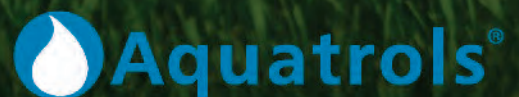


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On the cover: Major League Soccer's Denver home is Dick's Sporting Goods Park, maintained during the long MLS season by head turf manager Bret Baird, STMA Board member Phil McQuade, Cody Witham, Manuel Garcia, and Brad Young. The guys apparently have all survived the brutal "spring" of 2013.



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From the Sidelines



Eric Schroder
Editorial Director

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Ripken Experience includes quality fields

MY FIRST “RIPKEN EXPERIENCE” was at STMA’s infamous San Antonio “Ice” Conference in 2007 when severe ice storms affected a large swath of North America and resulted in at least 85 deaths and caused hundreds of thousands of people to lose power. I had set up an interview with Cal Ripken, Jr., before his appearance at the Jacobsen booth on the trade show floor, and because of flight cancellations arrived in Texas with just enough time to get to his hotel suite after a mad dash through the airport.

I ended up doing the interview in the back of a Lincoln Town Car, sitting in between the former Baltimore Oriole “Iron Man” and the Jake PR woman, as we drove from his hotel to the convention center. My first question was, “Who will introduce you when you are inducted into the Hall of Fame this summer?” When he replied, “The Pro Football Hall of Fame does that,” I could feel the PR woman beside me begin to squirm. But I was at my self-deprecating best and recovered, and Ripken continued to be gracious as we walked through a back entrance and onto the show floor, feeling everyone’s eyes on the 6’4” icon and yes, me, to whom he was giving the time of day.

My second “Ripken Experience” was last month when my 13-year-old son, Max, played in the Armed Forces Day tournament at the Ripken Baseball complex in Aberdeen, MD. The Ripken Experience, its formal name, is home to youth camps and tournaments and consists of a youth-sized version of Oriole Park at Camden Yards and youth-sized replicas of Wrigley Field, Fenway Park, Citizens Bank Park, Nationals Stadium, and the old Memorial Stadium in Baltimore, which is 35 miles south of Aberdeen.

While there I met up with Patrick Coakley, CSFM, the facility’s sports turf superintendent, who took a few minutes out of his busy Saturday to meet us. Coakley, known as “Irish” to many STMA members, said his nickname is so prevalent that some fellow employees at Ripken don’t know his real name. During the 15 minutes or so we chatted, Coakley’s walkie-talkie squawked five or six times with questions and updates from his mostly student crew. When we parted I watched him jog away and realized that the time he’d given me was time he really should have been doing something else!

▼ **PATRICK “IRISH” COAKLEY, CSFM,** left, and Max Schroder. Irish asked that we report the 13-year-old is not taller than him but rather was posing uphill.



Coakley said currently he is working on determining the budget numbers of what it will cost to get to, and maintain, the natural turf fields at the complex at a “professional level,” which is his goal as well as that of his boss—Cal Ripken, Jr. Irish said he works directly and regularly with Ripken on field maintenance issues and that the former infielder understands well what it takes to get a field into professional condition.

Max and his teammates had heard that their Hall of Fame host regularly shows up at tournaments and practice sessions; I was skeptical, knowing what a busy schedule he must have, but we learned Saturday night that we had just missed a visit by the big man by a few minutes that day. ■

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President's Message

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Swinging into summer

JUNE? That means we are almost half way through the year, and I still can not write 2013 on anything. Our committees have been in full swing for a few months now and it is encouraging, rewarding, and exciting for the Board to get our weekly updates from Kim Heck (STMA CEO) each Friday about all the progress being made. The continued commitment of your time and talents in serving this association is what makes us the vibrant association that we are.

There have been plenty of opportunities for me to expand my writing skills over the past month as well, as the Board addresses important issues raised by the membership. You should always feel empowered to challenge the Board and let us know your thoughts and concerns; we represent you and will always strive to do what is in the best interest of our membership. I had the opportunity to represent STMA at the US Department of Agriculture's Grass Roots Initiative at the National Arboretum in Washington, DC in early May. This is the first time ever that turfgrass is scheduled to be a featured horticultural plant at the Arboretum, complete with a multi-acre outdoor display and turfgrass-specific educational programming for the arboretum audience. For 4 years, arboretum visitors will learn first-hand about the function, benefits, and value of grasses, with the focal point being turfgrass (and one exhibit site devoted to sports turf). STMA is proud to support this initiative.

There is one particular article that I hope you will give special attention to this month so that you might possibly garner some recognition for your efforts in delivering safe and aesthetically pleasing sports fields: STMA's Field of the Year program (see p. 42). I will once again have the privilege of presenting these awards to our winners in 2014 in San Antonio, and I doubt there is more meaningful recognition than to have your peers select your facility for a FOY award. Having served on the Awards Committee several years ago myself, I know how challenging it will be for 2013 Chair Andy Gossel and his committee members to select this year's winners. I encourage you to take the time to put together a really well-prepared submission and make this committee's job that much tougher (sorry Andy)! Put your marketing expertise to work and "sell" your facility. In particular, spend extra time on your written materials and carefully detail your challenges (whatever they may be... budget, climate, labor...), strategies, and solutions, that allow you to deliver a field most worthy of recognition. And by all means, if you don't win this year, keep trying in the coming years. It is an old adage but it still rings so true—"Anything worth having rarely comes easy."

I hope your summer season has gotten off to a great start. I do hope you can find some time in your busy schedules to plan a little rest and relaxation with friends and family during this time of year. Seeing the schedules that many of my colleagues keep during the summer season, I know you deserve it. Take care. ■

A handwritten signature in black ink that reads "Mike Goatley". The signature is written in a cursive, slightly slanted style.



Research update: nitrate leaching

IN 2005, research began in 3 locations in Florida to quantify nitrate-N and phosphorus leaching under a variety of circumstances. The research is in response to increasing concerns regarding potential nutrient pollution of water resources from urban turf fertilization. Florida has experienced a growing number of fertilizer ordinances enacted at the local

government level, often based on perceived notions rather than science. The research has been completely funded by the Florida Department of Environmental Protection. Sites and researchers include Dr. John Cisar at the Ft. Lauderdale Research and Education Center, Dr. Jerry Sartain (phosphorus) and Dr. Laurie Trenholm (nitrate-N) at the Plant Science Research and Education Unit

in Gainesville, and Dr. Bryan Unruh at the West Florida Research and Education Center in Jay.

The research is broken down into various projects, most of which were conducted at two or three of the sites. Each project was conducted for a period from 2-4 years per site. While the research was specifically conducted on lawngrass species, results would be applicable to most warm-season grasses. Variations might occur on athletic turf due to the injury from traffic, but the anticipated outcomes would be similar to results seen here based on the treatments and condition of the turf. Here is a brief synopsis of results from some of the main projects in Gainesville.

Newly planted turf, whether sodded, seeded, sprigged, or plugged, should not be fertilized with N for at least 30 to 60 days after planting, due to the potential for large nutrient losses before a root and/or shoot system has been established.

GENERAL METHODOLOGY

Drainage lysimeters were installed in the center of each experimental plot at a depth of 4" below ground. The lysimeters were 22" in diameter and 42" tall (Figure 1). Tubing was fitted to the base of each unit, running to above ground boxes. A vacuum

▼ **FIGURE 1.** N Source Study Treatments

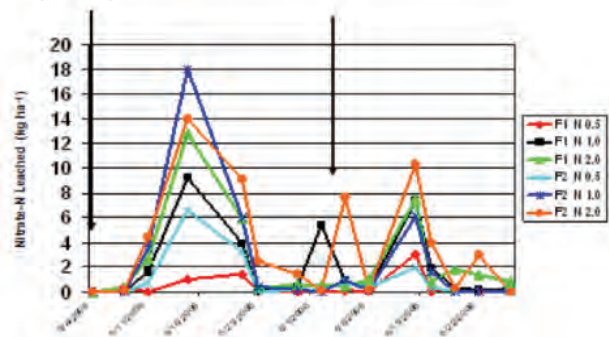
	N Rate (lb N 1,000 ft ² per application)	Frequency of Application
Control	0	0
Ammonium nitrate	1	60 days
Urea	1	60 days
30% SCU	1	60 days
50% SCU	1	60 days
32.8% PCU	1	60 days
32.8% PCU	2	120 days
Milorganite	1	60 days

was applied to the tubing to evacuate the lysimeters weekly. Samples were sent to the Analytical Research Lab for analysis of nitrate-N. Data from all projects are expressed in units of kg ha⁻¹, which is a measurement of the nitrate-N loading that occurred based on nitrate-N concentration and volume of leachate.

NITRATE-N LEACHING FROM NEWLY PLANTED TURFGRASS

'Empire' zoysiagrass and 'Floritam' St. Augustinegrass were sodded and N treatments were applied the same day at rates of 0.5, 1.0, 1.5, or 2.0 lbs N 1,000 ft⁻². Nitrogen was applied as soluble

▼ **FIGURE 2.** Nitrate-N leaching losses from newly planted Floritam St. Augustinegrass.



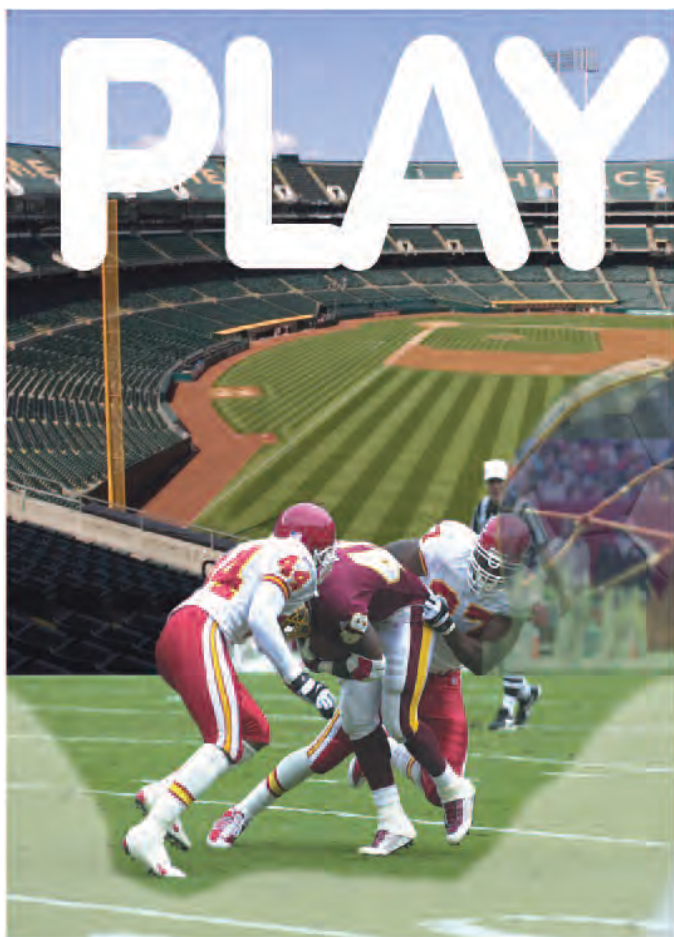
urea. Half of the plots received the same treatments 30 days later.

Nitrate-N leaching from both grasses over all years was considerably greater than from the established grass studies, regardless of N rate (Figure 2). The percent of applied N that leached from St. Augustinegrass in 2006 was 73.4% of what was applied the same day as planting in 2006. Leaching from the plots that received a second treatment 30 days later was reduced to 56.4% of the applied N. Similar results were seen in all years.

Newly planted turf, whether sodded, seeded, sprigged, or plugged, should not be fertilized with N for at least 30 to 60 days after planting, due to the potential for large nutrient losses before a root and/or shoot system has been established. This is now a Best Management Practices (BMP) recommendation.

NITRATE-N LEACHING FROM ESTABLISHED TURFGRASS

Nitrogen was applied to Empire zoysiagrass and Floritam St. Augustinegrass over a 3-year study. Annual N rates were 1, 4, 7, or 10 lbs N 1,000 ft⁻² applied every 60 days throughout the growing season. Nitrogen was applied as soluble urea. Leaching data are presented for 2006 and 2007 for each of the four Fertilizer Cycles (defined as the 60-day interval between each fertilizer application). Fertilizer cycles are presented as spring (April-May), Early Summer (June-July), Late Summer (Aug-Sept), and fall (Oct-Nov).



BALL!

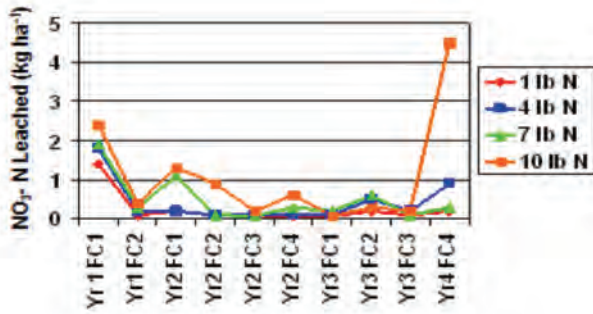
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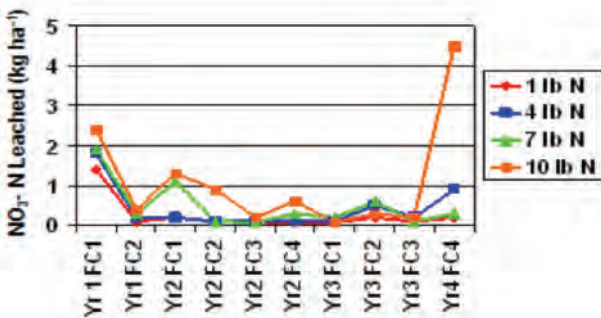
▼ **FIGURE 3.** Nitrate-N leaching losses from Floratam St. Augustinegrass due to N rate.



There were few statistical differences in nitrate-N leached due to N rate in St. Augustinegrass (Figure 3). Where there were differences (primarily Fall 2007), greatest nitrate-N load occurred at the highest N rate. During this study, the St. Augustinegrass was in good health and had good growth and cover. The dense root and shoot system provided the grass the ability to take up nitrogen at the excessively high rates applied to some of the plots (7 and 10 lbs 1,000 ft-2 yr-1, which far exceeds the current recommendations for fertilizing St. Augustinegrass in north central Florida). Nitrate leached did not exceed 1.4% of the applied N in any fertilizer cycle and was generally below 1% of that applied N. Increased leaching occurred in the fall of 2007 at the 10 lb N rate in response to increased disease and associated injury due to the high N rates. This reduced the cover and density of the grass, resulting in less ability for nutrient uptake and the higher N losses.

Zoysiagrass showed a greater tendency to leach more nitrate-N as N rate increased (Figure 4), but it is important to remember that many zoysiagrass cultivars stay green and healthy with less N. Plots that received the high N rates in this study had large patch disease and poor cover by the 3rd year. As seen in the St. Augustinegrass, this resulted in less ability to take up the N and therefore greater N losses.

▼ **FIGURE 4.** Nitrate-N leaching losses from Empire zoysiagrass due to N rate.



By late summer, the disease was suppressed and the grass had resumed active growth, slowing the high leaching losses down. When N is applied at the recommended rates for zoysiagrass, leaching is minimized as with St. Augustinegrass.

Results of this study clearly indicate that maintenance of a healthy grass that provides dense cover will minimize nitrate-N losses when N is applied at the recommended range of rates and at the correct times. All practices that help to maintain a healthy turfgrass, including proper irrigation and mowing contribute to a healthy turf. An interest-

ing observation is that the lowest N losses generally occurred during the summer fertilizer cycles as opposed to spring or fall. This is, of course, the time of greatest warm-season grass growth and therefore also the time for the greatest demand for nutrients. This also corresponds with the time when many of the local fertilizer ordinances ban fertilization with N and P throughout the state.

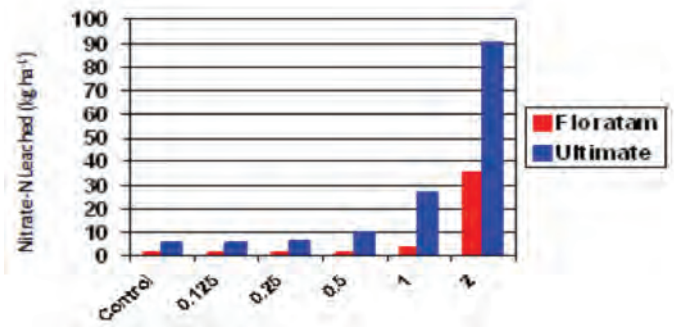
WINTER FERTILIZATION

This study was conducted in Gainesville (north-central Florida) and Jay (northwest Florida) to determine the impact of fertilizing dormant or semi-dormant turfgrass through the winter months. Floratam St. Augustinegrass and 'UltimateFlora' zoysiagrass were sodded in the fall of 2006. Nitrogen rate treatments were applied monthly as soluble urea. Rates applied were 0, 0.13, 0.25, 0.5, 1.0 and 2.0 lbs N 1,000 ft-2 mo-1.

Total nitrate-N leaching losses for the season differed due to an interaction of N rate and grass in years 1 and 2. In both of these cases, St. Augustinegrass had no differences in leaching between control and up to 1 lb N 1,000 ft-2, while zoysiagrass had greatest leaching from either the 1 or 2 lb N rate (Figure 5).

Nitrate-N leaching was also compared for differences between months (Table 2). In years 2 and 3, after the grass was well established, greatest leaching generally occurred in the winter and early

▼ **FIGURE 5.** Cumulative nitrate-N leaching losses from Nov-March.



spring months as compared to the fall months. More N was able to be taken up in the fall when the grass still had a root system as compared to January through March, when the grass was in deeper dormancy and a large portion of the roots had sloughed off. While N fertilization is not recommended for home lawns during the winter months in north Florida, there is less potential for nitrate-N leaching from late fall fertilization than from fertilization during Jan-March. These results are based on north Florida conditions and do not apply to south Florida.

N SOURCE STUDY

This study ran from 2008 through 2011 on Floratam St. Augustinegrass and Empire zoysiagrass. Treatments are listed in Table 1 and were applied as granular treatments at 1 lb N 1,000 ft-2 every 60 days, unless noted otherwise. In 2008, this project began in July and therefore only two treatment applications were applied.

In 2008, St. Augustinegrass had no differences in total nitrate-N loading (Figure 6) Zoysiagrass had significantly greater leaching from ammonium nitrate than from any of the other N fertilizers,