

Yearning for Recognition

Maintaining college fields is not well understood. Grounds managers are asked to do much more than just keeping the gridiron neat.

by Ron Hall, assistant editor

A major roadblock to serving the athletic field market has been that there is no such thing as a typical athletic field manager.

It's the least understood area of turf management," one grounds manager told WEEDS TREES & TURF, "with the least amount of information available."

An informal survey of college and university athletic field managers in September now provides some consistencies in the way athletic fields are managed.

The individual in charge of athletic fields is also responsible for the entire campus in more than half the cases. He reports to the Physical Plant Director but must consult regularly with athletic directors and coaches. He puts together his own budget and field maintenance standards.

His biggest concerns are overuse of the fields, control of them, time available, and water (irrigation and drainage.)

For the most part, he operates without any particular set of recognized field maintenance standards, putting together his own based upon his experience and requests from the athletic department.

The average budget for chemicals and equipment for fields was \$16,000, while the track surface and pits are worth \$117,400, the fencing around fields is worth \$52,000, the equipment used worth \$163,000 and the stadium building and stands are valued at \$1.57 million.

With sizeable investment for just the athletic portion of their respon-

STADIUM BUILDING & STANDS \$1.57 million

EQUIPMENT USED WORTH \$163,000

TRACK & PITS' WORTH \$117,400

CHEMICAL & EQUIPMENT BUDGET \$16,100

FENCING \$52,000

SALARY \$24,000

ATHLETIC FIELD SURVEY

Average



room in the gym.

The athletic field manager of today has to work out complicated schedules, substantiate budget requests, deal with unions, and still know grass. He has to overcome bad weather, satisfy alumni, and even invent equipment and methods to get his job done.

Salary range

Salaries (and respondents were surprisingly frank) ranged from \$12,000 to \$40,000 annually, with 14 percent of those polled earning in the \$12,000-\$19,000 range, 48 percent in the \$20,000-\$25,000 category, and approximately 26 percent \$25,000-\$30,000.

Those indicating the highest salaries usually hold titles such as grounds and services manager, physical plant director, or director of facilities and grounds.

"I think you'll find the salaries to be about the same as what park directors make," one superintendent notes. "In the North they're probably a little higher than in the South."

Experience is a big word in the college groundskeeping fraternity with 11 years on the job being an average of all those responding, the low respondent having one year experience, the veteran 36 years.

These averages may not give the complete picture since some of those relatively new in their positions also indicate previous experience in grounds departments or related businesses.

Slightly more than half hold undergraduate degrees with hor-

sibility, colleges need more than a "maintenance man."

"Colleges don't want people in charge who go out and just work with their back all day," a chief groundskeeper at a college in the Southeast says. "They want people with some leadership, and people who can put together a budget, train other people, and supervise effectively."

College administrators can't expect a person who has little education and is unwilling to accept responsibility to manage buildings and landscapes worth millions of dollars. There is more than money at stake. The atmosphere of the campus to students and alumni and the safety of athletes are also at risk.

Management decisions for these can't be made by someone working out of a closet with a washtub in it or a cramped corner of the equipment

ticulture, just edging agronomy, the most prevalent educational background. Nine percent hold associate degrees, 15 percent graduate degrees.

While many of the college grounds superintendents who responded to our survey earned their positions by coming up through the ranks, they, like their more formally educated counterparts, are eager to broaden their understanding by attending conferences and seminars. Winter short courses in turf management by some larger universities provide an excellent opportunity to learn, several note.



Harry Gill, right, and assistant Gary Vanderberg of County Stadium, Milwaukee.

Specialized training

The feeling among grounds superintendents is that the profession will require more specialized training in the future.

Differences caused by the size of colleges and universities and geographic location sometimes make direct comparisons tricky.

If the grounds superintendent isn't worrying about pushing the snow off a parking lot in the North, he's fretting about the seed he put down on the bermudagrass in the South, hoping for just a bit more green before the alum-

nae show up for their once-a-year homecoming bash. In fact, he often doesn't have the same responsibilities from campus to campus.

Few—a very few granted—fulfill responsibilities seemingly unrelated to athletic field maintenance, like one respondent who schedules events at the university ice arena also. Or another who serves as athletic director and baseball coach. More common are the grounds superintendents (a title used by 60 percent of those answering the survey) responsible for all the grounds at their particular universities or colleges, athletic fields being just part of the picture.

Almost 80 percent of those responding to the poll indicate they maintain more than ball fields, slightly more than 10 percent doubling as transportation supervisors also.

Although there's no such animal as the typical grounds superintendent, there are typical problems, our survey suggests, the most common being over use and control of the use of athletic fields.

Problems

"The biggest problem we have is keeping everything off the main football field. Now we've got soccer and rugby and that's one reason why I'm

... the profession will require more specialized training in the future.

retiring," one veteran superintendent says. "You can't play on it everyday and expect it to stay good."

Band practices, ROTC drills, even parking ("if we don't play on it, we park on it," one manager moans) cause headaches for those charged with keeping the campus green.

"Coaches as well as other field users need to be more realistic and sensitive to field wear," a supervisor in the Northeast says.

Another superintendent complains, echoing the responses of several others, he can't keep "conscientious" help because of lack of funds. "You kind of scrimp," he says. "You know what has to be done, but you just can't get it done."

Time. It's a major problem.

"I'm responsible for 119 acres of campus plus the athletic fields," a

West Coast grounds supervisor explains. "It's hard to find time to do everything. This year we rebuilt our football field (900 yards of new soil, new grass). We only had six weeks to get ready before our first game."

80 percent of those responding say they maintain more than ball fields.

Other problems listed in order of their frequency on the survey include poor drainage, inadequate irrigation, lack of equipment or equipment failures, and weed control.

University field managers and grounds supervisors keep themselves informed in a variety of ways, and 65 percent of them specifically listed trade publications with 30 percent using suppliers for ideas on a regular basis.

Solutions

Grounds managers are not bashful in seeking solutions to specific problems and the sources they use include product manufacturers, local extension offices, and specialists in related areas. Most have developed a network of "experts" they contact on a periodic basis for assistance, our survey shows.

Most indicate a need for a better exchange of information, or as one harried answerer pleads, "I need all the help I can get." Just over 50 percent responding to our survey said they would join an association for field managers with another 18 percent answering "maybe" or "depending upon the benefits." Only 12 percent came back with a definite "no."

Many current athletic field managers made it to the top by hard work, on-the-spot problem solving, and by being good politicians. Replacing them, however, are former golf course superintendents and horticulture graduates.

These new managers are more receptive to new techniques, more willing to share their expertise, and more determined to make natural turf withstand the wear of athletics. They will take the athletic field manager out of the days of secrecy and into the days of rapid progress.

WT&T

Pennant Winning Turf

Historical Detroit and Chicago fields prove inspirational to pennant winners.

by **Ron Hall**, assistant editor and **Kent Kurtz**, professor of Horticulture, California Polytechnic Institute, Pomona, CA



handling a loaf of bread compared to what we used to do. When you don't have football and baseball combined, you're not in bad shape."

Feneck feels adequate irrigation is the key to maintaining good athletic turf. "If you've got the team home for two or three weeks, you just try to make the grass survive until the team goes on the road and then you flood it," Feneck explains. "I'd say most of keeping good grass is water. I like to water twice a day in July and August."

A five-year-old, underground Rainbird sprinkler system takes most of the work out of Tiger Stadium irrigation.

Feneck insists groundskeepers should have an excellent understanding of the sport they're dealing with ("I played baseball and I know what I liked") but the groundskeeper still won't please everyone.

"If you can get grass to grow in a minute," he sighs, "then you've got something."

Wrigley Field

A chill runs down any baseball fan's spine when he steps onto Chicago's Wrigley Field. The soil is the same trod by the immortal and legendary heroes of the past, Babe Ruth, Lou Gehrig, Honus Wagner, Mel Ott, Joe Dimaggio, Jimmy Foxx, and others.

The field has not changed much since the Cubs played their first National League game there on April 20, 1916. Only three other stadiums are older than Wrigley Field, Comiskey Park (Chicago, opened in 1910), Tiger Stadium (Detroit, 1912), and Fenway Park (Boston, 1912).

Wrigley history

The first baseball game was played at Wrigley Field on April 23, 1914. The field was named Weeghman Park in those days and was the home of the Chicago Whales, a Federal League team which went out of business two years later.

Weeghman Park was built for \$250,000 and accommodated 14,000 fans. Building the stadium required 490 men, 140 were employed by the George Wittbold Florist Company to haul in 4,000 cubic yards of soil and

continued on page 26

Wrigley Field —one of the oldest and most respected baseball fields in the country.

Tiger Stadium

Millions watched the virtuoso performance of the Detroit Tigers in the World Series, but the name Frank Feneck, assistant director of stadium operations at Tiger Stadium, is hardly a household word.

"We're here for the Tigers. We're not here for the people to say, 'Oh, what a beautiful turf you have,'" the pragmatic Feneck, chief of the stadium's groundskeeping force, says.

Feneck is uncomfortable with the publicity his profession sometimes generates.

"When I don't hear from the ball-players I know I'm doing a fine job," he says.

The criticism of San Diego's Jack Murphy Stadium during the Series elicits a sympathetic response from Feneck. "I hate to hear complaining about their field," he says. "No matter what they do, they're going to lose because they share the field with a football team. We only have to worry about the Tigers. That's why I sometimes hate to hear compliments about our field."

Maintaining Tiger Stadium is a snap compared to what it was before the NFL Lions moved to the Pontiac Silverdome in 1974, Feneck, a native Detroit claims.

"We used to carry about 18,000 yards of sod," he says. "Now it's like



Frank Fenneck, chief groundskeeper of Tiger Stadium, left, and **Eddie Goward**.

plant four acres with Kentucky bluegrass seed, hand-collected from mid-western pastures.

The name of the field was changed to Cubs Park in 1918 and then to Wrigley Field in 1926. A second deck was added in 1928 allowing a capacity crowd of 46,000 fans to jam into the stadium. More than 10,000 spectators watched some games standing along the edge of the field.

The large centerfield scoreboard was constructed in 1937 and continues today to be the only scoreboard in the major leagues to be operated by hand.

Today, Wrigley Field seats 37,275 spectators, and only during the day since it is the only major league park without lights.

Lights were almost installed in 1941 when the Wrigleys purchased bulbs, wiring, fixtures, and steel light standards. But, when Pearl Harbor was attacked and the country went to war, all the lighting equipment was donated to the war effort.

Another tradition of Wrigley field is the Ivy Covered Walls. In 1938, a young Bill Veeck (later owner of the Chicago White Sox) purchased ivy and bittersweet from "Clavey's Corners" and with the aid of Bob Dorr (park superintendent) and Cotton Bogren (clubhouse boy) ran copper wire up and down the brick facade and strung the vines. Each spring the ivy comes out of winter dormancy just in time to begin a new and invigorating baseball season.

The new tradition

In 1980, the Cubs were purchased

from the Wrigley family by the Chicago Tribune and the entire baseball program was restructured.

Building a "new tradition" is an understatement, for they not only put together a winning ball club (the 1984 National League East Champions), but also changed the stadium and field management team, now headed by Lubie Veal, assistant director of stadium operations/facilities.

Veal brought to Chicago a positive attitude and broad experience from the previous National League baseball clubs. Lubie spent four years in Montreal, nine years with the Cincinnati Reds, and has just completed his third year with the Chicago Cubs. Everything he has learned about the management of sportsturf has been acquired through working long hours, trial and error, and a lot of hard work and energy.

Veal is the new breed of sports-turf manager; one who is willing to learn new ideas, attempt new techniques and try new products. He will listen to advice and seek suggestions to make his job easier and to enhance the playing surface.

When Dallas Green, executive vice president and general manager, came to Chicago from Philadelphia after the 1981 baseball season, he lured Veal away from the Cincinnati Reds to take over field maintenance. Upon his arrival in Chicago, Veal found most of the turf maintenance equipment in very poor condition. He convinced management that to perform his job correctly he needed to purchase \$70,000 worth of equipment. His

request was granted and he is now able to perform his maintenance responsibilities with an adequate arsenal of equipment.

All large equipment, such as a skid-steer loader, mowers, utility vehicle, tractor, sod cutter, roller, large drags, batting cages, and wheel barrows are stored under the left and center field bleachers. Adjacent to the Cub's third base dugout is a tool room where small hand tools, equipment and supplies are stored. Also located in this room is an adequate supply of moist clay used to repair the pitching mound and the home plate area, several sets of bases, small drags, hoses, shovels and rakes.

The stadium crew

Except on rainy days the stadium crew is rarely seen by spectators. It consists of 22 individuals, only five directly responsible for the playing field on a full-time basis.

Frank Capparelli is responsible for the crew who give the field the finishing touches prior to each game. Many of the crew have long service records, like Lenny Wheeler who began work in 1957. Cotton Bogren retired in 1982 after 47 years of service.

Einar Bogren, assistant supervisor of the field crew has worked at Wrigley Field for 24 years. Einar is responsible for the condition and upkeep of the field and the ivy.

Maintenance program

The soil in Wrigley Field consists of sandy loam which is well-drained and rich in organic matter. When the field was originally constructed, surface drainage was taken into consideration. To the novice the field looks flat; however, the infield slopes four inches from the base of the pitching mound to the infield grass and outfield slopes ten inches from center-field to each foul line.

The irrigation system was installed 40 years ago and utilizes quick coupler valves.

The field receives a minimum of five lbs. of nitrogen per 1,000 square feet per year. The nitrogen source is a combination of urea and methylene urea to assure both quick green-up and long term feeding. Fertilizer is applied in March, May, June, September, and October. An application of 2,4-D and MCPP is applied in May for broadleaf weeds and Dursban is applied in June to control grubs and sod webworms.

The field is not aerified, vertical

mowed or topdressed. Drags equipped with spikes (nails) are used twice yearly by pulling them through the turf with a tractor.

The infield is mowed every other day with a rotary mower set at approximately two inches. A lower height would not work because all the games are played during the daytime and stress on the infield grass would be apparent during a ball game (if mowed at one inch like many other major league ball parks). The outfield turf is mowed three times per week at 1½ to two inches using a triplex reel mower.

Specialized maintenance

Many of the jobs performed by the grounds crew may seem routine to the casual observer, but are really quite specialized.

Building the pitching mound is a slow, exacting process which requires six to eight hours according to Veal. The mound is built of clay layered in two-inch increments and tamped by hand until the mound is ten inches high and the sides and back taper to a

specific degree of slope.

For this and other purposes "green bricks" (not Kiln dry) are purchased from a brick yard, soaked for ten days, and then broken up into pieces. The pieces of moistened brick are placed in depressions and holes in and around the pitching mound and home plate areas and tamped down firmly.

The skinned areas in the infield contain a red clay and sand material purchased from the East Coast. The infield soil is used mostly for aesthetics but does aid drainage during wet weather.

During inclement weather and every evening when the Cubs are home, the infield is covered with a nylon laminated field tarp. Placing and removing the nylon field cover requires the help of the entire stadium crew. Whenever standing water accumulates on the skinned infield an aggregate known as Turface is used to absorb the moisture. As many as 50 50-lb. bags have been used to dry up wet spots on the infield during a single ballgame.

The foul lines in left and right fields are marked prior to each home game. A carbon dioxide (CO₂) charged sprayer containing a white latex field paint is used to apply the foul lines. To mark the batter's box at home plate a white, non-caustic chalk material is used.

Face lift

The summer of 1983 was extremely hot and dry and the old common Kentucky bluegrass turf was heavily infested with Fusarium blight. Immediately following the 1983 baseball season (October), the old Kentucky bluegrass turf was removed. After soil preparation, 108,000 square feet of an improved blend of Kentucky bluegrass was sodded in Wrigley Field. The new blend of Kentucky bluegrass included Adelphi, Touchdown, Majestic, Glade, and Ram I.

During the 1984 season the field turf looked exceptionally good. Perhaps the condition of the field had an impact on the team and helped create the new Chicago Cubs tradition.

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Notre Dame, Penn State Proud of Their *ROOTS*

They don't design the plays and they don't write the schedules, but knowledgeable athletic field managers do their part to keep traditions alive.

by **Ron Hall**, assistant editor

Major universities so proud of their athletic traditions sometimes aren't eager to maintain the facilities, including their turf fields, that helped in building the legends; but at Rockne Stadium at the University of Notre Dame and Beaver Stadium at Penn State University they do.

Athletes at both locations have been playing on grass for generations, and it looks like they'll continue to do so thanks to experienced groundskeepers who care enough to

have established successful maintenance programs.

That's not the case everywhere.

The number of synthetic turf playing fields outnumber natural turf fields 56 to 48 in universities with Division 1-A football this season. Only Purdue in the Big Ten plays on grass, Missouri in the Big Eight. PAC-10 schools are split.

Notre Dame

It's hot in South Bend, IN, so hot a pair

of ducks, oblivious to the campus foot traffic, treat themselves to the refreshing shower of a lawn sprinkler, but the most relaxing location on this mid-summer scorcher is Harold "Bennie" Benninghoff's office in the belly of the University of Notre Dame Stadium.

Benninghoff, literally working in the shadow of the famed Golden Dome, is comfortable in his role as keeper of the Fighting Irish turf. Easy going and resourceful, he goes about his job in a quiet, workmanlike manner.



"If you find something that works, why mess around with it?" Benninghoff says of his unsophisticated but practical maintenance program. It is the result of 20 years of tinkering at Notre Dame's Rockne Stadium where he's encountered everything from fusarium blight to the handiwork of over zealous Air Force partisans who initialed his stadium turf with a huge "AF" the fall of 1983.

In addition to Rockne Stadium, Benninghoff maintains approximately 40 acres of turf athletic fields and 24 tennis courts.

He's taking a breather after meeting with a Sherwin Williams rep concerning line marking paint to be used on an artificial surface practice football field. Benninghoff is seeking a paint that'll last forever. He's not convinced there is such a paint, but he's looking. Later in the day he'll be performing surgery on a sprinkler head decapitated by a wayward mower.

Benninghoff, in his own relaxed way, has tailored his program to fit his stadium's needs including application of Scott fertilizer (19-5-9) plus



Harold Benninghoff, keeper of the "Fighting Irish" turf.

ninghoff to keep his program on schedule.

"If you find something that works, why mess around with it?"

—Benninghoff

fungicide on a periodic basis, aerification with a 3/4-in. spoons at least four times (the most compacted areas six times) annually, overseeding with a Jacobsen groove seeder, and the addition of soil conditioners about twice a year.

The field's surface is a mixture of Kentucky bluegrasses.

"Every time they come up with a new improved variety I try it," Benninghoff says. "There might be seven or eight varieties on it."

Problems? Nothing major.

"We're always fighting compaction like they are at other fields and we have had a grub problem, Japanese beetle and *aetenus spretulus*," he says, "so we watch and try to take preventative measures."

Installation of an underground Toro sprinkler system two years ago and the use of Rockne Stadium almost exclusively for football allows Ben-

Penn State program

The stoop-shouldered hills of Central Pennsylvania are a patchwork quilt of fall color but fog smothers the valleys as coach Joe Paterno's Nittany Lions are just one day away from a loss to a struggling Crimson Tide in far-away Alabama. Bob Hudzik, the 30-year-old Penn State University groundskeeper—the experiment—stays home.

Home for him is either Beaver Stadium, the 80,000-plus seat monument to the storied Lions, or one of two Penn State golf courses. He's on the job early. He leaves late.

"I guess I was kind of an experiment," Hudzik says of the decision a few years back to put him in charge of what is a pretty sizable hunk of real estate in the Nittany Valley. "Usually in a case like this it's somebody that's come up through the ranks, but I guess they wanted to see if I could develop some new ideas."

Hudzik's responsibilities, in addition to Beaver Stadium and the two campus golf courses, include practice fields, recreation fields used for intermurals, tennis courts, and even low maintenance fields used for parking.

Originally from a small Western Pennsylvania community, the tall, thin Hudzik, a former Penn State stu-

dent, has put together and uses an athletic field renovation program that, according to an informal WTT survey, is gaining favor at other universities as well.

"There are no secrets," Hudzik says, "and we're doing nothing difficult. It's just a matter of getting on the fields and getting to work. Our program is very simple."

The Penn State program begins in the spring, as soon as workmen can get on the fields. It has to.

Early each summer hundreds of eager youngsters arrive at State College, PA, to participate in summer sports camps. The campus is host to three consecutive football camps, each with 750 to 800 students. That gives the grounds crew about three weeks from the end of intramural sports to the beginning of the camps to pull the athletic grounds back together.

Renovation of the turf at Beaver Stadium begins at this time also to dress up the stadium for graduation ceremonies. "When these students and their parents are here we want this field looking as good as we can so we can leave them with a good memory of the university," Hudzik notes.

Early April sees the application of 3/4 to one pound of 18-5-9 fertilizer per 1,000 sq. ft. with a tractor drawn cyclone spreader. An application of straight urea provides a quick greenup.

Then Hudzik sees to it that athletic fields are practically riddled with an Arien rennovator with 3/4 tines. The fields are aerified at least eight times, the stadium turf 10 times.

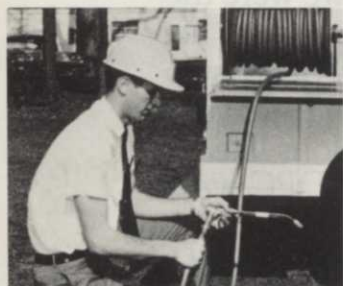
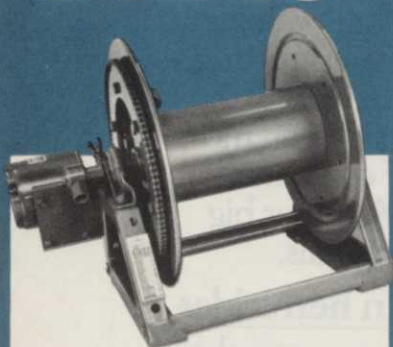
Aerification vital

"If somebody asked me, 'what are the most important things you do to your fields?' I'd say aerification and phosphorus," Hudzik says. "Get the damn fields aerified. Sure, it would be nice if you could aerify in the fall too, but a lot of the time you just can't do it then."

A chainlink drag mat is used to smooth the soil churned up by the repeated aerifications.

"People sometimes say to me, 'well, I aerify and I still have problems'," Hudzik adds. "Maybe what they're doing is slicing. You've got to remove a core to allow the soil around the hole to collapse. If you have the time to let the field recover, just aerify the daylight out of it. It might scare you, but if you have a good overseeding program, you

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shouldn't have any problem at all."

Hudzik says not to underestimate phosphorus either. His fields receive two pounds per 1,000 sq. ft. of triple super phosphate in late May.

"Phosphorus is essential. I would use it in a renovation process even if we weren't low on phosphorus. It's been proven that you can establish a good, healthy stand of grass much quicker with it. It's essential particularly in developing a good root system," he points out.

When overseeding, Hudzik believes it's best to work in a crossing pattern.

Using a groove seeder a mixture of three Kentucky bluegrasses (Baron, Fylking, and Touchdown) and two perennial ryes (Pennfine and Manhattan) is applied in one direction, then Touchdown blue is sown perpendicular to the first mixture.

"Even on the football practice field I try to get the bluegrass established because it'll take more of a beating," Hudzik says, "but we know we don't have enough time to get bluegrass established on the intermural fields so we're putting a little extra rye on them."

It's just after overseeding that a lot of the thatch is removed from the stadium turf, last spring three dump truck loads. "The field's thin," Hudzik admits. "It looks like a piece of swiss cheese, but it's got all summer to recover."

Bare areas on the stadium floor are hydromulched ("if we put seed in it, it's very little") to keep moisture in and to prevent crusting which may

hamper the emergence of grass seedlings.

The Beaver Stadium turf gets a rest after graduation. It's mowed three times weekly, watered as-needed, and treated with insecticides and fungicides "on a curative basis." For weed control Hudzik mixes 1 pound 2,4-D, .55 pound MCP, and .10 pound of Diacamba.

Early October sees the Beaver Stadium turf receiving another shot of nitrogen, but Hudzik says he's careful not to overdo it.

"You can make a field look super but when it comes to football you

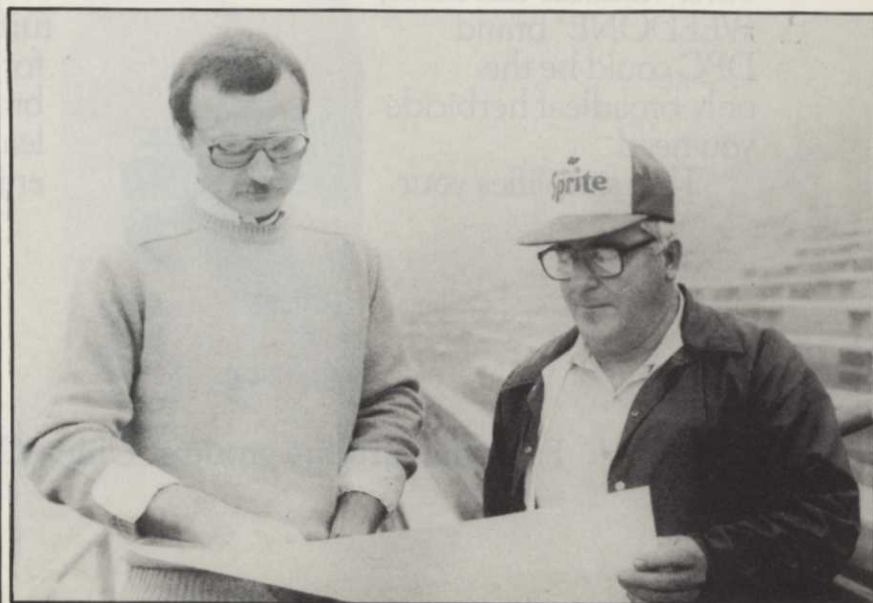
"There are no secrets. It's just a matter of getting on the fields and getting to work."

—Hudzik

don't want a super, lush growth. Those succulent grass blades will tear," he explains. "You want it to look good, but also you want the best playing conditions. You don't want to combine excess nitrogen and warm weather."

Taking care of Beaver Stadium might be Hudzik's showcase, but he doesn't see it as "any big deal." Getting his renovation program under way each spring is.

WT&T



Bob Hudzik, and assistant Fred Sweeley of Beaver Stadium.

Only the Best For Our Kids

Safety is a big concern with the best high school sports program. Natural grass playing surfaces are usually the choice.

by Ron Hall, assistant editor

Kings Island and Oak Harbor, two small communities separated by about 250 miles of checkerboard Ohio farmland, don't have a whole lot in common. But they do share pride and a long-term commitment to excellence in their high school athletic programs. The evidence is two first-rate natural turf playing fields.

Small potatoes? Hardly.

The National Federation of State High School Associations reports more than 14,000 schools involved with high school football, more than 13,000 with baseball, and another 4,500 offering soccer programs.

Prep athletics continue to grow, but shrinking budgets result in many young athletes using facilities that are often poorly planned, worn out or neglected, sometimes even dangerous.

The importance of proper athletic field construction and maintenance came down hard at College Football Hall of Fame at Kings Island just a short drive from Cincinnati.

Fall religion

The Hall of Fame, located on a knoll within eyesight of the large Kings Island theme park, displays relics of our fall religion beside the microchip wizardry of computers and film presentations. It is a neat slice of Americana; as American as the "rah rah" of a Saturday afternoon in the fall.

But when it came to the game itself, the Hall of Fame flopped when it built a field of its own in 1981. What should

have been a showcase for the sport turned into a sloppy, muddy headache instead.

This summer that changed.

The College Football Hall of Fame's Galbreath Field sports a new Prescription Athletic Turf (PAT) playing surface and is home field for a pair of nearby high schools, including nationally-recognized Cincinnati Moeller. It also hosts the Collegiate Division III championships, the Amos Alonzo Stagg Bowl.

A tough choice

The PAT natural turf field was chosen even though an artificial surface received serious consideration.

"We're basically a high school stadium and we've seen enough to know that grass for growing young people is a safer surface," Don Schumacher, general manager of the Hall of Fame, says. "Also, cost was a major consideration. We figured it would cost about \$600,000 with synthetic turf and we might have to replace it in eight or nine years. The PAT cost \$300,000."

Strengthening the swing to grass was the availability of professional maintenance help from the nearby Jack Nicklaus Sports Center with its two golf courses. The Nicklaus Sports Center is owned and managed by the Taft Broadcasting Company which also manages the College Hall of Fame.

PAT, invented by Dr. William Daniel of Purdue University, provides

a flat, moisture-controlled playing surface. The turf is placed over a bed of 12 to 14 inches of sand which, at Galbreath Field, covers a network of 2-inch perforated tile (15 in all) running lengthwise every 11 feet apart. These tiles connect to a main drain which leads to a pump house.

A thick plastic sheet lies just below the layers of turf, sand, and tiles. Electronic sensors measure the moisture content. Watering is accomplished in two ways: via traditional in-ground sprinklers (Galbreath has 21 Toro sprinkler heads on the field and about 50 around the perimeter) and by pumping water back through the system beneath the field.

"Don't misunderstand," Schumacher says. "I'm not anti-artificial turf, but when you combine the savings, the utility of use and some concern for younger players, and then we have professionals to maintain it—the PAT is right for us."

The field is excellent for Moeller which shares the field with neighboring Kings High School. Moeller, perennial Ohio champion, is consistently ranked as one of the finest high school football teams in the nation and this season hosted Christopher Columbus, Miami, FL, and Cathedral Prep, Erie, PA, at Galbreath. Gerry Faust coached and won honors at Moeller before being tabbed as head coach at the University of Notre Dame in 1981.

But, Galbreath Field was anything but championship prior to this season.

Carved from a woodlot in 1981, its natural soil base had literally been chewed into a dustbowl by almost daily rounds of football and soccer. Built with a 21-inch crown, forward passes at the Hall of Fame field resembled mortar lobs and long passes in soccer games took parabolic routes to their destination.

"The first year we had 18 or 19 high school games," Schumacher explains. "We didn't have any rain and the field was dry every game. We tore the turf (the field had been seeded with fescue) pretty badly, but we thought maintaining a field was easy and that

everybody could do it."

Management at the College Hall of Fame pulled out all the stops in 1982, scheduling a full program of youth football and soccer in addition to the high school games and season-ending state playoff game.

Disaster struck.

"The field started to tear up," Schumacher says. "By the time we made it to Thanksgiving the top six inches of material were churned to a pudding. It wasn't even safe to walk on. What a mess."

The field was resodded with bluegrass in March 1983 in an attempt to

bring it back to life. Youth football and soccer programs were dropped.

The bluegrass looked good ("We found the bluegrass tended to regenerate and it also made for better footing," Schumacher says) but the basic problem remained. Rains turned the surface mushy and conditions weren't good for the Stagg Bowl which featured Augustana and Union City Colleges.

When officials from the National Football Foundation and Hall of Fame, Inc., owners of the field, went looking for answers they didn't have far to go. Spinney Field, the PAT prac-



The College Football Hall of Fame, Kings Island, OH.



Mel Hoover of Oak Harbor, school superintendent and grounds superintendent.



Filling in around irrigation lines at Galbreath Field, King's Island.

tice field for the Cincinnati Bengals professional football team, was nearby. Eventually a meeting was arranged with PAT proponent Daniel at Purdue in Lafayette, IN.

"Now that we have a surface that can control the moisture, we can somewhat control the wear," Schumacher explains. "We're very eager to get to the fall of 1985."

This past year marked a renewed interest in the sand-concept PAT system with the University of Mississippi removing an old artificial surface in favor of PAT at Vaught-Hemingway Field in University, MS. PAT fields have been in use at three high schools, two in Indiana and one in Michigan, for the past decade with all three holding up well under intensive use. There have been problems, however, although they don't appear to have been a result of the PAT concept.

Alkalinity woes

In Evansville, IN, for instance, an inability to keep healthy turf on a PAT field was eventually traced to the high alkalinity of the city water supply. Bob Meyerholtz, who oversees the field, says efforts to grow first Bermudagrass, then fescue, then zoysia failed as the alkalinity of the soil, irrigated with city water, climbed to a pH of 8. Meyerholtz, a teacher of agriculture at Reitz Memorial High School, says phosphoric acid is now

added to water used on the field and the turf is showing "a definite improvement in growth, color, and standability."

Meyerholtz admits the terrific usage the field gets (it is used by the junior high and high school teams from two schools) keeps it from being a showcase. "We have so many things on it, including band practices once or twice a week. We do have a problem

The PAT natural turf field was chosen even though an artificial surface received serious consideration.

in keeping grass in the center of the field," he says.

Tax money used

PAT remains beyond the financial reach of most high schools, however, even ones like Oak Harbor in North-western Ohio, the beneficiary of a tax windfall from a nearby nuclear power plant. Once one of the poorest districts in that part of the state, the Benton-Carroll-Salem District (of which Oak Harbor is a part) has literally

uncorked a magic genie.

"The state says you can't save the money," School Superintendent Mel Hoover says of an ambitious project to upgrade the school's athletic facilities. "You have to use it and have a reason for using it, so we're using it."

The school sports a lush new football field encircled by a rust-colored, latex-based, all-weather track with accompanying permanent metal stands and concession stand. A baseball diamond with a grass infield, four new tennis courts, a football practice area and an encircling cross country course complete the athletic complex.

Price tag for all the above? About \$650,000, according to Hoover.

Even with the taxes generated by the Davis-Besse nuclear power plant, however, school officials keep a careful eye on expenses.

Subsoil taken from the football field site, for instance, was used to create a hill on the school's cross country course. And, when it became apparent the seed that had been planted the previous fall on the football field wasn't going to provide an attractive playing surface, Hoover and a handful of volunteers (mostly teachers) resodded the field themselves.

"We got a pretty good crop of weeds from the straw that was on the seeds, but we didn't feel like the grass was going to mature," he recalls. "We waited to see what was going to happen, but we couldn't wait any longer because we had to give the sod enough time to anchor itself."

Hoover, who built and operated a nearby golf course prior to heading the neighborhood school, remains protective of the field which is built over native clay soils.

The field gets "tender care," he says, including liberal applications of the soil conditioner Turfas and regular aeration. Fertilizer for the turf (a mixture of Nugget, Cheri, and Adelpi Kentucky bluegrasses) is applied four times annually, while irrigation is provided by electronically-timed Toro Mistamatic sprinklers and drainage by four-inch field tile with off-field catch basins.

Hoover admits his school could have spent more on its athletic fields, but he doesn't feel the extra expense would have accomplished anything.

"I think we have excellent facilities and they stay in good shape," he points out. "The key, I think, is keeping them well maintained." **WT&T**