

EVENTS

CALENDAR

MARCH

19 Sports Turf Institute and Grounds Operations Conference, Cal Poly, Pomona, CA. Contact: Kent Kurtz, Dept. of Horticulture, Cal Poly University, Pomona, CA 91768, (714) 869-2219.

21-22 Sports Turf Conference and Show, Joe Robbie Stadium, Miami, FL. Contact: Ed Birch (305) 928-0217 or John Mascaro (305) 928-7477.

APRIL

15-16 Southeastern Turfgrass Conference, Georgia Coastal Plain Experiment Station, Tifton, GA. Contact: University of Georgia, College of Agriculture, Coastal Plain Station, Tifton, GA 31793, (912)386-3353.

MAY

15 North Carolina Turf and Landscape Field Day, Turf Field Center, Raleigh, NC. Contact: R.H. White, NCSU, P.O. Box 7620, Raleigh, NC 27695-7620, (919) 737-7615.

JUNE

24-25 Annual Turfgrass Summerfest, Washington State University Puyallup Research and Extension Center, Puyallup, WA. Contact: Northwest Turfgrass Association, P.O. Box 1367, Olympia, WA 98507, (206) 754-0825.

JULY

29 Turfgrass Field Day, South Farm, University of Missouri, Columbia, MO. Contact: Missouri Valley Turfgrass Association, 344 Hearn Center, University of Missouri, Columbia, MO 65211, (314) 882-4087.

NOVEMBER

19-20 Southern Grounds & Turf Maintenance Exposition and Conference, Myrtle Beach Convention Center, Myrtle Beach, SC. Contact: South Carolina Board for Technical & Comprehensive Education, 111 Executive Center Drive, Columbia, SC 29210, (803) 737-9355.

Send announcements on your events two months in advance to editor, *Golf & SportsTURF*, P.O. Box 8420, Van Nuys, CA 91409. Fax: (818) 781-8517.

THE FRONT OFFICE

OPINION PAGE

A RENEWED COMMITMENT TO SERVICE

In February, without fanfare or ceremony, Denne Goldstein typed the last words of his column in this issue, flipped off his computer, shook everyone's hand, and left the office for the final time. He could barely speak, something unusual for a man who never hesitates to voice his opinions.

Personally, Denne was a friend and yet my greatest critic. He gave me an opportunity to turn ideas into a tangible, hopefully useful product, this magazine. Not many people have the gumption to turn words into action. Denne did and put his money where his mouth was.

Working for Denne must have been like playing for Lombardi. He always wanted more out of his team and kept the pressure on. He thrives on pressure and expects others to do so as well.

In retrospect, that is the type of drive necessary to launch a magazine in the turf industry. There is no draft in the publishing business. You start off at the bottom and compete for the attention of every reader and advertiser. We have been bucking tradition for almost six years trying to expose the common bonds between the golf industry and the recreational turf industry. We do this every month, not once or twice a year like our competitors.

Denne's record speaks for itself. Five magazines in 13 years is a tremendous accomplishment! Few people contribute so much in such a relatively short period of time.

One of his final acts as publisher was to make sure that *Golf & SportsTURF* and its four sister publications would continue to serve their readers for years to come. He was very selective about to whom he sold the company. More than once he walked away from an offer on the table.

Last year, he was approached by Adams Communications Company, a company established on a long family tradition of strong management and quality products and services. Steve Adams, owner of the company, wanted to create a trade magazine division to go along with a network of consumer magazines, television and radio stations, and outdoor advertising companies. Just before Christmas, after months of careful negotiations, the contract was signed.

To make sure Gold Trade Publications receives the attention it deserves, Adams assigned the job of publisher to his son, Mark. For the past three months, he has been working seven days a week, 14 hours a day, to provide a smooth transition.

Golf & SportsTURF is in good hands. Mark and I are committed to you, the reader. We want to hear from you, share your ideas with others, make changes you would like us to make, and serve your needs.

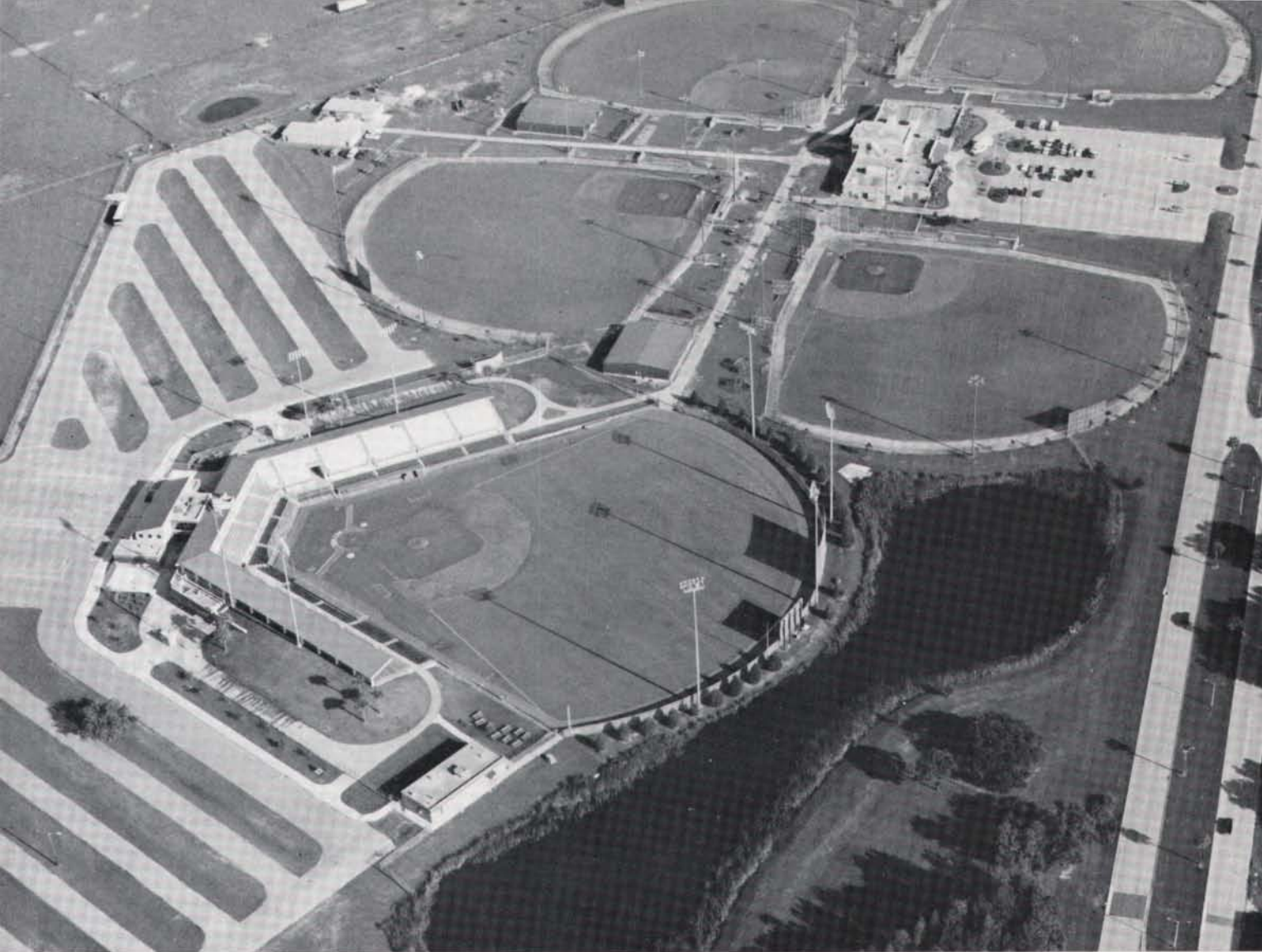
We will be attending shows across the country, visiting your facilities, and producing the best magazine we can. In other words, we are going to get more involved than ever before in order to serve you the best way we can.

We invite you to write or call with your suggestions, your news, your events, and comments. *Golf & SportsTURF* is your magazine. We simply put it together for you.

The changes here at Gold Trade Publications are positive ones. Let me assure you that we are dedicated to serving your needs today and long into the future.



Bruce Shank



Osceola County Stadium & Sports Complex

Koehnke Blends Experience And Innovation At Astros Spring Training Center

For 30 years, Bud Koehnke held onto his dream of making the majors. Since he was 17 years old, when a minor league scout for the St. Louis Browns signed the adolescent pitcher during a tryout camp in his home town of Appleton, WI, Koehnke worked his way toward the Big Leagues.

"I was a thrower, not a pitcher," Koehnke jokes today. After stints with the Browns and the Cincinnati Reds in cities such as Pittsburgh, KS, Wellsville, NY, Aberdeen, SD, and Knoxville, TN, his playing career ended. "Four years in the minors gave me some strong feelings about baseball facilities," he adds. "I appreciate what ballplayers contend with and have been fortunate to be able to do something about it."

Had Koehnke remained a player, he might not have been part of a major overhaul in spring baseball training facilities. His hard work for the Houston Astros at Osceola County Stadium in Kissimmee, FL, has earned his facility the 1990 Baseball Diamond of the Year Award in the profes-

sional category, the closest thing baseball groundskeepers have to the Hall of Fame.

Koehnke, in conjunction with HOK Sports Facilities Group in Kansas City, MO, designed and built the stadium field and four practice diamonds in 1984. Osceola County essentially upped the ante for communities trying to attract professional baseball clubs and their tourist fans. The 60-acre site has enabled the Astros to consolidate spring training of both their Major and Minor League clubs, provided a home for a single-A Florida League farm team, and served as a base for fall instructional leagues. The facility is dedicated year-round to player development and meets all the requirements of professional baseball.

"Osceola started a trend in spring training facilities," states Rick deFlon, senior vice president of HOK. "In 1983, when the Astros were in Coco [FL], half of their spring training games were rained out. They started looking at other facilities in Florida. Andy McPhail and Al Rosen [owner and general manager respectively] put together specific ideas based on what they saw and what they'd like if they could start from scratch. Osceola had been talking with the Cubs."

The Astros and Osceola got together and brought in the newly-formed Sports Facilities Group of HOK to turn their ideas into reality. DeFlon was assigned the challenge of creating a prototype for future spring training facilities. "It was one of HOK's first big ventures in sports facility architecture," he adds. It was also one of the first times a stadium architectural firm had addressed a spring training project.

Meanwhile, Koehnke was renovating Tinker Field in nearby Orlando for the Minnesota Twins. Since leaving the player ranks, he had spent most of his career as Recreation Director for Appleton. Goodland Field in Appleton was a regular stop of the Class A Midwest League and one of Koehnke's responsibilities. "I had Goodland Field, all the parks, an 18-hole golf course, and four swimming pools to look after," he recalls. "The people of Appleton take pride in their athletic facilities. My son Brandon used to help prep the stadium before games, just like I had done when I was a kid. It was sort of a family affair."

Over the years, Koehnke met and built relationships with many professional baseball owners, managers, and players. "After 26 years in Wisconsin, I decided it was time for a change," he reveals. "All three of my children are athletes and I thought they would have more of an opportunity in Flor-

ida. We pulled up stakes and moved there in 1980."

Upon arriving in Orlando, Koehnke called Calvin Griffith, owner of the Twins at the time. Tinker Field had gone downhill. Griffith invited him to bring the field back to life.

"It was my first exposure to bermudagrass and mole crickets," he admits. Koehnke credits much of his success at Tinker to the assistance of Dr. Wayne Mixson, manager of the O.M. Scotts Southeast Research and Development facility in Apopka, FL. "Dr. Mixson was a tremendous help in building a fertility program, offering advice about overseeding, and making suggestions on how to control mole crickets," adds Koehnke. "He gave me time to concentrate on other problems like the infield dirt, compaction, thatch, and the playability of the field.

"For example, if you're a pitcher, the mound is your office," he states. "If the pitching rubber is off by four inches or the landing area is too loose, the office is wrong. I've seen cases where the bases were off by two feet and no one caught it. It's the groundskeeper's job to keep an eye on those things."

Inside of three years, Koehnke had Tinker Field back to specs, had established schedules for all maintenance practices, and had added a number of extra techniques that impressed the Twins' management. Rosen became aware of the improvement at Tinker Field under Koehnke.

The Astros deal with Osceola gave the team input on construction and control over maintenance. Rosen wanted his groundskeeper involved early in the project to work with the county, the contractors, and HOK. The new facility was going to be extremely busy once it opened. There was little room for mistakes, especially considering that the new design would be under close scrutiny by other teams.

The good thing about Koehnke is he was right for the time. Management felt most comfortable with "old school" groundskeepers who came up through the ranks and were close to the game. Koehnke's background fit that mold. Twenty years as a recreation director imparted other traits to his personality which make him confident in his ability to build budgets, manage people, and negotiate with vendors.

Koehnke has the stern, focused expression of a relief pitcher. If you don't know him, you feel like a batter facing him in the late innings of a tight game. Rosen, a for-

mer player and pitching coach, liked his resolve. DeFlon found it a bit unsettling. Both are pleased today with the product Koehnke has delivered to the Astros for the past eight years.

Actually, Koehnke is quite open-minded. He is loyal to products that work for him, yet is willing to try new techniques. He welcomes suggestions from his crew and his suppliers. When he tries something new, he solicits comments from the players and coaches on the results. In fact, he is constantly experimenting with new equipment and chemicals.

After all, if he was set in his ways, it's doubtful that Osceola County Stadium & Sports Complex would be what it is today, a model for many new spring training facilities from Arizona to Florida. HOK has since designed three more spring training



Stadium field at the Osceola Complex.

complexes in Florida with features common to Osceola: nearby Baseball City for the Royals, the White Sox complex in Sarasota, and a brand new facility in Homestead.

From a design standpoint, the main features are a pinwheel-like arrangement of the four practice fields with a clubhouse in the center and an adjacent stadium. Osceola added an AstroTurf half-field last season with the old material from the Astrodome. All natural fields have bullpens. Two four-station batting tunnels and an eight-pack, eight side-by-side pitching positions, are tucked in around the practice fields.

The Tifway bermudagrass fields are nearly as fast as the AstroTurf the team plays on at the Astrodome. Bounces and rolls are true whether on the dirt or the grass. All fields are lighted and fully-outfitted with warning tracks, fences, and scoreboards.

The trick is keeping all the fields and grounds in shape more than ten months a year. "That's the amazing part about the whole thing," comments Scotts' Mixson. "The fields take a beating almost year-

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round with very little chance to rest and recover. At the same time, the demand for a quality playing surface has increased. It's reached a point where the worst field today would have been acceptable 25 years ago."

"Baseball gets more like golf every year," says Jim Griffith with Zaun, Koehnke's Toro salesman. "If a piece of equipment goes down, they need a replacement by the next day. Many of the features on greensmowers are becoming popular at spring training facilities. Since many complexes don't have mechanics like golf courses, service becomes even more important."

Koehnke and his experienced staff of six operate on a tight schedule year-round. In November, when the training leagues end, they have barely two months to oversee,



Sand Pros are used on base paths and warning tracks.

rebuild the skinned areas, aerify, topdress, and get ready for spring training. That's the time when Koehnke, Don Miers, stadium operations manager; and facility coordinator Michelle Link sit down and work out the schedule for the coming season.

"Between the five fields, we had 979 events last year," Miers points out. The list of events includes the Senior Little League

World Series, the Roy Hobbs World Series for players over 35, NCAA tournaments, the National Police Youth Tournament, soccer, high school football, flag football, and concerts. The Astros also added a winter program of three games a week this past year. "There's never a dull moment," adds Miers.

"Building the fields has been a big help in maintaining them," says Koehnke. "The only major problem we had involved the PVC pipe for the irrigation system. We've had to replace nearly all of it. Everything else has worked out great!"

All fields are constructed of sand and are crowned on a line from home plate to center field. The drop from home to the corner of left and right field is more than two feet. Koehnke went a step further for the stadium field by installing a Cambridge System. This entails a network of sand-filled trenches spaced 15 feet apart. Small perforated drain tubing sits in the bottom of each trench. Water removed by the system is pumped into a man-made lake behind the outfield fence.

"We keep the surface open throughout the year by slicing four times and shallow aerifying twice every year," he explains. "In the winter we aerate the outfields down to nearly eight inches with an Aerway. We have base and mound tarps for the practice fields and a two-piece infield tarp for the stadium."

The Toro irrigation system is fed by a well on site. Each field has its own controller. A sixth clock controls the rest of the property. All dirt areas are watered by hand. "We may be switching over to reclaimed water from Kissimmee," says Koehnke. "That might add a new twist to our fertilization program."

The soil on all fields is tested every year. "We take two sets of samples and send them to different labs for comparison. Scotts also runs its own tests for us. They use the results to adjust our program." Jim Boesch is Osceola's representative from Scotts. He is one of nine tech reps the company added two years ago to serve the special needs of schools and sports fields. "I test the soil in December and then meet with Bud in January to put a program together for the coming year. By adjusting the analysis of the fertilizers and using a few amendments we've gotten the pH down to normal and solved manganese and potassium deficiencies typical for central Florida," he says.

Koehnke applies all chemicals. "We use fertilizer combination products as much as possible," he states. "Our big problems are

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FLEXIBLE TURF DRAG MATS

mole crickets and bahiagrass invading the bermuda. If I could do one thing over again, it would be to have planted bermuda between the fields instead of bahia. We are trying a new selective herbicide from Scotts for the bahia. The mole crickets seem to be having more generations than the experts predict. They start in late February and hang around into September. The lights must attract them. I alternate Orthene and Mocap to avoid resistance. The Mocap may also be helping us with a nematode problem we had on one field. Fortunately, we've had hardly any problems with diseases."

Fire ants have not been a problem because the fields and grounds are mowed frequently. Infields are mowed daily at 5/8-inch with triplex greensmowers. The outfields are mowed every other day at the same height. At Griffith's suggestion, Koehnke is trying a Toro 223-D five-gang out-front reel mower for the outfields in place of tractor-drawn reel gangs.

"The 223 is very similar to a greensmower," Griffith states. "By setting the speed of the eight-bladed reels to fit the forward speed of the mower you get a tight cut like a greensmower with a variable-speed kit. You can see the difference when you mow as low as a half inch. You can also



Osceola is trying a Toro 223-D for the outfields and foul areas.

set the reels to recut the clippings. You basically have a five-gang greensmower."

Koehnke wants to try a walk-behind greensmower on the stadium infield. "You need to baby the area in front of the plate," he advises. "We cover that area with Turf Saver mats during batting practice. They look like ping pong netting and you can leave them down except for games." He also topdresses the infields with mason sand periodically in addition to spiking.

In December, Koehnke overseeds the infields with eight pounds per 1,000 square feet of perennial ryegrass from SunBelt Seed. The rate is slightly lighter for the outfields. This past winter he experimented

on one practice infield with Kentucky bluegrass. "I'm very happy with the color," he remarks. "The rye has been hanging on longer and longer. I'm hoping the bluegrass will burn out earlier than the rye. It's an alternative to increasing the rate on the ryegrass to get density."

Another key to baseball diamond management is keeping the turf and the dirt where they belong. Each day the mounds and batters' boxes are packed and covered. The basepaths are spiked and dragged with a Toro Sand Pro and moistened. If needed, infield mix is added and packed to the turns. Every two weeks the diamonds are edged to control encroachment and any lips are raked out.

"We do all we can to keep clay off the turf," states Koehnke. "The clay changes the way the sand holds water and nutrients. It also can lead to compaction problems in the areas most likely to get compacted. On the other hand, you need a certain amount of calcined clay on top of the dirt to hold moisture to make sure the ball rolls instead of bounces."

The warning tracks and basepaths have a twelve-inch foundation of local clay. Koehnke surfaces the hard, baked warning

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The Osceola grounds crew (l. to r.) Kirk Jones, Mike Dellafano, Bud Koehnke, Matt Kutik, Rick Raasch, Bob Heller, and Greg Kaufmann.

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tracks with a red brick aggregate called SportTrack from Florida Brick and Clay Co. "The brick absorbs some moisture, responds nicely to dragging, and makes the ball roll instead of bounce," he states. "It also provides a nice contrast with the turf." For extra contrast on the stadium warning track he uses a special red mix from Beam Clay.

The basepaths are rototilled in November and amended with either Turface or Terragreen. Throughout the year the basepaths are spiked and dragged on a daily basis. To firm up the turns, Koehnke works in mound or home plate mix before topping the area with his normal base path mix. Every two weeks the edges are recut to contain the bermuda.

The bullpens and other practice pitching areas are maintained exactly like the rest of the mounds. Koehnke is especially concerned that the minor league players have the same quality of facilities as the majors. "In some ways I'm closer to the farm system players," he remarks. "Having been in their shoes, I try to do everything possible to help their careers. They deserve every chance they can get to show their stuff."

Not only has the Osceola sports complex been a model for many other major league spring training facilities, Koehnke has also helped train a number of visiting groundskeepers. His favorite pupil was his son, Brandon, who was head groundskeeper for the Atlanta Braves last year. "Brandon is great at coming up with new ideas," says the proud father. "He played professional

ball for a year and helped me here until he went to Atlanta."

"It's refreshing to have someone with a lot of experience who is still receptive to new ideas," says Boesch, the Scotts rep. "But it's even more refreshing to have an experienced groundskeeper be so willing to share his knowledge. I've passed a lot of Bud's advice on to high schools, parks, and colleges."

Mixson credits Koehnke with causing him to urge the ProTurf Division to create a group specifically to serve athletic fields and schools. "The interest in quality playing surfaces has come to the forefront," says Mixson. "Groundskeepers need more than products, they need service. But they also need to know more than turf management. That's where people like Bud and Brandon have been so much help."

"Osceola is what it is today because the owners and managers of the Astros want it to be the best," adds Koehnke. "Dr. John McMullen [owner], Bill Wood [general manager], Fred Nelson [farm director], Jimmy Johnson [field coordinator], and Don Miers [stadium general manager] always make sure the crew has what it needs. That kind of support makes my job rewarding and fun."

The '90s will be a decade of change for professional baseball. Two new Major League teams, rising player salaries, planned improvements in the minor league system, and rapidly improving standards for baseball stadiums and training centers will affect hundreds of groundskeepers. It's reassuring that veterans like Koehnke not only keep pace, but actually set it. ☺

BONALLACK TO RECEIVE DONALD ROSS AWARD



Michael F. Bonallack, OBE, secretary of the Royal and Ancient Golf Club of St. Andrews since 1983 and one of Britain's all-time amateur golf champions, has been chosen to receive the 1991 Donald Ross Award from the American Society of Golf Course Architects. The organization presents the award annually to an individual who has acknowledged the importance of golf architecture to the game and who has encouraged others to recognize great design.

According to Dan Maples, ASGCA president, Bonallack was selected because he has "consistently focused on the importance of good golf course design to the enjoyment of the game by its millions of players around the world, as well as to the success of its major tournaments."

The award will be presented to Bonallack at a special Donald Ross banquet on April 23 in Broughton, England. The event is one of the highlights of the organization's annual meeting, to be held this year in Britain.

Among his numerous achievements are Bonallack's five victories in the British Amateur Championship. He won the event in 1961, 1965, 1968, 1969, and 1970. No one else in the history of the tournament has ever won it three years in a row. He was also English Amateur Champion in 1962-1963, 1965-1967, and 1968.

Bonallack played on the Walker Cup team in every match from 1959 to 1973 and captained the team in 1969 and 1971. He was also a member of every British World Amateur team from 1960 to 1972, and served as captain three times.

In 1972 Bonallack received the Bobby Jones Award for distinguished sportsmanship. He also was chairman of the Golf Foundation from 1977 to 1983, chairman of the Professional Golfers' Association board of management from 1976 to 1982, and president of the English Golf Union in 1982.

RIEKE HEADS DOWN UNDER

Dr. Paul Rieke, noted turfgrass soils

specialist, has left Michigan State University for a six-month sabbatical in Palmerston North, New Zealand. It is the first sabbatical he has taken in 20 years.

During the next six months, Rieke will study and write at Massey University. He will also conduct research at the nearby New Zealand Institute of Turf Culture.

Rieke plans to return to East Lansing, MI, in early September to prepare for fall term classes. In addition to sharing his experiences with students, he will report on his trip at the 62nd Annual Michigan Turfgrass Conference in January 1992.

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Superintendent Fields Challenges At Ole Miss

Someone once described a specialist as "A person who knows more and more about less and less," but nothing could be less true for today's multi-talented turf managers. To excel, they require a breadth of horticultural knowledge that includes irrigation, drainage, topdressing, fertility, mowing, aeration, and other cultural practices.

In short, the modern successful turf manager must be part scientist, part artist, and part magician, with a "big picture" perspective. Gary Morris, superintendent of the golf course and athletic fields at the University of Mississippi in Oxford, MS, is all of these.

The 37-year-old Morris started his turf management career in 1973 at Inverrary Country Club in Fort Lauderdale, FL, as a laborer, and eventually moved up to foreman. He stayed there for almost four years before moving on to Coral Ridge Country Club, also in Fort Lauderdale, where he was the head spray technician.

After four years at Coral Ridge he went to PGA National in Palm Beach Gardens, FL, where he was supervisor of the Haig Course. He stayed with PGA for six years until he left to become superintendent of Emerald Hills Country Club in Hollywood Park, FL. He worked on the course for

almost four years before taking the position of head groundskeeper at Joe Robbie Stadium, home of the Miami Dolphins in Miami, FL.

"Working with the Dolphins was an unforgettable experience," Morris recalls. "So was working with Tom Mascaro [consultant to Joe Robbie Stadium and inventor of the Verti-Groove cultivator]. In my view, he's the backbone of the turf industry. He's a legend."

Morris left Joe Robbie Stadium after two years to take his current position at the University of Mississippi, affectionately labeled "Ole Miss."

"I was looking to get out of the big city," he explains. "When I came here to interview for the job, I sort of fell in love with Oxford and the history of Ole Miss."

"The experience I gained in Florida in golf course management and then working with athletic fields has helped me greatly at Ole Miss," Morris adds.

Morris accepted the position at the university in November of 1990. He is responsible for the Ole Miss Golf Club 18-hole golf course, Swayze Stadium baseball field, Hemingway Stadium football field, a track and its infield, and two practice fields. He directs a six-man golf course crew, a three-man football and track crew, and a two-man



Truckster pulls aerifier across golf greens during renovation.

baseball crew. What he found when he came to the school was less than perfect.

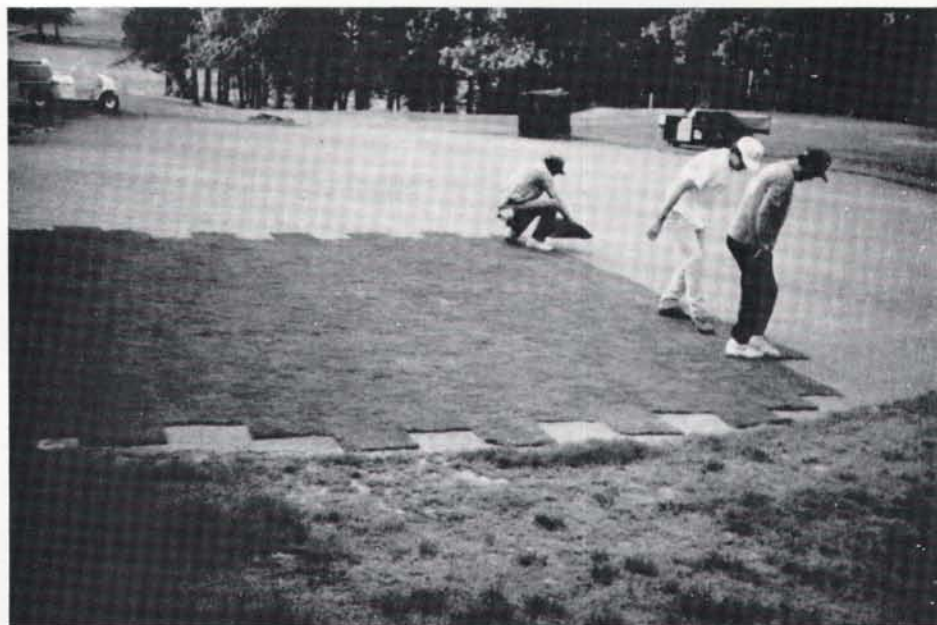
"When I arrived here I was greatly concerned with the turf—all the roots were in terrible shape," Morris explains. "The athletic fields were in terrible shape. The baseball field at Swayze Stadium wasn't as bad as the rest of the facilities, but I guess that's because it was a fairly new facility. The golf course needed a tremendous amount of work."

Morris had soil tests performed on the golf course and fields not long after he arrived, and spent the winter pondering what he would do to each turf area in the spring. That winter was one of the coldest experienced in the area in 20 years, and caused much of the grass to become dormant. Like other superintendents in the area, Morris reluctantly covered the greens on the university's course.

"It was kind of hard to plan, with our limited funds for the golf course, exactly what we would do come spring," Morris says. "We had to play a lot of it by ear."

Five greens were lost to winter kill that year. Most of them were in shaded areas. However, Morris recalls, that wasn't the worst of it.

"We lost all 18 of our tees because of low mowing late in the season last year that was done before I arrived," he explains. "That was kind of funny—I'd never seen anything like it before. You could see where



Resodding greens lost to winterkill.

the mower had cut off the very tops of the tees, and come spring they were all dead."

Both the greens and tees had to be rebuilt. Morris and his six-man crew faced several challenges.

First, the soil tests performed when Morris arrived revealed that 95 percent of the greens had a pH level of 5.5, and the superintendent wanted to raise the soil's pH. The greens had been constructed in the early 1970s on 12 inches of topsoil, over a clay hardpan, and had become extremely compacted. Drainage was inadequate. And then there was the problem of time: The golf season would be starting in a few months.

"We didn't have time to remove the soil profile, so we incorporated sand into it," Morris says. "We regraded and reshaped the greens and tees, installed drainage tile, and then sodded the greens with Tifdwarf and the tees with Tifway. I know a lot of people don't like the idea of sodding greens, but I had no choice. We had no time."

All the greens were Vertigrooved twice, in two different directions. Potash was incorporated into them, and regular cultivation and fertilization were implemented.

"I started out by liming the greens, and incorporated a lot of potash and magnesium," Morris explains. "In this area in the spring, you don't want to start out with a lot of high nitrogen fertilizers. For the season, I began with milorganite and moved up to a 3-15-30 fertilizer, alternating with a 0-20-20. Once in a while, to get some color, I would use some ammonium nitrate. Of course, in the fall I had to back off and went back to milorganite and potash."

According to Morris, the roots of the greens had grown down three to four inches within a few months. "By late June, we probably had the finest greens in northern Mississippi," he says.

Those greens that did survive the winter of 1990 will be renovated in the future. "I hope to rebuild another five greens next year, and eventually install new drainage and Tifdwarf for all our greens," Morris reveals.

While drainage, soil fertility, and other aspects of turf management are vital to both golf courses and athletic fields, Morris believes there are fundamental differences between golf course and sports field maintenance practices and goals.

"On sports fields, you're really trying to grow grass," he points out. "On golf courses, you have to pay attention to different surfaces and their conditions.



Hemingway Field the day after vertigrooving.

"The training I got in Florida [at Joe Robbie Stadium] and as a golf course superintendent is starting to come together, because here I have a golf course and athletic fields, and I like that," Morris continues. "I'm learning a lot about this area—it's a whole different ballgame owing grass here than it is in Florida. One of the things

I do in my daily practice is look underneath the grass, as well as on top of it. That's something I've always believed in, but Tom Mascaro helped reinforce it. I'll never forget that." Not content to focus solely on the "smaller" issue of greens rebuilding and renovation, Morris and his crew tackled the

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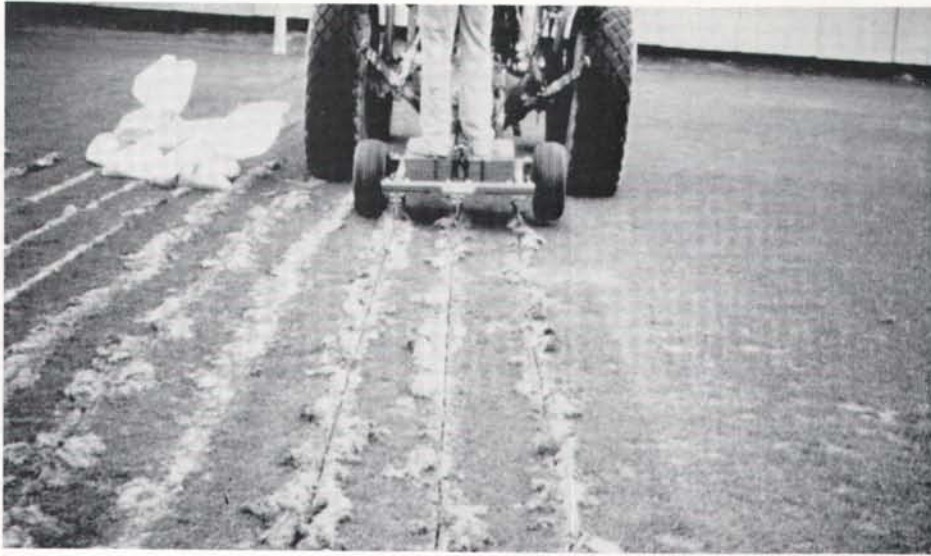
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Slices removed by Verti-Groove on Hemingway Stadium.

Ole Miss

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larger issue of course irrigation. Originally, the course at Ole Miss had no fairway irrigation, and a manual system for greens and tees. Morris envisioned something more. "So I trained my superiors and told them exactly what we needed," he jokes.

A complete automatic irrigation system has been installed. Morris credits Robin Shores of Liberty Pipe, which supplied all the products required, including a Links Master Control System from Rain Bird, and contractors Scott Cross and Lanny Shackelford, for much of the project's success. Morris recalls few problems during installation.

"We did run into some trouble near completion with elevation," he says. "The pump was at one end and we had more pressure than we wanted at the low end, so

we installed pressure relief valves. There was also a little trouble at the end of the season with rain. A lot of our ditch lines washed out."

The system will be fully operational for the 1991 golf tournament season. Of course, Morris has additional ideas for improving the course at Ole Miss.

"I feel like we can get this golf course to be one of the finest in Mississippi if we can come in and do some reshaping on the fairways, install some more drainage, widen some tees, and put in some fairway bunkers," he says. "This course has a lot of potential. It's just been neglected. It has a beautiful fairway layout."

Budget, as always, is a consideration, and Morris describes his golf course budget as "lower than average." He also hopes to boost it, but realizes that such increases come from donations by alumni, and often



Core samples from green shows difference in root depth after aerifying (right) and without aerifying (left).

take time.

"The football field budget is a little different, because football is a big attraction," Morris observes.

Although the golf course is the largest turf area at the university under his care, Morris is also dedicated to improving football and baseball fields, practice fields, and track infield. Two practice fields were actually rebuilt last spring.

"The football field had no root system, no fertilization program to speak of," Morris remembers. "It was neglected." As on the golf courses' greens and tees, Morris incorporated potash and began cultivation of the fields. "I do a lot of cultivation, simply because roots move through spaces in the soil," Morris says. "If you don't have spaces in the soil, roots won't move through it, no matter what you put on the grass."

The fertilizers used on the fields are the same as those used on the golf course. Morris says this enables him to buy various

One 18-hole golf course and five athletic fields translate into many long hours of hard work.

fertilizers in bulk, which saves money. He generally applies some type of fertilizer to the fields every week, except during the cold winter months. He matches fertilizers to what he believes the fields need.

The results have been dramatic, and Morris is justifiably proud of the athletic fields at Ole Miss.

"I would say our football field could match up with any in college, or even the pros," he says. "Our baseball stadium is probably one of the finest in the nation at the collegiate level."

One 18-hole golf course and five athletic fields translate into many long hours of hard work for the superintendent and his crews, but Morris, one of today's multi-talented turf managers, finds the challenge exhilarating. "We've got golf, baseball, football, track—we've got everything!" Morris exclaims. "I'm on the move so much that I'm never in one place very long. It keeps me pretty busy, but I sure am enjoying it."