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## COVER STORY

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The McInnish Softball Complex, pride of Carrollton, TX.

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**ON THE COVER** The McInnish Softball Complex, Carrollton, TX.  
Photo by LeeAnn Widyn, Widyn Photography.

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# the front office

## Observe, document, respond, follow up

**W**ith apologies to those of you who work in areas of the country where your patrons rarely are stuck indoors because of Mother Nature, where the heck is Ms. Spring? The rest of America awaits you.

With little more than a week left in April as I write, most of the country either has had not enough rain or too much. And readers from here in Illinois haven't put away their gloves and stocking caps yet, save for a few days in mid-month when the temps skyrocketed to all-time highs.

Of course low-humidity, sunshine-filled warm days will most likely have arrived by the time you read this. And with the nice days will come the people for whom you work so hard: the beer-league softball players, the soccer moms, the summer campers, the kids on the playground.

To assist you in getting ahead of the game from a liability angle, we asked Greg Petry, executive director of the Waukegan Park District in suburban Chicago, for some tips:

"Form a safety committee that meets once a month and keep minutes," Greg says. "Establish a procedure to follow up all safety concerns, accidents, complaints, and incidents, and create a form to document complaints or report safety hazards."

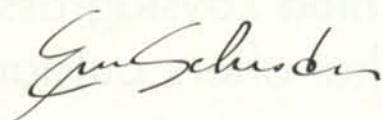
Inspect all your facilities, paying special attention to portable fire extinguishers, alarm systems, back flow valves, and boilers, and videotape all building contents and equipment, he suggests. On your sports fields, check bleachers and benches, fencing, pathways, turf, bases, and signage. "For special events, you need to have a plan for crowd control, traffic, volunteers, emergency facilities, and a lightning protocol," Greg says.

An important part of loss control programs is your staff. "Distribute your policy manual to everyone and have them acknowledge receipt," he says, "and establish discipline and termination procedures for safety violations. You also should have criminal background checks, drug screens and physicals completed before an employee is placed. And your orientation program must be thorough."

Do you have all the correct licensing needed? Does your staff? Are you meeting league standards, Consumer Product Safety Commission standards, ASTM standards? If applicable, can you rely on the opinions of a certified sports turf manager? Are you completing vehicle inspections, daily ones for vans and buses? Greg says you need to be on top of everything for an effective risk management program.

There's a lot more to be said about achieving success in the liability and safety game, so if you don't have the information you should, find it. At the very least, says Greg, you should always be looking for potential hazards, and if something does happen, be prepared to document, respond, and follow up as soon as possible. It'll be much easier to enjoy the nice weather that way, opposed to being deposited in some lawyer's office because you're being sued.

*Oops: We neglected to credit the American Society of Agronomy for the illustration on p. 26 in the April issue.*



Comments always welcome.  
Call Eric at 630-678-0054, fax 630-678-0334, email [eschroder@aip.com](mailto:eschroder@aip.com), or send to PO Box 67, Lombard, IL 60148.

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# president's message

## Too little or too much, it's a challenge!

**S**TMA members across the country have experienced abnormal winters and, in large blocks of the US, too little moisture this spring that is affecting the spring sports and will be a factor in summer wear and tear of their sports fields. Mother Nature has been into extremes this spring. April showers are supposed to bring May flowers, but those still waiting for the showers face real challenges. Water restrictions have been imposed in many areas that will have an impact on the playing conditions of our fields. Now is a good time to communicate with your fellow members and see how they are planning to cope with this issue.

Living in Florida for many years, we had to deal with this issue on several occasions. Watering the infield before the games during drought conditions was really tough to explain to fans whose yards were dead. Communication is key. I promised them my yard looked a lot like theirs and that watering the infield was required for player safety.

It's also important to explore all your options. A proactive approach will enable you to act rather than react. I can already tell you wetting agents are in high demand now, so contact your local vendor (who I am sure will be an STMA member) about products. They can make a little water go a long way!

While all the media coverage is focused on the drought situation, in other areas of the US, April showers brought wet field conditions extreme enough to force cancellations of practices and games. Because every field user group wants to get in all the games on the original schedule, that means working those missed games back into slots on fields already heavily scheduled. That so many fields at so many different levels of play are able to support these packed schedules is a tribute to the expertise and dedication of sports turf managers.



Murray Cook.  
STMA President

### Professional & patient

Whether Mother Nature brings you too little or too much precipitation, do be patient and be professional in how you handle your water management issues.

Now, while those spring sports are in full swing, is a great time to start taking photos of your fields to enter for the STMA Field of the Year awards consideration. The best time to begin planning your awards presentation is now. Take a series of photos, to show the before, during, and after views to demonstrate how your field changes throughout the season. You will reap other benefits besides using the photos to develop a great presentation package illustrating your field operations for awards consideration.

I have found that taking photos on a weekly basis helps in detecting problems on your fields. Since you are on the fields daily, it's tough to see the turf changes/problems in their early stages. Comparison of the weekly photos can make those differences stand out so it's easier for you to catch them.

You can also use photos to document on-field events, especially those where play takes place in poor weather conditions. Those too wet and too dry situations are prime examples. A before, during, and after photo series for such events may help you explain to field user groups, coaches, and supervisors why it may be necessary to limit or cancel play in bad weather.

Keep an eye on the STMA website as well ([www.sportsturfmanager.com](http://www.sportsturfmanager.com)). It's a great place to catch up on industry news, connect with others on key issues of the day, or post a question for quick networking feedback. You can also contact any of the STMA Board members or STMA Headquarters with ideas to share or for additional resources. Your input is always welcome. You can contact me directly via email at [murrayc@brickmangroup.com](mailto:murrayc@brickmangroup.com).

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# The Championship "Green"

*Photos by LeeAnn Widyn, Widyn Photography*

## City of Carrollton's McInnish Softball Complex earns the STMA 2001 Softball Field of the Year Award

BY STEVE AND SUZ TRUSTY

**T**he Championship "GREEN" Field of the McInnish Softball Complex earned the STMA 2001 Softball Field of the Year Award in the Parks and Recreation Division. This is one of the five softball fields within the City of Carrollton, TX, McInnish Complex and is an exemplary example of an outstanding athletic facility in the Dallas Metroplex.

The current population of the Carrollton is 111,000, with growing room to reach approximately 125,000. This sports-oriented community has supported the development of its sports facilities and uses them extensively.

Andy Babbitt, athletic manager for Carrollton Parks and Recreation, says, "The McInnish Sports Complex is not only home to the five softball fields, but also to six baseball fields, nine soccer fields, and an additional five soccer fields in the R. E. Good Complex contained within the McInnish site. The City's Josey Ranch Complex is home to eleven fields: five baseball, two football and four girl's softball fields."

And there's more to come. Babbitt says, "The City has approved a major bond issue that will add 12 more soccer fields to the McInnish Complex, at the cost of approximately \$2 million, and develop the new T. C. Rice Complex. The \$10 million first phase of the T. C. Rice project will include six adult softball fields, five girls softball fields, and a multi-use, lighted facility—for a combination football, soccer and track—that will have seating for 2,000. Construction will begin the last quarter of 2002, with play projected for 2004."

Assisting Babbitt in overseeing all this is athletic fields supervisor, Mason Ward. Ward is in charge of field maintenance and sports organization outreach. Babbitt says, "Mason started as a crew member on the athletic field team 13 years ago, so he's covered every aspect of field care and understands the complexities of keeping so many different fields ready for play."



# Maintenance Program

## January

- Check base pins and replace bases and pitching rubber
- Mow overseeded perennial ryegrass to 1.5 inch height, once per week
- Drag field once per week to prevent valleys, hills and grass invasion
- Add additional infield material

## February

- Mow overseeded perennial ryegrass to 1.5 inch height, twice per week
- Drag field at least once per week, and as many times as needed for each tournament
- Irrigate if weather conditions require it
- Edge around turf perimeter to keep sharp edges for games

## March & April

- Mow overseeded perennial ryegrass to 1 inch height, twice per week
- Drag and prepare infield each day for league play
- Fertilize with 15-5-10
- Topdress with sand
- Irrigate twice a week (20 minutes per outfield zone; 5 minutes per infield zone)
- Slice aerate once in April
- Adjust mowing if needed as perennial ryegrass phases out and bermudagrass takes over
- Edge around turf perimeter to keep sharp edges for games
- Apply weed control if needed following standard IPM procedures

## May, June, July, August & September

- Mow bermudagrass to 1 inch height, twice per week
- Drag and prepare infield each day for league play
- Slice aerate twice per month
- Irrigate infield daily (8 minutes per station); outfield three times weekly (30 minutes per station)



- Edge around turf perimeter to keep sharp edges games (once a month in June and July)
- Sod cut edges to keep lip down and field level in May
- Fertilize with 15-5-10 in May and August
- Topdress with sand in May and August
- Apply fire ant and other insect control if needed following standard IPM procedures

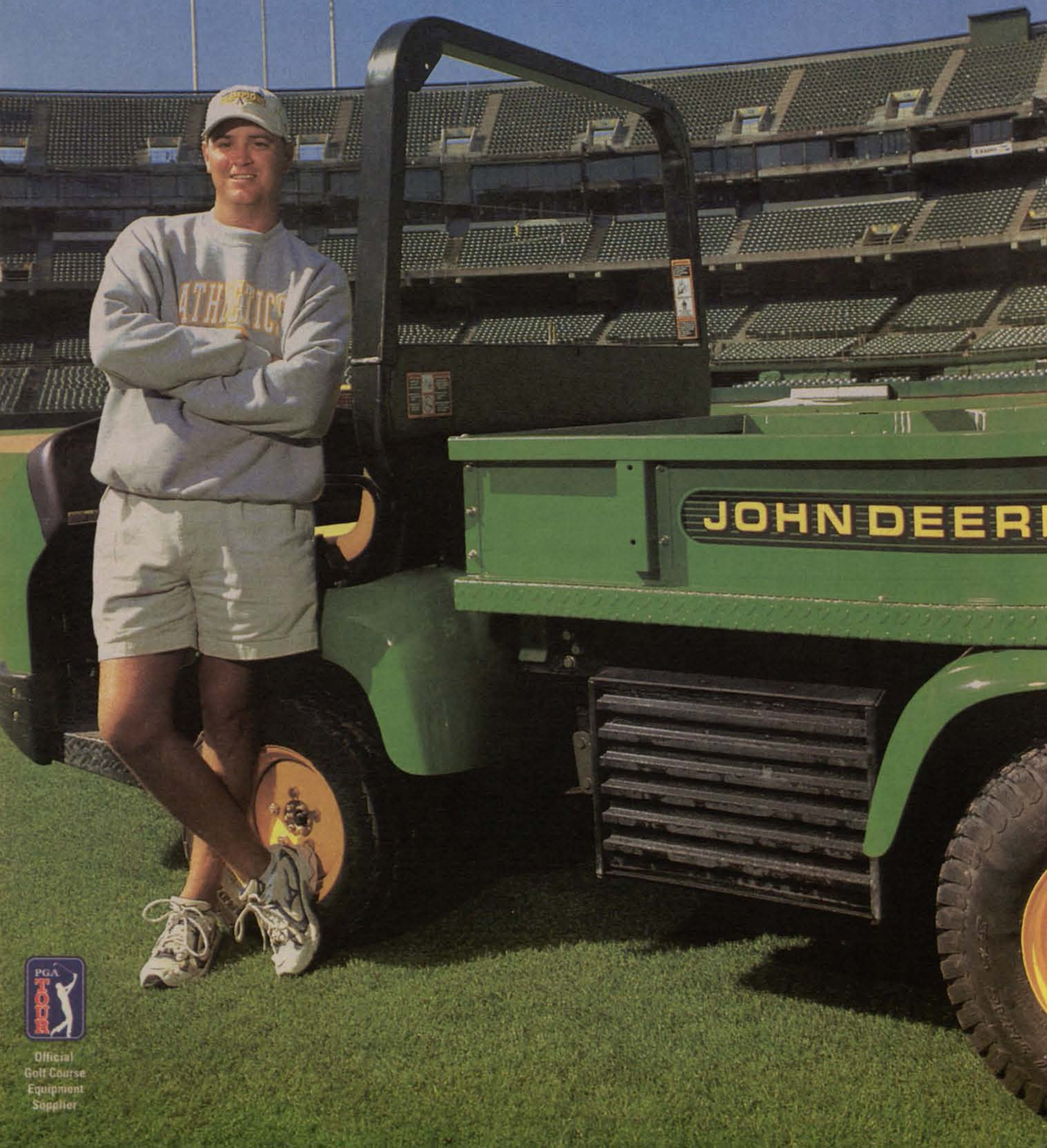
## October

- Slice aerate in two different directions
- Overseed with perennial ryegrass and topdress with sand
- Mow bermudagrass to 1.25 inch, twice a week
- Drag and prepare infield each day for league play
- Irrigate twice a week (20 minutes per outfield zone; 5 minutes per infield zone)
- Edge around turf perimeter to keep sharp edges for games

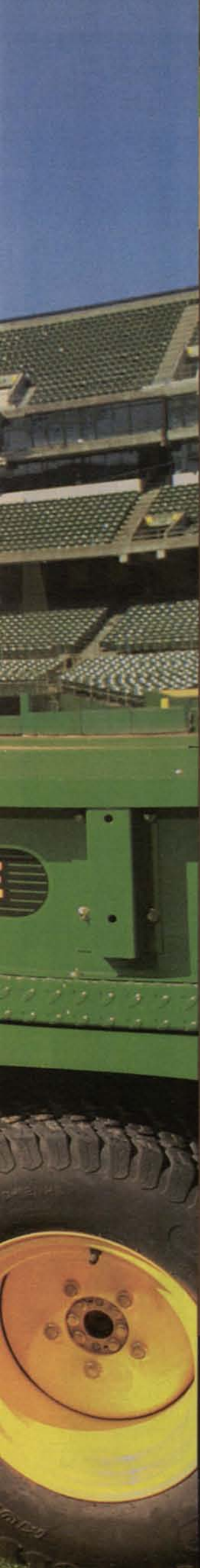
## November & December

- Mow overseeded perennial ryegrass to 1.5 inch height, twice per week
- Drag field at least once per week, and as many times as needed for tournament or league play

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There isn't much of an off-season at Network Associates Coliseum in Oakland, California. At least not for Head Groundskeeper Clay Wood and his grounds crew. After maintaining a diamond for most of the year for the baseball

Athletics, Clay and his crew have to make sure the field is ready and striped for the football

Raiders. To keep both clubs running on a good surface, Clay and his crew rely on John Deere turf equipment. "I won't buy anything else,"

says Clay. "John Deere equipment has come full circle. They have great quality in terms of mowers, reels, and blades. The 1200A Field



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All the fields were renovated in 2000, including constructing totally skinned infields, during an unusually rainy period (23 in. in all). Thanks to a great crew, spring events went off as scheduled.

The McInnish Complex crew leader, Jorge Hernandez, works with a crew of six (David Conrad, Paul Wood, Gregorio Escareno, Matt Ackers, Hayward Potts, Genaro Herrera); Josey Ranch crew leader, Gregg Woods, with a crew of four (Rogelio Herrera, Jorge Felan, Mark Berry, Anacleto Marquez). Babbitt and Ward give the credit for excellent field conditions to their staff. They note, "Our staff is a special group and we're lucky to be working with them. Not one of them looks at this as just a job. They're determined to have the best fields around and willing to do whatever it takes to make that happen."

The five softball fields of the McInnish Complex were originally constructed in 1980 with a native clay/loam soil profile. The outfield and the non-skinned area of the infield were established with common Bermudagrass turf. A 1 percent slope was designed to channel surface water toward the outfield and off the playing surface.

These softball fields were renovated in 2000, because they were all grass fields. Ward says, "Over the years the skinned area material around the bases had built up, actually creating humps. We had to remove not only the existing turf, but also all that excess material, to construct totally skinned infields. To complicate matters, this project was in process during an unusually rainy period, 23 inches in all. We still completed it in time to hold our spring events as scheduled."

The material used for the infields and the warning track is a combination of red clay sand of a reddish-brown color and decomposed granite sand, both blended with soil conditioner. Ward says, "Twelve pounds of infield conditioner per ton of infield mix has been the perfect mixture for our fields. In 2001, we had fewer rainout days than the other municipal fields in the Dallas area. We had no tournament rainouts, even with storms hitting the night before the event, and that's without the use of a drying agent."

The Championship "GREEN" Field is surrounded by a black vinyl covered eight-gauge chain link fence. It is 25 feet high around the backstop, 15 feet high past the dugouts, and 8 feet high around the rest of the field. The crew constructed a 12-foot wood wall in left field that attaches into the fencing along the 300-foot deep outfield fence. Behind the right-center field fence is a 'state of the art' LED scoreboard. Down the lines and around the outfield fence is a 110-foot, "three step," warning track that notifies the players of the approaching fence. The seating has capacity for 1,000 spectators. The grass areas around the field can be set with additional temporary seating or the fans can set up their own picnics during the game.

Babbitt says, "We knew the conversion to skinned infields would require extra field preparation time, but improved field quality. To help reduce both the daily and the between-game prep time, we installed separate irrigation systems for the infields of all the softball fields. There are four zones on the infield system, all using rotary heads. One head is located

approximately 5 feet behind the pitching rubber. There are two heads on the left side of the infield and two on the right side and one in each corner about where the batter up would stand. Winds are big here in the Metroplex, often 20 to 25 miles per hour, and they can come at the field from different directions. This head placement allows us to adjust for the wind and still get good coverage. After watering and dragging, the heads virtually disappear."

Ward explains the impact of this system. "Before our games, instead of carrying out a large hose, we run each station on the infield for 5 minutes to moisten the infield material before we drag it with a groomer attached to our field rake. We save approximately 30 minutes for each field, by just turning on the irrigation system rather than unrolling the hose, watering the entire skinned surface by hand, rolling up the hose and removing the hose from the field. During tournament play in hot, dry, windy conditions, we can hit most of the infield with a couple passes of the central head in between games. It's just enough water to keep the dust down and slightly soften the playing surface.

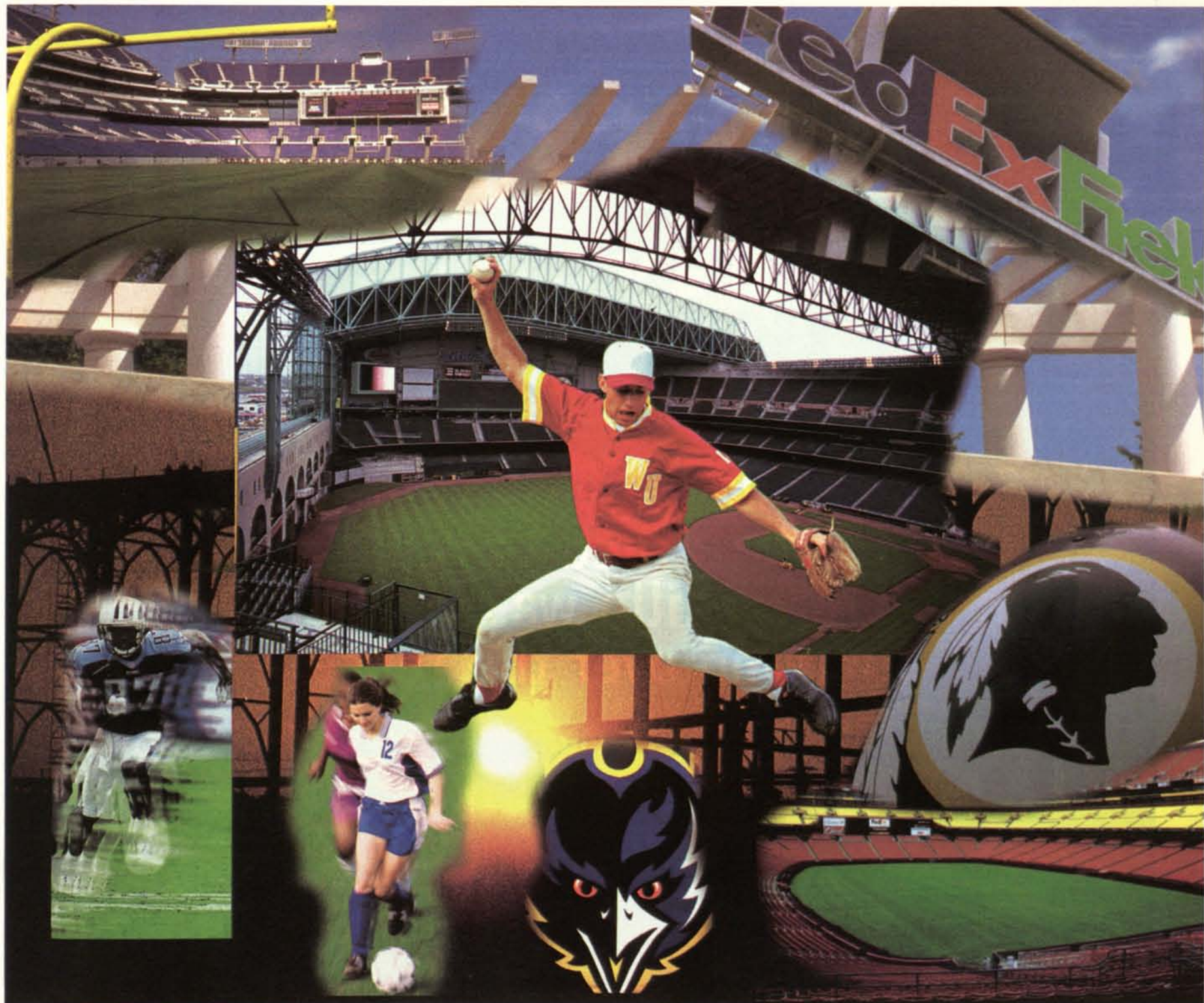
"At night, during the summer, we set the infield system to come on at 2:00 AM for 5 to 10 minutes a

session. Generally, the field will then be ready to drag when the crew arrives in the morning. During the hottest part of the season, we also may set the system to run toward the end of the day. The outfield irrigation system consists of four zones. We set this system to run overnight with the frequency and timing per zone adjusted for weather conditions."

Staffing assignments at the McInnish Complex have been fine-tuned for efficiency and top results. Two crew members tackle the daily infield preparation for all 11 fields. The pitching rubbers are established. They set the magnetic bases and the umpires pull them out and put them in storage after the last game at night. The outfield foul lines are painted once or twice a week, depending on turf growth. Chalking the lines is the last task of the day. If conditions are wet or extra attention is required, these two crewmembers can call on any or all of the other crewmembers from McInnish or Josey Ranch for assistance.

The other four crewmembers at McInnish handle the other maintenance tasks, such as mowing,





# Fielder's Choice

It's hard to go wrong when you're choosing between two new warm-season turfgrass varieties as outstanding as SeaIsle 1 Seashore Paspalum and TifSport Bermudagrass. These two new patented cultivars can only be sold as certified sod or sprigs, and only by a member of a select group of licensed growers. Our top-quality producers have agreed to a stringent set of production practices. This means the grass you buy from a Florida, Georgia or South Carolina grower is going to be the same grass you buy from a Texas or California grower. And it'll be the same 10 years down the road. If you're involved with the installation or on-going maintenance of a sports field, you'll really appreciate how these turfgrasses compare to Tifway 419 and the other older varieties in use today.

While SeaIsle 1 is similar in texture and wear tolerance to hybrid bermudas, it may offer a number of important advantages. First and foremost, it can handle multiple stresses: prolonged drought, high salt levels, waterlogging and extremely high or low soil pH levels. Secondly, SeaIsle 1 can tolerate most types of alternate water sources, including wastewater, effluent, gray water, brackish water, and even ocean water. It requires less irrigating, less fertilizer and only minimal pesticide applications when compared to other warm-season cultivars. It also handles cloudy conditions and the low light intensity of domed stadiums extremely well. That's why it was such a good choice for the Houston Astros' new field. Take a look at its pluses and specify SeaIsle 1 for your new sports field or renovation project.

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**“Turf damage prevention efforts turned to repair after an armadillo was spotted climbing over the fence.”**

edging, and trash pick up. The ballfields are mowed twice a week, to a one-inch height, with a five-reel ride-on mower. The complexes' non-field turf is mowed once a week. The crew leader focuses on the irrigation systems, the security and field lighting systems, and the field condition and safety inspections, including the bleachers and fencing, as well as the playing surfaces. Both crews combined work on a rotating 6-day schedule so weekend maintenance is covered. Three people cover the weekend detail, and get the following Monday off. They arrive at 4:00 or 5:00 AM and do all the tournament preparation.

The field hosts play for everything from recreational sports to company league teams to slow pitch major softball and girl's fast pitch competitive tournaments. The staff puts up the 200-foot temporary sports fence and moves the bases for fast pitch games. The majority of play uses the standard field configuration.

Babbitt and Ward both laugh as they note that staff vacations must typically be packed into the only extended period of downtime, December. Spring field preparations start in January with play in full swing by February. They've made adjustments to the overall maintenance program to compensate for the high level of field use. For example, they've opted to avoid the surface disruption of core aeration, and compensate with an aggressive slice aeration schedule.

Weather-related issues, such as a day or two of rain, mean the staff must push even harder to catch up. The nature center within the complex adds a few challenges as well. The staff is vigilant in eliminating weed and insect invasions and takes an aggressive, pro-active approach to fire ant control. Because the complex is close to a river, the City's environmental services generally apply mosquito controls once in the spring and once in the summer.

The most unusual nature center invaders have been the armadillos. Babbitt says, "During drought conditions a few years ago, the only green turf remaining was on the irrigated turf of our athletic fields. Armadillos were seeking out this green turf at night

and tearing up the fields in their search for grubs. It looked like a bunch of golfers had been chipping shots. The crew closed off everything they could and even put trash cans in front of the dugouts to stop the attacks. Then, early one morning, one of our crew members watched in amazement as a crafty armadillo climbed up one side of our chain link fence and down the other. So we shifted our focus from prevention to repair."

Ward names the lighting at the championship field as the biggest challenge. It was installed in 1980, during the original construction. He says, "Because the system is outdated, we are constantly having ballast and bulbs burn out. We've also spent considerable time redirecting the light, but have been able to keep the lights at 31 candlepower. With all the other projects in development, it will be a while longer before we can consider replacement of the system."

With so many public athletic fields to maintain, and with a limited municipal budget, field quality depends on staff commitment and dedication to providing the best possible playing surfaces. Babbitt says, "Because of the incredible job our staff does, no one could tell how much softball is played on this field just by looking at it.

"League softball starts in February and ends in November. It's scheduled six nights a week, Sunday through Friday. Beginning in March, and ending in October, we have tournaments almost every weekend. These run all day Saturday and sometimes continue into Sunday morning. This field is used 235 days a year, with a minimum of three games and as many as twelve games a day.

"There are 154 teams in our league. A typical night will put four games on the field between 6:30 and 10:30 PM. The first tournament of 2002 drew 64 teams; the second 40 teams. Each put 12 games on the field on Saturday and 8 games on Sunday. We estimate that overall, 890 games per year are played on this field. Thanks to our staff, it looks like each game is the first of the season."

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# Painting a masterpiece

How to turn your  
football field into  
a work of art

BY JOHN KMITTA, SENIOR EDITOR

The surface is many times larger than a standard 18- by 24-inch artist's canvas; it is green instead of white; and it is destined to get wet, dirty, and trampled. Despite these challenges, a football field is the turf manager's blank slate. Each week, that slate is filled with the precise white lines, colorful end zones, and specialty logos that become a masterpiece of functionality.

When painting a field, several factors must come together to determine whether the end result will be a masterwork—set up steps, tools, application methods, the climate and, of course, the paint.

According to Carbit Paint Company, a Chicago-based manufacturer of natural turf marking paint, users should prepare natural turf surfaces by removing old paint with sweep brooms and high-pressure water. If the application is seasonal, no preparation is typically required.

According to Abby McNeal, CSFM, assistant turfgrass manager at Invesco Field at Mile High, you must determine the dimensions that you will be painting before setting up to paint.

"You need to first make a plan as to how you are going to paint the field," said McNeal. "It is important to take the time to think about it so that you do not track back across painted lines. Gather all of your painting strings, check all of your equipment, and finalize the method of painting with the crew."

McNeal also recommends having towels on hand in case a spill or mistake happens. A cart with paint (for refilling the machines) should also have a bucket of water and a toolbox with extra tips, nozzles, and miscellaneous tools.

## Tools, paint and application

"Tools that we use to paint a football field include strings that are approximately 170 feet long and strings that are 370 feet long," said McNeal. "We use an 8-inch wide piece of cardboard to make sure we get the gap between the end of the yard line and the sideline. A Graco 3900 Line Lazer is the painting machine that we use. We have it set up so that we can use up to three 150-foot hoses. We are fortunate to use line stencils that are exactly 4 inches wide and 15 feet long, creating a stencil effect when we paint our yard lines. We also have an 8-inch wide stencil to create the goal line."

Kevin Dawkins, senior crew leader of Raymond James Stadium, said he typically mixes paint with water at a 1-to-1 ratio.

McNeal uses World Class paint diluted at a ratio of one part paint to one part water.



Precise field lines are created by running string from end zone to end zone.

- Photo courtesy of Suntec Paint, Inc.



"The amount of paint used on a particular day is determined by the event for which we are painting," said McNeal. "We stretch painting out over three days for football. So the day depends on how much paint we use. By the time the field is game day ready, we have used about 25 five-gallon buckets of paint (at the one to one ratio). We want the brightness for television, and this is how we get it."

Dawkins recommends putting down a white background before painting over it with color to provide enhanced brightness.

According to Carbit, when using a compressed air sprayer, adjust reduction with water to obtain a uniform pattern. Use a tank pressure of 100 psi and a fluid pressure of 30 psi. Reduce with water for desired consistency. For a heavy line, reduce with 1 1/2 parts water to one part paint. For remarking, reduce with 2 1/2 parts water to one part paint. When using a gas-operated piston pump sprayer, reduce seven parts water to three parts paint. When using airless spray, reduce 10 percent with water and apply at tip pressure of 2,000-2,500 psi with orifice tip size of .018 inch to .021 inch.

### Time to paint

"We start on a Wednesday and finish on a Saturday, and that is two coats of everything," said Dawkins. "If there is a call for rain, we like to find out how much is being called for before it does rain. The paint is dry within an hour and fifteen minutes, so if we get a window like that, we will go ahead and paint, even if it is calling for rain. Rain doesn't damage it too much, unless you put it down right before it rains. Most of the time it leaves some of it there. That way we don't have



Paint should be applied at a recommended spread rate by spray, brush or roller.

- Photo courtesy of Suntec Paint, Inc.

to go over the whole routine again, we just brighten up what washed off."

For a Sunday NFL game, McNeal also starts on Wednesday with the framing of the field and the outside media lines. Thursdays are for end zones, logos, and the first coat of the 6-foot border. Friday is used to finish the field, yard lines, numbers, hash marks, and another coat on the border. Saturday is used to paint in case weather impacted the painting schedule earlier in the week. Saturday's can also be used to paint one more coat on the border.

"We are always looking at the weather during a game week," said McNeal. "It dictates so much, from tarping to painting, that we must always keep updated as the week progresses."

Carbit recommends applying field paint when air, product and surface temperatures are above 50 degrees Fahrenheit and at least 5 degrees Fahrenheit above the dew point. In average weather—77 degrees Fahrenheit, and 50 percent relative humidity—Carbit's paint dries to the touch in 30 minutes, and is hard in one to two hours.

### Quality results

"Don't be afraid to experiment with different methods and ways of doing things," said McNeal. "Make your ultimate goal to frame the turf that you spend so much time working on look even better with a great paint job. Use the best paint that you can afford. The cheapest isn't always the best for your turf, so remember to test the paint before you go for the gusto."

ST

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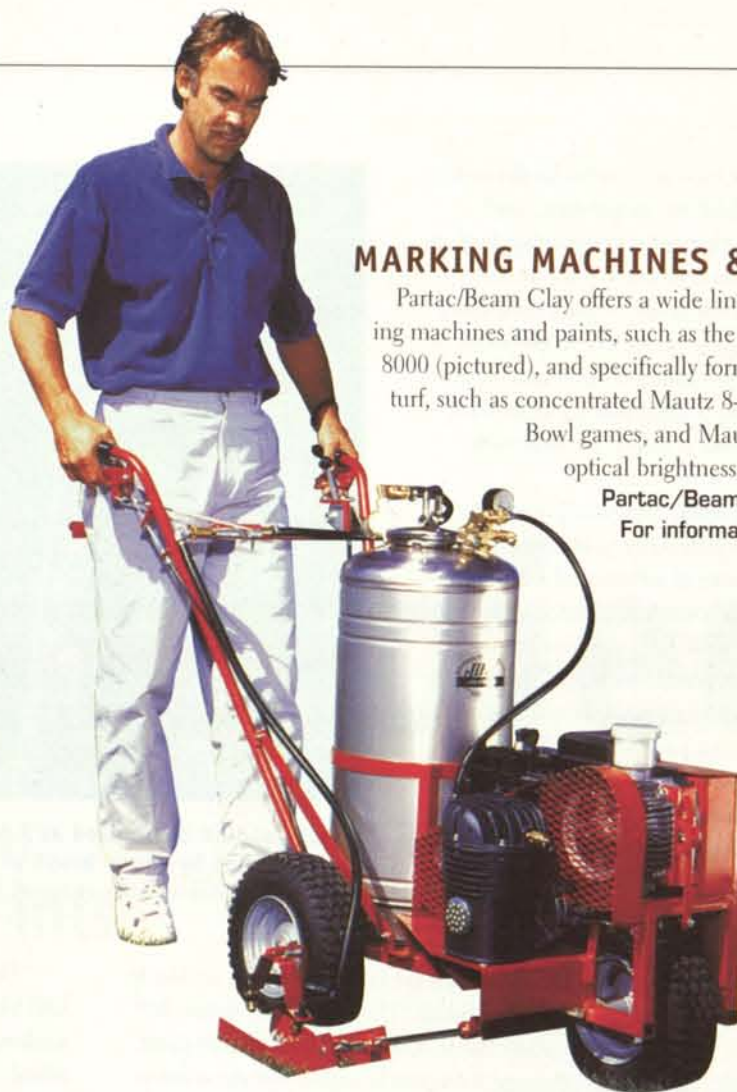
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**FIELD MARKING PAINT**

Zeke's Athletic Paint has taken another step up with ZAP Chiefs Red and ZAP Yellow. Both colors have been reformulated to be brighter and better, says Zeke's. These new colors join an extensive list of stock colors and three levels of ZAP white field marking paint: ZAP Super White, ZAP Pro White and ZAP-1. Zeke's ships all over the country.

Zeke's Athletic Paint/888-430-4076  
For information, circle 060



**MARKING MACHINES & PAINT**

Partac/Beam Clay offers a wide line of athletic field marking machines and paints, such as the self-propelled Jiffy 8000 (pictured), and specifically formulated latex paints for turf, such as concentrated Mautz 8-30 used on 32 Super Bowl games, and Mautz Bright White with optical brightness.

Partac/Beam Clay/800-247-2326  
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**PAINT STRIPERS**

Newstripe's Fielder paint stripers can save you money with their first use by replacing expensive aerosol cans with bulk paint, says the manufacturer. Both models are available as basic units or can be upgraded with power packs to handle the largest fields. Both are backed by 18-month warranty.

Features include: 7- or 12-gal. stainless steel tank; dual handle with control lever; turf specific spray head with 2 to 6 in. adjustable line widths; and optional air, CO2 or engine power packs to eliminate hand-pumping.

Newstripe/800-624-6706  
For information, circle 166

**"PAINT MULE"**

Randy Dvorak, manager of the Cedar Rapids (IA) Tuma Soccer Complex, says, "I used to spend on the average 35 hours using our old walk-behind sprayer to line our 30-field complex. Using the RS-500 'Paint Mule' I'm able to line the same fields in 12 hours. We're very pleased with its efficiency and performance."

Randy is now spraying lines at more than 250 ft. per minute, says manufacturer TruMark. The RS-500's spray shoe allows a high ground speed while laying down a straight line. The 20-ft. hose & wand facilitates stenciling, hash marks, and other applications.

TruMark/800-553-6275  
For information, circle 163



**RESOURCE CENTER**

World Class Athletic Surfaces has built its reputation as the reliable manufacturer of premium quality bulk and aerosol paints and custom stencils. Made of 100% acrylic, World Class super concentrate paints are guaranteed to be brighter, last longer and are kinder to turf. After all, the last thing a groundskeeper needs is field paint that kills or damages the playing surface.

For athletic programs that cannot find specific colors, World Class can create custom colors. The company supplies custom color paints and coatings for field marking, traffic, goal posts, non-slip floors and artificial turf surfaces.

The company also provides the means to apply its premium paints. In addition to standard kits for field marking, the production department can supply high quality, affordable custom-made field stencils.

World Class Athletic Surfaces/800-748-9649  
For information, circle 173



**BRIGHT WHITE**

Pioneer's BRITE STRIPE athletic field marking paint produces lines up to 400 percent brighter than standard paints under UV lights for night games, thanks to its exclusive formulation of Halogen 2000 and OPTIWITE optical brighteners. The extra bright look not only ensures compliments but results in more accurate spotting of field positions for all, says Pioneer.

BRITE STRIPE can be applied with any bulk paint striper and dries ready to play in less than 1 hour. Custom color blending is available in addition to 16 standard colors, to make team logos pop off the field.

Pioneer Manufacturing/800-877-1500  
For information, circle 167

**ONE-STEP IRRIGATION CEMENT**

"Pro-Green" One Step irrigation cement is a fast set, low V.O.C., medium bodied solvent weld cement specifically formulated for the irrigation and sprinkler maintenance. Pro-Green works on wet or dry pipe and requires no primer before assembly of pipe and fittings. Because of its bonding strength, the product is excellent for "pulling" PVC pipe and allowing for immediate pressure testing of the system. "Pro-Green" is recommended for all classes of

PVC pressure pipe and fittings through 3 in. and PVC non-pressure solvent weld pipe and fittings through 6 in.

Whitlam Paint Co./800-321-8358  
For information, circle 159



## Managing Bermudagrass Turf

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The Fastliner Super Concentrate Paint, with its 5 to 1 dilution, can stay in suspension for up to 14 days. This means you can leave it in the application tank until you need to use it again; and when you do, simply agitate and resume painting.

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Broyhill/800-228-1003 ext. 34

For information, circle 161

### MANAGING BERMUDAGRASS BOOK

Co-authored by SPORTSTURF magazine's "Q&A" columnist Dr. Grady Miller, *Managing Bermudagrass Turf: Selection, Construction, Cultural Practices, and Pest Management Strategies* is now available from Ann Arbor Press. This complete reference guide provides a broad introduction to types and characteristics of bermudagrasses, gives fundamental guidelines for green construction and growing-in processes, shows step-by-step cultural practices, and covers critical techniques for controlling weeds, insects, diseases, and nematodes.

Ann Arbor Press/800-487-2323

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Game Day 8050 Super White Athletic Field Marking Paint is a new product by Suntec Paint that is specifically developed with the needs of the sports turf professional in mind. Game Day 8050 is highly pigmented with concentrated amounts of titanium dioxide and optical brighteners to give an extremely brilliant white finish. The pigment loading contains no calcium carbonate, eliminating a limestone buildup on the field and drastically reducing settling after mixing.

Game Day 8050 also contains more latex resin, which gives added durability for a longer lasting job. This environmentally friendly product contains no harmful ingredients, allowing grass to grow back vibrantly and healthy. Its highly concentrated formula allows the user to dilute two to three parts water to one part paint to achieve the desired level of brightness. It stays in suspension longer after mixing, with no hard settling. It is easy to mix and clean up is with soap and water.

Suntec Paint/800-333-1104

For information, circle 171



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PVIP aerosol athletic field marking paint from Pioneer has unique 24-oz. cans that are a value because they save money by holding 22% more paint than ordinary cans, which means fewer changes are needed to stripe a field. PVIP contains Halogen 2000 and Optiwite optical brighteners for lines that are brighter and whiter under natural light or stadium floodlights.

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Pioneer Manufacturing/800-877-1500

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TrueLeaf Technologies/800-438-4328

For information, circle 170



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For grounds maintenance professionals, Becker Underwood's Green Lawngr turf paint provides an effective, environmentally friendly, proven alternative to the problem of discoloration of worn, overplayed, or otherwise stressed turf.

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Grounds maintenance professionals in the athletic community also appreciate Green Lawngr's versatility and ease of application. Whether blending in worn areas of stadium turf, brightening stressed or overplayed fields, or keeping dormant grass vivid all season, Green Lawngr is part of many sports turf maintenance regimens, and is key in preparing surfaces for major events.

Becker-Underwood/800-232-5907  
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The Starliner line marking system by Broyhill uses a large poly hopper to save marble dust refilling time. The system also features a snap-on wind skirt and slanted handlebar design that allows a full stride operation. These characteristics help make this one of the ultimate machines for dry marking base lines and infield surfaces.

With its stainless steel frame, 4-wheel construction and accurate swing-down sighter guide, the Starliner system allows for more even lines and no gate operation. Also fitted with a brush auger and ground driven internal hopper brush, the product feeds evenly every time.

Broyhill/800-228-1003 ext. 34  
For information, circle 162



## LINE MARKER

The Bannerman Wet Line marker is a simple, practical tool for line marking on grass surfaces using low-cost latex paint. The machine is sturdy and well-balanced, with tires at the base of the handle that create a comfortable fulcrum for raising the marking belt off the ground for easy turning. Positive alignment for easy turning on straight lines or curves. Use a stake and tether line to produce perfect circles.

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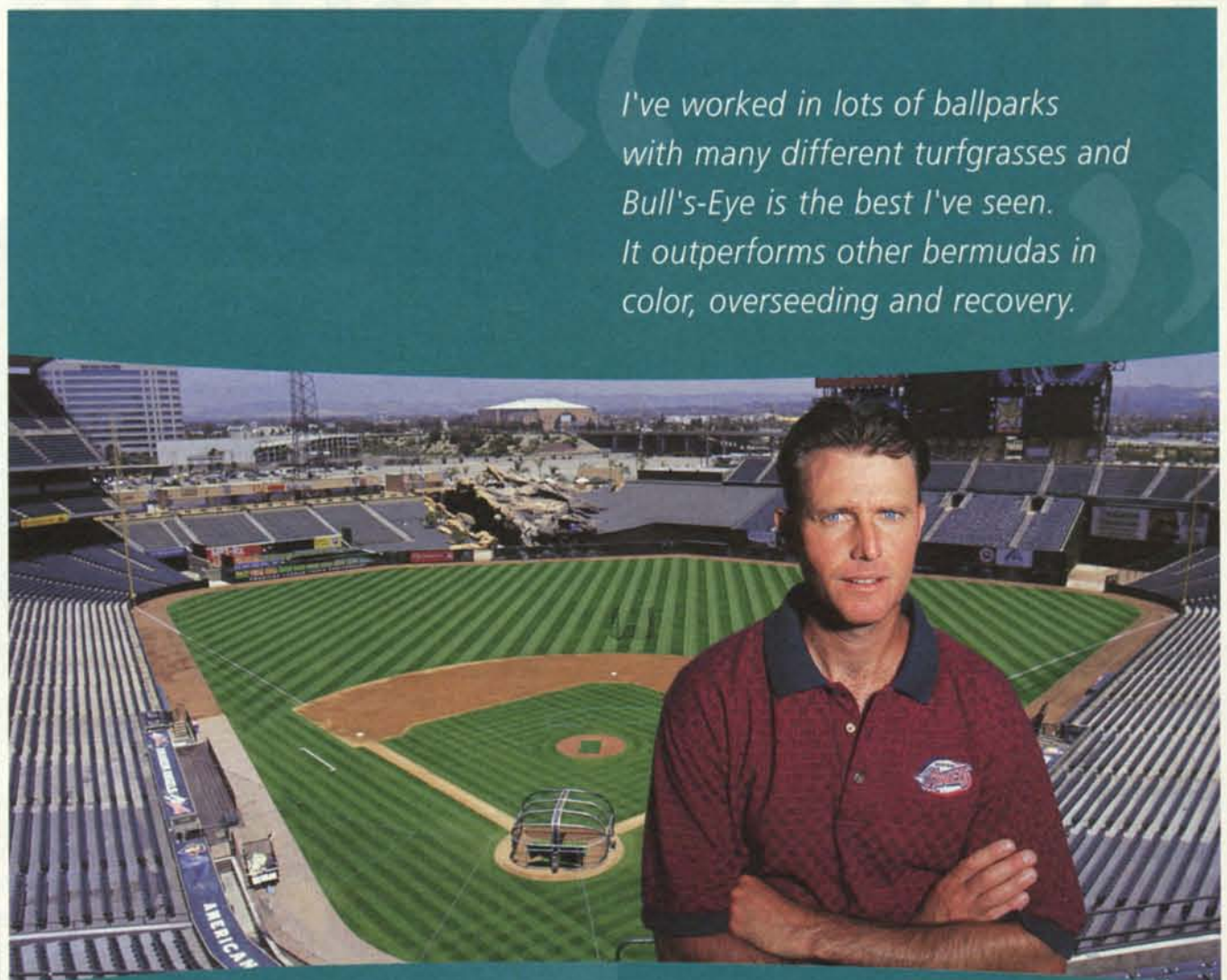
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## MARKING FLAGS

Both custom printed and plain marking flags are available from Blackburn in weather-resistant, 4-mil. plastic. Choose from traditional style, bent staff banner flags and rigid markers. Sizes include 2 1/2 x 3 1/2 in., 4 x 5 in., 5 x 6 in., and 5 x 8 in. Staff lengths range from 15 to 36 in. wire, plastic, or fiberglass. The 14 colors available include all standard APWA colors for marking underground utility lines and four fluorescent colors. No screen charge for industry messages already in stock.

Blackburn Manufacturing/  
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# Creating safe, playable infield surfaces

BY RENE ASPRION

**G**roundskeeping is an art and groundskeepers around the world take different approaches to building and maintaining baseball or softball infields. However, the overall goal should be the same: To create a safe, playable surface day and night, rain or shine.

There are two basic ways to topdress infields, also known as the skinned area, the playing surface or the dirt portion, including the pitching mound, baselines and homeplate. The first method is to simply topdress the playing surface with a quality infield conditioner by creating a thin top layer that acts as a blanket over the dirt. The second is to work an infield conditioner into the skinned area, followed by a topdressing application. This procedure is usually recommended for poorly graded or slow-draining infields and hard, over-compacted playing surfaces. The work requires more time and is typically performed during the off-season.

To properly topdress an infield using either of these methods, refer to the following application instructions and remember that these techniques may not fit every situation. It's best to work with an experienced, professional groundskeeper for the best application techniques for your particular field(s).

## First steps in topdressing

The first step in planning any infield work is to know your infield(s). A regulation baseball (Major/Minor League, Collegiate, High School) infield, with an infield arc of 95 feet will have approximately 11,500 square feet of skinned area, which includes the baselines, mound, and homeplate. A regulation softball (Professional, Collegiate, High School) field with a 60-foot arc will have approximately 8,300 square feet of skinned area. Once you know how much surface you're working, follow these basic instructions:

1. **Do preliminary work on the infield.** Lightly water the skinned area and allow some drying time so the water will soak into the dirt. Next, nail drag the infield arc (no deeper than 1/2 inch) to provide some pre-leveling and give the skinned surface a good blend when the infield conditioner is added.
2. **Apply a thin layer of infield conditioner.** Use approximately 1/4 inch to 1/2 inch of conditioner and place on all infield dirt areas, including baselines, mound, and home plate. How you apply the material is determined by how you purchased it (either bags or bulk—bulk is usually cheaper and saves money over time), as well as the equipment and manpower available. The most common application methods include: a topdressing machine, a front-end loader, wheelbarrows, and by hand from bags.
3. **Level the conditioner.** Use a flat board (a nail drag turned over on its flat side), a screen drag with a leveling bar, or with good old-fashioned rakes.
4. **Finish drag the infield.** Use a screen or mat drag, and then lightly water again. The infield should now be ready for safe play.

## Pre-Season infield renovation

For poorly-graded or slow-draining infields and hard, over-compacted playing surfaces, use the following application techniques to renovate your infield(s) before a season begins:

1. **Prepare the field.** Lightly water the skinned area and allow the water to soak into the dirt.
2. **Till infield conditioner into the infield arc.** Some groundskeepers will nail drag or roto-till the infield before placing the conditioner to re-mix or re-level the infield mix (the dirt portion of the infield that is made up of a combination of sand, silt, and clay). Be advised that tilling the infield too deep, or overworking it with a nail drag, makes it more difficult to apply the conditioner because the



Top-dressing infields can be done fairly quickly and easy with bulk infield conditioners, saving time and money.

skinned area will be too loose. (Note: An overworked infield, or one that is tilled too deep, will take more time and effort to make level and compact.)

3. **Apply 1/4 inch to 1 inch of infield conditioner.** Cover all skinned areas as evenly as possible, using the topdressing procedure described earlier. The depth of conditioner will depend on how deep you roto-till or nail drag the infield. For example, if the manufacturer's instructions recommend an application of 1/4 inch of conditioner per 1 inch of tilled infield dirt, and you roto-till 2 inches deep, apply 1/2 inch of conditioner.
4. **Roto-till or nail drag the infield.** This helps incorporate the conditioner with the existing infield mix.
5. **Level the conditioner.** Use a box blade, a flat board (a nail drag turned over on its flat side), or good leveling rakes. After leveling, your field should have a fairly loose surface that needs to be compacted and leveled again.
6. **Compact and level the infield to your players' preferences.** This can be achieved using a small roller or a compacting/leveling machine. Some coaches and players prefer a fast, firm surface, while others prefer a slower, looser playing surface. Ideally, your players should be able to play on the infield without slipping or cutting, thus creating ruts, or sliding and creating deep holes. The real test, of course, is when a ball is thrown or hit. The infield should provide a true and even hop or roll. Bad hops are everybody's nightmare.
7. **Apply a topdressing application.** Follow the steps outlined for the topdressing procedure.

In summary, use good, clean, quality materials for both your infield mix and infield conditioner. Don't be afraid to experiment and make mistakes, and ask questions along the way. Remember groundskeeping is an art, not a science. Play ball on a safe infield! **ST**

*Rene Asprion is sales and marketing coordinator for Diamond Pro Professional Groundskeeping Products, a division of TXI-ESC, and is past president of the North Texas Sports Turf Managers Association. For more information about Diamond Pro, call 800-228-2987.*

## Tips for maintaining skinned infields

**A**bout 90 percent of the game is played on the infield dirt. With 7 of the 10 players (including the batter, but not the 3 potential base runners) occupying the skinned area, it takes a pounding and can develop problems without regular maintenance.

### After every game or practice:

1. Remove the bases to avoid creating any low or high areas.
2. Screen drag the infield level, keeping at least 1 foot from the edge of the grass to avoid build-up or "lips" on the edge.
3. Retaining moisture and regular watering are key to healthy infields. During dry spells, water the skinned area to allow it to retain some moisture, thus improving the workability and playability. Always keep the dirt underneath your top layer moist and do not allow it to dry out, crack and become too hard.
4. If your infield is too firm, use water and/or a nail drag to loosen up the playing surface. Nail dragging should be done at least once a week, sometimes more, depending on the weather and condition of your infield.
5. Apply infield mix and infield conditioner as soon as needed. Avoid letting problem spots grow larger and possibly becoming a safety issue.

### Pitcher's mound, homeplate, & baselines

1. Top-dress these areas with 1/4 inch of infield conditioner.
2. Use a good mound clay to fill any holes in the pitching/batter's boxes, as needed.
3. *Do not* till unless you are adding clay and building up the area. These areas should be firm with a natural slope, allowing excess rainwater to run off.
4. Water these areas after games and practices to keep them moist.
5. Use tarps on your pitcher's mound, homeplate and even bullpens, whenever not in use. This will keep the moisture in the clay to allow for better play, wear and tear.

### Excess rain

Infield conditioners eliminate much of the maintenance that would be required on the infield, so be sure the conditioners are



in place *before* the rain comes. After a heavy or long rain, it is important to:

1. Stay off the infield. Let the conditioner and Mother Nature do the work for you. More damage is usually done to an infield by walking/working on it too soon after a rain.
2. Take a good look at your infield to see whether you have high and low areas that need to be leveled. Depending on the area and the depth of a problem spot, a deeper, larger area usually requires adding infield mix, or if the area is not too deep (less than 1/4 inch), simply add some more conditioner.
3. In good weather conditions, if the sun is out and/or the wind is blowing and it's before a game or practice, let the field dry naturally for as long as possible. When the field is dry enough to work on it without causing damage (such as, rutting or clay balls forming when using a nail drag), nail drag the infield to allow the air to permeate into the dirt.
4. In poor weather conditions, do not nail drag, if there is still a chance of rain, you will make matters worse. If you cannot nail drag, but can walk on the infield, lightly rake open the surface.
5. Let it dry naturally. Allow the infield to sit as long as possible before a game or practice.
6. Add infield conditioner. Give yourself just enough time before the game or practice to topdress the field or, if needed, add drying agents (specialized products for faster drying, compared to normal infield conditioners).
7. Finish drag (screen or mat) the infield. Play ball!—Rene Asprien

# What's Wrong with this picture?

BY DR. JEFF KRANS

**T**he turf on the football field in the photo on this page has excellent density, outstanding color, great uniformity, and no sign of any disease or insect problems. So, what's wrong?

The answer can be found in the picture, but not easily recognized without another piece of information—the game schedule. This turf has peaked 2 months before the first sporting event. Now you may not see this as a problem. After all, we all know that a manager is better off to have the turf ready early than late. Early turf beats late in most situations, but does early beat “on time” or “peak” turf performance?

Peak performance refers to turf growth and quality that maximizes (peaks) immediately before or at the start of play. The management strategy of peaking turf is not new to golf course superintendents, who will adjust cultural practices, nutrition, and water to peak turf just before a tournament, then readjust for everyday golf. The superintendent's adjustments in management are designed to match turf quality with player expectations over a season.

In sports turf, the common management strategy appears to be one of peaking the turf early, then holding quality. Both approaches have been successful and there is no doubt that golf and sport turfs are very different and may not even be comparable. The pressure on the sports turf manager to maintain quality turf at all times is intense and trying. The early peak, then hold strategy is a compelling choice given the high expectations of players, fans, coaches, and administrators for high quality turf no matter what the circumstance or season.

So, what is the best management strategy for growing turf on sports fields? The response may not lie in a comparison of golf and sports turf management, but in understanding the limits and biology of the turfgrass plant.

Knowledge of turfgrass growth and development is a fundamental requirement of good management. The first step in gaining this knowledge lies in the sequence of turfgrass growth and development. All grasses, including turf-types, have a continual pattern or expression of growth. In other words, when temperature, moisture, and light levels are adequate for plant activity, all structures grow continually. The continual growth of turf is especially true for turfgrass leaves and stems. In contrast to grasses, other plant types such as deciduous trees express flushes of growth. In trees, all of the leaf growth occurs in the spring, commonly referred to as a “spring flush.” This flush is followed by the summer-long presence of the same leaves, then leaf senescence (growing old) and detachment in the fall. The tree example represents a single season of growth lasting 6-8 months depending on climate.

The continual and repeated growth sequence of the turfgrass leaf is a key factor in addressing how to peak turf. The turfgrass plant will follow a continual and repeated (old leaves are replaced by new leaves) as well as short (individual leaf longevity is only 2-4 weeks) growth sequence of (a) emergence, (b) function (c) senescence (growing old), and (d) detachment.

Emergence is the growth of the leaf blade and sheath from their respective growing points until both segments have fully expanded. The function sequence refers to a fully expanded leaf engaged in high photosynthesis (manufacture of plant food) and export of photosynthate (distribution of plant food). Senescence is a leaf growing old with low photosynthesis and no export of photosynthate. Detachment is the death stage with no contribution to plant health. The sequence of leaf emergence to detachment in grass is difficult to visualize because all events occur continually and concurrently among during a short time period (2-4 weeks).



**A bermudagrass football field with excellent quality turf, but 2 months away from the first game.**

For example, new turfgrass leaves are continually emerging from their growing points while existing leaves (originated from the same growing point) are passing through the other sequences of growth. Leaves that emerge from a single growing point arise in concert with other leaves and the number of leaves exposed at any one time per growing point is limited to 4 to 8 depending on conditions. In addition, the lifetime of an individual leaf is short, ranging from only 2-4 weeks depending on species, cultural practices, and environmental conditions. The pattern of leaf emergence to detachment from a single growing point can go on indefinitely provided the growing point remains alive or viable. To gain a sense of the sequence and pattern of leaf growth, leaves of tall fescue and bermudagrass are labeled to illustrate the different stages of growth (See next page).

These pictures represent only a snap shot in time that identifies the growth sequence of each leaf and do not demonstrate the dynamic and continual process of leaf growth. In practical terms, the individual leaves mowed today will not be the same leaves mowed 3-4 weeks in the future. The future leaves will be new leaves and today's leaves will be dead.

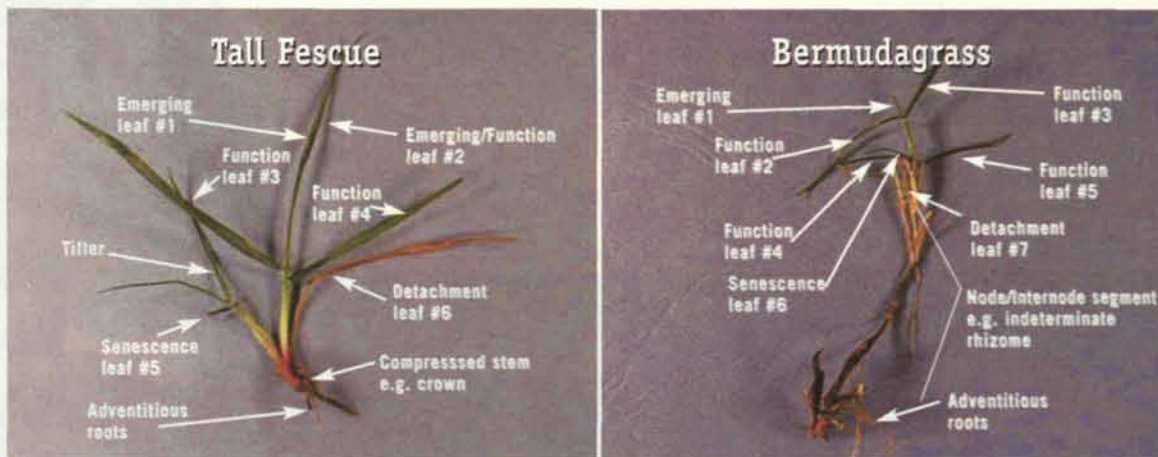
Management can affect the continual sequence of turfgrass leaf growth. In fact, the manipulation of the number of leaves can be a useful and powerful tool in managing quality turf. One direct means to manipulate the number and sequence of leaves is nitrogen fertilizer. Nitrogen will stimulate the frequency, alter the sequence, and change the size of leaves. Multiple applications of nitrogen stimulate leaf emergence resulting in a greater than normal number of leaves exposed from a single growing point (an increase in shoot density). This response can be used to peak turf. Peaking turf with high nitrogen will have consequences however, which fall into two categories

of plant affects - a sudden loss of turf quality and the predisposition of the plant to pest and environmental stresses.

The sudden loss of turf quality will come 2-4 weeks after the repeated nitrogen applications have accelerated leaf emergence and thereby causing a higher than normal number of leaves to emerge. This higher than normal "unit" of leaves will eventually pass along the growth sequence. In other words, the leaf unit will emerge,

function, senesce, and finally detach or die. Therefore, 2-4 weeks down the road, the unit flush of new leaves will result in a unit "flush" of detachment (death). In practical terms, pushing turf with nitrogen to get a "bounce" in turf quality is great, but how great will the "bounce" in leaf detachment be 2-4 weeks down the road?

The other consequence of a larger than normal number of leaves emerging at one time is the predisposition of the plant to suffer from pest and environmental stresses. In this case, pest and environmental stresses are disease, insect, and nematode invasion as well as injury from heat, cold, and drought extremes. The scenario of high shoot density predisposing turf to injury has been well documented in research stud-



Tall fescue and bermudagrass plants illustrating stages of leaf quality and growth sequences. Leaves are labeled according to stage of growth for a single point in time. This illustration does not exemplify the dynamic and concurrent nature of leaf growth and development in grass.

ies, but predisposition is not a guarantee of injury. After all, chemical controls are available for nearly all invasions of turfgrass pests, and most environmental stresses can be countered with cultural management. Yet, is the predisposition of turf to injury a sound management strategy?

The consequences of the nitrogen bounce both up and down and the predisposition of turf to pest and environmental stresses are determined

by the biology of the plant. There is also no doubt that the strategy to peak turf on time coincides better with the plant and sound management than to peak early, then hold until game day. So, what are the practices that one should use to peak turf on time and avoid the consequences of holding turf quality? In my next article, I will discuss management practices to grow quality sports turf within the limits of the biology of plant and sound management.

ST

Jeff Krans, Ph.D. is a professor of agronomy at Mississippi State University and SPORTSTURF's technical editor.

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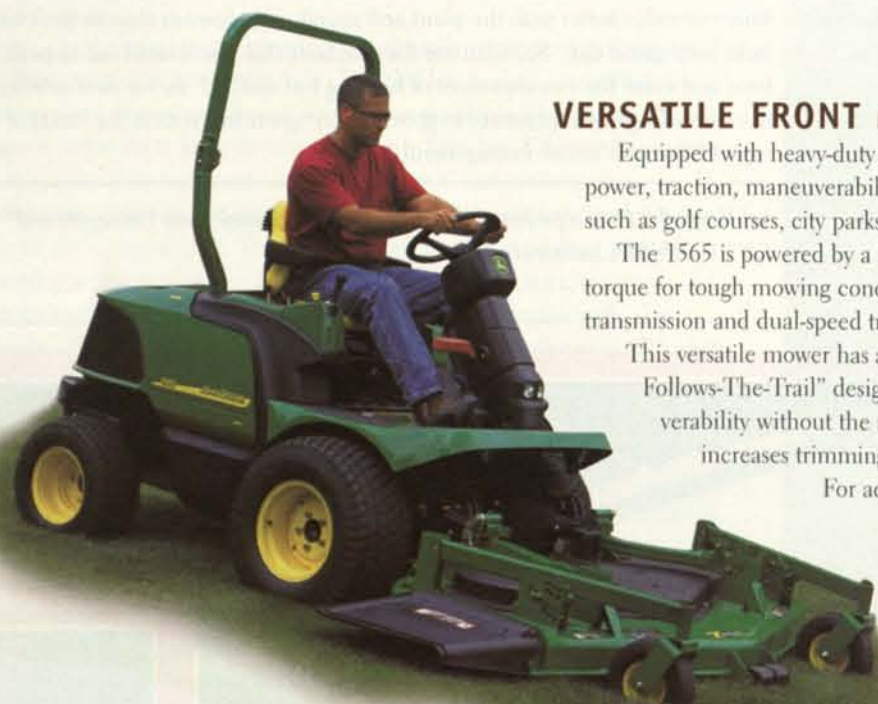
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Prime Line/217-324-9430  
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## VERSATILE FRONT MOWER

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The 1565 is powered by a 36-hp Yanmar diesel engine that features maximum torque for tough mowing conditions. This mower also features a Kanzaki hydrostatic transmission and dual-speed transaxle with forward mowing speeds of up to 8.5 mph.

This versatile mower has a front-mounted offset mower deck with a "Tail-Follows-The-Trail" design. An industry exclusive, this design allows for maneuverability without the rear of the machine encountering obstacles and increases trimming capabilities.

For added productivity, the 1565 is outfitted with a 14.5-gal. fuel tank and is available with 60- and 72-in. side-discharge, 7-IRON mowing decks for cutting performance.

John Deere/800-537-8233  
For information, circle 190

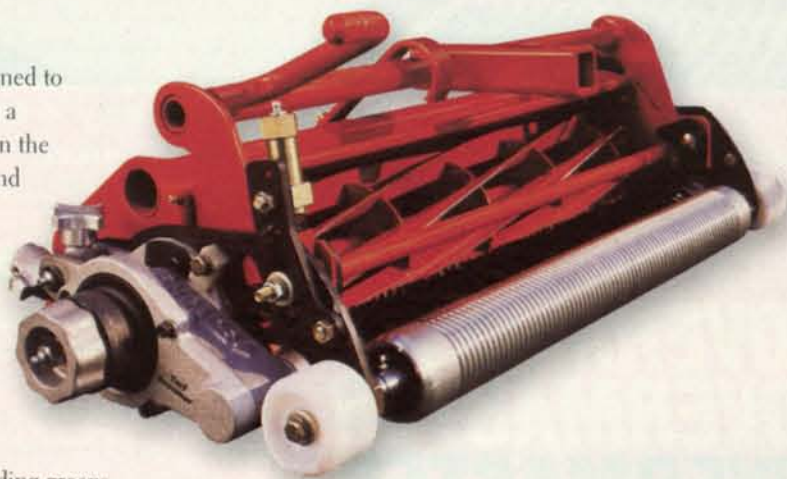
## SPORTS FIELD CONDITIONER

The patented Turf Groomer attachment from Jacobsen is designed to promote healthier turf by working with the cutting reel to produce a smooth finish. Powered vertical knives rotate through the grooves in the front roller of the unit to cut runners in the grass close to the ground before they can lie down.

The cutting action exposes more of the leaf surface for better photosynthesis while encouraging a healthier, deeper root system and improved stress tolerance. Because the roller base of the Turf Groomer is sharp, the cutting head closely follows ground contours. Combined with the cutting action of the blades, the unit helps smooth out irregularities in sports fields caused by normal play.

The Turf Groomer is available on Jacobsen walk-behind and riding greens mowers, and selected models of Jacobsen LF and Super LF Fairway Mowers.

Textron Golf & Turf/888-922-8873  
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### MULTI-PURPOSE IMPLEMENT

The Quadivator attaches easily to your ATV or lawn tractor, and can be used with numerous attachments (each sold separately). The 4-ft. deluxe unit comes standard with a cultivator attachment and is equipped with electric depth control that is operated from a switch that is mounted on the towing vehicle.

The Quadivator tool bar can be used with several accessories including: hilling model boards, potato digger, box scraper, lawn irrigation plow, dump box, tandem disc, barb wire dispenser, lawn roller and lawn aerator.

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### BASEBALL MOWING SYSTEM

ProMow has introduced The FLEX, a gang reel mowing system designed in part for baseball fields and infields. The 5-ft. cutting path will deliver a scissors-type cut and a healthier field by not chopping the grass.

ProMow/877-477-6669

For information, circle 192





## GREENS ROLLER

TerraRoller's integrated roller/spiker design employs a two-section star bladed spiker followed by a three-gang roller to fold foliage back over perforations in the green without closing opening. The result is an immediately playable green with a smooth, fast surface, says the company. Standard weight trays have been brought forward to provide additional down force on the front spiking heads for 2002. Three gang rollers can be used separately to increase greens ball roll rate.

Broyhill/402-987-3412

For information, circle 198



## COMPACT BUT HEAVY DUTY

Ingersoll Equipment's 7000 Series loader/backhoe is a compact, 4-wheel-drive tractor.

Its loader is an integral part of the tractor and frame, with heavy-duty lift arms and a reinforced bucket. Lift capacity of the loader bucket is 750 lb. at full height.

The backhoe is coupled to the tractor via mounting arms connected to a counterweight. It offers a 92-in. digging depth with joystick controls and a selection of buckets from 8 to 24 in.

The tractor is powered by a 20-hp Kohler engine. It has a hydraulic drive through a 2-speed transaxle controlled by a foot pedal.

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920-582-5000

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## DIESEL ZERO TURN

Kubota now is offering its ZD28F zero turn mower, powered by a liquid-cooled 3-cylinder E-TVCS diesel engine that has higher torque curves than competitive diesel and gas-powered ZTRs, says the company. The engine operates at lower rpms, lower noise levels, and offers better fuel efficiency, says Kubota.

Cutting height can be adjusted in 1/2-in. increments between 1 and 5 in.; all deck controls are accessible from driver's position. Kubota's exclusive multi-belt drive with heavy-duty cast-iron pulleys distributes and reduces belt tension while transmitting power to the mower blades, and helps prevent damage and slipping caused by belt twisting.

The unit's front suspension uses an oscillating front axle that follows ground contours, and its Tilt-up feature allows you to easily raise the mower.

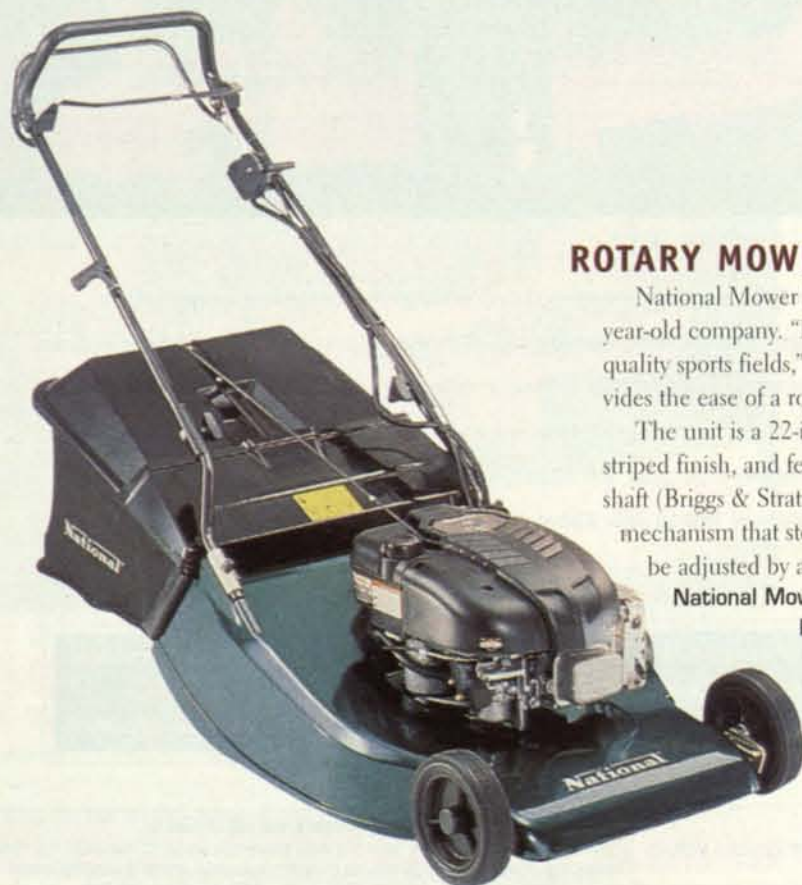
**Kubota Tractor/888-458-2682**  
For information, circle 200



## SOD CUTTER

The KisCutter is the newest sod cutter in Turfco Direct's line. Its simple design, few moving parts and easy-to-use controls make it easy to operate. The handles fold down for easy transport or storage, lowering the height to less than 32 in. Only 140 lbs., the KisCutter is easy to haul and useful for many applications. Unit features a centrifugal clutch, friction drive to the wheels, and variable speeds make starting and stopping, corners and curves easy to maneuver.

**Turfco Direct/800-679-8201**  
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## ROTARY MOWER FOR INFIELD STRIPING

National Mower has introduced its I-Stripe 22 rotary mower, the first rotary for the 83-year-old company. "In the past decade, field striping has become synonymous with top-quality sports fields," says National Mower president Stan Kinkead. "The I-Stripe 22 provides the ease of a rotary mower and stripes like a reel mower."

The unit is a 22-in. walk-behind with a powered rear roller for creating the classic striped finish, and features a blade friction disc to limit the impact to the engine's drive shaft (Briggs & Stratton Intek OHV 5.5 engine). Incorporated into the handlebar is a safety mechanism that stops the mower blade whenever the bar is released. Cutting height can be adjusted by a single lever to seven settings, from 1/2 to 2 1/2 in.

**National Mower/888-907-3463**  
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## CHAINSAW

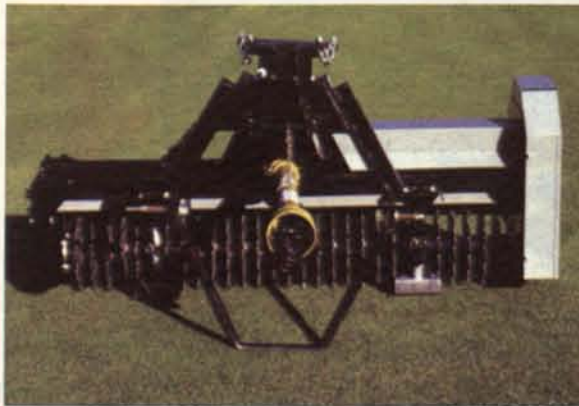
John Deere has available its Pro-Series chainsaws, the CS46 and CS52, each which have 16- and 18-in. bar options. While a two-ring piston and closed port cylinder provides higher compression and more power, the saws' compensating carburetors can last triple the average time between cleanings, says Deere.

Maintenance is more efficient since the air filter and spark plug both can be accessed without tools, and the side cover on both models offers easy access for chain tensioning. Deere guarantees delivery of any replacement parts needed within 24 hours, 7 days a week.

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Reist Welding (Elmira)/888-565-5587

For information, circle 191

## HYDRO DRIVE WALK-BEHIND MOWER

LESCO has available its 36-, 48-, and 52-in. fabricated deck hydro drive rotary walk-behind mowers, all powered by Kawasaki engines, which are optional in 15 hp single cylinder to 17-, 19-, and 21-hp twin-cylinder with or without electric start models.

Units' dual hydro pumps and drive motors mean true zero-turning radius, and twin ground speed control levers allow on-the-go speed adjustment. Newly designed ergonomic handles reduce operator fatigue, and a digital gauge that monitors total hours, engine rpm, and hours between oil changes is standard.

LESCO/800-321-5325

For information, circle 202



## MULTI-FUNCTION TOPDRESSERS

Redexim Charterhouse has introduced their new line of hydraulically driven topdressers, including two models that function in either drop spread or broadcast spread modes.

Models 1010 and 1520 have both rotary brushes as well as optional twin spinning disks. The smaller 1010 is a trailed unit with four pivoting wheels and a 35.3 cu. ft. capacity. In drop spreader mode its width spread is 5 ft.; fitted with the twin disks it has a broadcast range of up to 19.6 ft.

The larger 1520, designed for fairways and sports fields, offers a 70.6 cu. ft. capacity and a drop spreader width of 5 ft.; the disks create a broadcast spread of up to 36 ft., says the company.

Redexim Charterhouse/800-597-5664

For information, circle 204



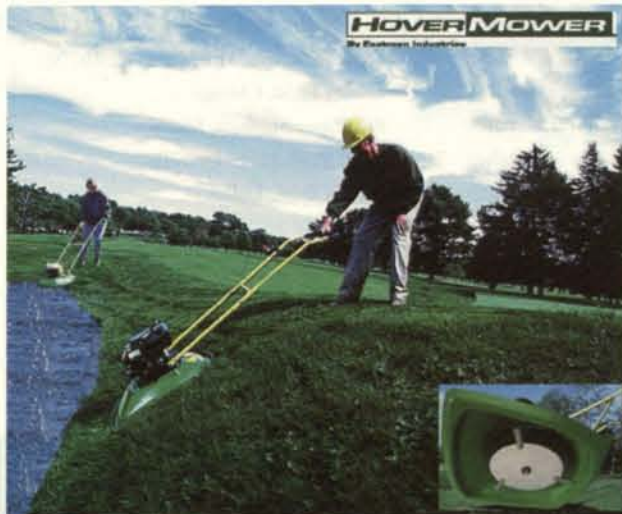


## BUNTON MIDSIZE SERIES

Launched last year, the Bunton midsize series of walk-behind mowers offer more choices in engines, cutting widths, and cutting decks, says the manufacturer.

Every Bunton midsize has an electric clutch for blade control and a top-mounted cutter spindle for better impact resistance. Bunton's comprehensive warranty (3-yr. no-crack deck; 2-yr. spindle, electric clutch and hydro-drive components; and 1-yr. power unit) is available on both hydrostatic-drive and gear-drive models.

Textron Golf, Turf & Specialty Products/888-922-TURF  
For information, circle 205

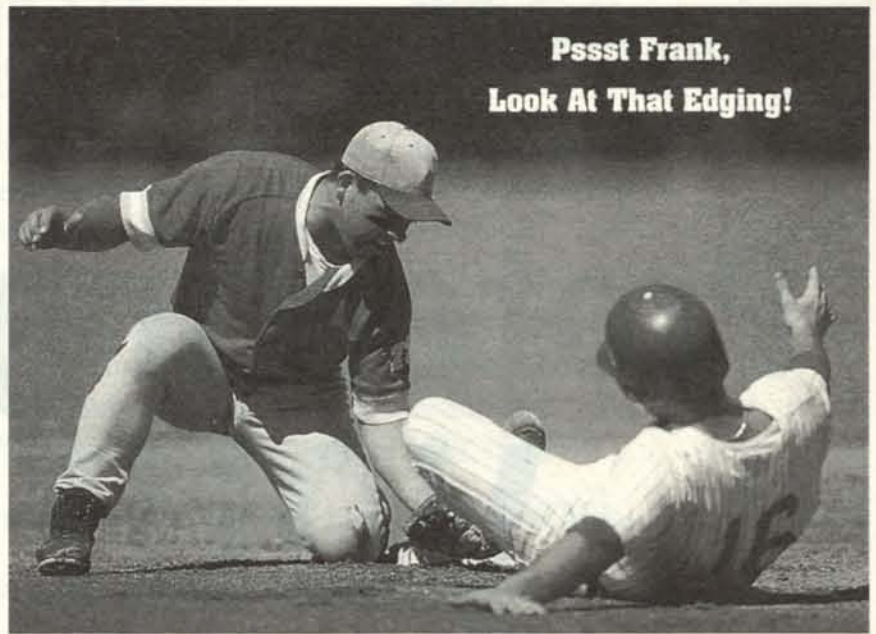


## HOVER MOWER

Instead of using wheels, the Eastman HoverMower floats on a cushion of air, allowing you to mow difficult terrain such as slopes, wet turf, steep banks, sand traps, and retaining walls. The air cushion also increases maneuverability and productivity, as well as reduces wear and tear on mower parts.

The model HM 19S-2 weighs just 37 lbs. and features a Suzuki 3.8 hp, 2-cycle engine with a 19-in. cutting width and adjustable cutting height from 1 to 3 in. Cutting disk is aluminum with three stainless steel blades, and the unit features a 15-in. impeller for optimum air volume.

Eastman Industries/800-760-1680  
For information, circle 203



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# Protecting your field

## Oh no, not the Backstreet Boys again!

**W**ith the ever-increasing amounts of money being spent on stadiums (and turfgrass fields), the revenue-hunters don't allow these venues to sit empty for too long. Many turf managers know the feeling; after being told "This is a single-use facility," they soon are asked to diligently research the turf protection business.



The trend to the single-use stadium, such as Astros Field in Houston, Comerica Park in Detroit, Pacific Bell Park in San Francisco, or Safeco Field in Seattle, doesn't mean no other events take place in these "baseball-only" parks. Each of those stadiums has hosted other events, such as a George Strait concert, Microsoft's 25th anniversary party, and the Catholic Church Celebration.

Michael Beane, the director of marketing at Terraplas USA Rentals, says he's been through this many times. "Every conversation I have with a turf manager, sooner or

later, he or she says 'I know you have done this in other stadiums; however, our grass is unique and I'm not sure it will work here!'"

Beane says the conversation also always turns to pricing. "As is always the case, the best product costs more."

After the turf manager has had a chance to check out the materials Beane sends him or her, the research is usually over, says Beane. "Just a few calls to his or her friends on our Client and Reference list and they hear 'If you have to cover your field, there is only one system that will assure the best results.'" List of other Terraplas users:

- Giants Stadium, The Meadowlands, NJ
- Soldier Field, Chicago
- Pro Player Stadium, Miami
- Alltel Stadium, Jacksonville
- Cotton Bowl, Dallas
- Arrowhead Stadium, Kansas City
- Ohio Stadium, Columbus
- Turner Field, Atlanta

Terraplas USA Rentals/903-983-2111  
For information, circle 054



Any turf manager knows that today "single-use facility" is an oxymoron.



The toughest job may be to convince management to spend the money to protect your turf.



### UP AND DOWN IN TWO

With Curb-It, you can take mowing apparatus (including lawn tractors and towable equipment, along with some walk-behind and riding mowers) up and down curbs easily. Curb-It was invented by a commercial mowing contractor and is inexpensive, says the inventor, and will pay for themselves quickly.

The product is easy to assemble and use and is fully adjustable to the wheel widths of any size tractor or mower.

Curb-It/608-752-5229

For information, circle 180

### EQUIPMENT BOXES

These rugged equipment lock boxes safeguard your equipment with steel construction and a double padlock hasp. Perfect for on-the-spot storage, they have an option for wheels or holes to allow permanent placement if desired.

Safety features include a compression spring lid that prevents the top from slamming shut on heads or fingers, and a hold-open arm that keeps the wind from accidentally closing the lid. Standard size is 30 x 30 x 48 in.

Custom sizes and colors are available.

Thybar Corp/800-666-2872

For information, circle 188



### POROUS PARKING & DRIVING SURFACE

Glenn Rehbein Co. provides two forms of porous heavy access driving and parking surfaces.

Netlon Advance Turf System is a combination of turf/sand/soil and mesh segments that combine to provide a load bearing, compaction resistant profile. This system can be used for perimeter or over-flow parking, emergency access routes, and still be available for other recreational use.

The Netpave System is a surface and sub-surface product that protects the turf or plants that are grown in the drive or parking area. It can also be used with decorative stone.

Glenn Rehbein Companies/763-784-0657

For information, circle 099



### GROUND COVER MATS

AlturMATS are 1/2-in. thick, 100 percent polyethylene mats that can support heavy-duty equipment such as trucks, bulldozers, and backhoes. Thick cleats on both sides eliminate slipping. Product is alternative to plywood or fiberglass.

AlturMATS/888-544-6287

For information, circle 182



### MOTION SENSORS

Heath/Zenith, a leader in motion activated security lighting, enhances the category with Creep Zone detection, only available in Heath/Zenith motion activated security lights.

Creep Zone allows a motion sensor to detect activity directly beneath itself, an important security benefit.

The exclusive look down feature is available in the model SL-5105 Security Light. In addition, the light offers other exclusive Heath/Zenith features such as Dual Brite

2-Level Lighting, for combination accent and security light, and Pulse Count technology that reduces nuisance lighting from false signals. This model not only includes a 240-degree detection range, it also features power outage reset, daylight shutoff, adjustable range and selectable time settings. The product uses traditional floodlight bulbs housed in a decorative, full size lamp cover.

Heath/Zenith/800-858-8501

For information, circle 176

### SIDELINE MATS PROVIDE IN-GAME PROTECTION

A tough polyester fabric that provides protection for your natural turf, EnkamatPlus is a unique product made of a 3/4-in. nylon matting that has been heat bonded to a tough, polyester fabric. The 95 percent open, three-dimensional matting provides an airspace and a structure that flexes as athletes and coaches continually walk over it on the sidelines. The polyester provides a smooth walkable surface that allows rainfall to penetrate through to the turf below. EnkamatPlus is an innovative product perfect for protecting natural turf fields in the most vulnerable areas—the sidelines during football and soccer games and around the batting cages and fungo areas for baseball practices and games.

Product features include rolling out and up quickly; easily reusable over and over; available in 16 x 150-ft. size; and easy to store.

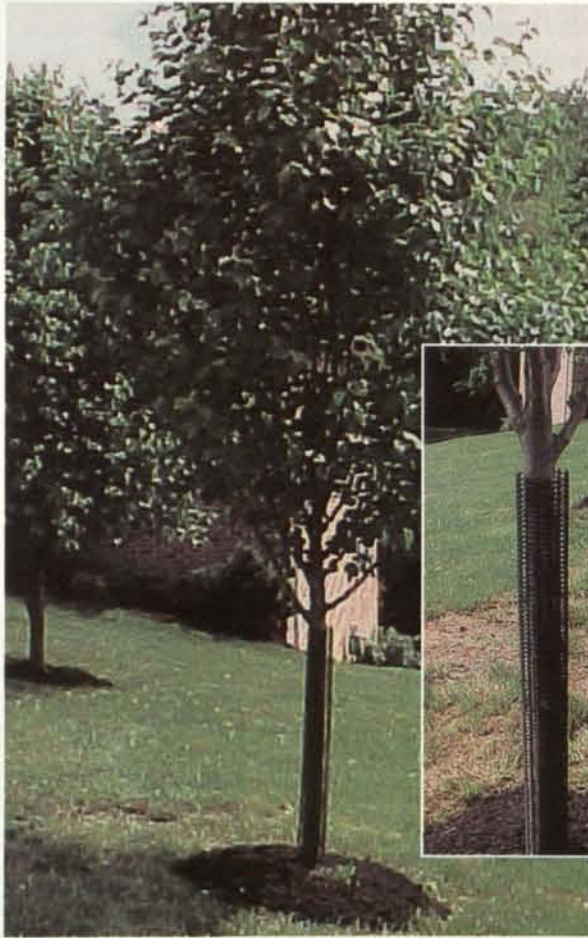
Colbond, Inc./800-365-7391 x 5016

For information, circle 055





CUSTOM NETTING, WINDSCREENS



**NO BITE ON THIS BARK**

NSW, LLC has introduced a rigid plastic mesh netting that protects young tree trunks from damage caused by deer and other wildlife, string trimmers, mowers, or other tools. The Tree Protector wrap keeps animals from feeding and rubbing on tree bark, and shields the bark from contact.

Unlike plastic sheet wrap, the product will not harbor insects or trap moisture around the trunk. It allows needed air, light, and chemicals to reach the bark. Unlike sheet metal and wire mesh, the flexible wrap can be erected and removed easily. Lengths up to 5 ft. are available.

**NSW, LLC/800-368-3610**  
For information, circle 179



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www.terrapiasusa.com mbeane@terrapiasusa.com

Circle 119 on card or www.OneRS.net/205sp-119



### A CLEAR SOLUTION

USG Industrial-Ground Gypsum offers a quick and environmentally safe means of clearing muddy ponds, lakes or other bodies of water. The product is hydrated calcium sulfate, finely ground powder that dissolves in water. When applied to muddy standing water, the positively charged ions cause suspended clay particles in the water to clump together in "flocules" and settle out because of their weight, leaving the water clean within a few days.

Lakes up to 40 acres have been successfully treated, says the company. The product doesn't disturb the hardness of the water or adversely affect plants or animals.

USG Corp./800-487-4431

For information, circle 181

### COLD WATER WASHER

Landa has an optional upgrade that provides portability to its SEA stationary cold water pressure washer. Among the available add-ons are stainless steel cart with two large, solid rubber wheels and two caster wheels, a detergent container rack, mounted electric cord hooks, and a high-pressure hose reel.

In business since 1969, Landa pressure washers are manufactured in an ISO-9001 certified plant.

Landa/800-547-8672, x175

For information, circle 187



### FLEXIBLE JOINT SEALER

Fill your concrete expansion joint weak spots with Tigerthane 220 from Garon Products. It provides a durable, flexible seal that won't break if concrete moves. It is good for repairing spalled joints and filling random cracks and patching gouges, holes or surface defects.

The product sets in 60 minutes and is a two-part polyurea elastomer that can be used on floors where sanitary conditions are needed.

Garon Products/800-631-5380

For information, circle 184





## CUSTOM NETTING, WINDSCREENS

California Industrial Fabrics manufactures windcreens, sight barriers, shade fabrics, and custom netting for baseball and golf. Its Pro-Block fabric, for example, is guaranteed for 5 years against UV degradation.

Around the Grounds

All windscreen and sight barrier fabrics are rot resistant, available in rolls, can be fabricated to your specs, allow water to pass through, are easy cut to fit, do not include grommets, and are available in many colors.

California Industrial Fabrics/619-661-7166  
For information, circle 183

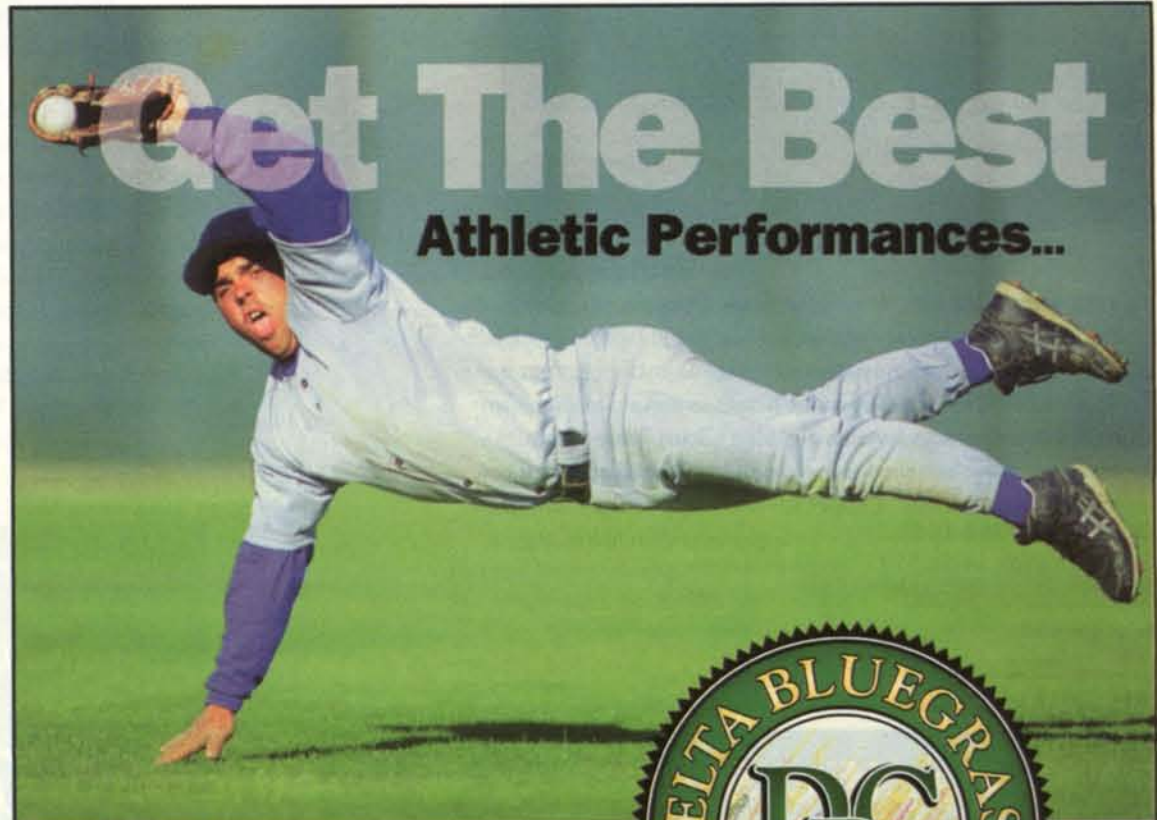
## SYNTHESIS OF ECOLOGY & TECHNOLOGY

Progressive ecological thinking has established itself for applications that traditionally have called for solid paving. Grassy Pavers provide answers to problems associated with supplying functional areas, while maintaining green space and dealing with stormwater management compliance. The porosity of the paver eliminates the need for retention ponds, drainage systems, and other means of dealing with runoff associated with solid paving.

Grassy Pavers provide the strength of pavement with the natural beauty of grass while simultaneously eliminating soil compaction, reducing reflective heat, and allowing for all-weather accessibility.

Product is available in two sizes, four colors, and in both a rigid and semi-rigid version.

RK Manufacturing/  
800-957-5575  
For information, circle 056



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## LARGE CAPACITY HOSE REEL

Coxreels 1125 Series hose reels feature an open hose slot and low profile outlet riser that work together allowing you easy,

even wraps of the hose around the drum. Operator efficiency is also enhanced with a longer drum lock pin, a round tapered crank handle, and a long wearing corrosion-resistant adjustable tension brake.

This 1125 Series is also available with motorized rewind featuring a direct gear driven design and your choice between air, hydraulic, and electric rewind. Hose capacities available to 500 ft. and working pressures to 5,000 psi.

Coxreels/800-269-7335  
For information, circle 177

## SEGMENTAL PAVEMENT SYSTEM

Sandlock joint sand stabilizer additive from PAVE TECH prevents sand loss due to wind, traffic, moisture or thermal movement. There are NO harmful chemicals, it is 100% organic. The product is safe for use around plants, animals and people and works in all climatic conditions. Sandlock is mixed on site with joint sand; sweep and compact into the joints, soak with water and let dry. A natural "glue" is formed binding the sand between the pavers. By mixing on site with native sand, the need for shipping many bags of heavy material for jointing sand is eliminated.

Pave Tech Inc./952-226-6400  
For information, circle 178



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Spring 2002 Catalog



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## SAFETY CATALOG

Compliance Safety Inc. distributes safety products to the turf market and has available its Spring 2002 catalog, which features hundreds of personal protection and safety equipment items. The company offers a wholesale program to specialty distributors in the turf market.

The company's product line includes safety glasses, protective clothing, footwear, respirators, sunscreen, flashlights, hazmat signs, hearing protection products, first aid kits, protective gloves, ergonomic products, spill response kits, and chemical storage products.

Compliance Safety/800-340-3413

For information, circle 185



### ROLLOUT FLOORING SYSTEM

The PORTAFLOOR rollout flooring system was used to cover several local venues in Salt Lake City during the Winter Olympics, the largest being Washington Square downtown. Pioneer Park, Liberty Park, and the Courthouse Station also sported the portable flooring.

"We are very happy that we chose PORTAFLOOR," said a representative of Salt Lake City Corp. "Price was a huge concern, but we also wanted a product that would protect our grass and was easy to install."

PORTAFLOOR provides the solution with technology that combines to produce both pedestrian friendly and protective flooring. The protective canopy that is formed when the product is installed allows the grass to maintain its integrity for many days of use. In addition to grass protection, PORTAFLOOR can also be used over sand, gravel, asphalt, dirt, artificial turf, concrete and more without damaging the surface beneath.

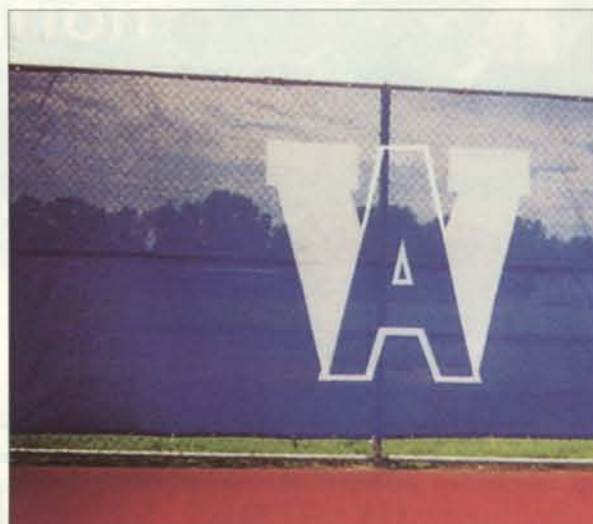
Sport Court Inc./801-972-0260  
For information, circle 057



### BASEBALL SUPPLIES

Southern Athletic Fields supplies baseball and softball field accessories, including heavy-duty stiff drag mats, standard drag mats, 10 x 10-in. tamps, manual sod cutters, Poly-Cap fence guards, mound rulers, as well as bases, home plates, and pitching rubbers by Hollywood.

Southern Athletic Fields/800-837-8062  
For information, circle 058



### WINDSCREENS

Pioneer's protective windscreens reduce wind gusts, distractions, and glare while lending a clean background for outdoor sport venues, especially baseball fields, batting cages, field houses, and volleyball and tennis courts. The windscreens come in three different materials and can be custom sized. Available colors include Dark Green, Royal Blue, Black, or custom color depending on material chosen. Open mesh vinyl-coated polyester windscreens can be customized with team logos.

Pioneer Manufacturing/800-877-1500  
For information, circle 186

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# Passion Play

Who could forget Greenville baseball, or great guys like Butter Ball?

BY MEL LANFORD

*Editor's note: Each month, "On the Road with the Ace" will profile different people and places that veteran groundskeeping pro Mel Lanford encounters on his travels throughout the United States, visiting ballfields and the many dedicated groundskeepers who make them great.*

**G**reenville, NC—Born and raised in a city dubbed "The Heartbeat of Baseball," Chris "Butter" Ball claims his first key influence in baseball and in life as a small boy, and even now as a young adult, was a fellow by the name of "Crash" Davis, the character depicted by Kevin Costner in the movie "Bull Durham." Butter's grandfather, Grandpa Charlie, was Crash's longtime friend and neighbor in Durham and was as well known in that town as Crash. Both were star college athletes, Grandpa Charlie at Carolina and Crash at Duke. Crash and Charlie made their love of the game a cornerstone for their lifelong friendship. Young Butter inherited his passion for baseball before he could walk or talk, and even before he received his first mitt, ball, and can of "gloveoleum" from his dad, Lee, at the tender age of six. Two years later he was christened "Butter," a handle he still answers to proudly today.

North Carolina was the first hotbed for minor league baseball in the United States and has a colorful history dating back to the early 1900s. Stories of fans arriving at early stadiums by horse and buggy are recalled some 100 years later. Greenville's love of baseball has remained at the center of attention, with Greenville Little League dominating the Southeast programs for the past 50 years. The city has long been considered the "Birthplace of Baseball" in the rural U.S. and has participated in the regional and national finals of the Little League World Series.

Just take a look at the town's 1998 baseball record, considered a typical year in Greenville:

**Little League:** 2nd in the United States; 3rd in the World

**Babe Ruth:** Southeast Regional champs

**Senior Boys:** Southeast Regional champs

**Rose High School:** State champs (33-0)

**American Legion:** Finals in State Playoffs

**East Carolina University:** Lost to LSU in NCAA tourney regionals

This winning tradition for the youth of Greenville begins at Elm Street Park, the town's beloved 50-year-old, 2,500-seat, Little League ballfield. In 1999, Hurricane Floyd threatened to alter the direction of Greenville's youth with a 10-foot wall of water that flooded the field. At that time, Butter Ball was the head groundskeeper of the new baseball stadium at the University of North Carolina, Greensboro, and his alma mater. He immediately enlisted his industry partners, Jake Holloway of the



Neil Avent (left), Assistant Baseball Coach, U.N.C.G. and Chris "Butter" Ball at the UNCG Baseball Field.

Greensboro Bats baseball club, Joey Simmons of the Charlotte Knights baseball club, Chad Price of Carolina Green field construction, and me, a representative of Diamond Pro professional groundskeeping products and founder of the Ace of Diamonds Tour.

Together, we donated material, equipment, and our expertise to help save the historic Little League ballfield. Remarkably, with the help of hundreds of local volunteers, the field repairs were completed in just 2 1/2 days. So important is baseball to this city that officials decided to put the ballfield project ahead of other recovery projects, knowing it would become a rallying point and catalyst to the reconstruction of an entire community following a devastating natural disaster. Today, Elm Street Park continues to serve as a testament to Greenville baseball's history and the pride of this dedicated baseball community.

Butter went on to notch 2 years of groundskeeping experience in professional baseball with the Harrisburg Senators, the AA Eastern League affiliate of the Montreal Expos. He returned to Greensboro and is now on the vendor side of the business, working as an athletic field specialist with Nivek, Inc., a turf supply company.

"It's more important today to educate managers and coaches about what's new in materials, equipment, and techniques, than to approach them as a salesman," he says.

As testimony to his dedication to baseball, Butter built 18 professional pitchers



mounds last year in his market area—all at no cost. The work was done to help build relationships and educate end users about new materials, equipment, and techniques. As the groundskeeping profession evolves, it is knowledgeable pros like Butter, with their solid baseball backgrounds, who lead the way. **ST**

*Chris "Butter" Ball, 25, is a graduate of the University of North Carolina, Greensboro and a member of the Eastern North Carolina Turfgrass Association. He is currently involved in forming a new STMA chapter, known as the Piedmont Chapter, in Central and Western North Carolina.*

*Mel Lanford, a 30-year veteran of the groundskeeping industry, is the creator and host of the Ace of Diamonds Tour, sponsored in part by Diamond Pro Professional Groundskeeping Products, a division of TXI. Mel travels across the United States year-round presenting hands-on seminars, demonstrating the proper infield and sports turf maintenance materials, equipment and techniques to athletic field managers. For more information, visit [www.diamondpro.com](http://www.diamondpro.com) or call 800-228-2987.*



Mel Lanford and Joey Simmons at mound building at Elm St. Park.



Father and son volunteer at Elm St. Park.

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**Fastliner line-marking system** (shown on the Highlander SPORT®) is ideal for ballfields and parking lots. Non-clog system paints evenly at up to 15 mph.

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## Rain Bird website offers answers

Rain Bird Corporation has launched its enhanced website ([www.rainbird.com](http://www.rainbird.com)) enabling user-friendly online access to quality solutions for all types of irrigation applications, says the company.

The site provides immediate access to detailed product specifications, replacement parts, and instruction manuals. In addition, visitors will have access to troubleshooting guides, tips on efficient irrigation, a dealer locator, an online store, a custom design service, and answers to the most frequently asked questions regarding irrigation.

"The site is now more comprehensive and easier to use than most printed materials," says Art Ludwick, vice president of Rain Bird. "We expect that it will be a great resource for professionals seeking helpful tips and solutions about irrigation products or installation issues. We want to assist our customers with



issues that can apply to any landscaping or agricultural project, from backyards to farms to golf courses to sports arenas and public parks."

## Rutgers, Japan Tobacco want improved turfgrass

An agreement between Rutgers University and Japan Tobacco will enable Rutgers to develop and commercialize improved turfgrass varieties by using a pioneering plant transformation technology, announced Dr. William Meyer, head of the turfgrass breeding program at Rutgers.

The new technology was developed by Japan Tobacco and modified for use in turfgrass by Dr. Barbara Zilinskas, a plant scientist at the Center for Turfgrass Science and the Biotechnology Center for Agriculture and the Environment at Rutgers. The agreement will also enable the university to sublicense the Japan Tobacco technology, and Rutgers improvements, to research-oriented companies, for use in developing improved transgenic turfgrass varieties. These companies have access to proprietary genes and will use this technology to develop new varieties, which they then will market.

"Long term, we believe that transformation technology will enable us to solve some unsolved pest and disease problems," said Meyer.

The Japan Tobacco transformation technology known as PureIntro employs plasmids derived from *Agrobacterium tumefaciens*, a bacterium that has the unique ability to insert a portion of its DNA into the cells of plants. For years, scientists thought that this bacterium could transform only dicots, a category of plants that includes soybeans, cotton and tobacco, but not monocots, a category that includes corn, rice or grasses. However, Japan Tobacco scientists found a way to employ *Agrobacterium* in monocots. A Rutgers team led by Dr. Zilinskas has successfully applied PureIntro to turfgrasses.

The Center for Turfgrass Science at Rutgers is a leading developer of turfgrass in the United States and is headed by Dr. Bruce Clarke, director, and Meyer.

## LA Clippers and AT&T donate Sport Court game court to help kids

According to a report from the Secretary of Health and Human Services and the Secretary of Education, adolescents are more likely to be active if they have convenient access to play spaces and sports equipment. However, there are children in the Los Angeles area that

have no convenient and safe place to play. That is why Sport Court, Inc. and Sport Court of Los Angeles are supplying four full size courts for AT&T Wireless P.L.A.Y. Safe program.

The Los Angeles Clippers P.L.A.Y. (Playgrounds for Local Active Youth), sponsored by AT&T Wireless, strives to build safe playgrounds and help refurbish basketball courts and hold clinics for children in the Los Angeles area. Each court will be made of the Sport Court Sport Deck IV (SD IV) tiles.

"We are really excited to be a part of this event," says Dale Hendrickson of Sport Court of Southern California. "Sports can be very beneficial for the kids in these areas. Not only does it give them a healthy alternative to trouble, but by playing sports kids build self-esteem and team play, to be a part of this is like helping build those kid's futures."

## Chipco launches online product training

The Chipco Professional Products group of Aventis E.S. has launched Chipco Academy, a free online product training program for turfgrass professionals. End-user training on fungicide, herbicide, insecticide, and PGR use is available at [www.aventischipco.com](http://www.aventischipco.com).



Each Academy training program consists of information on target pests, product chemistries, benefits, and application procedures. After reviewing the info presented, participants can take an online quiz, then if they complete it successfully, they receive a certificate and a gift from Chipco.



Glenmac Inc, Jamestown, ND, has purchased assets and marketing rights to the Cherrington Corp. line of beach and surface cleaning equipment, and will market the line under its affiliate corporation, Harley Enterprises, Inc. For information call 800-437-9779.



# Chapter regional conference calls spark idea flow

The leaders of STMA's 23 affiliated Chapters and of many of the groups in the process of forming Chapters joined together to share ideas between March 26 and April 2. Abby McNeal, CSFM, Chair of the Chapter Relations Committee, and Dave Rulli, STMA Board Member Liaison to this Committee, have developed a nationwide network, grouping the Chapters within six regions, with a Regional Contact established for each region.

Regional Contacts are: Dan Douglas, Region 1; Boyd Montgomery, CSFM, Region 2; Connie Rudolph, CSFM, Region 3; Bill Marbet, Region 4; Tom McAfee, Region 5; and Bill Murphy, Region 6. Suz Trusty serves as the STMA Headquarters Chapter Contact.

The Chapters and forming Chapters within each Region meet in the spring and again in the fall by Conference Call with the Regional Contact, Abby, Dave, and Suz. This provides a forum for discussion of problems and a sharing of information and ideas. It's the second year for these Conference Calls. They were developed as a means of continuing the interaction between Chapters developed in the annual Chapter Officers Training and Idea Exchange Session (COTS) held in conjunction with the STMA Annual Conference in January each year.

Both the COTS gathering and the Regional Conference Calls are funded by the generous support of STMA Chapter Sponsors: Gold Level, John Deere; and Silver Level, Alpine Services, Inc; Hunter Industries, Stabilizer Solutions, and Syngenta.

Chapter leaders discuss ideas for trade shows, vendor field day exhibits, and equipment demonstrations; programs for seminars, field days and seminars on wheels; methods for developing better newsletters and websites; organizational ideas; and many other topics that fit the needs of those

involved. It's a networking bonanza!

During these spring calls, Abby and Dave also reported on the Chapter-related segments of the STMA Strategic Plan, including the progress made to date, and the initiatives to be undertaken in the future.

For example, one initiative from 2001, the STMA Speakers Bureau, has moved from an idea to a reality. Those interested in serving as a speaker at the Chapter, Regional and/or National levels are invited to fill out the form as posted on the STMA Website, or contact STMA Headquarters for a printed copy of the form. The information gathered will be compiled for use in program planning by Chapters, State and Regional Turfgrass Program Committees, other groups seeking sports turf related speakers, and the STMA Headquarters.

STMA Chapters are definitely in Action! Just check out the events listed below, or for even more detail, go to the STMA Website: [www.sportsturfmanager.com](http://www.sportsturfmanager.com). On the website, you'll find a master listing for Chapters, along with links to each chapter's STMA WebPages and, where Chapters have their own Websites, links to those as well.

STMA members report that the networking component of their participation in their Chapter and in the National (International) organization is one of the greatest resources they have. It's the best forum for sharing information, tracking down answers to tricky questions, solving difficult problems, and hundreds of other areas of support. Working together, sports turf managers are raising the level of professionalism throughout the industry, always striving to provide the best sports surfaces for all levels of play.

ST

## STMA Chapter News

**Tennessee Valley Sports Turf Managers Association (TVSTMA):** TVSTMA will hold an event on May 23 at the Franklin Road Academy in Nashville. Other upcoming TVSTMA Events are as follows: June 12: All Day Vendor Show in Jasper, TN; June 25: Joint meeting with Tennessee Turfgrass Association at the University of Tennessee in Knoxville; and July 18: Bellevue Baptist Church in Memphis, TN.

For information on the TVSTMA Chapter, or upcoming events, call Bill Marbet, Southern Athletic Fields, Inc., at 931-380-0023 or 800-837-8062.

**MO-KAN Sports Turf Managers Association:** The MO-Kan Chapter will hold a Summer Turf Management Field Day from 8:00 AM to 2:00 PM on June 19 at a Blue Valley School District location to be announced. This event will focus on all aspects of Bermudagrass establishment and maintenance on sand

base and native soil fields and will contain a laser grading session which will include the mathematics of dual slope laser grading, laser grader setup and the opportunity for you to operate a grader blade with laser controls.

For information on the MO-KAN STMA Chapter, or upcoming events, call Jody Gill at 913-239-4121; Gary Custis at 816-460-6215, or Mike Green at 913-208-6158.

**Minnesota Chapter STMA:** The Minnesota Chapter is planning a spring workshop for May 14 at Bethel College and Seminary. More details will be announced soon.

For information on the Minnesota Chapter, or upcoming events, contact Jeff Hintz, Bethel College & Seminary, St. Paul, Minnesota at tel. 651-638-6075 or e-mail: [j-hintz@bethel.edu](mailto:j-hintz@bethel.edu).

**Florida Chapter #1:** The Florida Chapter will hold

a Sports Equipment Field Day and Demonstration at Parkland on May 14. The educational focus is on preventive maintenance for irrigation systems and equipment.

For information on the Florida Chapter, or pending activities, call John Mascaro at 954-341-3115.

**Sports Turf Managers Association of Arizona:** The Arizona Chapter will meet on May 16 at the Tucson Parks and Recreation Hi-Corbett Field for morning educational sessions and a tour. The afternoon session will include a tour of the Karsten Turf Facility. The Chapter's Second Annual Golf Tournament will be held on June 7 at Sanctuary Golf Course at Westworld. For tournament information, contact Scott Yakel at 602-315-6500 or Brian Johnson at 480-965-3890. The Turf in the Pines educational seminar will take place on June 14. Contact Felip Garcia at 928-774-2868.

## STMA Chapter News

For information on the chapter, or upcoming events, contact Bill Murphy, at e-mail: [bmurphy@ci.scottsdale.az.us](mailto:bmurphy@ci.scottsdale.az.us) or tel. 480-312-7956.

**Keystone Athletic Field Managers Organization (KAFMO/STMA):** Beacon Ballfields, in association with the Keystone Athletic Field Managers Organization (KAFMO), is conducting two field maintenance seminars in Pennsylvania. The first will be held on Tuesday, May 21, at Delaware Valley College in Doylestown. The second is scheduled for June 5 at Cranberry High School in Seneca. Both seminars will feature former Baltimore Orioles head groundskeeper, Paul Zwaska, who is now general manager for Beacon. Topics in the seminar are designed to educate groundskeepers, coaches, and facility managers with the emphasis placed on field maintenance materials, equipment, and maintenance practices. The day-long seminar consists of a morning classroom session followed by an early afternoon on-field session.

For more information on these seminars call Beacon Ballfields at 800-747-5985. For information on the KAFMO/STMA Chapter or other upcoming events, contact Dan Douglas, Reading Phillies Baseball Club, at tel. 610-375-8469, ext. 212; or e-mail to: [kafmo@aol.com](mailto:kafmo@aol.com).

**Ohio Sports Turf Managers Association (OSTMA):** The OSTMA chapter will hold a spring workshop in the Cleveland area with Baldwin Wallace College and the Akron Aeros on May 22. Check the website for more details and a registration form.

The OSTMA will host a summer workshop with the Toledo Mudhens on June 26 at the brand new 5/3rd Field in downtown Toledo. Educational sessions will be conducted by Jeff Limburg, head sports field manager, and the OSTMA. The MISTMA Chapter also has been invited to participate. Tickets will be available so attendees can catch the ballgame following the workshop.

For information on the OSTMA Chapter, or upcoming events, call OSTMA Headquarters at 740-452-4541 or Boyd Montgomery at 419-885-1982; or visit the chapter's website at [www.glstma.org](http://www.glstma.org).

**Iowa Sports Turf Managers Association:** The Iowa Chapter will hold a Softball Workshop at the Burlington Regional Rec Plex on May 22. A New Construction and Renovation Workshop is scheduled for June 25 at Grinnell College.

For information on the Iowa Chapter, or upcoming activities, contact Lori Westrum of The Turf Office at tel. 515-232-8222, or fax 515-232-8228, or e-mail: [Lori@iowaturfgrass.org](mailto:Lori@iowaturfgrass.org).

**Midwest Chapter STMA:** The Midwest Chapter will hold a "Back to Basics" Baseball/Softball Maintenance Clinic in early June. This will include a hands-on workshop covering mound construction, infield maintenance, turf care, water removal techniques, and equipment demonstration. The location and date will be announced soon. The Chapters Tour on Wheels will be held in late August.

For information on the Midwest Chapter, or pend-

ing activities, visit the Chapter's website, <http://mestma.org/>, or call Libby Baker at 847-263-7603 or email [Bake60ft6in@aol.com](mailto:Bake60ft6in@aol.com).

**Colorado Sports Turf Managers Association:** The Colorado Chapter is planning a Baseball/Softball Seminar at the City of Westminster on June 5. Also in the planning stages is a Summer Workshop covering soccer/football/baseball/softball maintenance. This event will be held at the City of Aurora.

For information on the Colorado Chapter, or upcoming activities, visit the Chapter's website, [www.CSTMA.org](http://www.CSTMA.org), or call the CSTMA Chapter Hotline at 303-346-8954.



**Michigan Sports Turf Managers Association (MiSTMA):** The Michigan Chapter's annual meeting will be held June 20 at Okemos High School. MISTMA also will join the Ohio Chapter for a summer workshop with the Toledo Mudhens on June 26 at the brand new 5/3rd Field in downtown Toledo. The MSU/MTF/MiSTMA field day will be hosted by the MTF at Michigan State University on August 13. This event will team sports turf managers and business managers with a focus on the business end of maintaining sports fields.

For information on the Chapter or pending events, email Amy Fouty, University of Michigan, at [fouty@umich.edu](mailto:fouty@umich.edu), or go to [www.mistma.org](http://www.mistma.org) to visit the chapter's new website.

**Southern California Chapter:** For information on the Southern California Chapter, or pending activities, call Ron Kirkpatrick at 858-453-1755.

**Northern California Chapter of the Sports Turf Managers Association:** For information on the Nor-Cal Chapter, or pending events, call Janet Gift at 530-758-4200.

**The Greater LA Basin Chapter of the Sports Turf Managers Association:** For information on the Chapter or pending events, call Steve Dugas, California State University-Fullerton, at 714-278-3929 or email [sdugas@fullerton.edu](mailto:sdugas@fullerton.edu).

**Gateway Chapter Sports Turf Managers Association:** For information on the Gateway Chapter, or upcoming events, call Mike Krone, Missouri Baptist College, 314-392-2328 or email [krone@mobap.edu](mailto:krone@mobap.edu).

**Indiana Chapter:** For information on the Indiana

Chapter, or pending activities, call Terry Updike, B & B Fertilizer, at 219-356-8424.

**Nebraska Sports Turf Managers Association:** For information on the Nebraska Chapter, or upcoming events, call Gregg Bostelman, City of Grand Island, at 308-385-5426.

**Sports Field Managers Association of New Jersey:** For information on the New Jersey Chapter, or upcoming events, call Fred Castenschiold at 908-722-9830; or call Eleanora Murfitt, at 908-236-9118; e-mail to [SFMANJCHAPTER@netscape.net](mailto:SFMANJCHAPTER@netscape.net).

**Mid-Atlantic Athletic Field Managers Organization (MAFMO Chapter STMA):** For information on the MAFMO Chapter, or pending activities, call the Hotline at 410-290-5652.

**North Texas Sports Turf Managers Association:** For information on the North Texas Chapter, or pending activities, contact Scott Piecha at 817-831-4505 or [sspiecha@aol.com](mailto:sspiecha@aol.com) or Rene Asprion at 972-647-3393, or visit the website at [www.ntstma.org](http://www.ntstma.org).

**South Texas Sports Turf Managers Association:** For information on the South Texas Chapter, or upcoming events, call Craig Potts, Texas A & M University, at tel. 979-458-8841, or e-mail: [CPotts@athletics.tamu.edu](mailto:CPotts@athletics.tamu.edu).

**Virginia Sports Turf Managers Association:** For information on the Virginia Chapter, or upcoming events, contact: Chapter Vice President, Randy Buchanan, County of Henrico Recreation and Parks, via e-mail: [buc06@co.henrico.va.us](mailto:buc06@co.henrico.va.us) or at tel. 804-261-8213.

**Wisconsin Sports Turf Managers Association:** For more information on the Wisconsin Chapter, or other pending events, call Richard Miller at 608-756-1150.

### Chapters on the Grow

**Pacific Northwest:** For information on the chapter forming in the Washington/Oregon area, contact in Washington, Jay Warnick at 425-893-5130 or [JayW@Seahawks.com](mailto:JayW@Seahawks.com) or in Oregon, Mike Wagner at 541-346-5436 or [MWagner@Oregon.UOregon.edu](mailto:MWagner@Oregon.UOregon.edu).

**Georgia:** For information, contact Lori Turek at 770-928-1580 or [gastma@earthlink.net](mailto:gastma@earthlink.net).

**Kentucky:** For information, contact Tom Nielsen at [TNielsen@batsbaseball.com](mailto:TNielsen@batsbaseball.com) or Aaron Boggs at [AVBoggs@netscape.net](mailto:AVBoggs@netscape.net).

**Las Vegas:** For information on the chapter developing in Las Vegas, contact Rod Smith, Grounds Manager/Cashman Center at e-mail: [rms@lvca.com](mailto:rms@lvca.com) or at tel. 702-386-7140.

**New York:** For information on the chapter forming in Central New York, contact Kevin Meredith, National Soccer Hall of Fame, at e-mail: [Kevin@wpc.com](mailto:Kevin@wpc.com) or at tel. 607-432-2953.

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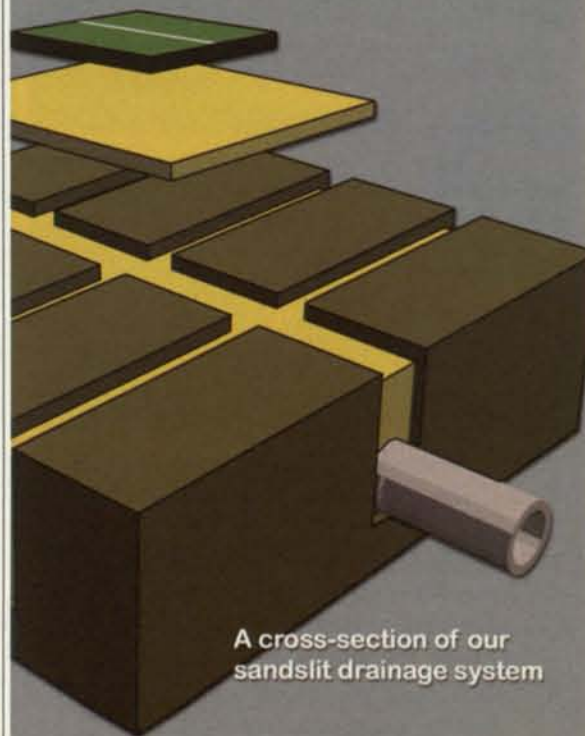
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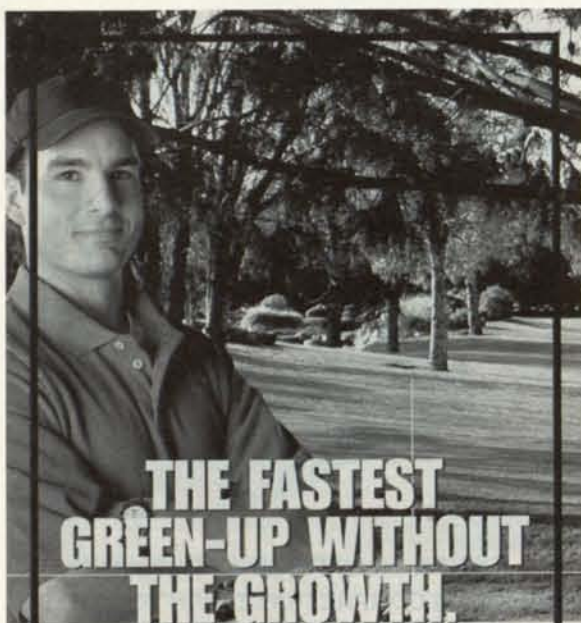
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# Cutting heights

*I have noticed a lot of variations in the height of mowing the soccer, football, adult softball, and youth ball diamonds. I am wondering if there is a desired height for these facilities. Currently we keep everything at 3 inches and we have no problem with late season "browning" and our players seem to like the extra cushion in the outfields. I was wondering if we lower the blades, will we cut back on our maintenance costs?*

City of Wilmington, OH

**I** was about to comment about your high mowing height, and then I noticed your fields are in Ohio. Not that Ohio fields should be higher than anywhere else, only that you are most likely growing a cool-season grass. Our warm-season grasses (mostly bermudagrasses) are typically maintained a lot lower than fescues, bluegrasses, and ryegrasses.

Your question brought up several good points about mowing height that I would like to address. First, should different field types and different levels of play require different mowing heights? Second, if fields are mowed lower, will that result in lower maintenance costs?

Let me address the first question using part of your statement. If the "players seem to like the extra cushion" then perhaps you have found a good mowing height. One of the most difficult tasks as a field manager is to get to the point where everyone is happy with the field's condition. Often we change our practices to meet the demands of the field's users. If everyone is happy with the field with your normal level of maintenance then you have accomplished a great feat.

An argument can be made that some sports benefit from a lower mowing height than others do. For instance, with soccer the field surface can impact the speed of the game and the accuracy of the passes. A shorter mowing height usually transfers into a quicker, more direct roll of the soccer ball. The University of Florida's soccer coach talks about "playing the ball to the feet" when they play on dense, closely mowed bermudagrass versus "playing the ball in the air" when they play at northern schools with taller-cut cool-season grasses that have a bunch growth habit. I know our soccer team probably plays within a given season on fields mowed anywhere from 1/2 inch to 3 inches. To me that means that different levels of play probably do not justify different mowing heights, just reasonable mowing heights.

## Can't mow away bad hops

Football, lacrosse, baseball and softball do not depend on the field surface as much

as soccer for ball response. It could be argued that bad hops for baseball and softball may influence the outcome of a game, but mowing height alone will not produce or eliminate bad hops. The turf and good judgment can dictate the mowing height. To strengthen that opinion, most surveys I have read have indicated that players (and coaches) could not generally differentiate moderate differences in cutting heights.

Now to address the second question. From an academic perspective, the lower you mow it, generally the more frequently it should be mowed. The basic recommendation is to mow no more than 1/3 of the plant with each mowing. So, if you have a lower

mowing height, it will generally require a reduced interval between mowings, which may not fit in with a reduction in maintenance cost. Generally, the higher the height of cut, the less damage you see following use, and the more cushion. Realize that cushion is as much a result of soil conditions (compaction and soil moisture mainly) as grass height.

There is another reason to vary mowing height—turf recovery. Some managers like to let the grass grow a little higher during the off-season to allow the grass to fill weak areas. Before the season begins, they slowly lower the mowing height to the desired playing height.

On the other hand, some turf managers feel by letting the grass grow tall, you reduce the lower leaves on the plant, reducing density. By keeping the grass at the in-season height the grass is conditioned to perform at that height. From my perspective the choice between those two theories depends on the desired in-season height. Turf can be mowed below an optimum height for special events, but must be allowed to recover if you want your turf to last through the season.

Lastly, let me provide a more specific answer to your question. Your 3-inch height is probably on the upper end of the suggested mowing range. In my limited association with northern athletic field grasses, I would probably suggest a little lower mowing height during the season (say 2 inches) and perhaps the 3-inch height during the more stressful summer months. The 2 inch height gives a "cleaner" look and should not have a significant impact on browning, wear, etc. and should fit well with each of the sports field types you mentioned.



## Have Questions?

Send them to Grady Miller at the University of Florida, PO Box 110670, Gainesville, FL 32611, or email [gmliller@mail.ifas.ufl.edu](mailto:gmliller@mail.ifas.ufl.edu). Or, send them to Dave Minner at Iowa State University, 106 Horticulture Hall, Ames, IA 50011, or email [dminner@iastate.edu](mailto:dminner@iastate.edu).

# Water-logged athletic field?



Hit a home run by installing the very best drainage system that...

- is easiest to install
- is least disruptive
- prevents field damage
- maintains schedules
- outlasts other systems
- is cost-effective

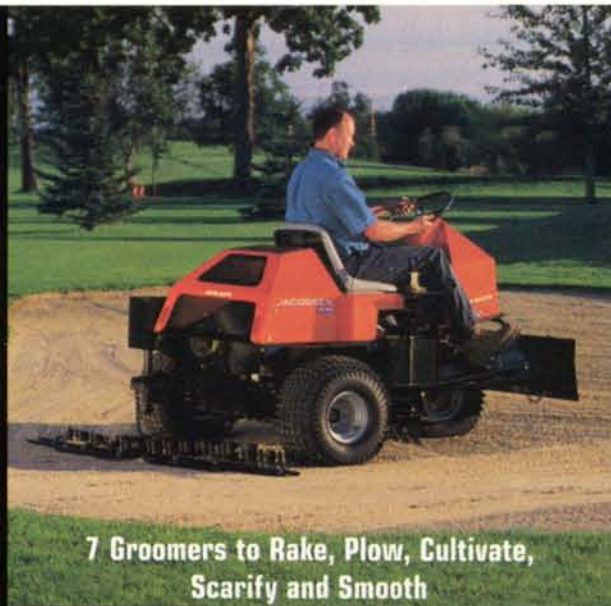
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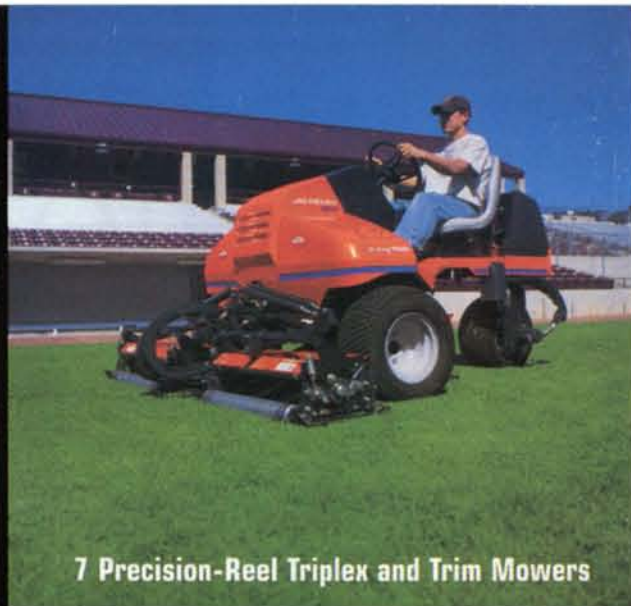




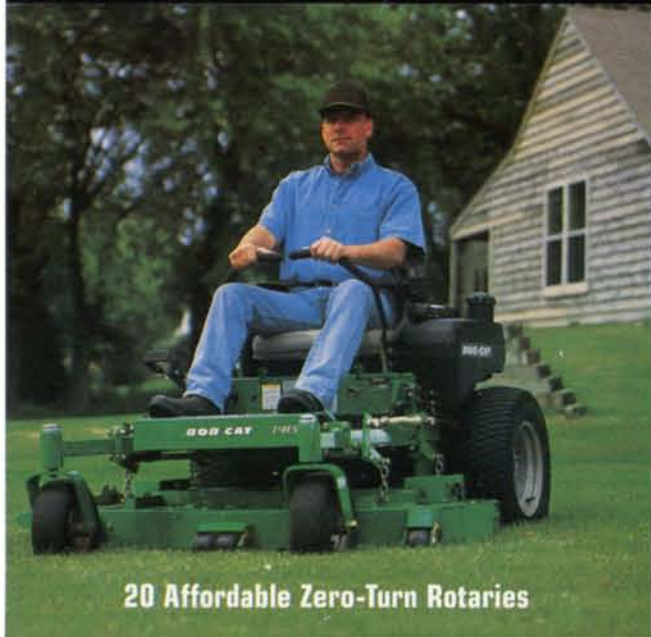
5-Gang Rotaries that "Stripe"



7 Groomers to Rake, Plow, Cultivate, Scarify and Smooth



7 Precision-Reel Triplex and Trim Mowers



20 Affordable Zero-Turn Rotaries

# ALL-STAR SPORTS TURF LINEUP

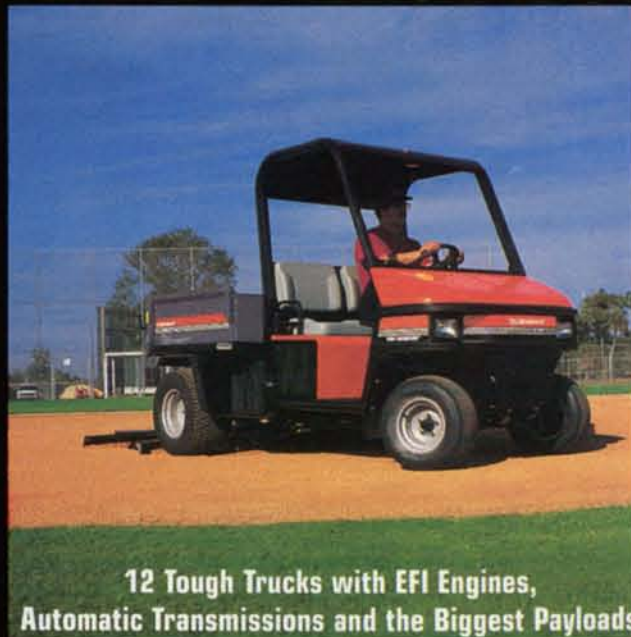
**CUSHMAN**  
Vehicles

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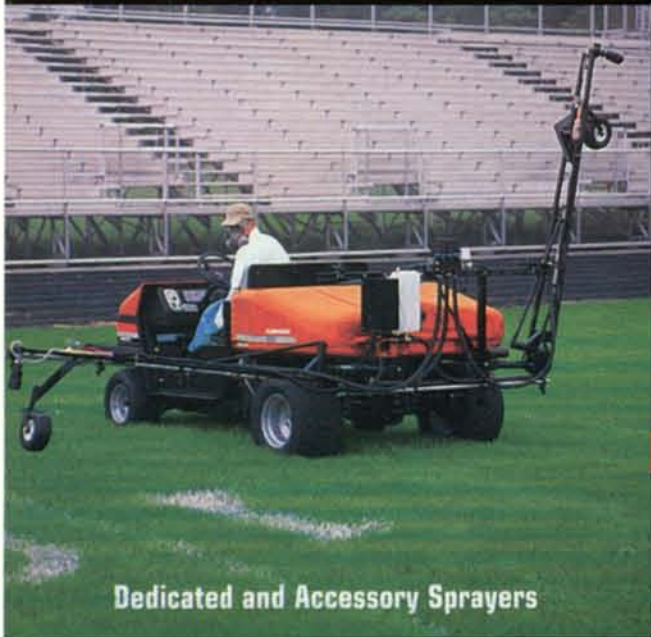
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Aerators



Zero-Turn Mowers



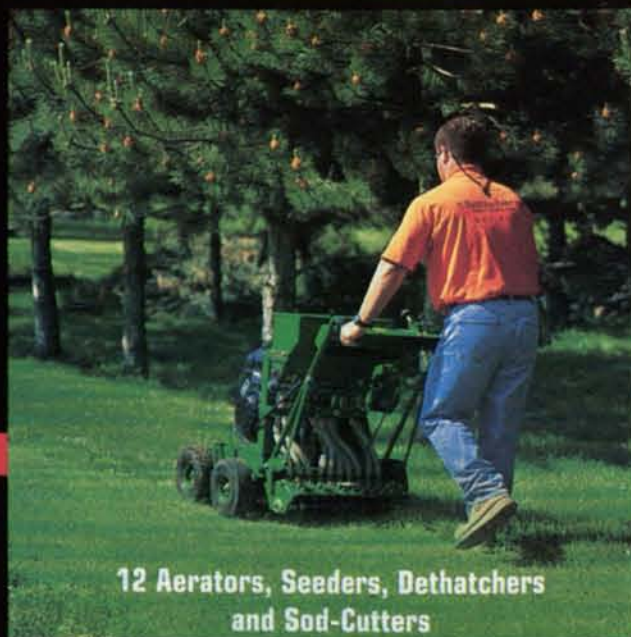
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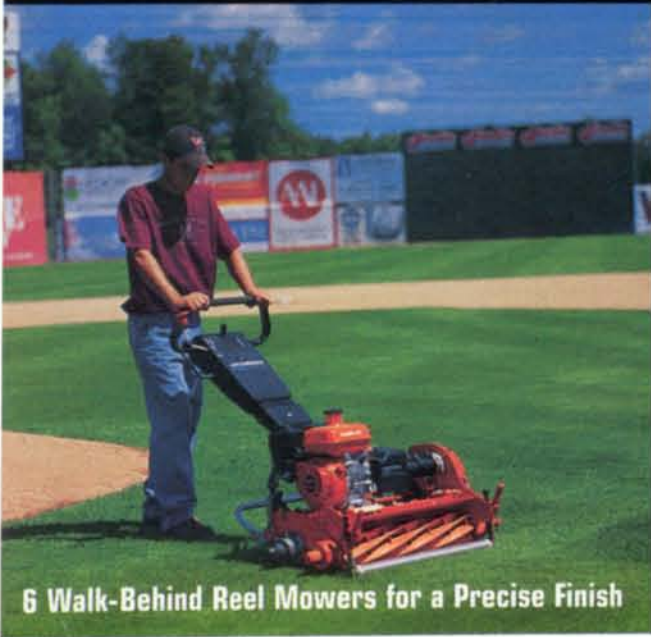
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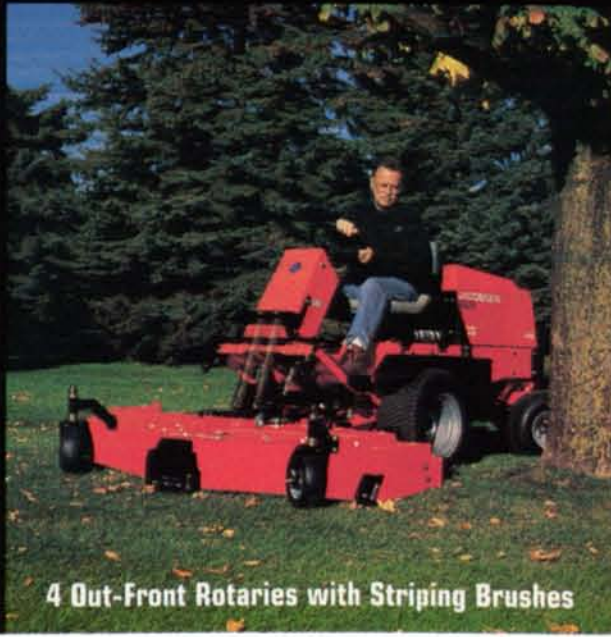
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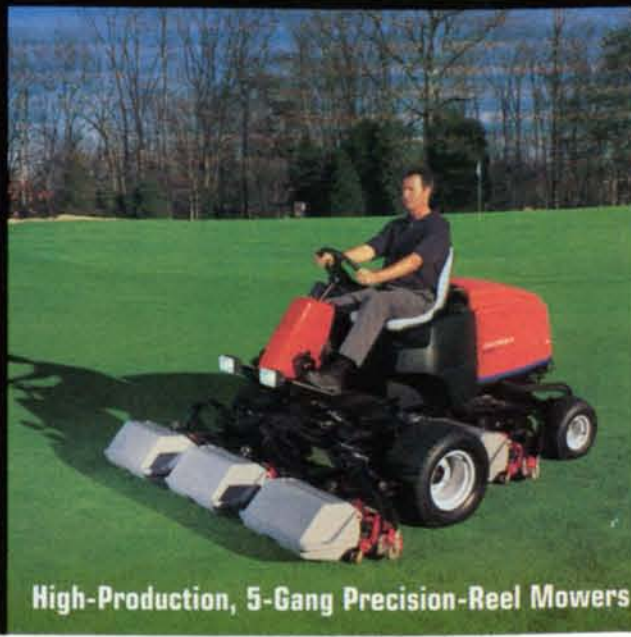
12 Aerators, Seeders, Dethatchers and Sod-Cutters



6 Walk-Behind Reel Mowers for a Precise Finish



4 Out-Front Rotaries with Striping Brushes



High-Production, 5-Gang Precision-Reel Mowers