

Cup games also were played there during a May and June schedule that brought 43 events to the field. Then there are the concerts that fill every possible open slot in this already packed schedule. High intensity, the phrase LeGros uses to describe it, is an obvious understatement.

He says, "On field events from late April through early December have averaged between 140 and 150 per year since the 1996 reconstruction. From May 1 to August 1, 2001, the use has been the equivalent of an on-field event every 1-1/2 days."

Field reconstruction

The field reconstruction was designed to enable the heavy use schedule. The original heavy clay, native soil was excavated to 2-feet. A concrete field-level curb was added between the playing field and the existing asphalt track. A sub-surface drainage network of 4-in. perforated pipe was installed within the crushed stone subgrade layer. This was topped by an 18-in. layer of USGA spec profile consisting of 75 percent sand, 15 percent peat and 10 percent top soil. The in-ground irrigation system provides full field coverage with Toro 640 pop-up heads. Big roll Kentucky bluegrass sod formed the playing surface for the 1996 season.

"The field was put to the test by torrential downpours during that first season," notes LeGros. "Because of the sand based system we were able to play when games at other local fields were cancelled."

In March of 1997, the surface was converted to the Hummer Grastile System. The tiles are developed in 7-ft. by 7-ft. frames containing 2-1/2 inches of a mixture of sand and Dupont carpet fibers planted with the desired turf. For Hersheypark Stadium, this was a blend of Kentucky bluegrass cultivars. Once the tiles are mature enough to be harvested, they are lifted out of the tray and placed on top of the field's existing soil profile with the tile joints staggered.

LeGros says, "The field was designed for the tile system with the installation date based on the maturity of the tiles. We selected the system to have the flexibility to remove and replace tiles according to field wear and to gain the added stability of the carpet fiber in the sand base. Once the system was installed, we found keeping ahead of the events with our aggressive aerification and overseeding program combined with nutrient 'spoon-feeding' allowed us to avoid moving tiles in-season. We doubled the 1996 event schedule in 1997 and the field held up well."

"By late November, day time temperatures here are dropping below 60 degrees and we're getting frost at night. With football the major sport during that period, we will have heavy wear from hash mark to hash mark between the 20 yard lines. But, when we ask the players about the footing after each event, they report it's great."

"Over time the tile sections have grown in to become one field. A couple of times, we have needed to cut out the goal mouth areas and replace them. We've sawed out the worn areas in 7-foot sections and replaced them with the tiles so we have continuity within our soil profile and turf ready for play."

Handling those concerts

It's not uncommon for the stadium to host soccer, football and a concert, in any sequence, back to back to back three or four times a season. For example, this year, the Wildcats played Montreal in a July 20 night game. The Big 33 Football Classic took the field the next night, and a Bon Jovi played July 22, followed by Destiny's Child on July 24.

To help facilitate this multi-event scheduling, a per-

Hersheypark Stadium 2001 Maintenance and Fertilization Program



MARCH – MAY

- Take soil sample; analyze results
- Monitor soil temperature
- Mow as needed at 1-1/2-inch height of cut
- Aerify with shatter tines or solid tines every 14 days
- Seed before each event with Kentucky bluegrass
- Apply slow release granular fertilizer 18-24-12 at 1-1/2 lbs. of nitrogen (N) per 1,000 square feet
- Apply 0-0-50 at 1/2 lbs. of potassium (K) per 1,000 square feet
- Apply fungicide according to IPM practices as weather dictates

JUNE

- Monitor weeds; spot spray as needed according to IPM practices
- Aerify with shatter tines or solid tines every 10 days
- Monitor moisture levels; irrigate as needed
- Spoon feed biostimulents 20-20-20 as turf needs dictate
- Prepare for soccer, gradually move mowing height of cut to 1-1/8-inch
- Mow every other day at 1-1/8-inch height of cut
- Aerify with hollow tines in late June; harvest the cores
- Seed with 100 lbs. of Kentucky bluegrass

JULY

- Aerify with solid tines if weather permits
- Irrigate deeply and infrequently as turf needs dictate
- Spoon feed biostimulents 10-5-40 as turf needs dictate
- Apply granular slow release fertilizer 5-10-30 at 1/2 lbs. of K per 1,000 square feet
- Mow every other day at 1-1/4-inch height of cut
- Make preventive fungicide applications every 14 – 21 days
- Seed before each event with Kentucky bluegrass

AUGUST

- Aerify with shatter tines or solid tines
- Irrigate deeply and infrequently as turf needs dictate

- Spoon feed biostimulents 10-5-40 every 14 days
- Apply fungicide according to IPM practices as weather dictates
- Seed before each event with Kentucky bluegrass
- Take soil sample; analyze results

SEPTEMBER

- Aerify with shatter tines or solid tines
- Spoon feed biostimulents 10-5-40 every 14 days
- Prepare for football, gradually move mowing height of cut to 1-1/2-inch
- Mow at 1-1/2-inch height of cut
- Seed center of field with perennial ryegrass as needed
- Apply fungicide according to IPM practices as weather dictates

OCTOBER

- Aerify with shatter tines or solid tines
- Apply granular fertilizer 9-18-17 at 1/2 lbs. of phosphorous (P) per 1,000 square feet
- Spoon feed biostimulents 20-20-20 every 10 days
- Mow at 1-1/2-inch height of cut
- Seed center of field with perennial ryegrass as needed
- Cover field with turf blankets when temperature drops below 50 degrees F

NOVEMBER

- Aerify with shatter tines or solid tines
- Apply granular fertilizer 18-24-12 at 1/2 lbs. of P per 1,000 square feet
- Seed center of field with perennial ryegrass as needed
- Cover field with turf blankets when temperature drops below 50 degrees F

DECEMBER

- Aerify with hollow tines in two directions; harvest the cores
- Seed with 200 lbs of Kentucky bluegrass
- Apply 1/8-inch layer of sand topdressing
- Apply starter fertilizer with percentages of N-P-K matched to turf needs
- Apply preventive fungicide for snow mold
- Cover field with turf blankets

Field of the Year



Hersheypark Stadium is owned by the Hershey Entertainment and Resort Co., which also owns the Hershey Wildcats, a men's soccer team that is a member of the A League Professional Soccer League.

manent stage was installed in 1997, at the north end of the field, replacing the previous seasonal stage. The new stage does offer flexibility since the uprights are attached to the footers with anchor bolts. This allowed the Hersheypark staff to move their stage and set the larger N'SYNC stage starting from the regular end-of-field position to provide the maximum on-field seating for that concert. The stadium's stage also is used during many sporting events as a premium seating area and refreshment station for VIPs or corporate sponsors.

Field conversions are a well-orchestrated performance. LeGros says, "In most instances, the field is covered and uncovered within a 24- to 36-hour period to minimize damage. Teardown always begins immediately at the close of a concert. If necessary, we can turn the whole stadium from a concert venue to a sports venue in approximately 19 hours. It requires coordination between all the different departments, with each performing their tasks in sequence. During teardown, we'll have a team of 50 people on the field alone. I can't say enough about the staff here. Many of the Hersheypark seasonal employees work on the teardown and setup of stadium events. The cooperation between departments, and the dedication and attention to detail are outstanding. That's what makes the whole thing work."

A lot of planning and ingenuity come into play in the setups, too. LeGros says, "Prior to a concert we mow the field in three different directions to minimize damage when the field is covered. We also control the moisture as much as possible, trying to dry down the top 1 1/2 inches of the profile. If it's too wet, compaction is greater and the turf transpiration beneath the cover can 'cook' the grass. We generally cover the field the night before the concert when the temperatures are cooler.

"Previously, we covered the field with Porta Floor alone. We found it protected the crown but we'd have some scorch on the tip of the leaf tissue. That scorch remained for 4 or 5 days until mowing gradually removed it. This year we've added an under layer of Enkamat to give the turf a small air cushion and eliminate the tip burn. We'll place the Enkamat running north to south and the Porta Floor on top of it, running east to west. The portable mixing tower is rolled into place. Then we set up

the 17,000 chairs in rows with 8-ft. aisles. All the rows must be marked and the chairs numbered."

Tshudy designed the portable tower, a unique concert facilitation feature. LeGros says, "John drew on his ingenuity and farm background to develop a sound mixing and lighting tower that would be quick and easy to equip and put in place without damaging the field. He took two flatbed farm wagons and put them side by side to create a doublewide bed. The tongues of the two wagons form a triangle that can be attached to one hitch on the back of a tractor. The three-story tower was built on top of these flatbeds.

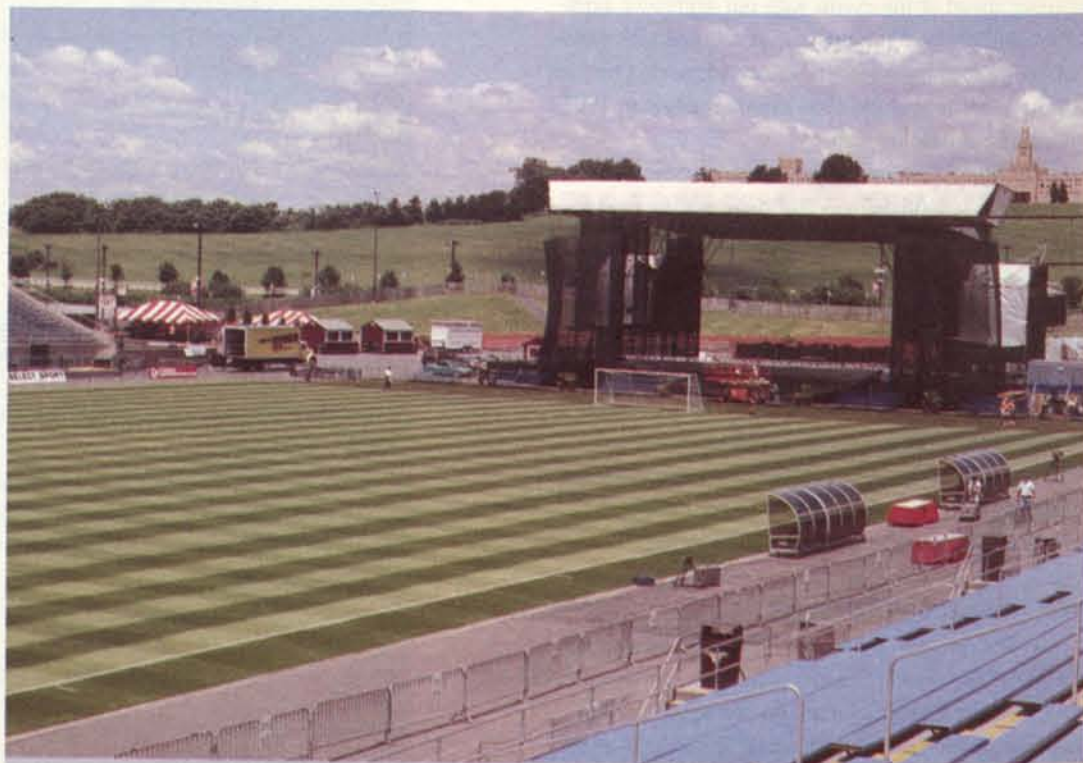
"We place a plywood road to move the tower to and from the stage to its on-field location, though the giant flotation tires give it a very low footprint, just 3.5 psi. The concert setup personnel drive their truck to the back of the stage, roll their sound and lighting equipment to the tower at the front of the stage, and put it in place on the tower. We then move the tower into position over the plywood, remove the plywood and put a crowd barrier around the tower. The same thing happens in reverse during teardown. The tower wagon can be pulled to the parking lot area and secured during sports events."

Fine-tuning the maintenance program

LeGros thrives on orchestrating things. Perhaps that comes from his college background as a music and drama major. He's orchestrated his own career, moving from an assistant golf pro to the maintenance side of the green industry spurred by his positive reaction to his 3 weeks of greenskeeping experience in the PGA golf pro apprenticeship program. He plotted his course from a crew member, to assistant golf course superintendent, to

owner of a landscaping business, to turf and sports field specialist for the parks and recreation department, all in the Orlando area. Seeking a site with four season weather patterns, he came to the Hershey area and began working in the Hershey Nursery landscape maintenance department of the amusement park. Hersheypark Stadium was just the place to apply his green industry background and organizational skills.

One way that organizational ability is put to use is in the three separate logs he uses to record every detail pertinent to the field maintenance program. One log is for daily weather conditions, one for daily events, and one for tracking all applications made to the field. He compares the information contained in the three logs to analyze results



To help facilitate multi-event scheduling, a permanent stage was installed at the north end of the field; it offers flexibility since the uprights are attached to the footers with anchor bolts.

and fine-tune the program. He says, "The logs document the situation when you need to respond to an inquiry from staff, management, a governmental agency or the public. But primarily, they provide a multitude of benefits in developing our maintenance plans. We can avoid mistakes and make adjustments to produce better results when the same circumstances occur."

"Since the installation of the new field, we've constantly adjusted the maintenance program to become proactive, rather than reactive. The logs are extremely helpful in this process. If you wait to react to field damage, you're always focusing on the recovery and the field declines because you're never ahead of the game. So we're doing things today to prepare the field for what will happen 3 weeks from now. We want the field to go into every event in the best possible condition for that event."

One example of this fine-tuning is the overseeding program. LeGros strives to keep the bluegrass content of the field near 100 percent. He begins overseeding with a bluegrass blend in early spring and continues throughout the season. As temperatures cool, in October, November, and December, he has, and will continue to, add perennial ryegrass to the overseeding mix for the center of the field. In previous years, at the end of December, he's replaced tiles to repair worn areas. These practices have allowed him to retain a 92 to 95 percent bluegrass stand.

In 2001, he's added Princeton 105 to his three-cultivar bluegrass blend and is overseeding with approximately 25 pounds of seed in key areas before every event. More seed may be applied immediately after a game to fall into the cleat marks prior to irrigation. The field is also cultivated with an Airway aerifier or with solid tines at least once, and sometimes twice, a month. LeGros says, "This cuts the rhizomes promoting better root development and increases the oxygen exchange and moisture penetration for deeper rooting. We also irrigate deeply and less frequently to encourage deeper rooting."

In December of 2000, rather than replacing tiles, the field was aerated in two directions with hollow tines, the cores harvested, the field overseeded heavily with Kentucky bluegrass and topdressed with the same sand mix as the soil profile. Fertilizer was applied and the field covered with a grow blanket. Monitoring began in March, with the grow blanket removed when temperatures allowed and replaced as temperatures

cooled. Biostimulants and urea were applied to strengthen the turf and promote growth. By the second week in May, turf cover was approximately 80 percent and was nearly 100 percent by the start of the playing season. These practices, combined with the aggressive overseeding program and the other continually adjusted maintenance practices, have resulted in approximately 98 percent turf cover in early August, after 43 on-field events.

Putting it all together

The program all comes together with LeGros and an assistant

as the total full-time maintenance staff for the Hersheypark Stadium field. An intern joins them for 3 months, May through July, of each year. To accomplish all that needs to be done, and keep fine-tuning to a higher level, LeGros is always seeking ways to make the tasks easier, more efficient and more cost effective. LeGros says, "Hersheypark management is very supportive of our programs and John Tshudy is an excellent supervisor. It's also motivating to see Hersheypark Stadium filled with people enjoying the results of the standards we strive to maintain. I try to use everything on my palette to paint the best possible picture for our field." **ST**

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Doubleday Field, Cooperstown, NY (photo courtesy of Typar Turf Blankets)

Cover your bases

Tools and tips for tending to tarps

BY MIKE HEBRARD

More and more schools are purchasing field covers to persevere the baseball season during the wet spring months.

Coaches typically feel that field covers are a good purchase for their teams and can prevent several rain-outs. However, if you are the guy that covers his field and can play on a questionable day, others can't. Your game is caught up and the others play the next dry day, which happens to be sunny and 70 degrees. As a result, your field got torn up playing in wet conditions, while everyone else is playing the same round on a nice day.

HOW TO CHOOSE A FIELD COVER

Field covers keep fields dry, reducing the risk of rainouts. But covers can also play a role in turf enhancement as well as lend themselves to great advertisement/sponsorship arrangements.

The color of covers can play an important role in turf management. For example, in the southern transition zone the length of time a cover can be left on the turf is critical. Heat buildup from the sun under a cover can cause hardships on the turf. In the northern transition zone, field turf managers may want to draw heat to the turf during early spring. Tests conducted by several turf specialists found that certain colors of covers can have a positive effect on turf development.

- White / silver combination, with white side exposed to the sun, on average, has 14 degrees Fahrenheit less heat build up under the cover than other color combinations.
- Black / silver combination, with black side exposed to the sun, draws more heat to the turf surface.
- Orange / white combination allows light penetration and enhances turf development.

- There are a wide variety of other color combinations, but their main benefits are from an esthetic point of view such as team or school colors. Using a sponsor's color choice could help sell that sponsor on donating all or a portion of the cover cost.

Vinyl or woven polyethylene?

Both woven polyethylene and vinyl provide a good cover. The basic rule of thumb is the polyethylene is one-third the weight of vinyl and one half the price. Vinyl offers a larger range of colors and a heavier cover is better for handling in high-wind areas. Vinyl will stand up better if snow removal is an issue on football fields. Also, a plastic zipper for joining sections can be supplied on vinyl covers, but Velcro must be used for jointing sections of polyethylene. Budget and people power will often play a role in the final choice of vinyl or woven polyethylene.

Plate, mound, bases and bullpen covers are available for spot coverage in both polyethylene and vinyl. Be sure and order grommets for staking down.

Vinyl mesh covers (windscreens) can be used for batting practice turf protectors, batters eye background, fence enclosures and seat covers for restricted areas of the stadium.

-Bob Curry, Covermaster Inc.

A full infield tarp takes a lot of manpower to put on and off, so timing and the availability of players is essential. The players also need to have other shoes available in case of a rain delay to quickly cover the field; otherwise the cleats will damage the material. Some coaches have been known to cut players for running onto covered fields while wearing cleats.

Be organized on how a field cover should be unfolded, rolled back up, and where to dump the rainwater. Sometimes a tarp might have to be taken off just the keep down the weight of the rainwater that gets trapped.

On dry days, practice with the grounds crew and players the proper methods to cover and uncover. You might even make a mark on the field where the corner of one end should be so the tarp is properly aligned on the field.

Apply an adequate amount of weights so that the tarp does not blow off the field. Weights can be as simple as used tires, sandbags or, my favorite, 4-inch PVC pipe with a rope handle filled with cement. One person can easily grab four weights and apply, or take off, the tarp.

Handles are also important, especially with girls or players with small hands. The weight of the tarp is hard on the hands if you have to grab and start pulling with your knuckles embedded into the material.

The big day

My number one rule is on the day before the championship game, cover the field no matter what the temperature is. The only time all season that I get to use a tarp is for the Little League Softball World Series. We have teams from the Far East, Europe, Canada, Latin America, and the four U. S. Regions, and they have tight travel plans, so I don't want to get delayed a couple of hours for the championship game on ESPN 2.

It is also important to uncover the field if the tarp has been on for more than 24 hours, which allows for the carbon dioxide to escape to prevent turf damage from the lack of sunlight.

Because the purchase of the field cover is an expensive investment, one option is to paint the sponsor's logo on the tarp. But according to Bob Curry of Covermaster, advertising dollars should be spent on the cover for the tarp when it is rolled up. More people will see the advertisement and it is easier to place logos on the cover for the rolled up tarp than it is to place logos on the actual tarp material. Material that is used on some tarps can be difficult for paint, vinyl lettering and logos to adhere.

ST



Mike Hebrard is founder of Athletic Field Design. He can be reached via e-mail at hebrard@athleticfield.com.



COVERTECH TURF PRODUCTS

Covertech has been protecting golf course greens for more than 12 years, and now the company reports more and more sports turf managers are using their products on their soccer, baseball, and football fields.

Now Covertech has products just for *Sportsturf* readers: Supreme Green growth blanket and the Green Shield rain cover/bench tarp. The Supreme Green product accelerates seed germination, encourages root development, delays dormancy in the fall, reduces ice and frost damage, says Covertech, and is available in any size.

The Green Shield provides protection from rain and snow as well as general wear and tear. It can be used to cover mounds, base and home plate areas, or as a general field cover to avoid rainouts and help protect against injuries. It's made of "rip-stop" woven-coated polyethylene material and UV-treated for long life, says Covertech. The one-piece construction simplifies installation; package includes anchor pegs and storage bag.

COVERTECH

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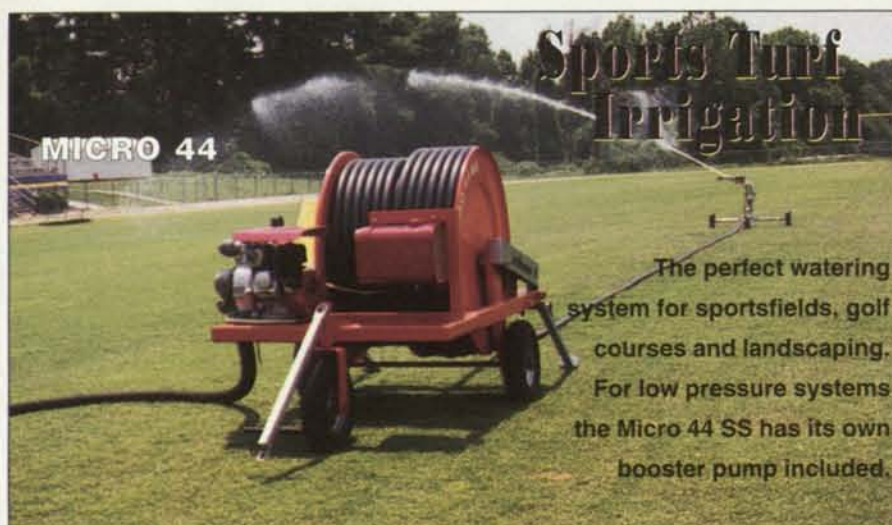
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Maintaining the turf is difficult not only because of the activity, but also because the time off for turf recovery is during upstate New York's winter. But that's when the job of ensuring healthy turf for the baseball games begins.

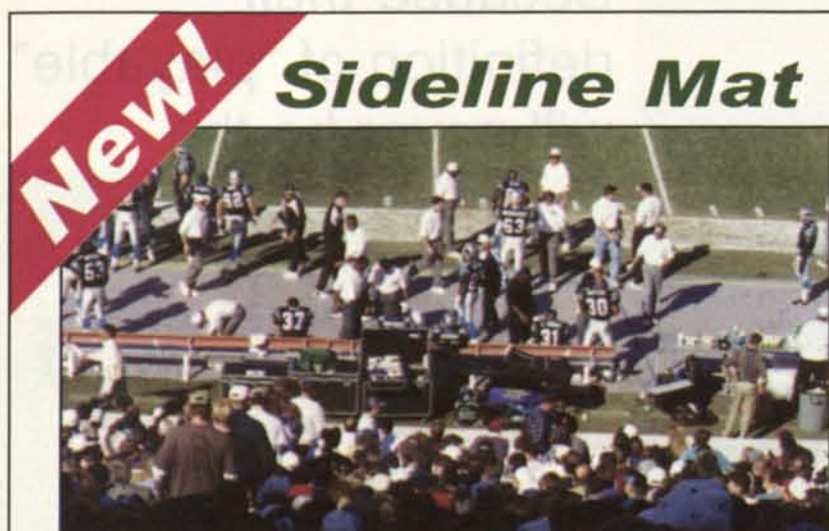
"We do everything when it's cold to make the grass stronger," points out Joe Harris, head groundskeeper for the Village of Cooperstown's baseball field since 1990, "so when spring comes we have a jump start on it."

A valued weapon in Harris' arsenal is Typar Turf Blankets. For the past 5 years, he has used the blankets from November until April, installing them by himself. He found that the turf blankets retain warmth and moisture to promote germination and growth, while allowing air and water through to the soil. Turf kept in this "greenhouse" of warmth and moisture will be stronger, have longer roots and will grow faster. The area can be used earlier, resulting in safer conditions, happier customers, and greater usage.

"The first time I used the Typar, I wasn't sure how they would work," Harris says. "But when I took them off and the turf was greener than surrounding areas, I knew they would become a standard part of my regimen."

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FIELD COVERS AND ACCESSORIES

Ball Products' standard field covers are constructed of 6-oz. woven polyester in either black/silver or white/silver. Each has heat-welded seams and hemmed edges. The covers feature #3 grommets, which are spaced at 24-in. centers on the edges. Standard sizes are 18-ft. and 26-ft. diameter. However, any custom size is available. Ball Products also has a full line of vinyl covers in 14- and 18-oz. weights, which are available in a full range of colors. Each vinyl cover is constructed with the same quality as Ball Products' standard 6-oz. covers. Accessories included spikes, spike straps and sandbags.

BALL PRODUCTS

For more information, circle 163



COVERING YOUR NEEDS

The many models of rain and field covers by COVERMASTER® include RAINCOVERPlus™, a top-of-the-line cover available in various colors with white on one side. Test results show that a white/silver combination is the best to reduce heat build-up. Other popular models are RAINCOVERLite™ and RAINCOVERSuperLite™.

COVERMASTER also offers a range of vinyl covers. TARPMATE™ is a plastic roller that stores most sizes of rain or field covers. TARP MACHINE™ is a tarp rolling accessory that attaches to a 14-hp tractor with a 540 P.T.O. and that helps you install and remove a cover by pushing a loaded TARPMATE™ across the field.

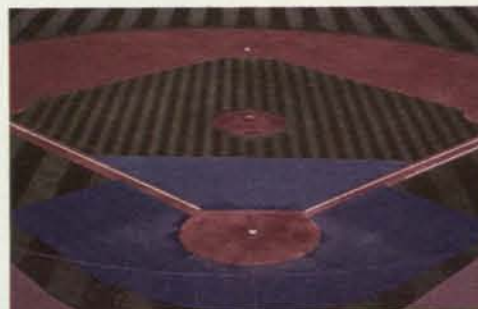
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COVERMASTER

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INFIELD MATS

The Baltimore Orioles needed portable infield protectors to cover their home plate area during pre-game batting and infield practice. The solution was a set of four tailored mats made from extrusion-coated polyester mesh. Each panel was made with reinforced seams. Hems and grommets were added to allow quick pinning to the ground. Beacon can make these infield-protector panels in any size or shape. These mats protect fields from damage by batted balls and steel-spike foot traffic.



Beacon also makes sideline tarps for football and soccer, track protectors, gym floor covers, and rain tarps. A new "skin tarp" system was developed for the Cincinnati Reds. It's a set of four lightweight, waterproof panels that connect and cover only the dirt portion of the baseball infield. This protects the soil from rain while holding moisture in during sunny "off" days.

BEACON BALLFIELDS

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