

Busch, St. Louis Cardinal owner William Bidwell agreed to treat his team to a trip to England. Mike Lynn, general manager of the Minnesota Vikings, thought it was appropriate that the Vikings, with their European roots, make a symbolic crossing of the Atlantic to show the British a thing or two about football.

At first the NFL wasn't sure how it would treat such exhibition games. It has very definite rules on how many pre-season games an NFL team can play. The NFL's job is to ensure that all teams derive equal benefit from revenues generated by the league.

William Granholm, assistant to the president of the National Football Conference, explains, "It's expensive for two teams to send 80 players and all their training and coaching personnel to England for a week. The teams needed a way to defray some of their costs. So the decision was made to allow them one extra pre-season game for their troubles."

The teams were ready to go, but Wembley Stadium wasn't. It had one of the best pitches for rugby and soccer, but it had no experience with American football. It rarely had more than four days to convert the pitch from one sport to another since it was so heavily booked. American expertise was required if the event was to succeed.

The Cardinals play on artificial turf at Busch Stadium, as do the Vikings in the Metrodome. But, the Vikings headquarters and training center in Eden Prairie, MN, had a state-of-the-art natural turf field under the care of facility supervisor Sam Monson. When Monson heard the Vikings might be going to play the Cardinals in Wembley, he asked Lynn if he could go to help out on the field marking and preparation. By saying yes, Lynn started a relationship between Monson and the groundsmen at Wembley that is entering its fourth year.

It wasn't that Don Gallagher, head groundsman at Wembley in 1984, was a novice at turf management. He was an institution in England, clearly one of the top groundsmen in the country. After 15 years at Wembley, he knew everything there was to know about the perennial ryegrass pitch and how to help it recover from all types of sports and concerts held on it. Since it is the largest stadium in England, it is used for all types of events. The pitch endures the ripping and tearing of cleats during scrums, the huddle-like formations in rugby, the fancy footwork of soccer players, the dancing of punk rockers during concerts, and the rowdiness of soccer fans who occasionally pour out onto the pitch after a match. Gallagher had discovered precisely how to repair the pitch after all these events with sod from Wembley's own nursery, frequent overseeding and a good pitch-forking.

If someone slipped and called his pitch a field, Gallagher would quickly explain, "A field is where cows eat. . . a pitch is where sports are played."

"Sports turf management in England is



Goal posts for American football had to be installed before the first game in 1984.

labor-intensive," Monson describes. "Where we would use a 72-inch riding triplex reel mower, they would take three hours to cut the pitch with a 30-inch walk-behind reel mower that catches the clippings. We'd use a boom sprayer for spraying for weeds, insects or diseases. They use three or four guys with backpack sprayers. Instead of pushing the turf with a pound of nitrogen per month, they use moderate rates of slow-release fertilizers. Where we'd use automatic in-the-ground irrigation, they take hours to water the field with hoses or occasionally a portable sprinkler. It's a whole different attitude about labor."

Monson wanted to give the British fans a pitch that was as dressed up as the Super Bowl fields they had seen on the "television." The Wembley crew never had the occasion to paint large multi-colored shields and logos on the pitch in all its 80 years of operation. "All they ever used was a white chalky emulsion and a walk-behind liner," Monson adds. "They were accustomed to rain washing the chalk off the field during a game. The idea of using a latex paint was not something they had ever considered as proper, since a soccer game might be followed by a rugby match the next day."

American football had never been played in Wembley. The single-post goals had never been erected on the pitch before. One of the first jobs Monson had to do when he arrived in London a week before the August game was to install four-foot-square concrete footers for the goal posts. To accomplish this the Wembley crew had to dig out large holes in both goal areas, pour the footers, and replace the soil and sod in time for the game. Except for one day every August, the Wembley fans are unaware that the foundations of American football lie beneath the surface of their pitch.

There was nothing Monson could do to improve the spectacular ryegrass turf. European groundskeepers had learned the superiority of the improved perennial ryegrasses for sports fields years before the idea took hold in the U.S. Gallagher was a leader in their implementation. He was also a leader in the use of high sand content soil. The Wembley soil was 80 percent sand mixed with cinders, peat and native loam. The dark mix warms with only minimal sunshine, drains well enough for most rainstorms that venture inland from the Atlantic Coast, and can be spread just as easily as sand for top-dressing and divot repair.

It rained nearly every day the week before the game. Monson quickly learned that British groundskeepers don't have tarps. "If

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Tingley wanted to paint the NFL logo himself.



A fork is used regularly to repair divots and relieve compacted spots near goal areas.

Wembley Stadium

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we had tarps, we'd spend all our time putting them down and taking them up with the rain here," explained Gallagher.

Between showers the day before the game, Monson instructed Gallagher's crew as they painted the lines for American football on the Wembley pitch for the first time in its history. Designs were very simple because Gallagher only had a few marking paints. Monson was losing hope as he watched the lines fade in the drizzle and get tracked across the field. He went to sleep that night disappointed.

He awoke early Sunday morning hoping for enough sunshine to touch up the pitch before the one o'clock game. To his delight, it was cloudy, but not raining. Hyde Park was already bustling with walkers as he left his hotel for the stadium. When he arrived, Gallagher had a few extra chaps to help out. By gametime, not only did the pitch meet Monson's expectations, the American flag flew over the stadium for the first time ever. Both were a good omen for Monson.

Only 37,000 fans bought tickets to the first game. For the most part, the local papers were kind to the event, treating it more as a cultural exchange program than a true sporting event. The teams received their guarantees and the experience of London. The promoter, however, didn't get rich. As Monson boarded the plane back to Minneapolis, he wasn't sure there would be another exhibition game in Wembley for a while. A bigger blow came to him when Gallagher, whose health had been failing, decided to retire and leave the pitch in new hands.

Little did Monson know, the NFL was not disappointed. "Magnitude is really a matter of logistics," says Granholm. "We knew that American football was catching on across Europe. There are currently more than 500 semi-pro teams in the Euro-Football League. But, it isn't the kind of thing a local promoter can turn into an instant success. The owners felt the NFL should take

over the project and build the event up over a five to ten year period."

The NFL took more than a year to examine all the aspects of staging the Wembley exhibition game. In 1986, when they were ready to try again, all the chemistry was there. The Dallas Cowboys, the John Waynes of American football to the British, and the Chicago Bears, the colorful misfits pubgoers related to, were paired off. This time the press, both national and international, got behind the contest all the way. It was like a volcano preparing to erupt.

When Joe Rhein, NFL director of operations, checked with Wembley about the arrangements for the pitch, he learned that the groundscrew respected the easy-going, tall Monson from the Vikings. Steve Tingley, the new head groundskeeper, had sought Monson's opinion when the stadium decided to install an automatic irrigation system and sand slits to improve the drainage. He may have been 6,000 miles from Wembley, but he still kept in touch. "I wanted to go back, of course," said Monson, "but I also knew the NFL has its own team of experts it re-



The entire field is mowed by a 30-inch reel mower with catcher.

lies on for big events. When Granholm called and asked if I wanted to go back to Wembley, it was like a dream come true."

"Steve has in education what Don had in experience," remarks Monson. Gallagher was so close to the conditions of the pitch he knew what would happen before it did. Tingley went to school for groundskeeping and mastered turf tennis courts before coming to Wembley. "They are both good managers of people," Monson notes.

When Monson returned to Wembley after two years, he found the field in precisely the same excellent shape. "Tingley was very interested in the entire painting process," says Monson. "The first day he said he wanted to do the NFL logo himself. He had saved all the patterns and boards from the first game and was anxious to try them out."

This time Monson brought with him all the paint and stencils he would need for the NFL emblem in the center of the pitch and the helmets and team logos for the end-zones. Tingley had the templates for the

numbers, hash marks and the four-foot-wide sidelines ready for Monson.

After going to so much detail to dress up the field, Monson did not want rain to wash away his hard work. He won a compromise from Tingley that he could use diluted latex paint for the emblems and logos. For the white lines, Monson mixed the Snow-cal chalk with white Mautz latex paint. As a result, the designs weren't as bold as the Super Bowl, but they were just as large.

The week before the game, it rained very little. Conditions for painting were perfect. Tingley spent hours working with Monson learning as much as he could. When the teams practiced on the field the day before the game, the pitch was perfect. This time when Monson awoke on game day, the walkers in Hyde Park carried umbrellas to protect themselves from the drizzle. He wasn't worried about the drainage, it was Tingley's NFL emblem he was concerned about. When he arrived at the stadium he found that the latex paint in the end zones and emblem required only minor touch up. The white lines, however, were tracking. The crew wiped up as much of the errant paint as they could before the game.

More than 80,000 fans packed the stadium this time. A week of frolicking by the Bears had drummed up ticket sales. The Cowboys chose to keep a low profile at the National Sports Center's Crystal Palace where both teams practiced the week before the game. The Dallas cheerleaders made up for the shy Cowboys.

The London weather, which resembled Chicago more than Dallas, tipped the game in favor of the Bears, who despite a certain irreverence to British or American customs, prevailed 17-6 in the rain. There was little doubt that the NFL had saved the exhibition from the throes of indifference. The upcoming contest between the Denver Broncos and the Los Angeles Rams, was sold out two weeks after the tickets went on sale. "We could have sold 250,000 tickets," exclaimed Wembley's Miller.



No sprinkler heads are allowed on the field so Tingley rigged up this Toro head on a stand.



The Wembley grounds crew with Tingley in the center.

"Interest in exhibition games has exploded," says Granholm. "We could put on sell-outs in Germany, France and Italy tomorrow. We have offers from Israel, Sweden, Finland and even Singapore, Malasia. Still, we are five to ten years away from anything that might resemble a foreign game schedule. Wembley wants us to hold five preseason games there."

The NFL is playing the exhibition game conservatively for the near future. It wants to protect foreign events to the same degree it must protect its franchises in the U.S.

The Tingley-Monson team will be back on the pitch next month trying to beat the rain again. Monson still hasn't convinced Wembley that tarps might not be a bad idea when you paint a pitch to NFL standards.

But rain is not their primary concern this year. Whereas the NFL had the field for four days prior to the game the past two times, this year they have it for a mere 21 hours. The day before the exhibition game, there will be a soccer match on the field.

Monson and Tingley will have from 4 p.m. on Saturday until 1 p.m. on Sunday to wash off the soccer lines, paint the emblems and logos, install the goal posts, and mark all the lines, numbers and hash marks. Furthermore, it might be raining the whole time. By the end of the day on Sunday, the NFL will hand the pitch back to the stadium in condition for an event the next day.

If Monson survives the Wembley ordeal, he may find himself facing two exhibition games next year. NFL Commissioner Pete Rozelle has given the nod for a second exhibition game outside of the U.S. next year. Volvo has invited the Vikings to battle the Bears or the Seattle Seahawks in Gothenburg, Sweden. Mike Lynn might ask the NFL if Monson could work on that stadium too.

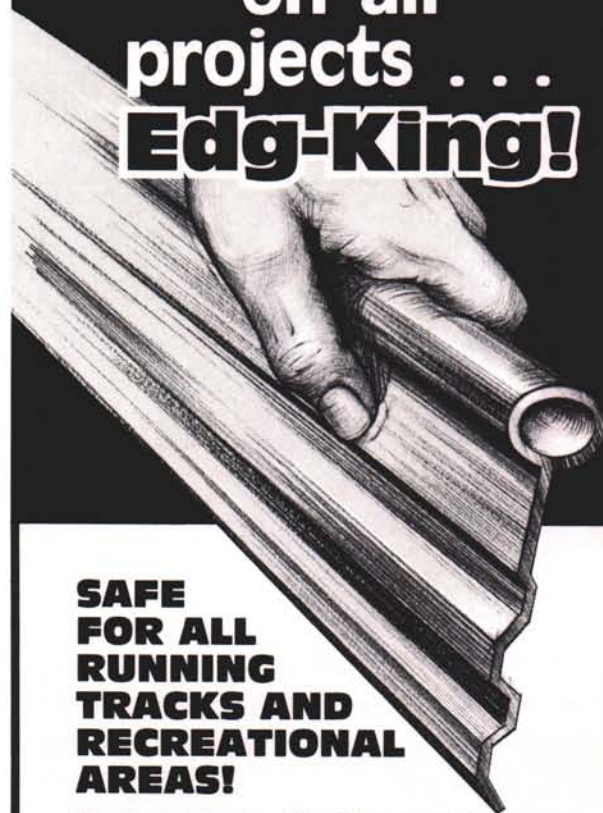
"It's funny, I hardly know what London looks like even though I've spent more than two weeks there," jests Monson. "It's Gallagher, Tingley and the pitch at Wembley that I think of when I think of England. I just wish we could do something about that rain!"

Back home in Eden Prairie, Monson has one artificial field and two natural sand-based fields to maintain. When the Vikings aren't in England, Sweden or on the road, they are practicing in Eden Prairie. It's his job to make sure those fields are as good or better than the stadiums the team plays at during the season.

He credits Dr. Donald White, professor of horticulture at the University of Minnesota-St. Paul, for guiding him into a sports turf management career. Monson was one of White's turf management students and part of the crew at the university's golf course when the professor designed the university's sand-based Memorial Stadium field. The school needed someone to manage the new field and White recommended Monson.

White also designed the fields at the Vikings training center. Monson was the natural choice when the facility was built in 1980. "It's a constant learning experience to work with Dr. White and Dick Ericson at the Metrodome," says Monson. "We are learning to deal with some of the toughest playing conditions in the country, and now the world. That's the way we will solve injury problems, not by keeping secrets. Steve Tingley has helped me as much as I've helped him. We both have better facilities as a result." ☺

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NEW STADIUM IS READY FOR THE MIAMI DOLPHINS

Joe Robbe, owner of the Miami Dolphins, has done what many thought was impossible, build a football-only stadium for his team with private financing. The new 73,000-seat, open-air stadium is situated on 70 acres in northern Dade County, FL, and will be used for the first time in August.

The Dolphins leave behind the 54-year-old Orange Bowl, but not the sand-based Prescription Athletic Turf (PAT) they played on there. Southern Turf Nurseries installed a new PAT field in Dolphin Stadium to match the one at the Orange Bowl at Robbe's request. Tifway bermudagrass sod has been

installed on top of a 14-inch bed of sand to help cushion the falls of tackled players. Calcined clay was mixed with the top few inches of sand to keep the field from drying out too rapidly. The PAT field has a closed moisture control system with pumps that can either add or remove water from the field. A Toro surface irrigation system was included at Dolphin Stadium.

HOK Sports Facilities Group in Kansas City designed the new stadium with 10,000 exclusive club-level seats behind the field-level seats and beneath the upper deck. Fans in these club seats will have access to specially-designed lounge spaces surrounding the entire stadium. More than 200 luxury suites on two levels also surround

the field. Although Dolphin Stadium is currently for football only, HOK made provisions for a baseball configuration.

The stadium is located on a 70-acre landscaped site with parking for thousands of cars. The grounds manager will be responsible for both the field and the surrounding grounds. Southern Turf Nurseries will maintain the stadium grounds until a grounds manager is selected.

OAKLAND MAY EXPAND SEATING TO ATTRACT NFL FRANCHISE

The Oakland-Alameda County Coliseum board of directors has engaged HOK Sports Facilities Architects to provide plans for the expansion of the stadium's seating capacity to 65,000 in order to accommodate an NFL franchise. The stadium has been a baseball-only facility since the Raiders moved to Los Angeles. Raiders owner Al Davis has recently been feuding with the Los Angeles Coliseum over a plan to add skyboxes.

HOK has been instructed to consider additional skyboxes, restrooms, press boxes, concession areas, team rooms, training facilities, lighting, advertising panels and scoreboards. HOK's Ron Labinski will coordinate the expansion plan. In more than 20 years of entertainment facility design, Labinski has been involved with the Pontiac Silverdome, Giants Stadium, Arrowhead Stadium, Anaheim Stadium, the Los Angeles Coliseum and the London (England) Docklands Events Center.

Coliseum President George Vukasin explains, "While we do not yet have an NFL franchise, we are confident that our efforts in that area will pay off." Labinski elaborated, saying, "We hope to affect some modifications that will not only make the facility more attractive to an NFL franchise, but also for the A's and other tenants."

MEMPHIS POSITIONS FOR NFL FRANCHISE

There may be a not-so-hidden reason why Memphis is hosting a pre-season contest between the St. Louis Cardinals and the Kansas City Chiefs this September, according to industry experts. Fred Smith, chairman of Memphis-based Federal Express Corp., has even launched a company called Mid-America Football to work full-time on securing a NFL franchise. The city currently has no professional football, baseball or basketball franchise.

At the same time, the Liberty Bowl has begun construction to increase its capacity to 65,000 seats, a number sought after by NFL team owners. Cardinal owner William Bidwell voiced serious doubts about the future of his team in St. Louis this past winter. If Memphis fills the Liberty Bowl in September, Smith may get his wish.



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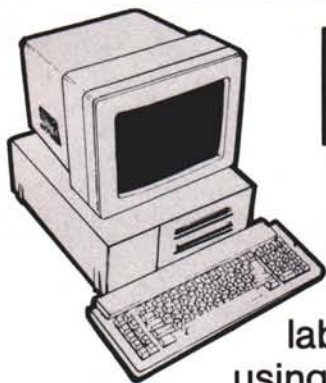
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CHALKBOARD

TIPS FROM THE PROS

ADVANCES IN TURF VARIETIES EVIDENT AT OREGON FIELD DAY

Ten years ago selecting the best turf seed for a particular site was relatively simple. The local seed supplier would have a choice of perhaps four Kentucky bluegrasses, two perennial ryegrasses, one annual ryegrass, one creeping red fescue, one chewing fescue, either K-31 or Alta tall fescue and Penn-cross or Highland bentgrass. Landscape architects rarely attempted to specify certain varieties of turfgrasses believing there wasn't significant difference between them. So, basically you went by the price and the supplier's recommendation.

Few turf managers realized the potential for improving turfgrass performance ten years ago, nor were they aware of breeding work underway by a handful of seed companies to develop and market the seed of better turfgrasses. The management of these seed companies had begun to realize the value of research data being produced at universities such as Rutgers and Pennsylvania State University. They started to hire graduate turf breeders from these universities to identify turfgrass varieties that outperformed the others and which produced seed in the Oregon fields most profusely. It was beginning to pay turf companies to improve turfgrasses and to expand the number of choices turf managers had when choosing seed for a site.

Today, it's hard for a seed supplier to pick a reasonable number of seed varieties to offer his customers because there are so many. There is a limit to the inventory a supplier can carry. About the only way a sports turf manager can see for himself what all the different varieties look like is to attend the summer field days held at state universities and seed companies during the summer. Chances are, once you see how your old variety stacks up against the newer ones, you'll want to switch.

One of the largest of these field days is held by Turf Seed Inc. in Hubbard, OR, every June. In five years, the company's Bill Meyer has planted thousands of different varieties of turfgrass on 66 acres of Willamette Valley farmland and maintained them to industry standards. Meyer keeps in touch with fellow breeders across the country to learn of regional variances in turf performance. He shares all this information with nearly 500 turf managers who venture from across the country to his research farm.

Meyer and other breeders have had a great deal of success in developing improved perennial ryegrasses and turf-type tall fescues. The number of new, significantly-improved varieties is rising at a rate con-



Bill Meyer explains crossing of selected turf varieties to achieve improved varieties.

siderably faster than in the past making production and marketing of individual varieties difficult. To solve this problem, seed growers are offering blends of three improved varieties to give them flexibility. The individual varieties in these blends can vary based on the availability of seed. This way the company can market the seed by the name of the blend and can avoid promoting individual components. The three varieties also provide the customer with three chances at disease resistance and wear resistance instead of one.

Nothing can beat the single-week germination period of perennial ryegrasses. By improving the color, disease resistance, mowability and wear tolerance of perennial ryegrasses, breeders are giving Kentucky bluegrass a run for its money in the northern U.S. Winter overseeding of dormant warm-season turfgrasses with perennial ryegrass continues to expand as soccer and other winter sports take their toll on dormant turf. Overseeding has become much more than a factor of appearance during the winter.

New turf-type tall fescues are quickly replacing K-31 and Alta on sports fields, parks and roughs. The finer blades and darker green color of these fescues, combined with surprising shade and wear tolerance, make renovating older tall fescue sites with the new varieties wise. Dwarf turf-type tall fescues will enter the market soon to give the turf the additional benefit of reduced mowing frequency. Some breeders, however, question the wisdom of using dwarf tall fescues on heavily-used sports fields, but they praise it for low-maintenance utility turf areas.

Ryegrasses and tall fescues, despite all their strengths, are bunch grasses. Only Kentucky bluegrass and most warm-season grasses spread to repair damaged turf without overseeding. Unfortunately, bluegrass' 28-day germination period makes it too slow for overseeding thin sports turf. However, breeders still recommend a heavy percentage of Kentucky bluegrass mixed with perennial ryegrass for establishing cool-season sports turf.

Research on low-maintenance grasses and wildflowers has increased greatly. Hard fescues, sheeps fescues, chewing fescues and creeping fescues are being developed which require barely any fertilizer at all. Wildflowers are a colorful option for low-maintenance areas of parks, schools and golf courses.

Insect resistance is another new feature of perennial ryegrasses, turf-type tall fescues and fine fescues made possible by a fungus contained in new varieties. This endophytic fungus repulses attacking aphids, bill bugs, sod webworms and chinchbugs. Growers have been able to produce seed containing the fungus. It's an extra benefit to look for when selecting a seed variety.

Turf field days are valuable events for sports turf managers today. Ask your seed supplier about field days in your area. You can see for yourself how the newer varieties can help you do a better job. Also ask him about the national turfgrass trials taking place at more than 30 different locations around the country. The type of turf seed you buy does make a difference. With the number of improved varieties on the market, field days and new information from suppliers is important.

ROOKIES

PRODUCT UPDATE

CHEMICAL TRIM

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HAZARD ABSORBER

Be prepared for oil or pesticide spills during handling, mixing or storage with Hazorb absorbent pillows from Precision Laboratories. Small granules contained in the pillows will absorb 15 times more liquid than clay products without the need to spread absorbent from a bag. Once the hazardous liquid is picked up by the pillow, it can be disposed of neatly according to regulations.

For most liquids, a single pillow will absorb up to 2.7 gallons in less than five minutes. It has been tested successfully on more than 115 different liquids including pesticides, chlorinated hydrocarbons, solvents, oils, salts and acids. Typically, Hazorb will pick up 80 percent of its capacity within 30 seconds of contact.

The pillows can be stored in mixing and handling areas for an indefinite period of time without any loss in effectiveness.

PRECISION LABORATORIES, INC.

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REFLECTIVE RAIN COVER

Stadium grounds superintendents can prepare a field the day before a game and cover it without fear of killing the turf with heat. The silver surface on both sides of Covermaster's rain cover reflects heat so well that it will not turn turf brown even after 20 hours on moderate days.

According to the manufacturer, this attractive, reversible cover will last three to five years and is one-third the cost of conventional covers. Grounds crews like it because it is only a third of the weight of conventional covers.

A team or sponsor's logo can also be included on the silver cover.

COVERMASTER

Circle 128 on Postage Free Card

TERRA 140



FACTORY SUMMER SPECIAL \$1,900.00

- Ideal for Football Fields.
- 140 tines – 387,000 holes per acre.
- Do an entire football field in one hour.
- Easy hook-up – pull with any 12hp vehicle.

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