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after topdressing.

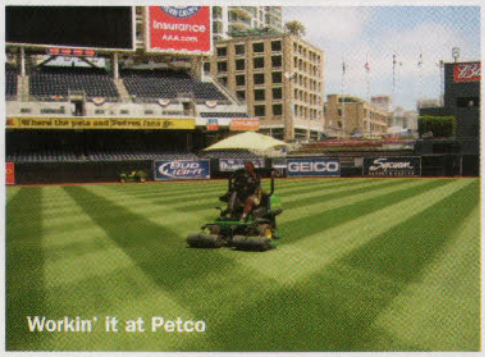
• Check blade speed; slow blade speed down for taller turf, speed up for shorter, tighter turf.

A good mowing pattern only looks as good as the quality of cut you are getting!

David Mellor, Boston Red Sox

Safety and playability should be every grounds keeper's first priority. After that is achieved, I think you have one opportunity to make a first impression. Whether it is a basic traditional checker board or a festive pattern like the Red Sox logo, attention to detail is very important. A pattern should never impact playability.

We rotate our patterns approximately every 10-14 days and monitor them throughout the time they are on the field. The pattern should be viewed from all angles of the field to be sure they not only show up nice but that they do not have a negative image from a different view than the main one. Measure twice to be sure before starting. My first book, *Picture Perfect: Mowing Techniques for Lawns, Landscapes and Sports*, has many step by step patterns and helpful nuggets of information.



Workin' it at Petco

Scott MacVicar, San Francisco Giants

We don't mow patterns here. We mow all of the grass in the same direction each day, so that there are no stripes. On the infield, we mow each stripe twice with the 26-inch walk behind Toro. You should pick a starting point, mow the stripe, turn the mower 180 degrees, and go right back down the same stripe. Turn the mower and start the next stripe and repeat.

When we mow the outfield (with a Toro Sidewinder triplex) we mow a stripe then lift the blades up, turn the mower around, drive back to the starting point over the grass that hasn't been mowed and continue that process.

Bill Deacon, New York Mets

As far as mowing goes we have been trying to keep things simple since I took over, therefore we do not really spend time designing or planning patterns, some of my tips would be:

• Check your mower blades daily to make sure they are cutting properly.

• Run a string the first time you mow a pattern to make sure the lines are straight.

• Alternate patterns after each home stand or at least every 10 days, to avoid ballsnake.

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*There must already be a national sports turf manager from your facility or commercial member from your company before you may sign up in the Associate category.

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2/2007

New fertilizer

Agrium Advanced Technologies has launched its first new product, XCU fertilizer, which delivers a high concentration of nitrogen, offering 93% CSRN (coated slow-release Nitrogen) – more pounds per ton than any sulfur coated urea on the market. The new product replaces TriKote and SCU products.

Agrium Advanced Technologies

For information, fill in **063** on reader service form or see
http://www.oners.hotims.com/14677-063

New polymer-coated urea technology

KMB Technologies has introduced a technology that they say will extend the nutrient release of fertilizers for up to 90 days. SurfCote-N is a slow-release urea for general turf production and will be available through Knox Fertilizer distribution in the Shaw's Turf Food line for spring 2008. The Surf technology, or "Sustained Uniform Release Fertilizer," is a patented polymer coating that represents a new era of "smart" fertilizers. Nearly 4 years in development, the Surf technology has demonstrated consistent results over diverse geography and conditions.

Knox Fertilizer

For information, fill in **062** on reader service form or see
http://www.oners.hotims.com/14677-062

New ProCore aerators

The Toro Company introduces the new ProCore 864 and the ProCore 1298. The same ground breaking technology that allowed the Toro ProCore 648 to revolutionize greens aeration is now available for large-scale applications. The name describes the configuration, the 864 has eight coring heads and is 64 inches wide and the 1298 has 12 coring heads and is 98 inches wide. Both are tractor mount, PTO driven units that are designed for large area applications. The precision balanced coring head drive eliminates hopping, rocking and unnecessary vibration.

The Toro Company

For information, fill in **054** on reader service form or see
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John Mascaro's Photo Quiz

Answer:
from page 25

This city-owned athletic field is not ready for use because it was a staging area for the disposal of hurricane debris. After Hurricane Wilma struck the Ft. Lauderdale area in October 2005, the city brought mainly plant-based hurricane debris like downed trees to this park and the material was piled up on what used to be the playing surface of this field. Any non-plant material was then separated out using large front end loaders and bulldozers and piled up in this secondary pile. The remaining plant and wood materials were fed into several tub grinders and reduced to mulch before being trucked away and stockpiled to be used in future landscape projects. After the entire 2-month process was completed, the entire athletic field was rebuilt. Thank you to Ed Bylica who was with the City of Ft. Lauderdale, for allowing me to take these photographs. ■

If you would like to submit a photograph for John Mascaro's Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL. 32303 or email to john@turf-tec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of *SportsTurf* magazine and the Sports Turf Managers Association.

Management practices to reduce runoff

By Justin Moss, PhD, and Greg Bell, PhD

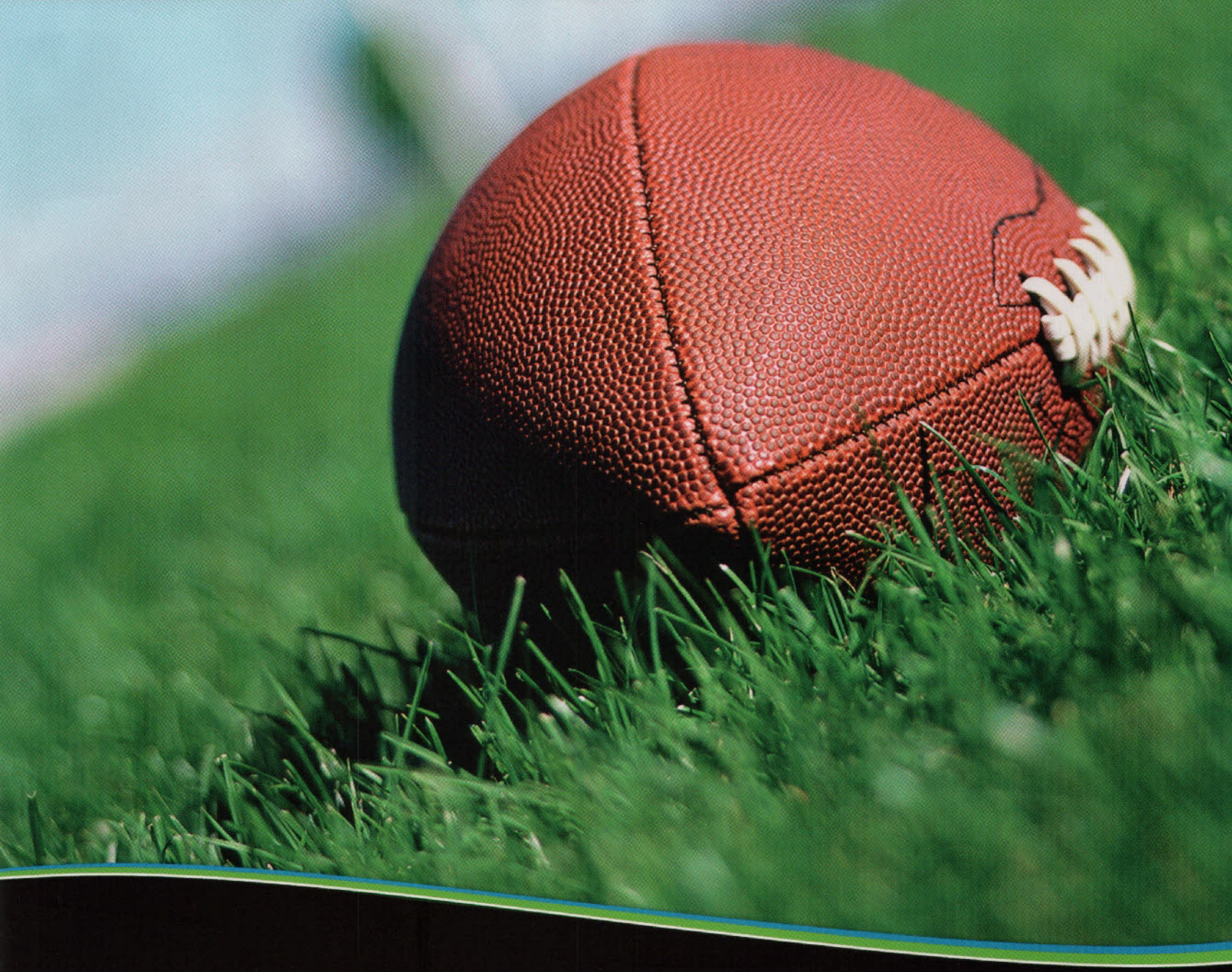
Figure 1. Oklahoma State University runoff research site.

Sports turfgrass areas are fertilized to maintain turf health, promote adequate turf cover, maintain playability, and provide aesthetic appeal. Whenever fertilizers and pesticides are applied, there is always the possibility of off-site contamination through surface runoff. Therefore, turfgrass scientists have examined the various management practices that can help to eliminate the chance of fertilizer and pesticide losses to the environment through surface runoff.

Why worry about runoff?

Grasses are very beneficial for erosion, noise, and dust prevention, cooling effects, and for providing safe playing surfaces. Turf can also help to mitigate runoff and sediment losses from agricultural fields, construction sites, and right-of-ways. Highly managed turfgrass areas can prevent runoff losses due to excellent turf density and cover. However, if fertilizers and pesticides are not applied correctly, there is a chance that some could be lost through rainfall or irrigation runoff. Loss of nutrients and sediments through surface runoff has contributed to the "dead zones" in the Gulf of Mexico and Chesapeake Bay areas. Excessive nutrients such as phosphorus can be swept away from agricultural lands and loaded into water bodies causing an excessive growth of algae which can reduce available oxygen in the water, thus causing these dead zones. However, for the turfgrass manager, proper turf management, fertilization, pesticide applications, and irrigation management can minimize or eliminate the possibility of losses through runoff.

Turfgrass managers have a responsibility to protect the environment and should be aware of management techniques that help to reduce runoff and environmental contamination. Common sense, experience, and attention to recent turfgrass research results help to make a good runoff prevention program. For example, applying fertilizers or pesticides to saturated soil, frozen soil, or non-target surfaces such as concrete or plastic are likely to increase chemical runoff during subsequent rainfall events. Maintaining a nice, dense turf can help to alleviate runoff but a program



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of over-fertilization or unnecessary pesticide applications, not only wastes money, but also encourages chemical losses to the environment.

Yearly soil testing, growing season conditions, and turfgrass manager experience are all part of a turf fertility program. Pesticides should only be applied as a final step in an integrated pest management program. Reading labels, checking weather forecast, monitoring pest activity, and application timing are all important aspects to environmentally sound pest management. Good planning can result in application windows that allow us to apply chemicals when weather conditions are most suitable for chemical activity and runoff losses are least likely to occur.

Post-application weather forecasts are just as important because a major rainstorm following a chemical application is likely to result in chemical losses to runoff. Using slow-release nitrogen and phosphorus sources only provide a small amount of soluble nutrient at any given time thus reducing the potential for nutrient runoff.

Aerification is a common turf management practice that serves to alleviate compaction, promote new growth and increase soil oxygen content. Core aerification helps to increase the surface infiltration rate and slows soil saturation that results in runoff. It could be argued, however, that aerification results in a greater leaching potential by moving chemicals through the soil more quickly. However, the soil is a great filter and can provide some resistance to nutrient or pesticide losses. In addition, "watering-in" fertilizers or pesticides when recommended with a small amount of irrigation or rainfall that does not produce runoff is effective for reducing the amount of product lost to a runoff event that occurs shortly after application.

Mowing is important

One of the most effective management practices for reducing runoff is proper mowing. As long as the mowing height remains in the range of species adaptability, turf tends to increase in density as the mowing height is lowered. A dense turf provides a complex system of shoots and stems that slow runoff and allow more time for surface infiltration. High mowing heights can also deter runoff when properly used.

Turfgrass scientists in Oklahoma have studied the runoff-reducing effects of turf mowing heights for many years (Figure 1). Their findings indicated that a strip of bermudagrass from 4 to 16 feet wide mowed at 1.5 inches down the slope from an area of bermudagrass mowed at 0.5 inches resulted in less runoff and lower chemical losses than bermudagrass that was not bordered by a buffer. The width of the buffer did not seem to make a substantial difference in the amount of runoff that occurred. Although turf density can be expected to increase with lower mowing height and have a negative effect on runoff, the work of Baird et al. in 2000 indicated that when a buffer strategy is employed, the shoot height of the buffer vegetation has a greater effect on runoff than turf density.

Figure 2. Runoff slows and puddles as it flows across turf mowed at 0.5 inches and encounters a buffer mowed at 2.0 inches on a 5% slope.

Our work in 2005 hypothesized that a series of buffer strips mowed at increasingly higher heights from 1.0 to 1.5 to 2.0 inches might further inhibit runoff by presenting multiple low-cut to high-cut obstacles. After 2 years of testing irrigation and natural rainfall runoff, the researchers found that the multiple height buffer strategy was, indeed, more effective than a single height buffer (Figure 2). ■

Justin Moss, PhD, is director, University of Wyoming Sheridan Research and Extension Center. Greg Bell, PhD, is professor, Oklahoma State University Department of Horticulture and Landscape Architecture.

Alley & crew

"bomb" competition in pro baseball

Isotopes Park in Albuquerque, NM won the 2007 STMA Professional Baseball Field of the Year this past January. Led by head groundskeeper Jarad Alley and his assistant Bryan Waller, the crew takes care of both the University of New Mexico Lobos baseball program as well as the Triple A affiliate of the Florida Marlins, the Isotopes of the Pacific Coast League. They also hosted last July's Triple A All-Star Fiesta, the state's high school baseball playoffs, and a high school all-star event, not to mention concerts, campouts, church services, corporate events, and softball games.

The Kentucky bluegrass (from Graff's Turf Farm in Colorado) field sits at an elevation of 5,102 feet; the desert climate poses numerous maintenance challenges, e.g., field temperatures during the season range from 40 degrees to more than 100 degrees. Spring and early summer bring winds that make keeping field moisture ideal a real challenge.

Rootzone is a 93-7 sand/peat mix (blended by Dakota Peat) and the irrigation system is Hunter with an ICC control clock with radio transmission, a master valve, ICV valves, and a combination of I-20 and I-40 heads. The field also has 16 quick couplers strategically located for hand-watering and hydrojecting. Alley says this system allows him to apply water efficiently.

Because the crew must balance two team's full schedules, planning and execution are extremely important, says Alley. Communicating the balance of aesthetics, playability, and maintenance with the teams and front office is vital to accomplishing their goal of consistency and appearance.

Alley interview

SportsTurf: What channels of communication do you use to reach coaches and users of your facility? Any tips on getting good cooperation?

Alley: I like to meet with all user groups before their event at Isotopes Park and try to use as much direct communication as possible. Field operations are more efficient when they know what I ask of them and when I know what they expect from the event.

I also make sure to find the coaches and coordinators of the event to reiterate any important information for that day. I feel the key to getting cooperation is being able to understand a user group's wants and needs and being flexible to their ideas. This does not mean they should be allowed to take advantage of the turf manager or facility. A time always comes when you have to stand up for what is best for yourself and your field.

Try to pick the battles that are most important to you, the crew, and the field over the long term. If every idea and situation is confronted with a negative attitude from the start, you will easily be labeled as the stereotypical "grumpy grass guy."

SportsTurf: How did you get started in turf management? What was your first sports turf job?

Alley: I was introduced to turf management during an internship for the Butte Copperkings. The staff was small and we didn't have a full-time grounds crew, so we all had to help out with the field and facility. My family had a small lawn care business while I was growing up, but I knew nothing about maintaining a baseball field. An interest was sparked, so I asked a lot of questions and paid attention to all of the details.

My first job in sports turf was with the Beloit Snappers. A big part of the reason I took that job was the Snappers' affiliation with the Brewers and it being only an hour drive to Milwaukee. I knew that if I ever needed any help or had any questions I could count on Gary Vanden Berg to help me in any way that he could. I was willing to move, work hard, and do whatever it took to become skilled at maintaining a baseball field. Looking back now, I learned a lot of what "not to do" that first full season in Beloit.

SportsTurf: How do you balance your family life with work demands?

Alley: I have to give my wife Katie all the credit for this. Without her unconditional support and understanding I would not be able to do what I love for a living. It is very tough during the season, especially in