibsen Dow: (702) 649-1551; or Alan Paulson, Clark County School District: (702) 799-8724.

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