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Chip Toma
Dir. of Complex Landscaping,
Kansas City Chiefs,
Kansas City Royals and Truman Sports Complex,
Kansas City, Missouri.
International turfgrass consultant
8 STMA PROFILE: TOM LJUAN — MILE HIGH LIFE
In his position as Mile High Stadium Turf Manager, Tom Lujan uses planning, coordination and organization to keep ahead of a hectic field use schedule and often erratic weather. In a stadium where as a boy he sat transfixed watching grounds crews at work, it's a job he was born to do.

12 FALL OVERSEEDING FOR WARM SEASON GRASSES
Overseeding warm-season grasses with cool-season grasses in the fall can improve athletic field playability and appearance. The keys to success are proper preparation, seed selection, application rates, timing, and more, as Dr. Gil Landy explains.

15 CONTROLLER ENCLOSURES: OUTDOOR ARMOR
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18 FERTIGATION LOWERS THE BOOM ON INEFFICIENT NUTRIENT DISTRIBUTION
From the simple to the complex, fertigation systems can give more control over turf growth and maintenance, using considerably less labor. However, with a substandard irrigation system, your turf could appear malnourished, much as it would without fertigating.

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ON THE COVER: Mile High Stadium in Denver, CO, home of the Broncos and Rockies. Photo courtesy: Tom Lujan.
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Take all the magazines published in this country, from Time to the Atlantic Monthly, from People to U.S. News & World Report and stack them in a pile. Then walk away for awhile. When you return, Sports Illustrated will have risen to the top of the heap.

Forget Sports Illustrated’s impeccable writing — lots of magazines have terrific writing, although few, from both technical, mechanical, and creative perspectives compare with SI. Forget dazzling photography and layout — lots of photographers and art directors have an eye for remarkable moments, although few capture and present them with SI’s consistency.

The true brilliance of Sports Illustrated is it’s absolutely thorough coverage, not just of “sports,” but of everything sports-related.

Take the August 16, 1993, issue of SI. Beyond baseball’s pennant races, the NFL preseason, and Pete Rose’s quest for redemption, the magazine included two articles that were applicable to sports turf, which is, after all, an integral element of the topic it covers. The issue’s “Point After” piece lamented the imminent loss of Durham Athletic Park to a new facility. The other article, called “Triumph of the Swoosh,” chronicled the ascendency of Nike, the shoe manufacturing and marketing giant.

The article on Durham Athletic Park was entertaining, worthwhile reading; however, I believe the article on Nike should be mandatory reading for those interested in the progress and growth of the sports turf industry.

Why? What does the phenomenal success of an athletic shoe company have to do with sports turf? It’s not “the shoes,” but how the shoes were packaged and sold.

Who even considered, much less cared, about athletic shoes 20 or so years ago? The majority of the NBA’s finest used to lace up footwear that provided little ankle support and even less cushion. Today’s athletes, from pros to high school, wouldn’t take a chance walking down the street in pair of yesterday’s “athletic” shoes, much less play a game in them.

What athletic shoe companies tried to do, but Nike did best, was tie its products to athletic performance. The company connected shoes, something nobody seemed to really care about for decades (beyond cleats for baseball and football and rubber-soled “high tops” for basketball), to athletic excellence.

That isn’t to say Nike didn’t develop superb products — by all accounts, other than those from some of its competitors, it did. But the best product in the world will “sell” poorly without promotion and marketing. Nike made its product synonymous with athletic performance and in doing so raised the athletic and non-athletic public’s awareness of the real or perceived contribution of shoes to that performance.

Like athletic footwear, natural sports turf is a product, and at this point one somewhat unappreciated one by the sporting public. The greater the connection we make between sports turf excellence and athletic performance and safety, like Nike did with shoes, the greater its real or perceived value will become. Bo may never “know” ryegrass, but the public may eventually know and value a superior athletic field.

Matthew Trulio
PRESIDENT'S MESSAGE
By Gil Landry Jr.

The first time I heard about a community taking pride in the sports turf industry was about four years ago at the annual Georgia Turfgrass Conference. Dr. Jack Hall of Virginia Tech talked about a ripple effect — how pride in the local high school football team demanded a top-notch field from its grounds manager. The competition made the pride spread to neighboring schools and communities.

Since that talk, I have often wondered what drives one community to have such a level of pride while other communities grapple with what they feel are "more important" issues.

What affects your attitude? Budget, expectations, planning? You can never rationalize an inadequate playing surface. It jeopardizes the athletes' safety and the profession in which you built a career. Budget costs and lack of manpower are not excuses to be conveniently employed, these are opportunities to excel.

Look at Scott Gaunky of Mundelein High School in Illinois who was highlighted in the August issue of SportsTurf. The article showed leadership, basic sports turf knowledge, planning, cooperation, effort and, to coin George Toma's phrase, an "and then some" attitude.

Scott may have developed his skills to meet his challenges. He may have acquired some of his skills through STMA-sponsored workshops and demonstrations, networking with fellow members or interacting with a knowledgeable vendor. It seems Scott, like many of us, is constantly trying to improve.

So is Bill Whirty, city of Fort Collins, CO, who wrote about "being part of the solution," and Steve Wightman of Jack Murphy Stadium in San Diego. Everyone mentioned here is an STMA member. I am proud to be a part of the same organization as these professionals.

Through a concerted effort from members like these over the last 18 months, STMA has worked hard to share its expertise through SportsTurf magazine. The STMA significantly impacted the August issue with an abundance of technical information.

If you are not a member of STMA, we would certainly encourage you to join. If professionalism is an integral part of your career, consider joining STMA at its National Conference in Baltimore this November. It may be the best show of pride you can exercise.

Chapter News

STMA Florida Chapter #1 — The Florida Turfgrass Association Conference and Show will run from September 26-29 in Tampa, FL.

A baseball seminar is being planned for October 15. The location, time and schedule of events will be announced soon.

For information on the South Florida Chapter or upcoming chapter activities, contact: John Mascaro (305) 938-7477 or Ed Birch (305) 938-0217.

Chesapeake Chapter: STMA — Chapter members are always invited to attend chapter board meetings, which are held the first Wednesday of each month.

Remember to mark your calendars for the national STMA meeting on November 6-9 at Camden Yards. It's going to be great! The Chesapeake Chapter is putting together an information packet for those who would like to spend a few extra days in the Baltimore area or nearby Washington, DC. Contact the hotline for details (301) 865-0667.

The New England Chapter: STMA — In conjunction with the August 11 annual meeting and field day, the New England Chapter elected their leadership team. Election results are as follows:


A lifetime membership was presented to Charlie Mruk in appreciation for his more than 30 years of support to the industry through his work with the Massachusetts Turf and Lawngrass Association and through 30-plus years as agronomist and consultant for the Hercules Company. A scholarship has been established in his name in support of educational efforts.

An October 1 date has been set for the field day at Plymouth State College, Plymouth, NH.

NESTMA will be co-sponsoring a session with the Connecticut Parks and Recreation Association in early fall.

For information on the field day or the chapter, contact: Mary Owen, University of Massachusetts Cooperative Extension System at (508) 892-0382.

Iowa Sports Turf Managers Association — For information on the Iowa Chapter and its activities, contact: Gary Peterson (515) 791-0765.

Midwest Chapter: STMA — The Midwest Chapter is holding an aeration and topdressing workshop on September 23. The workshop will be held at Flick Park, Glenview Park District, Glenview, IL. Speakers include: Mike Moorman, maintenance supervisor, Glenview Park District on "Construction and Maintenance of Park District Athletic Fields," Tom Voight, horticultural cooperative extension specialist, on "Benefits of Athletic Field Aeration," and Monty Montague of Turfco Mfg., Inc. on "Factors to Consider for an Effective Athletic Field Topdressing Program." For more information on the workshop, contact Don Michaels at (708) 526-0007. For information on the chapter, call: The Chapter Hotline (708) 439-4727.

Colorado Chapter: STMA — The Colorado Chapter will be hosting a workshop on September 16th at the University of Colorado, Boulder. Speakers for the day will cover ball field fertilization, new products for overseeding and how to strike a compromise between what the coach wants and what the field manager can do. Inspections of three natural turf fields and one AstroTurf field will be included.

For information on the chapter, contact: Ron Marten, Falcon Colorado School District 49, at (719) 495-3601.

September 1993 7
By Bob Tracinski

Picture Denver as a place of icy, wind-swept mountains covered in snow; as a place of dry, baking-hot summers; as a beautiful city with a stadium complex that could only be called Mile High.

From the subzero temperatures of winter to the blazing 110-degree heat of summer, Mile High's sturdy field looks good and plays well, through the rough and tumble pounding of the Broncos, the baseball play of Denver's immensely popular Rockies, and a host of soccer games, rock concerts, marching band competitions, tractor pulls, motocross racing and, lately, even a session or two with the Pope.

Coordinating the program that keeps the turf of this multiuse facility in top conditions is Tom Lujan of Stadium Turf Managers.

Mile High Stadium was built in 1948 originally as a baseball facility. Since then, there have been numerous upgrades.

“A lot of improvements were made for baseball, and a lot of them were made for the Denver Broncos,” says Lujan. “The P.A.T. [Prescription Athletic Turf] systems was installed in 1975-1976, and we’ve had tremendous success with it. The sand-based system has field heating, subirrigation and the ability to pump the field dry. It’s made sports turf maintenance a pleasure in Colorado.”

Meeting Challenges

Besides the wide range of temperatures inherent in Colorado weather, Lujan must contend with the “humidity” factor. “I monitor the humidity daily,” he explains. “We’re actually able to be more flexible in handling it in the summer than in the winter. On a Saturday afternoon in December, the humidity level may be 96 percent. By game time on Sunday that level may have fallen to 50 percent. With biting cold temperatures and low humidity, the field dries out quickly. With the P.A.T. system’s root zone temperatures of 65 degrees Fahrenheit and an ever-ready irrigation system, we can provide a quick syringe of the field to prevent desiccation.”

Mile High’s turf is a Kentucky bluegrass cultivar, Warren’s Bensun A-34. Lujan believes it’s well-adapted to the climate and air moisture content for survival in Colorado and says it provides early spring green-up and retains excellent color in the fall.

Lujan overseeds in early spring, early fall, and during the baseball and football seasons with a perennial ryegrass blend called Medalist 8, which contains Dandy, Target and Delray cultivars.

“We pregerminate the perennial ryegrass,” he says. “The presoak uses 8 ounces of ROOTS to 50 pounds of seed. We soak the seed for 48 to 72 hours, then drain the water and mix the seed with Turface to dry the mixture down enough so we can apply it with a broadcast spreader. Prior to application, we core aerate, then vacuum the field to remove the cores. We then apply the pregerminated seed. After that, we topdress the field with either pure sand or a mixture of 90 percent sand and 10 percent Dakota Sedge Peat, depending on the organic content of the field.”

“With the pure washed sand of the P.A.T. systems, we watch the organic matter content closely,” he continues. “Too much organic matter in the top 2 inches of the sod base holds moisture, making fields slick, soft and mushy. We
want to keep that 'virgin' sand base clean. The sand in the aeration holes forms a warm bed for the seed, speeds the germination process, increases the percolation rate and helps relieve compaction."

Lujan coordinates the fertilization program according to turf needs. He and his crew conduct a soil analysis once a month from March through October, taking soil samples at both 2- and 4-inch depths. "I want to see if the root zone and the sand zone are showing the same levels to ensure that nutrients are flowing through and not binding. I want to make sure the nutrients are in the spots at the right time. Applications are then tailored according to soil test results."

Lujan and his crew build a slow-release nitrogen program, he explains, usually with IBDU, to carry through in November and December so that nutrients are already in place to benefit the grass. With the field heating system keeping the root zone at 65 degrees F and the use of Evergreen blankets from Covermaster, they can provide a warm seed bed to "get the pregerminated seed going," even during the winter season.

"The last couple of years, I couldn't have come up with a better schedule for the Broncos if I'd planned it myself," Lujan enthuses. "They've had one or two home games, then had away games for two to three weeks, giving us the ability to put the field back into top shape. Besides that, when they've had home games, the weather has been good."

Lujan has developed a complete snow removal program that's geared for anything Mother Nature can dish out. The system taps the assistance of Mile High's 24-hour security personnel, which provides on-site weather information. Lujan says that because it can be blizzarding in one section of Denver and completely clear at the stadium, or the other way around, constant on-site monitoring is essential.

"Whenever I'm away from the stadium, the security personnel alert me as soon as snow starts to fall," he says. "I know how much snow we can move in a given period of time, what it takes in equipment and crew size, and what it takes to transport snow out of the stadium. We never let the snow accumulate on the field to a point where it's so heavy we wouldn't be able to push it.

"If there's going to be an event on the field, we tarp when there's a threat of accumulated snow," he adds. "That way, snow removal takes place on the tarp, not directly on the turf. I used a Dodge Ram four-wheel-drive with a snowplow attachment. We remove the skids and attach two strips of rubber, 1/2-inch thick, that extend the length of the plow. The act like a giant squeegee."

If there aren't any events scheduled for a two-week period, Lujan and crew won't go to the trouble or expense of covering the field. However, they will monitor moisture levels to make sure the field can handle it. The field has a percolation rate of 7 inches per hour, so it can receive quite a bit of moisture if there is a long enough time span prior to play.

Because of temperature and humidity fluctuations, the Mile High crew must be ready to irrigate year-round. They do winterize the field's irrigation system by draining and shutting it off, but will "fire it up" whenever necessary.

Lujan's tarp strategy is both well-planned and extensive. "We tarp the entire turf, not just the playing field," he says. "It takes three tarps, each 224 feet across and 150 feet wide. The tarps..."
Mile High Life continued from page 9

thing as massive as the Papal events, when his entire crew, the maintenance staff, and janitorial and concession crews are in full force, other Denver Parks facility personnel help out. Lujan also uses some contract labor, often through Jeff Mayberry & Associates.

In addition to the three acres of sport field, there is the care of 17 acres outside the stadium and parking lot maintenance for Lujan to coordinate. Communication, organization, and planning are essential.

"I really stress planning the event schedule and the turf maintenance schedule together," he says. "It's difficult to do sometimes. We have to work turf care practices around events, and we need to have the fertilization to the proper levels so the soil has enough nutrients to handle the foot traffic and extra wear."

"We have to coordinate our staff, the people we interact with on the teams or events, the production companies, the media personnel, and keep everything flexible enough to deal with the prevailing weather conditions," he continues. "We're always aware of safety and liability factors."

To keep everyone on the same page, Lujan meets with his crew daily. He goes out of his way to get things squared away in advance. If, for example, he needs a piece of equipment like a fork-lift, he'll arrange for it three weeks prior to the day it is needed. By the first of the month, he had arranged for fertilizer to be delivered on the 18th and scheduled application on the 19th.

"It's essential to know who is supposed to be where, when and for how long," says Lujan. "For a major rock show, like the Jacksons, if we have Gates 9 and 10 open at the south end of the field to allow flatbed trucks with lighting equipment to have direct access to the stage, and then need Gate 7 open at the north end to bring chairs for field setup, we must have proper security. People are fascinated by the facility and just want to look around. So we have to know who's authorized to be where for whom. We want them to do what they're here to do, then get off the field. It makes what could be a frustrating job a manageable one."

Mile High Stadium is more than a multiuse facility—it's a convertible system with computerized, moveable east stands that are 13 stories high and weigh 9 million pounds. The stands have three different positions to fit the configurations of the featured sport. They are set all the way out for baseball, moved in an additional 55 feet for NFL play. The entire 145-foot move can be made within a two-hour period.

"Each position of the facility has a complete audio visual set up, clean water and waste management systems," says Lujan. "It's a pretty awesome operation, even when you're used to it."

This summer hasn't exactly been slow for Lujan. The Colorado Rockies had some concerns about the skinned area of the infield. Sports field consultant George Toma came in to examine the situation in the infield. Sports field consultant George Toma came in to examine the situation in the infield and suggested the existing field be replaced by a mix with higher clay content.

"Toma was really good to work with," Lujan asserts. "Besides the changeover suggestions, he gave us some tips on maintaining the infield with the new mix that have proven beneficial."

While the Rockies were on an "away" series of games, the infield mix was removed and the new mix put in place.

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