used at Jack Murphy are gray on both sides, weighing 10 ounces per square yard. “We use a 170’ x 220’ to cover the baseball field, and add two 100’ x 220’ covers to protect the field during the football season,” Wightman explains. “When we remove it, we fold the tarps into fourths, sending the water to drains along the warning track.”

**Custom Sizes and Colors**

“Our niche is customizing,” says Brian Hatfield, sales manager with Anchor Industries, Inc. in Evansville, IN. “What sets one field cover apart from another are the graphics and lettering on them. We have an in-house graphics department. “Most of our covers are laminated or coated vinyl, or coated polyethylene,” Hatfield says. “These are the three most-requested materials.” Canvas, according to Hatfield, is no longer practical as a field cover. “Since it is a woven material, water will eventually drip through,” Hatfield explains. “It also gets dirty, and when wet, is extremely heavy.”

Anchor covers are currently in use by the grounds crews at Royals Stadium in Kansas City, KS, Three Rivers Stadium in Pittsburgh, PA, and Comiskey Park in Chicago, IL.

But woven covers have their place for field warming and as a compaction guard against traffic, chairs, television cameras and players in bench areas. “Our covers are a woven polyethylene,” says Graham Tanner, a sales representative with Hinsperger in Mississauga, Ontario, Canada. Hinsperger started with golf course covers to protect turf from harsh winter weather and speed spring green-up. Hinsperger’s Evergreen cover, which is used by golf courses and athletic fields in the U.S., Canada, Europe, Japan and Korea, works similarly to a greenhouse. The clear material draws the warming effects of the sun, and depending on the geographical area, can warm the soil 10°F compared to surrounding uncovered areas.

In this highly visible industry, each company tries to introduce something innovative to remain competitive.

**Field Marking Paints**

- **TEMP-STRIPE** - • Temporary field paint • Easy removal following the game • Will hold up to foul weather • Proven effective • Great for multi-purpose fields • Apply like normal paint • Available in team colors.
- **PRO-STRIPE** - • Long lasting field paint • Available in team colors and brilliant white • Dilutable up to 3:1 • For use on both natural and artificial turf • Will not harm grass. **Manufacturers of Quality Coatings Since 1900. Contact: Mark Whitlam**

J.C. Whitlam Mfg. Co.
200 W. Walnut St., P.O. Box 71
Wadsworth, OH 44281
(800) 321-8358
Circle 125 on Postage Free Card

**Get rid of mud problems for good!**

If your team bench areas and sidelines turn into quagmires everytime it rains, you need — **TerraCover** Bench Tarps

Each 15 ft. x 75 ft. TerraCover takes only minutes to install. Protects your valuable turf against damage from heavy game or practice traffic. Easy to clean. Soaps and detergents can’t harm it. Wash and reuse over and over again. Folds into 8 ft. wide roll for easy storage. Polyester fabric lets grass plants breathe so turf stays healthy, green, and beautiful.

**Other sizes available**

Call 1 800 448-8069

**STN Sports**

Circle 112 on Postage Free Card

August 1994 21
Field Covers
continued from page 21

"We generally do not manufacture covers of canvas or other woven material," Young explains. "However, the customer is king—if the client wants a woven cover, we'll make it." Custom covers, of course are not a problem. "If the customer will draw what he wants, we'll make it."

Reef field covers are currently on fields such as RFK Stadium, Fulton County Stadium in Atlanta, GA, and many colleges such as the University of Southern California, Rice, Auburn, and the University of Houston.

If "necessity is the mother of invention," then field-cover manufacturers are procreative. Basically, anything goes. Covermaster manufactures covers that protect fields from inclement weather, as well as covers that act as growth enhancers. Wall padding and windscreens are also in its product lines.

A new twist for 1994 is the upper-deck seat cover. The idea is to cover the upper-deck seating area, making a large stadium cozier and appear as a facility specifically built for baseball, rather than a football stadium that is only partially filled for baseball.

Winter Protection

In addition to protecting the fields from rain and winter weather, field covers act as mini-greenhouses at golf courses and other landscape operations. "Our Wintergreen turf covers are used at hundreds of courses around the country," said Tom Baas, group manager for Allied Products, which manufactures Contech Wintergreen turf covers. The nonwoven, 100 percent polyester geotextile blankets, which weigh in at only 3.5 ounces per square yard, are lifesavers when it comes to protecting delicate turf. "The blankets allow in air and water, while also offering temperature control," Baas explained. "They improve germination and speed spring green-up, and are specially treated to resist debris cling."

The heaviest cover sportsTurf found is Turf Armor™ manufactured by Barney Professional Turf Services (BTS), based in Belle Vernon, PA. Weighing in at a hefty 16 ounces per square yard, "it is tough stuff," says Joe Barney, president of BTS. "It's manufactured from recycled plastic two-liter soda bottles—the same stuff used in truck-tire sidewalls." Yet, despite its weight, the material allows turf to breathe. The covers can be used during batting practice to protect infield turf, or even as a backstop in the bullpen. They have also been used to protect goal areas during field hockey and lacrosse practice. Turf Armor™ products are used at many sports facilities including the Oakland Coliseum, Penn State, Notre Dame University and the Cotton Bowl in Dallas, TX. Two stadiums in Argentina have also purchased the covers.

Boys Just Want to Have Fun

Field covers are necessary, useful tools in maintaining healthy turf and safe playing fields, but they can also be fun. Rain delays for the Triple-A Denver Bears brought out the playful side of some athletes. Wightman, who was the turf manager before moving on to San Diego, would help his crew to get the field covered. "Then a couple of the guys would remove their cleats and slide on the tarp. It kept the crowd entertained while waiting for the storm to clear." After all, sports are part of the entertainment industry.
Construction of the soccer/football field at Cal State University Fullerton in 1991. After laying a half-inch of sand, the entire field is sodded. (Photos courtesy of Cal State Fullerton.)

By Eric McMullin

Playability is critical in today's sports fields, according to Merton Johnson, manager of landscape services at California State University, Fullerton. "Our facility is self-supporting," Johnson explains. "If we can't play on a given day, we're out that day's revenue."

When Fullerton State installed its football/soccer field three years ago, Johnson insisted on two things: irrigation valves situated outside the field's playing area and a state-of-the-art drainage system. Johnson got his wish. The Griswold 2000 valves are set about 10 yards beyond the soccer field's end lines.

"A lot of older systems have valves in the playing field," he says. "So they need to be buried, usually six to 10 inches below the surface. If a valve went bad, you had to dig up the field. By putting our valves outside the field, we don't have to bury them."

With Fullerton's setup, a valve is easily accessed if it goes bad, and the playing surface is not disrupted. Also, no pressure lines are under the playing field. "You're not going to see one rupture underneath the field," Johnson says. "It all comes back to not disrupting the field's use." In addition, Johnson uses Griswold controllers and Toro 640 sprinkler heads.
Sand Drainage

As for drainage, the entire field is sodded on a one-half inch of sand. Underneath the surface, slits are cut into the soil every 20 inches. The slits are nine inches deep, three-fourths inch wide and filled with sand. They run lengthwise under the field. Slits are also cut sideline to sideline. These are also nine inches deep and three-fourths inch wide. However, these are every 40 inches and have a three-quarter inch pipe laid into them before they’re topped with sand.

The field is built with a 12-inch crown to assist surface runoff. At the same time, the sand underneath the turf quickly wicks rainwater downward. If that’s not enough, the sand slits pull water nine inches deeper.

Johnson agrees. “I’ve seen the field playable two hours after a rainstorm,” Johnson said. “Most of our rain is between December and April, but I’ve seen it rain a half-inch or more in the spring and fall. If we didn’t have good drainage, it would be a day or so before the field would be playable.”

The field is sodded with Tifway II, a warm-season turf. “Some of the pro facilities might overseed with a cool-season turf, but we don’t do that,” Johnson said.

The field is used by the university’s men’s and women’s soccer teams, plus outside football and soccer programs. It is the home field of the Los Angeles Salsa professional soccer team, and was the training site of the Columbian and Brazilian World Cup teams.

Ballfield Covers from Anchor Industries

Cover Your Bases With Quality
Little League to Major League - We’ve Got You Covered

That field is always in perfect shape,” says Mike Fox, a midfielder for the Salsa. “We’ve played right after a rainstorm, and even during them in a few cases. It drains perfectly.”

On some fields, water puddles up during a storm,” says Johnson. “The ball hits a puddle and stops, and the field gets muddy. I saw a field with a runway. A guy slid into it, caught a cleat, and was out for nine months. That wouldn’t happen here.”

The field’s dependability is an asset when renting the field, Johnson adds. “A dry field cuts down on player injuries, so teams are eager to use your field,” Johnson explains. “You have more demand for your field. We have the L.A. Salsa here, the Fullerton Community College football team, a local parochial school and others.”

Each of those teams pays full-market rates to rent the field—a prime consideration when justifying the cost of the drainage system, notes Johnson.

“Everyone talks about the importance of drainage, but few people do anything to improve it,” says Lansdale. “Drainage is underground. It isn’t sexy. Raising money for a field is tough enough. Superior drainage systems just seem to get dropped in the process,” he continued. “I’ve seen hundreds of articles on drainage in the trade press, but you’ll see a game on TV—being played in the rain—and the players are in a mud bath.”

That mud bath costs money, says Lansdale. “That field is history for a month. It takes a lot of labor and money to repair it. We figure a Cambridge field has a three-year payback just in the savings on maintenance. The Cambridge system wasn’t in the original budget. I had to fight to get it included.”

Installation of the systems takes about a week. An improved machine has eliminated two annoying side effects: “The new machine actually excavates and disposes of the soil,” says Lansdale. “The old one vibrated front to back, and cut the slits in a manner that caused a heaving action. It did the job, but it left some scars that took a month or so to grow over. The heaving also created some compaction around the slits. We don’t have that anymore.”

Editor’s Note: Eric McMullin is a full-time freelance writer based in Berkeley, CA.
First Industry Survey Establishes Benchmarks

By Bruce Shank

Considering how much is known about the golf industry, it is astounding that so little is recorded about the rest of the institutional landscape maintenance industry. Even organizations dedicated to management of parks, schools, colleges and universities, and professional sports teams have little idea about their industries' investment in products and services related to turf and landscape management. The management of sportsTURF and the Sports Turf Managers Association thought it was time to dig for these numbers. STMA employed Smith Bucklin Associates to tabulate the results from questionnaires mailed to more than 2,000 subscribers of the magazine. Response was greater than ten percent and represented the park, school, college and university, and professional sports circulation of the publication.

Approximately how much do you spend total annually on all products and services?

<table>
<thead>
<tr>
<th>Total Answer</th>
<th>Pro Sports Turf Facility</th>
<th>College /Univ Facility</th>
<th>Parks &amp; Rec.</th>
<th>School District</th>
<th>Ext. AG. /Educ.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>$0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$1 - 1,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$1,001 - 5,000</td>
<td>13.4</td>
<td>11.1</td>
<td>14.3</td>
<td>10.9</td>
<td>16.7</td>
<td>25.0</td>
</tr>
<tr>
<td>$5,001 - 10,000</td>
<td>14.5</td>
<td>11.1</td>
<td>25.0</td>
<td>11.9</td>
<td>16.7</td>
<td>12.5</td>
</tr>
<tr>
<td>$10,001 - 20,000</td>
<td>21.2</td>
<td>33.3</td>
<td>17.9</td>
<td>22.8</td>
<td>20.0</td>
<td>-</td>
</tr>
<tr>
<td>$20,001 - 50,000</td>
<td>27.4</td>
<td>22.2</td>
<td>25.0</td>
<td>32.7</td>
<td>20.0</td>
<td>12.5</td>
</tr>
<tr>
<td>$50,001 - 100,000</td>
<td>12.3</td>
<td>-</td>
<td>10.7</td>
<td>12.9</td>
<td>13.3</td>
<td>25.0</td>
</tr>
<tr>
<td>Greater than $100,000</td>
<td>10.1</td>
<td>22.2</td>
<td>7.1</td>
<td>6.9</td>
<td>13.3</td>
<td>25.0</td>
</tr>
<tr>
<td>Mean</td>
<td>$41,481.69</td>
<td>64,711.11</td>
<td>32,234.29</td>
<td>36,849.29</td>
<td>43,784.50</td>
<td>-$97,512.50</td>
</tr>
</tbody>
</table>

*Figures are percentages.

After making every effort to be conservative in our estimates and calculations, we are now able to draw some conclusions about the size of the non-golf, institutional landscape maintenance industry. By combining the four industries discussed above, the non-golf segment of the market spent approximately $800 million on products and services for turf and landscape construction and maintenance in 1993. This does not include salaries, a figure that easily could exceed $400 million.

A joint survey by the National Golf Foundation and the Golf Course Superintendents Association of America (GCSAA) places the golf segment in the neighborhood of $1.4 billion. It should be no surprise that the golf industry spends more in this area than other institutions. Nevertheless, the non-golf segment is a substantial buyer of products and services.

continued on page 26

August 1994 25
Average Expenditures

How the data compares among the different non-golf segments is perhaps most interesting. The undisputed leader in expenditures is the manager of a professional sports facility. The average amount spent in a single year on turf-related products and services by one of these facilities is $65,000. This is divided among an average of six fields for a per field expense of $12,000. This most likely reflects one primary field and four or five practice fields. Projected to 800 professional sports facilities and this segment spends more than $50 million per year on products and services.

The most efficient provider of sports fields is the superintendent of parks. He or she spends an average of $37,000 ($1,200 per field) per year and is responsible for 31 fields. Altogether parks spend close to $180 million on landscape products and services.

School groundskeepers spend more on landscape products and services than any other segment, a projected $350 million per year. They are responsible for an average 15 fields and spend $2,850 per field.

The second largest segment includes colleges and universities. They spend a total of $195 million on products and services. They manage an average of nine fields at a cost of $3,800 per field. This is higher than parks because of stadium maintenance.

More than 80 percent of respondents are responsible for making purchasing decisions. The highest percentage responsible was at professional sports complexes (90%) and the lowest at school districts (70%). Despite this responsibility, the average professional sports complex manager has less formal education than the other three segments, 60 percent have at least two years of college. Another misconception

**McCord delivers the tires you need for flotation and traction.**

McCord Tire offers you an extensive lineup of tires. Choose from a wide selection of Goodyear tire types, sizes and light-footed traction for just about any driving surface. Everything from a 73-inch diameter Goodyear Terra-Tire®, to much smaller tires for ATVs, lawn and garden equipment; even ten-inch Goodyear tires for golf cars.

Whatever the equipment, whatever the surface, whatever the job, McCord has the tire and wheel—and the prompt delivery just for you. Give us a call today.

**McCord**

Replacement & Original Equipment Flotation Tires • Rims • Wheels • Service

**Indiana**

219-583-4136  800-348-2396
Indiana Only  Indiana

**Kansas**

800-332-0122  800-255-0276
Kansas Only  Out of State

**Minnesota**

800-522-5735

McCord delivers the tires you need for flotation and traction.
is that the person responsible for making field decisions at schools is someone on the janitorial staff. In fact, the decision makers at schools had more advanced education than any other segment, strongly suggesting that decisions are made on a district level by an administrator. Colleges and university sports turf managers had the next most formal education. Overall, two thirds of sports turf managers have completed a bachelor's degree. They have been employed in the profession for an average of 14 years.

**Purchases**

Sports turf managers spend more on equipment than anything else, an average of $28,000. Colleges and universities spend an average of $41,000 with parks spending $30,000. Schools spend $18,000 and professional sports facilities $9,500.

Irrigation is the second greatest expense, partly due to the cost of water. Sports facilities overall spend $14,000 on irrigation. Fertilizer is next on the budget list with an average of $8,200 per year. Professional facilities spend nearly three or four times more on fertilizers than other facilities.

Seed and sod expenditures average a strong $6,200 per year with schools spending an average of three times that amount.

The average cost of chemicals purchased is $6,000, the professional facility spending nearly four times the average. Schools spend half the average and parks fit the average perfectly. Colleges and universities spend $4,100 per year on chemicals.

We must stress that this data is a first effort at creating benchmarks for the non-golf segment of the sports turf industry. It can and will be refined and expanded over time. The expenditures by facility are the most reliable available. If any improvement is called for, it would be in the precise size of the universe by number of facilities. That is where the emphasis will be placed in the coming year.

Any suggestions to improve the survey are invited and will be reviewed by STMA and the magazine staff for inclusion in next year's survey.

---

**Are you responsible for making purchasing decisions for equipment and supplies?**

<table>
<thead>
<tr>
<th>Total</th>
<th>Pro Sports Turf Facility</th>
<th>College /Univ Facility</th>
<th>Parks &amp; Rec.</th>
<th>School District</th>
<th>Ext. AG. /Edc.</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Answer</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Yes</td>
<td>80.9</td>
<td>90.9</td>
<td>76.5</td>
<td>84.8</td>
<td>70.7</td>
<td>-</td>
</tr>
<tr>
<td>No</td>
<td>19.1</td>
<td>9.1</td>
<td>23.5</td>
<td>15.2</td>
<td>29.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Figures are percentages.*
West Coast Turf Acquires Foster

West Coast Turf of Palm Desert, CA recently acquired Foster Turf Products through the Resolution Trust Corporation. The acquisition of Foster's sod inventory enables West Coast Turf to meet the increasing demand for hybrid bermuda. West Coast specializes in the application of warm-season grasses on sports fields, and also serves the growing needs of landscape contractors.

West Coast Turf's projects include repairing Candlestick Park for a 1993 NFL championship game, supplying sod for renovation at Santa Anita Racetrack, and preparing the Rose Bowl for Super Bowl XXVII.

DowElanco Promotes Urbanowski and Smith

DowElanco announced recent personnel changes within its Urban Pest Management Division.

Mark Urbanowski accepted the position of Product Communications Manager for the Turf and Ornamental and Technical Products Divisions. Urbanowski was previously a sales representative in Atlanta for DowElanco. He replaces Keith Kohlman, who was promoted to product marketing manager for several of the company's turf and ornamental and technical products.

Janice Smith was promoted to product marketing manager. She was previously a promotions manager. Smith replaces Dave Maurer, who became a district manager for the Specialties Group.

Scotts Unveils New European Marketing Plan

As of September 1, marketing and sales of lawn and garden fertilizers and control products in Europe will be handled through the distribution and marketing system of the former Grace-Sierra Horticultural Products Company, which was acquired by Scotts in December 1993. The new European company is known as Scotts-Sierra Horticultural Products. The company's products are sold to the consumer market as well as the professional markets, including sports fields and golf courses.

Golf Classic Raises Funds for Turf Research

The Second Annual Envirotron Golf Classic, sponsored by the Florida Turfgrass Association, grossed $44,000 for the Envirotron Equipment Fund. The purpose of the tournament was to raise funds for the Envirotron, a state-of-the-art environmental research facility at the University of Florida in Gainesville.

The tournament consisted of a four-man scramble and an individual tournament with a total of 232 players. The World Woods Golf Resort owner donated use of the Pine Barrens and Rolling Oaks courses for the event. Major sponsors for the tournament included: Lesco, Vigoro, Helena Chemical, Tresca/Jacobsen and the Seven Rivers Golf Course Superintendents Association.

Water Reels

Kifco has introduced two models to their popular line of Water-Reels. The new B110 and B180 extend the product line to ensure there is a Water-Reel to fit your needs. Machines are compact, easy to use, operate unattended, and shut off automatically. They are suitable for all types of sports turf and are easily transported from one area to another. Water-Reels combine outstanding features that come from more than 25 years of traveling sprinkler engineering.

Kifco, Inc., P.O. Box 290
600 S. Schrader Ave., Havana, IL 6244
(309) 543-4425 Fax (309) 543-4945

“ ”

Circle 115 on Postage Free Card

Circle 116 on Postage Free Card
Meet the Adams Family of Green Industry Publications

**Landscape & Irrigation**
- **Title:** Landscape & Irrigation
- **Circulation:** 36,000 National
- **Frequency:** 12x
- **Market:** Full Service Landscape Contractors, Installation & Maintenance
- **Official Magazine of:** The Irrigation Association

**Landscape Design**
- **Title:** Landscape Design
- **Circulation:** 15,000 National
- **Frequency:** 10x
- **Market:** Landscape Architects

**SportsTURF**
- **Title:** SportsTURF
- **Circulation:** 22,500 National
- **Frequency:** 12x
- **Market:** Sports Turf Managers & Golf Course Superintendents
- **Official Magazine of:** Sports Turf Manager's Association

**Irrigation Journal**
- **Title:** Irrigation Journal
- **Circulation:** 19,000 National
- **Frequency:** 7x
- **Market:** Agricultural Irrigation Specialists
- **Official Magazine of:** The Irrigation Association

**Arbor Age**
- **Title:** Arbor Age
- **Circulation:** 17,000 National
- **Frequency:** 12x
- **Market:** Commercial, Municipal, & Utility Arborists

**California Fairways**
- **Title:** California Fairways
- **Circulation:** 3,500 Regional
- **Frequency:** 6x
- **Market:** California Golf Course Superintendents & Greens Committee Chairmen
- **Official Magazine of:** California Golf Course Superintendents Association

ADAMS PUBLISHING CORPORATION
69-860 Perez Road, Suite J, Cathedral City, CA 92234 (619) 770-4370 • FAX (619) 770-8019
Call or write for subscription information. Combination rates available on all APC Green Industry Publications. Contact your sales representative for details.
**PRODUCT UPDATE**

**Striper**

The Tandem Easy Striper is the most maneuverable low-cost striper on the market. The unit's light weight, high speed and perfect balance take the effort out of operation. The knee-action, independent suspension wheels hold the machine in a straight line, even over rough surfaces. The machine operates on a pressure spray provided by a hand pump mounted on a 2.5-gallon paint truck.

The 4 inch stripe is controlled by a hood on the spray. A strainer in the spray head eliminates clogging.

**LITTLE MANUFACTURING INC.**
Circle 126 on Postage Free Card

**Soil Amendment**

Axis, a unique soil amendment made from calcined diatomaceous earth, is effective in controlling the delicate balance of air and available water in the turf root zone when incorporated in USGA-specified root zone mixtures.

Axis permits water and oxygen to flow more freely to the root zone. This soil amendment aids in the prevention of fungus, black layer and compaction.

Axis is non-compacting so it aerates the soil while providing a firm surface. Water coming and going into Axis particles brings air into the root zone, and these particles act like a sponge that holds its shape when dry.

**AGRO-TECH 2000 INC.**
Circle 127 on Postage Free Card

**Warm-Season Herbicide**

DowElanco has expanded the label on Confront® post-emergence herbicide to include warm-season turf. Confront controls up to 35 species of broadleaf weeds including narrowleaf plantain, henbit, prostrate spurge and other broadleaves.

Confront is now labeled for use on Southern turfgrasses, including bahiagrass, bermudagrass, centipedegrass and tall fescue. Confront can be used in all turf areas including lawns, parks, golf courses, commercial grounds, residential areas and other public facilities such as hospitals and schools.

**DOWELANCO**
Circle 140 on Postage Free Card