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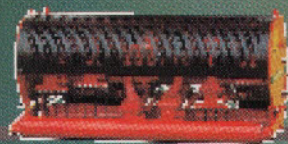
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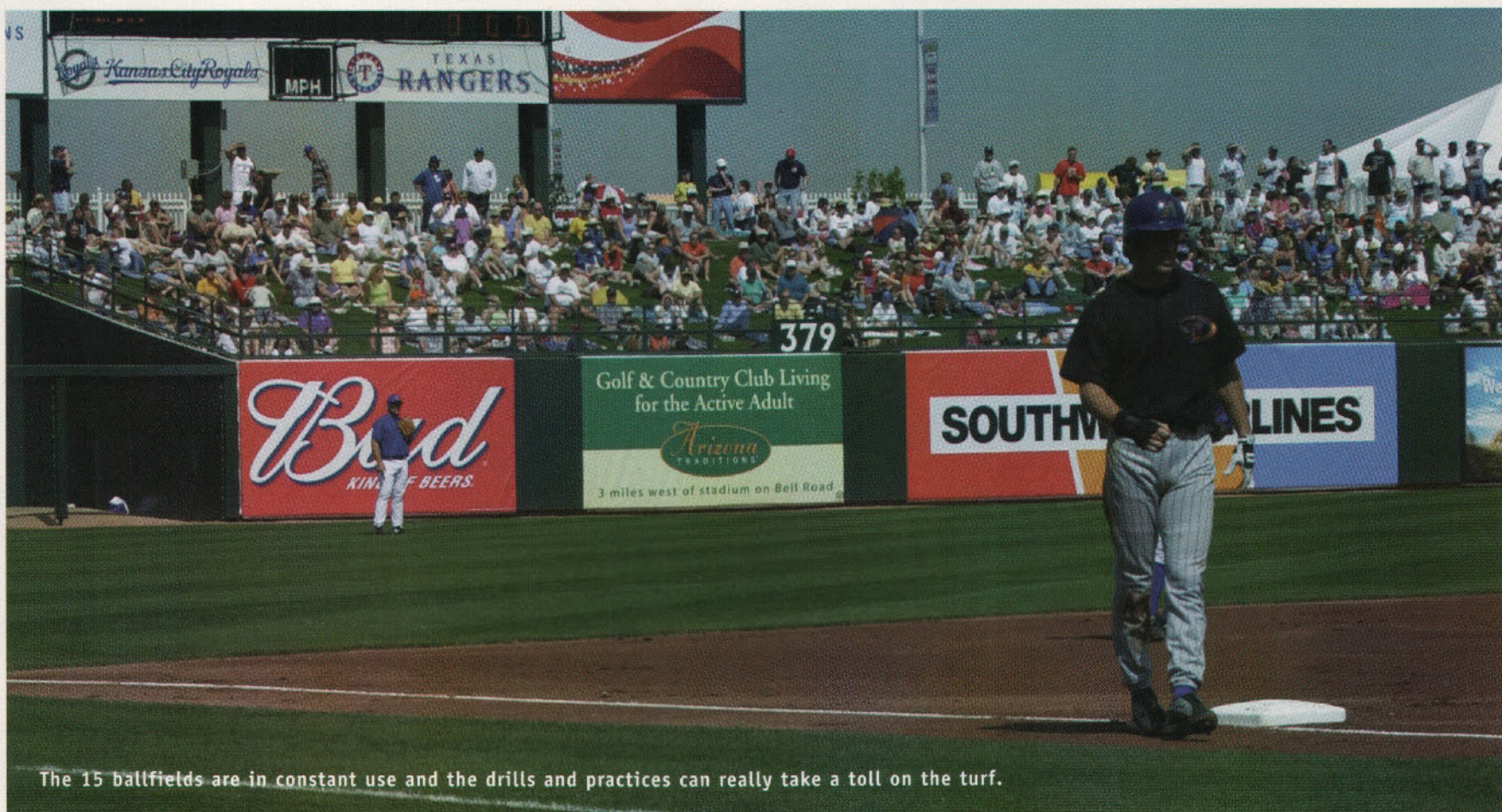


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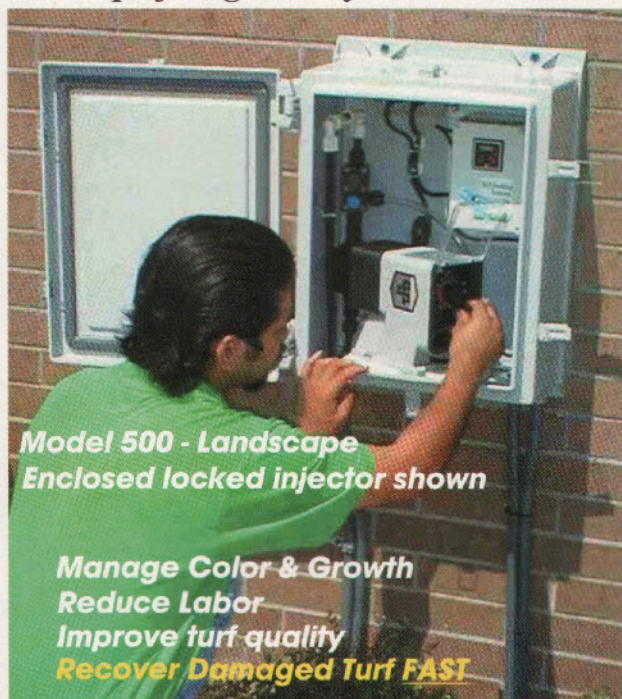
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**“I’m here to keep the coaches and teams happy.”
-Joe Kennedy**

Arizona gets in over half the year,” says Joe Kennedy, head groundskeeper. “But we didn’t miss any practices because our fields, including the infields, drained tremendously.”

The big job remains daily for Kennedy and his 30-man crew, many of whom are new to him and to baseball. The 15 ballfields are in constant use and the drills and practices can really take a toll on the grass. But Kennedy and his supervisors, Joey Brazil and Carl Hanson, already had 8 years of maintenance experience at nearby Peoria Sports Complex, another two-team training facility home to the Seattle Mariners and San Diego Padres.

“Our routine is to prep each field three times a day for about 20 minutes each time,” says Kennedy. “Then at the end of the day, we go back to reconstruct any damaged areas, irrigate, and fertilize. Basically, our crews are going from 6 a.m. through 9 p.m.”

Aside from the 15 fields, Kennedy oversees: 12 acres of common fields; the 5-acre lake, which is also the reservoir for the irrigation system; three soccer fields that serve as over-fill parking; two practice fields used for warm-ups; and a landscaped aquatic center across the street along with the pools (crewmembers are also certified pool operators). If there were a partridge in a pear tree, his crew would surely be there for any needed care.

“The toughest part of my job is coordination between my new employees and my supervisors,” says Kennedy. “I’m here to keep the coaches and teams happy. I’m a bit of a perfectionist so we’re all getting along well. These coaches are some of the toughest to please from a head groundskeeper’s point of view.”

ST

Patricia and David Fletcher are copywriters specializing in the green industry in Santa Rosa, CA, 707-546-8262.

Irrigation system hurdles demands

Of all the aspects of maintaining the 15 sports fields at the Surprise Sports Complex, perhaps the most challenging is irrigation. It's obvious that the sheer size of a site like this is demanding on an irrigation system. Add to that the constant public use of the venues beyond spring training with fall ball, college games, fantasy camps, and more. In fact, there will only be about two weekends per year when the fields are not in use. And finally, there's the added curve ball of high ET rates in the desert landscape.

Charlotte Engineering Sports Group, of Phoenix, saw the challenge as two-pronged: to water as close to ET as possible for conservation purposes-up to 2-1/2 inches of water per week, and in the short windows of time available. About half a million gallons are put down daily, and at build-out, including the 57-acre park, as much as one million gallons will be used.

"We obviously have a short water window and so we break the watering down on each field and often change the schedule on a daily basis," says Joe Kennedy, head groundskeeper at Surprise.

To help make scheduling efficient, Charlotte Engineering

specified Hunter's Genesis Central Control System with an ET weather station, handheld radio remotes, and a flow sensor on each ball field. The central determines the most efficient watering schedule based on ET, flow data (water already applied) and the available watering time as determined by the managers.

"The central is so important because it tells me how much water we've put down and how much more the fields needs," says Kennedy. "And I can schedule watering around events. I do whatever my scheduling requires and I can still maintain ET."

Hand-held remotes allow managers in the field control to provide extra water for hot spots without affecting the schedule.

For the sprinklers, Hunter Irrigation I-40-ON rotors were specified for all the turf on the ball fields. Senior designer Bill McBride liked the coverage, range, and high flow rate these rotors provide.

Kennedy agrees. "The I-40 puts more water down in less time, which helps tremendously with scheduling," he says. "Plus, these rotors have great uniformity, especially close to the head."

"The turf looks phenomenal," says McBride. "In fact, it's exceeded everyone's expectations."

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Modular turf system evolves in Puerto Rico

BY MARK LESLIE

The Ponce Lions completed last baseball season on a brand-new, real-turf field at the city's Estadio Francisco Montaner, and that same stadium was then changed over into a track-and-field venue for Puerto Rico's annual college championships.

"It was great. It worked perfect," Rama Construction co-owner Hector Costas said of the technology. "I was a hero in Puerto Rico for several months."

The world got its first glimpse of the possibilities of modular turf when Michigan's Pontiac Silverdome hosted a portion of soccer's 1993 World Cup Championships. Because World Cup matches must be played on natural grass, and the Silverdome had artificial turf, Michigan State Professor Trey Rogers and the staff of the Robert W. Hancock Turf Research Station were asked to solve the problem. The result was octagonal trays filled with natural grass that could be moved into the stadium and later removed.

That was the genesis of GreenTech's Integrated Turf Management System (ITM). The Ponce solution started with a discussion between Costas, a civil engineer, and Frankie Lopez, owner of Eco-Tectura and a sister company, Jardinero (Gardener), both in Ponce. City officials wanted to maintain their

Estadio Francisco Montaner with natural grass for the Lions, but still be able to host, on synthetic track, the collegiate track-and-field competition and, on occasion, the PanAmerican Games for Central America and the Caribbean.

The quandary was left to Rama Construction to solve. Years before, Lopez had told Costas about GreenTech's modular system. And neither man had forgotten them. A phone call later, GreenTech was shipping about 2,000 of its trays to Puerto Rico. Once on site, half of the modules were filled with the traditional mix for turfgrass, while the others were filled with concrete, topped with the special synthetic surface for track-and-field competition.

"The GreenTech modular system is perfect for multi-use venues such as



Estadio Francisco Montaner. The concept was truly 'outside the box,'" said John Patton, vice president of GreenTech, which manufactures 4-square-foot, high-density, polyethylene containers that have primarily been used for athletic fields, golf course tees, and rooftop gardens.

For athletic fields, the GreenTech modules are filled with a layer of gravel and 7 to 11 inches of rootzone mix then turfed with sod, seed, or sprigs. "Foot locator pads" lock the modules together and keep them closely aligned to insure no seams or joints disrupt the playing surface. Channels accommodate forklift or pallet jack arms on all four sides; and numerous small holes enable extensive drainage and gas exchange into the rootzone.

"You have to fight traditional thinking, but the science is behind this method," said Patton. "Dr. Rogers at Michigan State is an adviser for GreenTech as well as Dr. Rich Hurley at Rutgers University and Dr. Dave Chalmers of Texas A&M."

In Ponce, Costas said: "Comments from the Lions ballplayers were great. There are fewer injuries because it is natural grass." He said construction, like that at Estadio Francisco Montaner, should take about 2 weeks.

Once a concrete base is poured, installation is simply a matter of putting the trays in place, using a forklift since they weigh from 600 to 1,000 pounds. Transferring the modules from turf to the synthetic track takes 7-8 days, although Costas' crews performed the task in four long workdays.

While the Lions play baseball, the 879 track-and-field trays are stored off-site. Likewise, when track-and-field is in season, the turf trays are stored elsewhere.

Mark Leslie is a freelance writer based in Monmouth, ME. He can be reached at gripfast@ctel.net or 207-933-6708.

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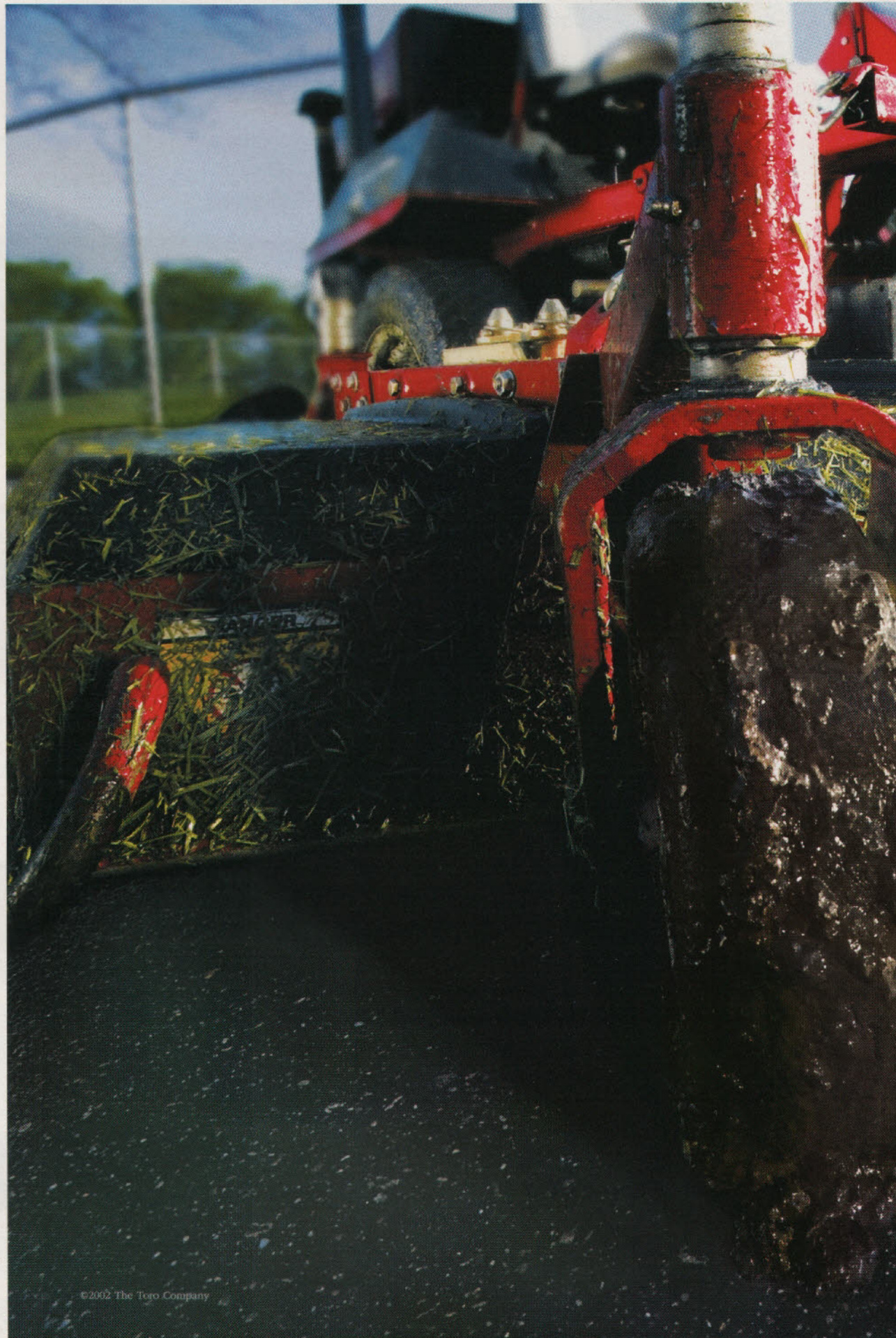


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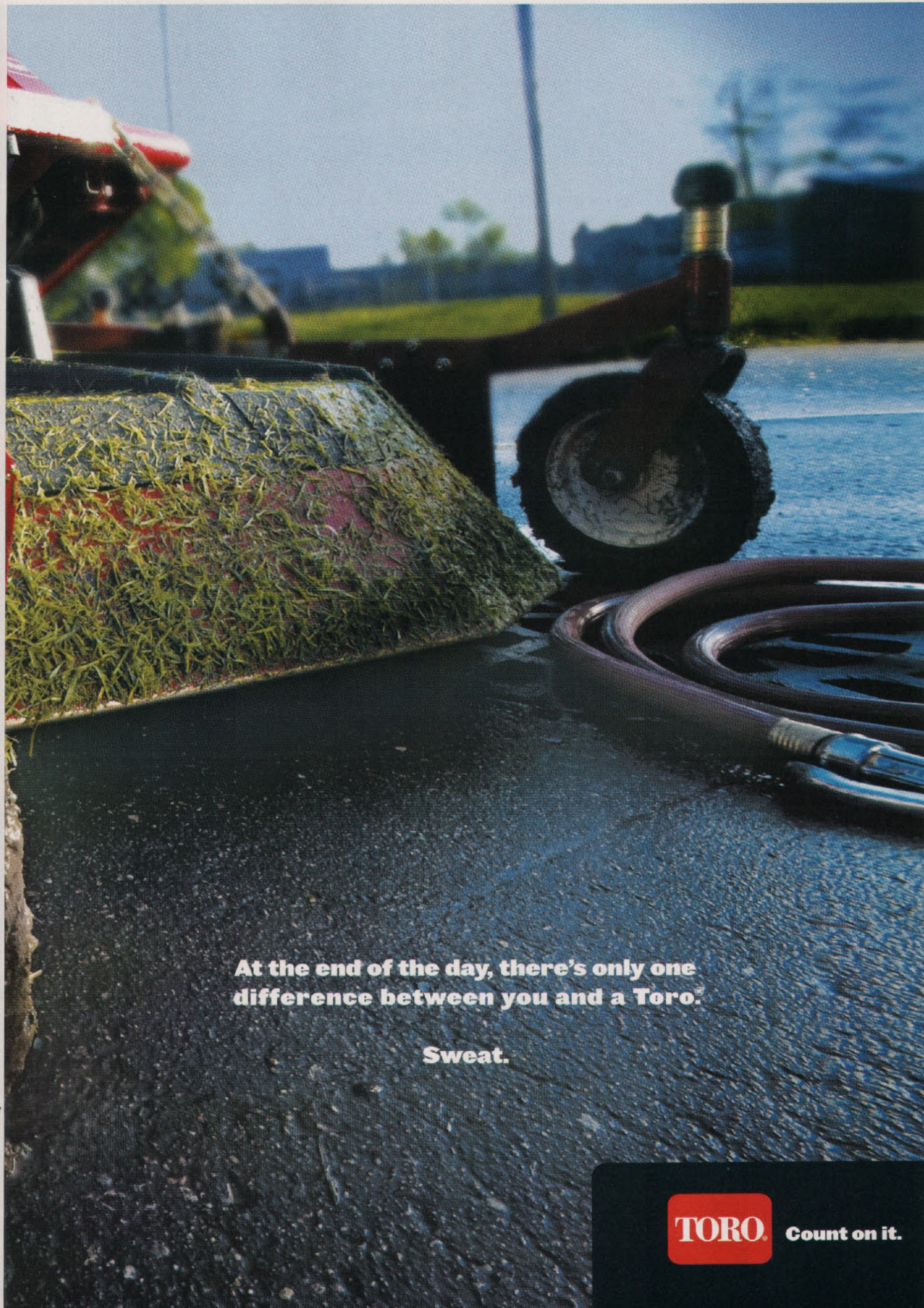
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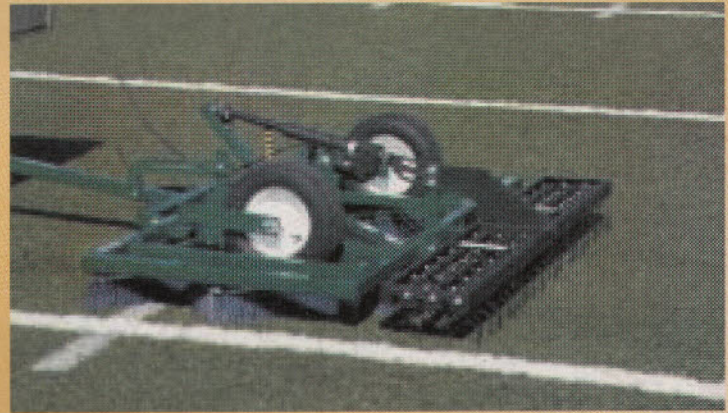
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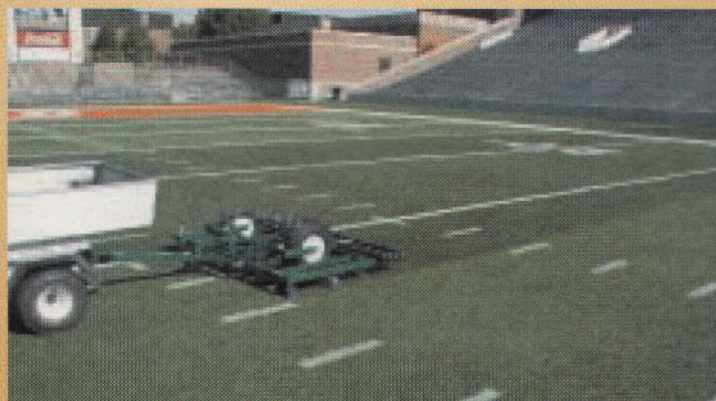
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8 steps to an easy field facelift

BY JEFFREY T. FOWLER

In the past 10 years I have been called to countless athletic fields to lend some advice to the athletic field manager, school custodian, or the school board member that wanted a “better” field for the young athletes in their district. After a few steps with similar answers, I realized that many people were forgetting the basic steps that we need to keep in the forefront of our minds when maintaining athletic fields.

Now, I realize that each of these 8 “facelift” steps has been or could be written about in their own book form, but this article serves as a friendly reminder of the basics.

1. Soil testing

Soil testing is the first step in any field facelift. Without a soil test we have no idea what the soil needs and thus what the turf plant needs to thrive. I like to compare soil testing to a human blood pressure. Medical professionals can tell a lot about our health by taking our blood pressure. Turf professionals can tell a lot about their soil’s health by conducting a simple soil test. This test will give you the soil pH and nutrient levels present in the sample.

A soil test is conducted by taking 20-32 core samples on the field, mixing them together and allowing them to dry. Take a representative sample and send it to a certified laboratory. (Check with your local County Extension Office for a list of laboratories in your state that can perform this test.) Costs will range from \$6-\$20, but this test will pay for itself many times over in the amount you save on lime and fertilizer expenses.

2. Lime and fertilizer

Dollar for dollar, fertilization does more to improve poor quality turfgrass than any other single management practice. Proper fertilization practices will produce a dense, medium to dark green turf that resists pests and environmental stresses. However, careless application techniques and/or applying excessive amounts of fertilizer at the wrong time of the year can result in serious turf

damage and contamination of water resources. Successful turf maintenance fertilization requires assessing the nutritional requirements of your turf, understanding fertilizers, how much and when fertilizers should be applied, as well as proper application techniques.

3. Mowing

Whether you are mowing with a reel or rotary mower, make sure that your blades are always sharp. Mowing frequency depends upon the rate of growth. Don’t remove more than one-third of the green growth in one mowing, e.g., if you want to maintain a height of 2 inches, mow when the plant reaches 3 inches. Clippings do not need to be removed as long as you maintain a regular mowing schedule.

4. Aeration

Aeration disturbs the soil to relieve compaction. Compacted soil does not allow proper air, water, and nutrient penetration and makes it difficult for proper plant root growth. Core removal should be performed at least two times a year when the plants are actively growing. There are many different aeration methods that can be used during the playing season that will not disrupt play.

5. Topdressing

Topdressing is adding sand or soil to the surface of the turf. Topdressing gives you a chance to improve the soil quality, improve the seedbed for new plants and rooting of both new and existing plants. Topdressing also gives an opportunity to level the surface of a playing field. The material used should be chemically and physically very similar to the existing soil unless the intent is to modify the soil texture.

6. Overseeding

Overseeding into thin turf or small patches of bare soil can be done in late

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winter, spring, or early fall. When overseeding, it is especially important that the seed comes in contact with the soil and has space to germinate. Perennial ryegrass overseeded at the rate of 3-4 pounds/1000 sq. ft. serves very well. Perennial rye is a quick germinating variety that can tolerate enough wear to be effective on an athletic field.

7. Playing surface

I have been asked many times at different athletic field maintenance seminars if I would do a quick demonstration on "puddle repair." My answer has always been the same, "NO." You cannot fix puddles; you can fix low spots in your playing surface by constantly working the skinned portion of a softball or baseball field. Working with your favorite leveling drag, you need to constantly be working the skin in all directions to maintain a playing surface that will not form low spots.

8. Transition areas

The appearance of the transition areas can make your field look like a million bucks or a million ducks, depending on the care. These areas where the grass and skin areas on a baseball or softball field meet, where players run on and off the field, or athletes always walk to and from the practice field, can really make or break the appearance, safety, and playability of a field. You need to continually work to keep these areas from forming lips, dips, and safety hazards on your playing fields.

9. Communications

Wait, the title of this article is eight steps to an easy field face lift, not nine steps. Well, just like Garth Brooks sings in "Friends in Low Places," I was going home one night and thought to myself, Jeff, is that really the way to end this article? No, so I wrote another step, just Garth wrote another verse.

Even if you know everything there is to know about the first eight steps of a field facelift, no one will understand them if you do not follow step nine. You have to let people around you; bosses, supervisors, coaches, players, volunteer parents, and school administrators know what you know. Not only what you need for a safer and more playable field, but also why you need it. Your job as turf manager is to maintain fields; their job is to do something else. You need to communicate your needs and your reasons for them so that everyone better understands the importance of the first eight steps.

If you adopt these nine steps, and formulate a game plan for your fields, these steps will leave spectators saying, "How did they do that?"

ST

Jeff Fowler is County Extension Director, Agricultural Sciences, Penn State Cooperative Extension, in Venango County. He can be reached at jtf2@psu.edu.