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Continued from pg. 19

field renovation, weather permitting.

I have a Turfcut 422D with two decks: one rotary and one flail mower. We attach the flail unit to the tractor and mow the field right down to the sand. We remove all the grass blades, so all that remains is the stolons and rhizomes.

We remove all of the clippings with a Toro 54 HC, and ship them out for recycling. The whole process takes about 14 to 17 days.

After a light verticutting, we core aerate in two directions. We break up the cores and remove them.

When each of these procedures is complete, we top-dress the field with approximately 75 to 100 tons of sand. A screen drag helps us fill the aeration holes and float out the field.

We apply approximately three tons of 6-20-20 fertilizer, and approximately five tons of calcium. We then start a light watering program, adding small amounts of ammonium nitrate, and we wait for the temperature to warm up.

We have soil tests done in early summer, after the renovation is complete. By the time August rolls around, my fields are in game day condition. They're ready to start the cycle all over again.



Ross Kurcab is turf manager for the Denver Broncos Football Club and is a member of STMA's Certification Committee. Steve Wightman is turf manager for Qualcomm Stadium in San Diego, CA. Rich Genoff is sports turf manager and head groundskeeper of the San Francisco 49ers.

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Saints to Use Natural Grass in Superdome

The safety issue has been a prominent part of the debate pitting natural-grass surfaces against artificial turf. A recent NFL Players Association survey found that 86-percent of players polled prefer natural turf. Many cited safety concerns as a major reason for their responses.

For NFL teams that play in permanently covered domed stadiums, artificial surfaces have provided the only option. This will change August 28, when the New Orleans Saints play a pre-season game against the Green Bay Packers in the Louisiana Superdome on natural grass.

Using a new system called STN2000 developed by Southern Turf Nurseries, specially designed equipment will install eight-foot wide big-roll sod for the event. The five- to six-month old natural-grass rug will sit directly over the Superdome's existing cement floor.

Forty trucks will begin delivering the grass Tuesday, August 24, and the field should be completely installed early Wednesday morning. Designed primarily for single-event use, the grass can survive in the covered environment for up to 11 days. Both the installation and removal processes can be completed in 10 to 14 hours.

The STN2000 system provides a thick stand of grass that's fully transportable, and it has been trial tested for strength and durability by the NFL. "This opportunity is exciting for the Saints, but even more exciting for the NFL, because it provides an avenue to further explore the reality of bringing grass indoors to all other stadiums," says Bill Kuharich, president, general manager, and chief operating officer of the Saints. "Our players are definitely looking forward to this particular game."

Kuharich explains, "We put the STN2000 through a trial run in our parking lot with a few of our players; and the grass, at that time, was only 70-days old, and it was very durable." Representatives from the NFL and the NFL Players Association joined NFL turf experts to witness the December trial.

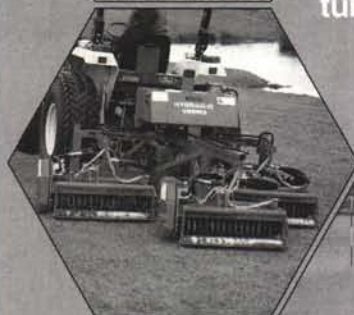
"This is a new day for us," says Southern Turf Nurseries President Eddie Woerner. "We have not only taken our natural grass and created a rug, but have also designed the equipment for installation and removal in record time. We have built a natural-grass system that provides an excellent alternative as a tough playing surface."

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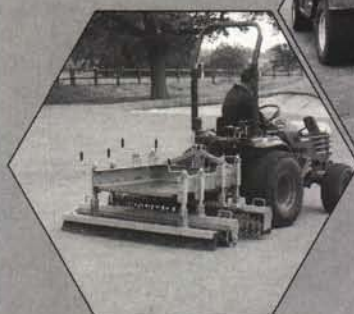
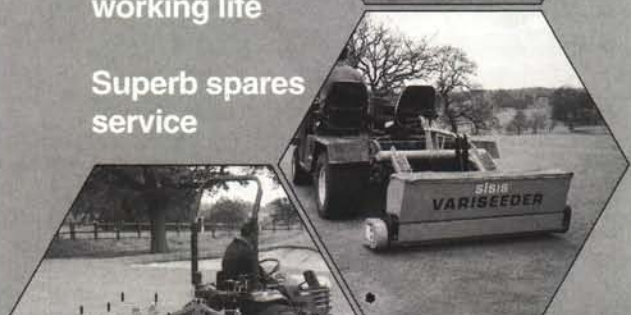
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Tip o' the Month

Logos and Field Decorations

Stencils help create logos, large lettering, and intricate decorations. They're usually made of polyethylene plastic sheeting or visqueen, which can be folded and stored between use.

When creating a stencil, first draw the logo or design of the decoration to scale on paper. Sometimes your design can be enlarged on a photocopier. This can save a lot of time and effort.

Section the design into a grid of one-, two-, or three-foot squares. This makes it easier to transpose the logo onto your stencil material.



Courtesy: Steve Wightman

Jaydee Drive Liner



The Jaydee Drive Liner is a self-propelled riding line marker. The 35-gallon paint tank carries enough marking material for a complete game field, or several practice fields. The 2-gallon flush tank cleans the discharge lines for work breaks, travel, or overnight. The center or side-mark spray shields are always operator-visible. A nearly zero turning radius reduces or eliminates back and turn maneuvers.

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When Your Game is on the Line.

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Courtesy: Steve Wightman

a blue circle with a white outer boarder, cut the half-moon shapes on the inside of the line that will define the border of the blue area. To create the outline for the white outer boarder, cut the half moons inside the line that will define the outer perimeter of the design. You'll paint the half moons the color of the area they are outlining.



Steve Wightman is turf manager for Qualcomm Stadium in San Diego, CA.

You will need to obtain a piece of plastic large enough to accommodate the scale of your design. Sometimes it's necessary to attach multiple pieces together to complete a large logo or decoration — endzone decorations can measure 30 feet by 160 feet!

You're going to need an area that's large enough to spread out the plastic for transferring your design. You'll wind up with a better stencil if your workspace is clean, smooth, and hard, like a gym floor or a concrete pad.

If you work on a soft surface, like grass, the plastic will move around too much when you walk on it. It will be much more difficult to keep your lines straight and your curves uniform.

When the plastic is spread out, secure it with weights and/or tape to prevent it from moving. Then create a grid with dimensions equal to the drawing you are transposing. String line does the job very well.

Transfer the image to the plastic with a permanent marker. Use a straight edge or string for straight lines, and freehand the curves and angles with the help of the grid lines. A metal tape measure will help determine the exact locations of the lines.

Some people use a slide projector or an overhead projector to project the design onto the plastic. However, this requires a large wall on which to suspend the plastic, and a dark place that will allow you to see the projection. Also, the larger the image, the blurrier the projection will be, and the more difficult it will be to transpose.

There are also computer imaging processes that help create large graphics very effectively. However, you'll have to dig into the budget to pay for that kind of clarity.



Once you have transposed your image to the plastic, strategically cut one- to three-inch half moons along the lines within the design to define your borders. Make the cuts on the side of the line that will fall inside an area that is to be painted all one color.

For example, if you want to create

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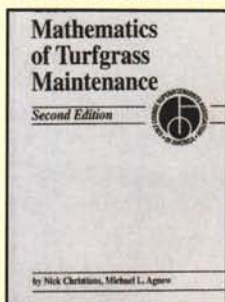
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Feature of the Month: Maintain It Easy(Keep It Safe), by Grounds Maintenance Services

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 pat-

terns; 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**



The Mathematics of Turfgrass Maintenance, 2nd edition,

by Nick Christians and Michael L. Agnew,

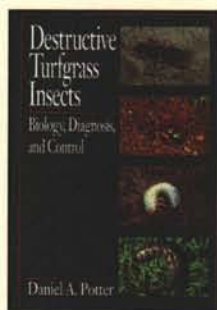
This book provides you with basic mathematical principles of budgeting, fertilizer and pesticide application, the ordering of top-dressing, irrigation, and many other parts of golf course operations. 149 pgs.

4149 \$34.95



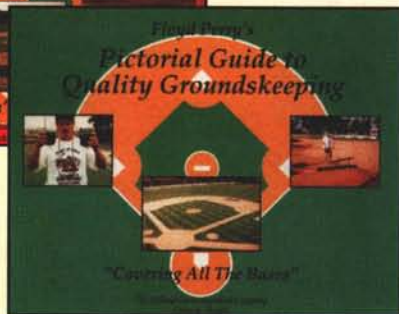
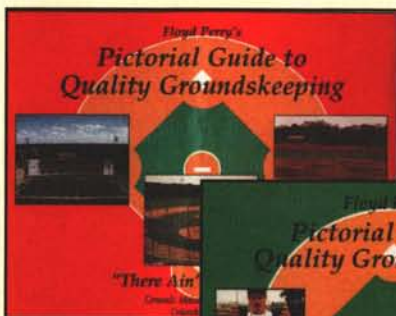
Superintendent's Handbook of Financial Management, by Raymond Schmidgall,

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**



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**



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Field Marking Materials

Product Spotlight

Materials available to mark sports turf areas vary greatly. Levels of field use and facility budgets generally determine which types of materials and delivery systems you'll be using on your fields.

Low-budget striping

Recreational areas with limited budgets often use herbicides or petroleum (kerosene or diesel) to stripe and mark fields. This type of marking system allows fields to go long periods without remarking.

The problem with this type of system is that it creates stripes and marks that are "un-turfed." An un-turfed surface is more prone to compaction. It may also become slick in fine-textured soils, or loose in sand or coarser-textured soils.

Loss of vegetative crown and degradation of thatch result in a change in elevation along the striped patterns. This can create a potential tripping hazard for athletes.

Lime

High schools often use a lime or whitewash system to mark their fields. Lime can be applied in dry-powder chalk form, or it can be sprayed on as a liquid slurry whitewash.

Dry powder lime is widely used as a marker for skinned areas of baseball and softball diamonds. Some facilities substitute fine marble dust to perform the same procedure.

Whitewash lime slurries mix lime with water, and they are applied with spray equipment. The lime must be fine ground, uniformly sized, and kept well agitated as a slurry to provide even-flow output and to prevent nozzle clogging.

Lime will leave a live turf system under the stripe. However, over time it may build up and cause turf thinning or death.

Water-based paint

When the budget permits, athletic facilities commonly use water-based paints that are specifically formulated as turf colorants. Compared to the other types of marking media mentioned, paint reduces turf thinning and die-back. It promotes safety by reducing the potential for tripping.

Paint requires frequent reapplication, since mowing actively growing turf constantly removes previous applications. To reduce this effect, lower the mowing height of the turf to be striped just prior to painting. Plant growth regulators can also be added to the paint.



This material originates from an article by Michael DePew and Gilbert Pulley published in the May 1997 issue of sportsTURF. To view the complete article, visit our editorial archives online at www.sportsturfonline.com. Our comprehensive archives provide instant, free access to thousands of past sportsTURF articles.

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Suntec Paint

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