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Keith Winter, STMA member and head groundskeeper for the Fort Wayne Tincaps, performs one task he says is very important to growing grass rather than replacing it: aerate, aerate, aerate!



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READERS SPEAK

Eric Schroder
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Late last year we conducted a reader survey, a part of which was providing an opportunity for you to give us feedback beyond the standard “choose a response from this list” questions. We appreciated hearing from many of you in this section and I want here to address some of the points that were made. Our goal is continuous improvement, which isn’t always that easy (just ask my wife how I’m doing personally with this theory).

The most popular topic from respondents was asking us to produce more articles for smaller facilities that don’t have large budgets. An example: “I would like to see more on MiLB or parks and rec profiles. I think you go too heavy on MLB and Division I [now FBS] with crazy budgets.”

I admit it’s fun to publish stories about turf managers from well-known teams, e.g., the profile of David Mellor of the Boston Red Sox we ran last September. And I think it’s important to publicize how important turf management is to the success of billion dollar franchises. But this point is well taken and I happily point you to “The *SportsTurf* Interview” subject from last month’s issue, Patrick Jonas, CSFM, from the parks & rec department of Charleston, SC. Look for more “regular guy” interviews this year.

Along this same vein, another topic mentioned more than once was help working with nominal budgets and staff. “[We] have little or no budget, minimal staff and need creative ways to succeed. We need articles we can [relate to].” STMA Editorial Committee member Joe Churchill recently emailed me with a great idea that might address this: a regular feature that mirrors a section called “Stuff We Love” from *The Family Handyman* publication. The concept is we would ask readers to send us photos and info on tools

that they have built themselves, or ingenious ways they have devised, to solve problems. Any thoughts on how we could best do this would be appreciated, please contact me.

Several respondents asked for more articles that would help younger sports turf managers “take steps to grow and become successful in this industry” as one wrote. Professional development is one of STMA’s most important missions and one for which we are always looking for content, usually by asking industry veterans to share their wisdom. If you are one of those vets who receive an email from me requesting your advice, on this subject or perhaps on facility management or agronomics, please try and find time to respond. No organization prides itself more on helping fellow members (and non-members) than the STMA.

While several folks told us they like the turf research articles that appear under our “Field Science” header, one person wrote, “Stop putting non-peer-reviewed articles in the “Field Science” section. We prefer the more casual approach to sharing this valuable research info with you for two reasons: one, we want you to read the dang article and find out how the findings might help you in your jobs rather than presenting tons of information and footnotes that are interest to only a small minority of readers; and two, our space each month is limited so if a reader wants more info on methodology, etc., he or she can find it online (easily if you’re an STMA member with free access to Michigan State’s Turfgrass Information File).

Please trust that we take all the survey responses seriously and will strive for that continuous improvement. I look forward to seeing you at the Conference in Orlando.

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WHAT'S NEXT

Jeff Salmond, CSFM

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I have been given the platform with these messages to talk about many subjects throughout my

Presidential year. Some I felt were important to highlight and through others I was compelled to pay it forward to our association and industry. STMA has come a long way in 36 years, and I hope that what STMA has accomplished has made our Founders proud of what they started.

With the strategic plan and new initiatives this past year, STMA continues to uphold our mission of *advancing professionalism in sport field management and safety through education, awareness programs and industry development*. President Tim Van Loo and the Board will be tasked with progressing the organization into the future. Areas as an industry that we need to continue to impact are our students, our current members domestically and internationally, and our technology and communications.

STMA helps provide an avenue for success, but as members we are in control of our own destiny with the tools that we possess. We need to continue to use these tools to be a voice and advocate for our vocation in all levels of sports, the industry, and within our own organizations. We can't stop learning, and we must be teachers to others who will one day take our jobs. Sports turf managers need to continue to be elevated to the highest degree of professionalism in providing safe surfaces for athletes and held in the best regards by our employers. We are tasked to subject our fields—living and growing organisms—to

the most rigorous traffic and weather conditions, and at times with minimal rest. We are trusted to prolong the field's life well past its prime, yet it is sticker shock when replacement is discussed. Our fields should be considered like any other piece of athletic equipment. Administration does not bat an eye at the costs to replace athlete's apparel and other equipment throughout that time period. Why does that same philosophy not apply to field replacement?

In a time when the political climate is on edge; government regulations and restrictions on the rise; funding limited and revenues stretched; fewer students in agronomic/turfgrass programs; and fewer athletes playing sports or becoming sports specialized, the sports turf industry as a whole needs to continue to do a better job of marketing itself and planning for the future. There is not a magic crystal ball, but we need to be more aware of the signs and signals around us to better prepare our industry for what lies ahead. Sure, there will always be a need for athletes to play on athletic fields, but the scope is becoming narrower. Our younger generation of field managers needs to strive to make sure that they continue to have a seat at the table.

Thank you for allowing me the opportunity to serve you this year. It has been very rewarding and fulfilling. I pray that you and your families and organizations had a Merry Christmas and a Blessed, Safe and Happy New Year.

Jeff Salmond

Aerial shot of Parkview Field in Fort Wayne, IN.



LET'S GROW GRASS NOT REPLACE IT

■ BY KEITH WINTER

It is often said that we live in a disposable, “throwaway” society. If we don’t like something or aren’t satisfied with the way it looks or works, we simply throw it away!

As sport turf managers, few of us have the luxury of this kind of mentality. The cost investment and longevity of our playing surfaces are of the utmost importance. Our owners (whether public or private), management teams, and facility operators are entrusting us to keep a natural grass playing surface healthy and safe for long periods of time.

Field replacement, except at the highest levels of professional sports, is usually not an annual occurrence, as some turf fields are expected to last a decade or longer. When you combine the seasonal wear and tear with aging fields, a comprehensive, aggressive, proactive, year round approach is the best solution. In other words, LET’S GROW GRASS, NOT REPLACE IT!

Many might respond that this is easier said than done. There is little doubt that budgetary restrictions, event overuse, weather, and laziness can be hard barriers to overcome. The first three on that list may be beyond your control. The fourth is not! Let’s put the hard work in and see what the results look like.

First of all, make sure you are soil testing your field at least annually. The results from year to year tell you a lot. The anions, exchangeable cations, base saturation percentages, and trace elements dictate where your field currently stands and what it needs to improve as an active, healthy growth environment. Nitrogen is important, but it IS NOT the key to turf life. You can impact your macros (phosphorus, calcium, magnesium, potassium, sodium) and micros (boron, iron, manganese, copper, zinc) through a comprehensive fertility program that will impact root and overall plant health.

Additionally, if you haven’t ventured into the world of biostimulants and micro-nutrition, you may be missing the boat and cheating your turf. Diverse soil biology, including high levels of indigenous beneficial bacteria and fungi are exactly what your soil needs, especially with sand-based fields. We annually introduce into our 4-year-old, sand-based field as much endo mycorrhizae and ecto mycorrhizae as are applicable, and our roots are deep and thriving. The healthier the roots, the quicker a field recovers and thrives whether you are looking for quick spring color (baseball) or active fall growth (football/soccer).

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When in doubt, aerate, aerate, aerate!

If I had one wish for all sports turf managers and their fertility programs, I would wish for you to use plant growth regulators (PGRs) in season and out of season. The improvement in our wear tolerance, color, turf density and blade durability after just one complete season of PGRs was significant. An added bonus is that PGRs have dramatically reduced or eliminated the annual bluegrass (*poa annua*) that many of us fight each season. Biweekly foliar applications of Trinexapac-ethyl and Paclobutrazol throughout the growing season also reduced our grass clippings and mowing frequency. The plant energy was not being wasted on what you mow off and throw away, but on promoting healthier, deeper roots even during the heat of summer. Again, healthy roots = healthy turf.

As described above, what comes from the bag or bottle is important to growing grass, but there is no substitute for regular, diligent cultural practices. When in doubt, aerate, aerate, aerate! Between home stands or when you have a few days with no field activity, aerate. Oxygen exchange not only promotes healthy roots, but it stimulates the sand-based soil biosphere to do things Mother Nature intended in native soil. Pulling cores, harvesting, and topdressing should always be the top priority.

However, in the world of professional baseball, we usually don't have the window to accomplish this more than twice a season. Solid, bayonet tines have become our best friend. After every home stand we open up our heavy wear areas to let them breathe, and punch holes in the entire field a couple more times a season.

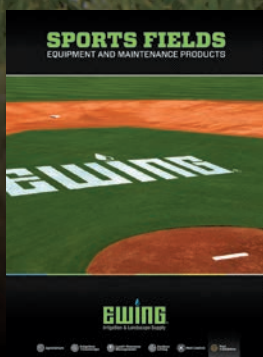
With a 100% Kentucky bluegrass field, I have cut back on in-season overseeding and choose to concentrate new seed growth and repair for the fall. Slow bluegrass germination, followed by heavy use on infant plants, and high soil temperatures from summer's heat, made in-season seeding a "chase your tail" experience. Our five-cultivar seed blend is costly, so I decided to get the most bang for the buck and put seed in the ground when it had the highest germination probability. Conversely, thanks to PGRs and healthy roots, the rhizomes and stolons in our turf grow enough lateral shoots and adventitious roots to fill and repair wear areas when our field gets 3-5 days or more of rest and recovery. Low soil temperatures in the spring challenge the bluegrass, but deep roots can offset some of that early season beat down.

For those of us who grow cool-season grass and host spring

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Put seed in the ground when it had the highest germination probability.

games or events, I highly encourage monitoring soil temperature and Growing Degree Days (GDDs) for applications of fertilizer, macro/micro and bio-nutrients, and PGRs. If you let the calendar dictate your fertility program, Mother Nature will often fool you. Knowing the time that the plant is ready to spring to life can optimize granular and foliar applications, whether that is earlier or later in the spring.

Even as experienced professionals, we can easily overlook some of the simple things that cumulatively enhance turf health. I believe sports turf managers have become carried away with repetitive mowing patterns at the expense of turf health. Rolling the plant the same direction for weeks at a time is an unhealthy cultural practice. Diminished sunlight on the plant canopy inhibits photosynthesis. You want healthy turf? Then rotate your mowing patterns, make sure your reels and bed knives make great contact, and have the guts to lower your height of cut. It is documented that players in all sports like a faster surface, and grass that stands up instead of lying over, will “stand up” to the rigors and demands of play with quicker recovery.

The in-season demands on sports turf managers can compromise your work ethic, attitude, and physical and mental state of

mind. No matter your age or level of facility where you work, there is a time when you have to grind away and get the job done, and also a time to walk away and re-charge the battery. Balancing the two, personally and as a supervisor of full-time and seasonal staff, is a challenge that is only made easier through experience and incorporating innovative management practices that work for your staff. My motto as a sports turf manager is that “hard work can be a substitute for knowledge, but rarely is knowledge a substitute for hard work.”

Lastly, as we look forward to spring, make the commitment that in 2017, you will work harder than ever to give your turf the best opportunity to succeed. Do the research, negotiating, and purchasing necessary to have all the tools in hand to have a strong fertility program. Plan out your 2017 program applications and cultural practices, taking into account your scheduled game dates, events, and off dates, maintaining the mindset of flexibility and practicality based on the weather. If you put these pieces together, you will be able to “grow grass, not replace it,” and isn’t that what being a sports turf manager is all about? **ST**

Keith Winter is head groundskeeper for the Fort Wayne Tincaps.

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A Cady traffic simulator, one of several machines used to simulate traffic in NTEP trials.



Field days are good venues for examining NTEP trials.

BERMUDAGRASS CULTIVAR PERFORMANCE FOR SPORTS FIELD USE

■ BY KEVIN MORRIS

At any one time, the National Turfgrass Evaluation Program (NTEP) is evaluating, in nationwide tests, more than 600 cultivars and experimental selection of more than a dozen species. Data collected and summarized from these trials can be found on our website, www.ntep.org. Our data is also published on a CD, in the same format as the NTEP website, which can be purchased from NTEP.



One of the new fine textured bermudas in the 2013 NTEP test.



2013 NTEP bermuda test at Columbia MO in summer 2014; note damaged plots.

NTEP collects data on overall turfgrass quality, appearance characteristics like color and texture, disease and cold tolerance and many other traits. In recent years, however, NTEP has focused more on testing specific performance traits, such as traffic tolerance and saline irrigation performance. This article provides insight on NTEP testing and an update on improved cultivars and new experimental selections of bermudagrass.

TESTING PROCEDURES

NTEP trials are established at university locations and evaluated for 5 years. Species such as Kentucky bluegrass, perennial ryegrass and bermudagrass have been tested by NTEP for more than 25 years. Each new trial includes recently developed cultivars, experimental entries that may become commercialized, and well-known standard cultivars. With each trial, NTEP and an industry advisory committee develops testing protocols and identifies important characteristics to be evaluated. Trials are established at locations that are important use areas for that species, or where a disease, insect or other problem is prevalent, such that NTEP can adequately evaluate the test entries for that problem. Also, NTEP establishes tests where specific stresses can be evaluated, i.e., a location that can impose simulated



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traffic, saline irrigation or consistent drought stress.

Evaluation procedures are developed for each of the traits; in some cases these procedures are very detailed. For instance, when testing traffic tolerance, we must consider the species being tested, its typical use patterns, the region of the country, the traffic simulation equipment available and other factors. Only then can NTEP decide how and when to impose simulated traffic and the best data collection procedures and timing for that trial.

The following is an overview of the latest traffic tolerance, cold tolerance, rate of spread and other pertinent information on the more than 60 commercially available and experimental cultivars of bermudagrass evaluated by NTEP since 2007.

DATA FROM 2007-2012

Our recently completed bermuda trial, established in 2007, contains 25 seeded entries and six vegetative entries. Many of these entries were experimental cultivars when originally entered (http://www.ntep.org/data/bg07/bg07_13-10f/bg0713ftent.txt). However, now several of these grasses are commercially available, including the seeded entries 'Gold Glove,' 'Pyramid 2,' 'Hollywood' and 'Royal Bengal.' Commercially available seeded entries 'Riviera,' 'Princess 77,' 'NuMex-Sahara,' 'Sunsport,' 'Yukon' and 'Veracruz' were also included in this trial. Commercial vegetative entries included 'Midlawn,' 'Tifway,' 'Premier' (now called Premier Pro), 'Patriot,' 'Latitude 36' and 'NorthBridge.'

NTEP evaluates warm-season grasses by comparing seeded and vegetative entries, and by separately comparing seeded vs. seeded and vegetative vs. vegetative. Therefore, you will find data collected on all submitted entries (http://www.ntep.org/reports/bg07/bg07_13-10f/bg07_13-10f.htm) broken down in different ways on our website. This section will only focus on the 16 commercially available entries from the 2007 trial.

Traffic evaluations were conducted for multiple years at the following locations: Fayetteville, AR, Gainesville, FL and Raleigh, NC. Data on traffic tolerance and recovery was collected in various seasons and in several years at these sites. Investigation of each dataset is best to identify grasses for your needs; information provided here on traffic and recovery are generalizations only.

At Fayetteville, AR, 'Premier Pro,' 'NorthBridge,' 'Latitude 36' (vegetative), 'Riviera,' 'Hollywood' and 'Yukon' (seeded) finished in the top statistical group for end of season ground cover in each year. 'Tifway,' 'Pyramid 2,' 'Gold Glove' and 'Princess 77' were in that top statistical group for 2 of the 3 years. Speed of recovery varied for the entries, depending on the time of year traffic was applied. The complete dataset can be found here: http://www.ntep.org/data/bg07/bg07_13-10f/bg0713ft21a.txt.

The Gainesville, FL location initiated seasonal traffic evaluations in fall 2008, with continuation (and breaks for

recovery) in spring 2009, summer 2009, fall 2009 and fall 2011. Seeded entries 'Veracruz' and 'Princess 77' were very good for traffic tolerance in each season. Entries with good ground cover at the end of three of the four seasons include 'Tifway' and 'Premier Pro.' You can look closer at the data here http://www.ntep.org/data/bg07/bg07_13-10f/bg0713ft22a.txt.

Finally, data was collected on wear tolerance and shear strength from 2009-2012 at Raleigh, NC. The best entries for both wear tolerance and shear strength in 2009 were 'Latitude 36,' 'NorthBridge' and 'Premier Pro.' In 2010, 'Latitude 36,' 'Pyramid 2' and 'Premier Pro' had some of the highest wear tolerance ratings along with shear strength ratings over 100 newton meters. The wear tolerance ratings of 'Tifway' and 'NorthBridge' in 2010 were lower (although not statistically significant), but they still both showed shear strength ratings of 100+ newton meters. 2011 data showed 'NorthBridge' with the highest shear measurement, significantly greater than almost all other entries. Also in 2011, 'Tifway,' 'Latitude 36,' 'NorthBridge' and 'Yukon' had the highest wear tolerance average. 'NorthBridge' and 'Tifway' continued to deliver the highest shear strength in 2012, and along with 'Latitude 36,' 'Patriot' and 'Princess 77', had the best wear tolerance ratings. Curiously, 'Midlawn' had high wear tolerance ratings from 2009-2011 at this location; however, its shear strength ratings were significantly lower than the other top entries (http://www.ntep.org/data/bg07/bg07_13-10f/bg0713ft23a.txt).

Data was collected on several environmental stresses throughout the testing period. For example, saline irrigation was used at Las Cruces, NM with 'Tifway,' 'Princess 77' and 'Latitude 36' finishing the 5 years of data in the top statistical group. At Stillwater, OK and Blacksburg, VA, 'Yukon,' 'Latitude 36,' 'NorthBridge,' 'Patriot,' 'Midlawn,' 'Riviera,' 'Hollywood,' 'Premier Pro' and 'Tifway' showed significantly less winter damage. And at Fayetteville, AR, Raleigh, NC and Knoxville, TN, spring dead spot (*Ophiosphaerella* sp.) was noted and evaluated. Only 'Patriot,' 'Latitude 36,' 'NorthBridge,' 'Pyramid 2,' 'Tifway,' 'Premier Pro' and 'Princess 77' showed statistically less damage from spring dead spot at all three locations.

DATA FROM 2013-2105

In 2013, NTEP initiated a new bermudagrass trial, containing 18 seeded entries and 17 vegetative entries (35 total entries). Twenty-one locations established the entries in spring and summer 2013, but the coldest winter in the last 30 years (2013-2014) necessitated replanting of some or all entries at seven locations. The winter of 2014-2015, although not as cold as the previous winter, was nonetheless also hard on these entries. Therefore, data collection (besides establishment and winter injury) could not commence at many locations until 2015. This report focuses on data collected through 2015, including both the 12 commercial and 23 experimental entries.



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M&T Bank Stadium in Baltimore resodded with Tifway bermuda after synthetic turf removal in May 2016.

Data from 2013-2015 can be found on the NTEP web site (http://www.ntep.org/reports/bg13/bg13_16-6/bg13_16-6.htm). Data from the early part of any NTEP trial needs to be used with caution, as additional years of data could affect entry performance. However, we are providing some initial data here with the caveat that these results may change over the new few years.

For 2013 and 2014, the story on these entries is primarily establishment rate and then winter injury (and recovery from injury). Bermuda establishment from seed is most often faster than from sprigs; however, not all seeded entries establish at the same rate (of course, the same is true for vegetative entries). Establishment data showed 'JSC 2009-2-S,' 'JSC-2009-6-S,' 'Riviera' and 'BAR C291' finishing in the top statistical group at each of 15 locations. 'MBG 002,' 'JSC 2007-8-S' and 'JSC 2007-13-S' also performed well, finishing in the top statistical group at 14 locations. These entries often bettered 'Yukon' for establishment, and occasionally, 'Princess 77' and 'NuMex-Sahara.'


Vegetative entry establishment rate varied more than with the seeded entries, with several entries showing consistency over many locations. Several new entries established equally well, if not better than well-known commercial entries, with outstanding performance at more locations. For instance, commercial entries 'Patriot' and 'Celebration' performed very well during establishment, finishing in the top statistical group

at 13 and 10 locations, respectively. Topping that however, 'FAES 1325' finished in the top statistical group at 14 of 15 locations; 'OKC 1131' (12 of 15 locations), 'FAES 1326' (11 of 15 locations) and '11-T-510' (10 of 15 locations) also established well.

The winter of 2013-2014 brought record low winter temperatures across much of the US, and the trials showed the effects of this extreme weather in spring and summer 2014. As noted above, because of the severe damage, two locations replanted all entries in summer 2014 and five locations replanted some of their entries. Before replanting, winter damage was assessed at these and other locations. Winter injury data averaged from Lexington, KY and West Lafayette, IN showed 'Yukon' with the lowest injury (22.8%) among seeded types (average damage ranged from 22.8 – 98.8%. LSD Value = 12.7). Among the vegetative entries at those two locations, 'OKC 1131' (14.5%) and 'Patriot' (30.8%) had the lowest average winter injury (range is 14.5 – 98.8%, LSD Value = 23.8). Since past top performers for winter injury showed more damage, i.e., 'Riviera' (55.2%) and 'Latitude 36' (57.3%), plant breeders may have made some improvements in bermudagrass winter survival.

The third year of this trial (2015) was the first year of turfgrass quality data collected with plots being adequately established plots at all sites. As often happens, entry performance varied significantly by location. In fact, NTEP statistical analysis dictated that data from each location be published in separate tables, and not compiled by region or grouped. However, 'JSC-2-21-18-V,' 'TifTuf,' 'OKC 1131' and 'Latitude 36' were the only entries with turfgrass quality averages in the top 25% of all entries for turfgrass quality at 70+% of locations.

One trait of considerable interest to turf managers is drought tolerance. At College Station, TX drought was imposed in summer 2015, and data being collected starting during the drought (mid-August) and continuing through recovery (mid-November). Throughout this 90-day period, percent living green cover ratings varied up to 40% among entries. Turfgrass quality ratings reflected this discrepancy with 'TifTuf' and 'OKC 1131' having higher overall quality ratings than almost every other entry.

Our 2015 dataset also contains much data on traits such as color, texture and density, with initial data on traffic, drought and disease (http://www.ntep.org/reports/bg13/bg13_16-6/bg13_16-6.htm). Again, this and other data needs to be repeated in multiple years before turf managers can feel confident in these results. Watch the NTEP web site (www.ntep.org) for this trial and other specie trial updates in 2017. 

Kevin Morris is Executive Director, National Turfgrass Evaluation Program, Beltsville, MD. He can be reached at kmorris@ntep.org.

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IS GENETICALLY MODIFIED TURF IN YOUR FUTURE?

■ BY DOUG BREDE, PHD

This article originally appeared in an issue of Turfgrass Producers International's Turf News, which is why it refers to "farms" a few times. Our thanks to TPI for allowing us to reprint it here.

A December 2014 article in the *Capital Press*, a West Coast Ag newspaper, indicated that the Scotts-Miracle Gro company had gained federal deregulation of Roundup Ready turf tall fescue, with similar innovations in Kentucky bluegrass and St. Augustinegrass not far behind. This means they are free to plant and market genetically modified (GM) turf crops without further federal regulation. Genetically modified crops are commonplace in most Ag production fields. But this marks the first time GM has entered the turfgrass realm.

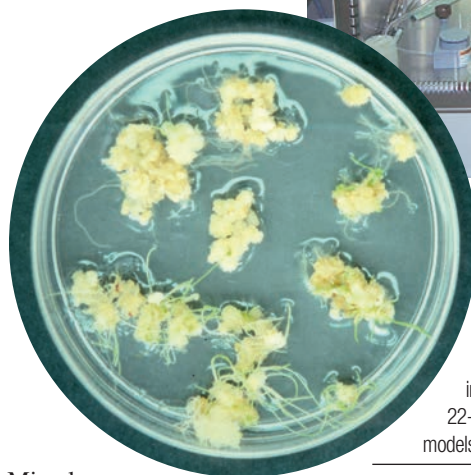
This article is a review of some of the pros and cons involved with GM turf. It's a good time to examine this new technology before sales get underway.

WHY THE TURFGRASS SOD INDUSTRY NEEDS GM TURF

All industries commoditize over time. New industries initially spring to life by an innovation. Old-timers will remember when Merion bluegrass, Meyer zoysia, or Raleigh St. Augustine hit the market. Turfgrass producers couldn't grow them fast enough. Raleigh was the subject of a whole episode of Fox's *King of the Hill*. Meyer was featured on the Arthur Godfrey show. And, well, Merion was everywhere.

Consumers were buying on features rather than price. Later, as time went by and competitors entered the market, competition soon centered on price instead of features. That's commoditization.

As a turfgrass breeder, I have seen some remarkable advances in our lifetimes in turfgrass genetics; all of these changes brought about by conventional cross-pollination and not laboratory methods. But I think our industry is ready for a



ABOVE: A "selectable marker" is used by biotechnologists to separate out cells that received the new genes from those that didn't. Later, by a change in the growth media, scientists regenerate grass plants from these cancer-like blobs of living tissue.

AT LEFT: The gene gun that's used by Scotts and others for inserting new genes into plant cells. This device initially used a 22-caliber bullet to propel genes at high velocity into cells. Later models used compressed air rather than ammunition.

PHOTOS BY DOUG BREDE

quantum change that will put us back in the days of Merion or Raleigh in terms of product features. Those are the kind of changes offered by GM turf.

Roundup resistance is only a building block. You are probably wondering why the first GM turf product to make it to market is for Roundup resistance. If you think about it, that does seem odd. We already have a plethora of herbicides to control most any weed that comes in our path. Even homeowners have a goodly number of choices at the local box store. What does Roundup resistance bring to the table?

Roundup resistance is a "platform" that biotech scientists use to create GM varieties. When lab scientists insert genes into plant cells, they have no idea which cells are taking up the genes and which are not. If they're lucky, 1% of plant cells will be transformed with the new genes. But how do you pick out those lucky 1% from the 99% that are unmodified? Simple, if you add a gene for Roundup resistance. Spraying Roundup herbicide on the resulting plantlets easily kills off the 99% that did not absorb the new genes. This makes it easy for biotechnologists to spot the transformed plants in the lab. They refer to this clever trick as a selectable marker.

All of the major agronomic crops (corn, soybean, cotton, alfalfa, canola, sugarbeet, etc.) all started out with Roundup resistance as their basic platform. Later they "stacked" additional genes on with the Roundup gene to add features to new varieties. Today, corn and soybean production in the US is greater than 90% GM.

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They say competition brings out the best in you; nowhere is that more relevant than in turfgrass breeding. From beginning to end Mountain View Seeds varieties are put through rigorous testing to measure attributes including color, drought tolerance, leaf texture, disease and pest resistance, wear tolerance and seed yield. Only the strongest will survive and make their way into a bag of premium grass seed from MVS. But the testing and evaluation doesn't end there. Additionally Mountain View Seeds varieties are constantly University tested for regional adaptability. But the biggest test of all comes on the field.

Many varieties perform well under ideal conditions, while completely controlled for optimum performance. But the true test of a variety is how it performs in the real world. Any shortcoming will reveal itself on the field. Mountain View Seeds varieties have performed consistently on the field. Because of that The Rose Bowl selected Mountain View Seeds to be their official seed supplier.

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So, yes, Roundup resistance is indeed a residual from the laboratory. But I believe we can turn it into a selling feature.

Spraying any herbicide increases the chance of creating herbicide-resistant weeds. Roundup is not unique in this regard. Any time we reuse an herbicide multiple times, we ‘up’ the chances of creating resistant weeds. With Roundup-resistant turf, we are not *required* to spray Roundup each time we need to kill a weed. You can always switch back and forth to 2,4-D to knock out any dandelions or weeds that may have become tolerant of Roundup.

Keep in mind that there are weeds that are already naturally Roundup-resistant. Clover is a good example. Also, common bermudagrass can tolerate a quart per acre with only superficial discoloration.

Cornfields will not be overrun by escaping GM turfgrass.

When was the last time you saw lawngrass escape from your farm and overtake a neighbor’s Ag production field? Maybe if you were growing kudzu. But turfgrass? Seriously?

GM turfgrass is no different in this regard than conventional grass. Genetic modification does not endow it with super powers to escape and populate nature. There are selective and nonselective herbicides that can be used to control the occasional plant that makes it over the fence.

FEDERAL OVERSIGHT NEEDS TO CHANGE

By some estimates it costs north of \$20 million to put one single GM variety through federal regulatory approval. While all this oversight does prevent the occasional mad scientist from releasing an evil product, it does inadvertently create a monopoly for giants like Monsanto. Startup companies don’t have the financing to get federal approval.

With turfgrasses it’s even more costly. In a cornfield you have a single variety of corn growing. In a turf field you might have five varieties of various species in the mix. If you intend to spray Roundup on that mixture, the seed inventor would have to put five varieties through federal registration, at the expense of \$100 million. (Hmmm... I wonder if they offer volume discounts?)

So how did Scotts afford it? How did they get Roundup-resistant turf approved without breaking the bank? Unbeknownst to many, no federal agency has ever been created by legislation to approve GM plants. This authority was bootlegged from existing programs based on the fact that some pathogenic organisms and virus genes are used in the creation of GM plants. These federal agencies do indeed have the authority to regulate transport of potential pathogens or parts thereof.

But in a stroke of near genius, scientists at the Scotts Company created Roundup-resistant grass using no pathogens or viruses. Therefore their innovation does not fall under federal jurisdiction. I understand from a Scotts’ scientist that they are voluntarily putting it through some of the same regulatory paces, just for safety’s sake.

ARGUMENTS AGAINST GM TURF

Opposition to GM turf is expected to come from both the far left and far right, politically. The only difference is whether they believe scientists are tinkering with nature or tinkering with God’s creation. And possibly (though not probably) you might find both sides uniting to picket your farm for growing unnatural grass.

One fact in favor of those who want GM turf is that no one “eats” our product. People are very touchy about what goes into their mouths. But they may give a pass to GM turf because no one eats their lawn. Or do they? When grass seed is cleaned, it is common practice to sell the chaff to feedlots. Even this simple consideration would require years of animal testing for safety, and would likely face suspicion from people whose cat or dog occasionally grazes on their lawn.

Other possible drawbacks of GM turf:

■ **Roundup resistance isn’t bulletproof:** During certain times of the year when the plant is exporting into its roots it can become susceptible to damage from Roundup.

■ **Pollen escape:** Although most turfgrasses don’t creep very far vegetatively, they can take a ride on the wind when pollen is shed. Scotts found out this the hard way when pollen from Roundup Ready bentgrass wafted 15 miles to cross with other bents in the landscape, creating Roundup-resistant weeds.

■ **Value proposition:** Can I make money on this product? Do my customers really want Roundup Ready fescue? Are they willing to pay extra for this trait? Will the cost of the seed be cheap enough to allow me to make a profit? Will it create more problems than it solves?

Lesson learned from Roundup Ready bentgrass. Back in 2001, Scotts was introducing their new miracle invention to the golf world: Roundup Ready bentgrass. Like a bull in a china closet, they appeared poised to corner the golf grass seed market. From a business standpoint, this may have been the right course to take. But it made them no friends and several powerful enemies. The opponents dogged Scotts every step of the way, until finally GM turf hit a brick wall when the Fish & Game department gave thumbs down. Turns out, they didn’t want to switch herbicides for weed cleanup.

This time, Scotts appears to have learned a lesson or two about diplomacy, and rather than go it alone, seems to be putting out feelers for others who want to participate in the benefits and risks of GM turf. **ST**

Recently retired, Doug Brede, PhD, served as research director for Jacklin Seed by Simplot for nearly 30 years. He is the author of Turfgrass Maintenance Reduction Handbook and more than 500 articles on turf maintenance. In the interest of full disclosure, Brede and Jacklin Seed are not involved in GM turf, although Simplot has a program that recently released the first GM potato.



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SOCIAL MEDIA 101: BEST PRACTICES

■ BY GLENN GRAY


Did you know that 62% of US adults receive their news via social media? In our dynamic and ever-changing digital-first world, it's important to learn more about these communication channels and determine which platform works best for you.


I've outlined each social media network's role below and provided some useful insights.

 **Facebook** is best used for longer-format content and to build lasting relationships. The average user is 41 years old and, for many, Facebook is the only online network they participate in. As the one-stop-shop, this is perfect if you want to connect with colleagues, friends old and new, alumni and your favorite brands. From STMA to Nike, every respected brand has a Facebook fan page. Simply "Like" a page and see all the news appear in your timeline.

 **Twitter's** platform is the go-to for real-time news and conversations. Posting with higher frequency than Facebook, the goal is to feature relevant content to catch followers while they are sifting through their feed. Keep it short (140 characters or less). When not conducting a back-and-forth conversation with someone, be sure to try and include an image.

Lara Froelich, Twitter's head of sports partnerships, said the platform "highlights the game around the game. Twitter complements the TV viewing experience and evolved naturally from the way fans were watching."

 **LinkedIn** is the professional network where users go to learn more about brands and search for new job opportunities. This is a platform that often gets under-utilized, but can be extremely powerful as you search for opportunities to get hired or doing the hiring. Posts should focus on industry news and professional development. To find your next job through LinkedIn, send messages to other professionals and join groups that peak your interest.

 **Instagram** is all about visuals. With beautiful sports facilities being manicured each day, posts are most popular when pictures are artistic and as original as possible. Great images and videos will engage the audience. As the "Directors of First Impressions," STMA members have an incredible opportunity to present your facility to a broad audience.

Adweek states that one in three Instagram users follow sports, athletes or engage in real-time during sporting events. Why not take a photo of your field and showcase it to the world?

With the general platform overviews out of the way, take a look at this checklist to guide you through the clutter and ensure your posts reaches the most users possible.

#SportsTurf social media checklist

1. Paint a Picture

Always include hi-res images (1 MB or so) with your posts; they help tell your story and receive higher engagement than content without images. Feel free to use filters to accentuate certain colors or aspects of your field.

2. Short and Sweet

Keeping posts concise and "to-the-point" will engage your followers more effectively. The average person only has an 8-second attention span, so make them count!

3. Frequency

Post frequently to keep your followers engaged by adhering to the suggestions below:

- Facebook – five posts per week
- Twitter – one post daily (minimum)
- LinkedIn – one post per week
- Instagram – three to five posts per week

4. When to Post

Knowing when to post is crucial to your success.

We recommend posting around 9 am, lunchtime and after 6 pm to maximize your reach.

5. Industry Hashtags

Using industry hashtags will help others find your posts and interact with them by "liking," sharing or commenting. Suggested sports turf industry hashtags include:

- #SportsTurf ■ #TurfExpert ■ #TurfSafety
- #TurfTips ■ #TurfJobs

6. No Man Left Behind

Make sure to tag friends, colleagues, organizations and teams to increase visibility. How can the @Cubs know you supported them during their World Series run if you didn't tag them?

Don't forget to tag the Sports Turf Managers Association's Twitter handle, @FieldExperts, for posts pertaining to the sports turf industry.

7. Stay Classy, #SportsTurf

Professionalism is a must, especially on social media. Be sure to double-check your spelling and grammar for errors. As a good rule of thumb, don't post anything that you wouldn't want featured on the front cover of *The New York Times*.

When in doubt, take the high road!

8. Seize the Tweet

Now that you are an expert, it's time to put your new skills to the test. This is an excellent opportunity to advance the sports turf management profession, both on and off the field. Your posts, images and videos might even be featured by STMA to other industry colleagues and employers. **ST**



Glenn Gray is Vice President of Buffalo Agency, STMA's agency of record since late 2013.



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THE SPORTSTURF INTERVIEW: LYNDA WIGHTMAN

This month in "The SportsTurf Interview," we feature Lynda Wightman, industry relations manager for Hunter Industries. Wightman has long-standing relationships, including Board and committee service, with many organizations, including STMA, and she received the association's highest honor when she was named the 2004 Harry C. Gill Memorial Award winner.



SportsTurf: How did you first become involved in sports turf management and how did you first become involved with STMA?

Wightman: I am obviously not a sports field manager, but attended my first conference

with Steve Wightman, who was with the Denver Broncos at the time. I started working for Hunter Industries in February 1984 and met Steve in the following years. He was a guest speaker at that conference, and I immediately fell in love with the people involved with this profession.

SportsTurf: What are your responsibilities with Hunter Industries?

Wightman: My title is "Industry Relations Manager," which I think means that I'll wear any hat that is available and needed. I am constantly looking for new, innovative ways to teach people about the value of water conservation and working together as professionals in our industry. I oversee quite a few of our association participation and sit on a number of Boards of Directors, including STMA many years ago. Another passion is dealing with instructors, programs and students who normally don't have dedicated irrigation courses at their schools. Thus, I'm always volunteering my time to teach (and "train the trainer") for turf, horticulture, and landscape architect programs around the world. How can someone even think about maintaining an athletic field without understanding basic irrigation hydraulics?!

SportsTurf: No member has more passion for the STMA than you; why are you such a believer in the association?

Wightman: Well, there are SO many others who equally share my passion, it's unbelievable. That is one reason why I love this group of professionals so much. There is pride and humbleness exuding from everyone I have dealt with. STMA is still a small group and the egos are left at the front door, if there are any at all. From the senior to the student members, STMA has developed a group of dedicated people who realize the importance of working together and believing in what they do. I'm also a HUGE proponent of the staff that STMA has employed. Kim Heck and her unbelievable team are awesome. They are the glue that binds the association together.

SportsTurf: What are the most important changes you've seen in sports turf management in the past 20 years?

Wightman: Women in the industry. No doubt. We all know there were very few many years ago, but now we have so many women who attend our annual Women's Forum at conference, it's fantastic. We are equal. Period. It shows through the ongoing networking I hear about from peer to peer, not gender to gender. I'm very proud to be a part of this today.

And technology, no doubt. I wish I could say "irrigation curriculum in schools," but I'm still working on that! With the advent of computers and Internet, it's amazing what can be done to assist with the job of the sports turf manager. As a manufacturer of equipment, I have also seen many new technical changes to water efficient products, but it still goes as it's said: "it is only as good as it is installed and managed." Again, education is the base of all changes in our industry. The ONE thing that has not changed is the fantastic and in-depth networking that takes place amongst these professionals. This includes not only sports turf managers, but also other entities of STMA: researchers, instructors, students, commercial partners, allied associations . . . the list goes on.

SportsTurf: You know a lot of sports turf managers. What are they saying are the biggest obstacles to overcome for them to be successful today?

Wightman: I still believe that owners of stadiums and teams, along with school superintendents and athletic

directors don't believe that the sports turf manager is the "go-to" person for items that pertain to the field; the PROFESSIONAL, knowledgeable employee. The tagline for STMA, "Experts on the Field; Partners in the Game" couldn't be more true for our members. Their bosses just need to appreciate that and not second-guess decisions made. Respect, honor and belief have to be included in these relationships. Budget, of course, will always be at the top of the list. STMA members need to be more creative with funds for equipment repair, field materials, and education/attendance to the local and national conferences.

SportsTurf: You are personally associated with the successful Student Challenge that is part of the STMA Conference. Why is that competition so important to you?

Wightman: As mentioned quite a few times before, students are our next generation of employment and we MUST empower them to learn and experience every part of management, including irrigation, while preparing for the careers. The Student Challenge is an event that gives the students this opportunity. In many cases, it is also a learning experience and not just competition. I love seeing so many types of schools, small to large, take this challenge and thoroughly prepare AS

A TEAM, in order to win for the school. I can't believe how many students personally come up to me, either at Conference or during the following years, to say thanks for the sponsorship and assistance. How cool is that?!

"Education is the base of all changes in our industry."

SportsTurf: What are your passions and interests outside of work?

Wightman: Ha! Anyone who knows me would say that I don't have much of a life outside of irrigation and Hunter, but I am a very lucky woman to live in Missoula, MT (eat your heart out!) and be close to family. I love to fly fish, garden, preserve and cook the goods I grow, and share everything with everybody I can! I invite industry friends to join me in the relaxation of being on the water, tossing a line, and not talking about sprinklers, water conservation and jobs!! By doing this, we all go away with a refreshed mind and soul, ready to tackle our daily challenges once again. **ST**



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John Mascaro's Photo Quiz

Answer on page 35

John Mascaro is President of Turf-Tec International

Can you identify this sports turf problem?

Problem: Chalk line

Turfgrass area: Paved area by baseball stands

Location: Pacific Northwest

Grass variety: None



BACKGROUND ILLUSTRATION COURTESY OF ISTOCKPHOTO.COM

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MAKING DECISIONS IN THE POST-PATENT PESTICIDE MARKET

■ BY REBECCA AUCHTER

When I started managing sports turf about 11 years ago, I had the misguided notion that it would be easier than golf course management, where I'd started my career. After all, it's just longer grass, right?

Obviously, I was wrong. It didn't take long to realize the special skill set needed to maintain quality playing surfaces under the "herding" traffic patterns and abuse sports fields must endure.

Even though I had some catching up to do in my transition from golf to sports turf, I was confident in my agronomic skills, especially in using chemicals and developing a spray program. For those of you not familiar with the Mid-Atlantic climate where I grow grass, it is humid in the summer and we get nearly every turf disease in the compendium. We are far enough north that cool-season grasses are required, but summer temperatures strain the limits of those species. Irrigation is crucial to keep turf actively growing and, more importantly, recovering from constant use in our municipal park system. Certainly, we employ good management practices with regard to nutrition, soil management, species selection, and cultural practices, but a preventive fungicide program is generally required for highly managed fields in this region.

SO MANY PRODUCT CHOICES

Developing a preventive spray program to manage turf disease isn't difficult for me since I started honing those skills years ago on the golf course. But making it happen on a municipal budget instead of a country club budget is an entirely different challenge. In addition, the last decade has seen an explosion of post-patent products entering the turf and ornamental market. While our choice of active ingredients has remained stable with only a few new chemicals to consider annually, the quantity of formulations, brand names, and combination products have skyrocketed. As a busy grounds manager with a wide array of responsibilities spread over hundreds of acres, I don't have the luxury of spending hours in my office researching every new product to determine if it may be a good fit for our program. At the same time, I am highly motivated to find the ideal products at the best price so my staff and I can evolve to meet the expectations of our customers. This article grew out my desire to develop some kind of systematic approach to selecting products for our program.

WHAT'S DRIVING THE CHANGES

I would like to note that I certainly haven't been living under a rock, but keeping up with the mergers and acquisitions of

agrichemical companies takes a commitment. In the late 90's when I was climbing the steps through the golf industry, most our chemicals came from a few big companies who did the research and development and brought new active ingredients to market. A few names like Dow, DuPont, Bayer, BASF, and the newcomer in 2000, Syngenta, dominated the scene. Those companies continue to innovate and bring new active ingredients to the market, in addition to supplying their trusted brand names. But things have changed. At the writing of this article, Dow and DuPont have a merger pending, Bayer is awaiting regulatory approval to purchase Monsanto, and the Swiss firm Syngenta's acquisition by ChemChina is all but complete. The Japanese chemical giant Sumitomo owns a significant portion of the Australian company Nufarm, who acquired Cleary's only a few years ago. SipcamAdvan's parent company is Oxon Group, headquartered in Milan, Italy. Makhteshim Agan, a huge Israeli chemical company responsible for the Quali—Pro brand, is renamed Adama and wholly owned by ChemChina. While these examples only scratch the surface, they do illustrate that it is a global industry with a global supply chain and partnerships that seem to change rapidly. Given the changing landscape, it is often tricky to determine the provenance of a product.

The proliferation of players on the agrichemical field has been driven, in part, by the number of active ingredients that are now post-patent. Azoxystrobin recently came off patent and two other strobilurins, pyraclostrobin and fluoxastrobin, will be available in the next couple years. Along with ai's mancozeb, propiconazole, iprodione, chlorothalonil and many others that have long been available, budget conscious turf managers have post-patent fungicides from nearly every class available to combat turf diseases. As a refresher, American patents last for 17 years during which the chemical's price and distribution agreements are controlled by the patent owner. Traditionally, the patent-protected period means higher prices for the consumer as the company recovers their investment for the research, development, and EPA registration of the active ingredient, which can easily exceed 10 years and \$10 million. Post-patent, however, active ingredients can be formulated and sold under several or even dozens of different brand names at whatever price the formulator chooses. As the post-patent market developed in the last decade, low prices were the driving force of growth. We often referred to products as "generics."

More recently, though, companies specializing in post-patent products have used sophisticated marketing to grow brand

recognition and differentiate their portfolio from others by adding original formulations that are proprietary. Pairing good customer support and quality control along with the registration of new post-patent formulations has created a niche of cost effective and reliable products that have shed the uncertainty consumers perceived under the “generic” moniker. I zeroed in on the post-patent brands that offer a relatively full portfolio of products and are widely available throughout most of the country. ArmorTech, UPI’s Phoenix, PrimeraOne, Quali-Pro, Select Source, Nufarm and Cleary’s, FMC, Prokoz, and SipcamAdvan are the brands with prominence in the turf and ornamental segment at this time. I expect this to be a changing and growing list as mergers and acquisitions spur the marketing efforts of parent companies and more active ingredients reach a post-patent status.

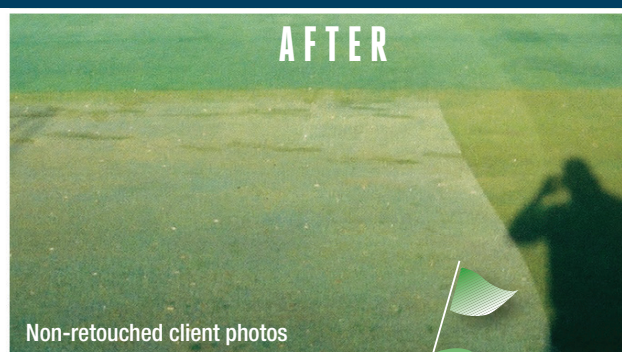
A METHOD FOR COMPARISON

Looping back, my motivation for digging into this topic was a way to compare the multitude of products with the same active ingredient. The most valuable tool, by far, is the EPA’s Pesticide Product Label System (PPLS.) The full link is at the end of this article. PPLS is a user-friendly database where you can enter the name, company, registration number, or active ingredient and get a list of every registered product that matches the query.

In a matter of a few minutes and a handful of searches, I was able to find objective information unavailable from any other source. For example, Bayer’s Signature is the original patent-protected formulation offered in the turf and ornamental market with the active ingredient aluminum tris. It is a true systemic fungicide that presents no resistance issues and is now available in post-patent formulations that are lower in price. One of my trusted vendors offers that active ingredient under United Turf Alliance’s ArmorTech brand and the product is called Alt 70 WDG. Another vendor carries UPI’s Phoenix brand and the product is called Viceroy 70DF. When I look up those fungicides by their EPA registration numbers, they are the same product, formulated by Tessenderlo Kerley. Selection, then, is simply a matter of comparing price because I can determine with certainty that the two products are identical. As another example, “Echo 720” is the chlorothalonil formulation offered by SipcamAdvan. If I search the EPA registration number in the PPLS database, I can find that PrimeraOne Chlorothalonil 720 is the exact same thing. NuFarm’s thiophanate-methyl and iprodione combination has three alternate names listed under the EPA registration number 228-630 that can be considered as equals. It is part of my due diligence when I am considering any pesticide to do a quick search of the EPA registration number through the PPLS



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EPA registration numbers are assigned under a rigorous set of standards and very specific rules. The first grouping of numbers identifies the company holding the registration. Syngenta registrations all start with 100, NuFarm is 228, BASF is 7969, Bayer is 432 and so on for each company. The second set of numbers after the hyphen identifies the specific product. Dow Agrosiences' Eagle 40WP fungicide is 62719-417 while Fore 80WP Rainshield is 62719-388. Occasionally, a third set of numbers appears which identify the distributor. Prokoz is a value-based brand available through a cooperative group of owner/distributors. Their myclobutanil fungicide, Hoist, has the EPA registration number 62719-417-72112. With the nomenclature just described, it is easy to identify that the first two sets of numbers are identical to the Dow AgroSciences' product Eagle 40WP with only the addition of the Prokoz distributor code. The addition of a distributor number and name only signifies a business arrangement and the label must be exactly the same as the original product's master label, with the exception of formatting and artwork that do not affect the product.

INFORMED DECISIONS

With an understanding of how EPA registration numbers identify a product's provenance and the handy PPLS tool to cross reference and compare chemicals, I have confidence that I can quickly determine if something is truly unique or just rebranded. It is the trend of agrichemical companies to use post-patent active ingredients and create proprietary, new formulations. These new formulations may have additives to improve mixing, tank compatibility, plant uptake, stability during storage, or a number of other factors. They must be submitted to the EPA and go through all the stringent tests and requirements at significant expense to the formulator to validate the claims and receive a unique EPA registration number. As I mentioned at the beginning of the article, there are only a few new active ingredients coming to market annually, but the number of new formulations and combinations are plentiful.

Having fewer choices may have been simpler, but the variety of products and the spectrum of pricing in today's market puts a sophisticated turf management program within the reach of all managers who want one. It is still imperative to master the basics of pesticide classes, active ingredients, and modes of action. But it is equally important to develop a method for vetting new offerings as economics, pathogens, the regulatory environment, and the expectations of our customers will evolve with or without us! Please check out the EPA's Pesticide Product Label System (PPLS) at <https://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1> for information on the products you are considering. **ST**



Rebecca Auchter is manager, grounds, for the Public Works Department of Cranberry Township, PA

John Mascaro's Photo Quiz

Answers from page 31

John Mascaro is President of Turf-Tec International

Obviously, a chalk liner caused this line; however the photo does not even begin to show the awesomeness of the story. This baseball stadium has a maintenance crew and an outside field maintenance company. In addition to these services, a volunteer coach sometimes helps with various activities, including chalking the baseball field for practices. On this occasion, the coach filled up the chalk liner inside the maintenance shop and did not notice it was open. Then he proceeded to walk to the field while lining the maintenance center parking lot all the way through the park to the baseball field. Oddly enough when he arrived at the baseball field, he did shut the chalk liner off before he went onto the field, however the field was never lined. When the field maintenance company arrived on site, they not only had to chalk the field but also had to clean up the "extra lines" by hosing the areas down. Photo submitted by Mike Hebrard, owner of Athletic Field Design in Oregon.

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 call (850) 580-4026 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.



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AWARD REWARD: MILB GROUNDS KEEPER GETS FOOTBALL

■ BY ERIC SCHRODER

After winning his fourth consecutive Southern League Groundskeeper of the Year Award last year, Ray Sayre of the Pensacola Blue Wahoos received his reward: college football on his field.

Last fall the University of West Florida Argos kicked off their inaugural gridiron season playing at the city-owned stadium that was built with multiuse in mind; the left field fence can be pushed back 17 feet to accommodate football, and goalpost anchors had been buried into the field when it was built 5 years ago.

“We’ll be hosting football for at least these first few years,” says Sayre, “but they could be playing here forever, it’s yet to be decided.”

Like all minor league baseball groundskeepers, Sayre’s facility hosts plenty of events and since he works for the main tenant, the MiLB team, he was in charge of changing over the field, which now has bleachers in right center field.

“The third base foul line is one sideline. We had to remove the mound and put sod where all the dirt was,” he says. “We took out 100 tons of clay to make room for the sod.”

Being on the west coast of Florida meant Hurricane Matthew didn’t touch the field, and Sayre says his weather this past season was a typical summer. “It’s been dry the past month (October); we had a rainy March and April, and drier May and June, and then as always around July 4 you get the pop-up showers just about every day,” he says. “It might not rain at the stadium but it’ll rain somewhere around Pensacola so we have to keep on the lookout.

“Not every shower is tarp-worthy. It depends on what time of day and if there’s a game; on game days we’ll tarp if it rains after 12 noon, but we need to be game ready by batting practice at 2:30. And here the sun comes out after a shower, and we’re near the bay so there’s usually a breeze as well to help our drying conditions,” he says.

“We hardly ever tarp overnight unless we’re expecting the rare all-day rain.”

Mother Nature has been kind to Sayre in his 5 years in Pensacola. “We dodged a big tropical storm that came up from the Gulf several years ago when it went east and hit Tallahassee, and in May 2014 we got 20 inches of rain in 24 hours but otherwise we’ve been lucky,” says Sayre.

NEW THIS YEAR

“We’ve always been aggressive at aerifying, pulling cores or

using solid tines to poke holes; we try to do it every time the team is away during the season. This past summer we added verticutting, followed by dragging with a broom unit we built, to keep the grass standing up,” Sayre says. “The bermudagrass grain can get out of control when you’re mowing patterns.

“We also began using growth regulator more regularly to keep the grass tighter and limit top growth that can lead to that grainy effect. These practices did a good job for us knowing that football was coming,” he says. “And it worked for baseball, too.”

Sayre graduated from high school in Lexington, KY without knowing what career he wanted to pursue, went off to college undeclared, and then got a job with the fields crew at the University of Kentucky. There he discovered you could get a degree in turf so he enrolled at Eastern Kentucky University and earned his horticulture degree with an emphasis in turf management. And, importantly, he interned with Tom Nielsen, head groundskeeper for the Triple A Louisville Bats, and one of most respected professionals in the country. Upon graduation Sayre spent a year on Nielsen’s crew before taking a job with the Greenville Single A Boston Red Sox affiliate in South Carolina, where they had just built a new stadium. His next stop was back home to Kentucky, where he again inherited a new Single A stadium (and new team) in Bowling Green.

“I was hired at Bowling Green soon after construction had begun, and I’d been part of conversations about the new stadium before I’d actually starting working there,” he says. “I mostly was involved to be made aware of what was happening rather than have major input; they were paying a consultant to make the big decisions.”

Sayre did have input on what materials were to be used in building the infield, he says, but adds that in the end, the field in Bowling Green wasn’t build that well.

“The 3 years I was there the field just didn’t drain that well; we discovered the gravel used was improper. When we pulled the tarp water would sit in the outfield for 2 or 3 hours before it would drain. We ended up renovating down 24 inches and fixed it. I had more input at that time,” Sayre says.

Sayre saw an opportunity in Pensacola in December 2011 and hasn’t looked back.

NEW OVERTIME LAW

Last year the US Department of Labor announced updates to the Fair Labor Standards Act. One change was that the



minimum salary for exempt white-collar employees more than doubled, from \$23,660 to \$47,476. That means before the change if you made at least \$23,660, you were considered exempt and an employer could make you work as much overtime as possible. Now, anyone making below \$47,476 would need to be compensated at time and a half for working in excess of 40 hours during a workweek.



"This will affect us," says Sayre. "I don't completely understand it though I know it doesn't affect me; I can still work a million hours a week. But it will affect my assistants since theirs is certainly not a 40 hour a week job."

Sayre says his management is trying to figure it out because it will affect a handful of employees in the organization, not just his crew. "I'm afraid we won't hire someone and I'll be here

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even longer than usual. And it might affect our practices, too," he says. "For example when we verticut, sweep and mow, you can't do it any faster but with more people you can certainly overlap the tasks.

"My boss wants me to leave early when I can but the work still has to get done; if not we won't be getting the recognition for having a great field."

While he enjoys living and working in Pensacola, Sayre does occasionally wonder what other opportunities might be presented. "I don't necessarily aspire to work in Major League Baseball but I'm not against it either," he says. "I have a wife and young daughter and if an opportunity comes along, we'll have to consider it. But Pensacola is a great place to be and I'm not seeking anything. I'm thankful to be here."

"You don't win awards by yourself; it's a collective effort"

NEXT SEASON

"Ours is now a football field and there are a few more games to be played before we'll know what we'll be facing heading into

this spring," he says. "We'll have to renovate some areas, and most likely will re-sod where the bleachers were. And after we remove the sod from the infield dirt areas, I want to continue to improve our mix. We started with a local mix that was naturally high in sand, and it didn't hold together as well as I would have liked. So each year I've been incorporating more and more clay into the sand.

"I would like to have a good standard mix and start fresh; if you have a good one out of the gate it's easier to be consistent year to year than when you mix it in every year," Sayre says.

"One day I'd like to do a full renovation, perhaps if there's no more football. I would like to re-grade and add some drainage; we know now from experience where we'd put more drains."

Sayre made sure to give a shout out to his crew. "You don't win awards by yourself; it's a collective effort," he says. "Wes Baldwin, my assistant, does a great job. Head groundskeepers can have great ideas but your crew needs to buy into what you're doing to make it happen. That's why it's so important to recognize all the crew, including the front office people that help pull tarps. It's hard work.

"The Southern League should call their award 'Field of the Year' rather than 'Groundskeeper of the Year,'" Sayre says. **ST**

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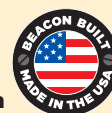
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The MASTMA Steering Committee, L to R front row: Don Follett, Nicole Andrews, Patrick Coakley, CSFM, and Nicole McFayden; L to R back row: Jason Kopp, Dr. Tom Turner, and Ryan Bjorn.

NOTES FROM THE NEW MID-ATLANTIC STMA CHAPTER'S INAUGURAL MEETING

■ BY GEOFF RINEHART

The newly re-formed Mid-Atlantic chapter of the Mid-Atlantic Sports Turf Managers Association (MASTMA) had their first member organizational meeting at M & T Bank Stadium last October. About 150 STMA members and prospective members attended the event that included an educational program, information about the re-kindling of the chapter, and a field tour. The educational program included PowerPoint presentations, a panel discussion, and a field tour. Speakers included Baltimore Ravens' head groundskeeper Don Follett, who spoke about the conversion of the M & T Bank Stadium from a synthetic surface to 419 bermudagrass; Jerrad Minnick from Growing Innovations, who spoke about the latest technology in stadium lighting; Dr. Tom Turner who detailed the turfgrass research program at the University of Maryland; and a panel discussion including lead groundskeepers from many of the regional professional stadiums.

The field tour provided an opportunity for attendees to take a look at the overseeded 419 bermudagrass field and the SGL lighting system used to improve the light quality

for the turf against the long shadows of this second half of autumn. The on-field portion of the meeting also included a presentation by University of Maryland professor Dr. Kevin Mathias, who demonstrated uses of a variety of field tools and instruments that sports field managers can use to make their jobs easier and increase their turf management precision.

The event provided a good opportunity for sports turf managers in Maryland, DC, and northern Virginia to connect after what was a very difficult summer in the Mid-Atlantic region. Steering committee member Jason Kopp captured the mood when he said, "After the event talking with several people about what they liked and found useful they all said they got to meet other managers from the area who they didn't know. This is what the chapter is all about. Sharing resources, information, and building long-standing friendships."

"It was a great day of learning, networking, and sharing ideas with other turf managers from the Mid-Atlantic. The overall attitude and response from the meeting was overwhelmingly positive, and I look forward to continuing to expand this network with MASTMA," said Ryan Bjorn, director of grounds and environmental maintenance at Maryland SoccerPlex.

The groundwork of the chapter rejuvenation had been

accomplished over several months by a steering committee including sports turf managers at some of the region's professional complexes as well as industry suppliers.

Re-starting a chapter that faded out about a decade ago, this first meeting represents a lot of hard work by the steering committee over the last several months. "I'm proud of what this steering committee has accomplished so far. There is a lot of work left to do but looking at where we are today and how far we have come in a short period of time is remarkable," Kopp said.

Moving forward, the next chapter event will be March 17, 2017 at Oriole Park at Camden Yards.

"It was invigorating to be a part of this process and to see it come together so well. The number of people that attended was great, but the level of enthusiasm for what we are trying to accomplish was what excited me the most. I can't wait to see how we harness the momentum and carry it forward," said Patrick Coakley, CSFM, who manages the Ripken Baseball facility in northeast Maryland and is on the steering committee.

Hopefully, MASTMA can keep the momentum. As evident from the crowd at M&T, sports turf managers from around the Mid-Atlantic are happy to have an STMA chapter they can call their own! **ST**



Dr. Kevin Mathias, University of Maryland, demonstrates a soil moisture meter during the field portion of the meeting.

Geoff Rinehart is coordinator of the Grass Roots Initiative Exhibit at the National Arboretum in Washington, DC.



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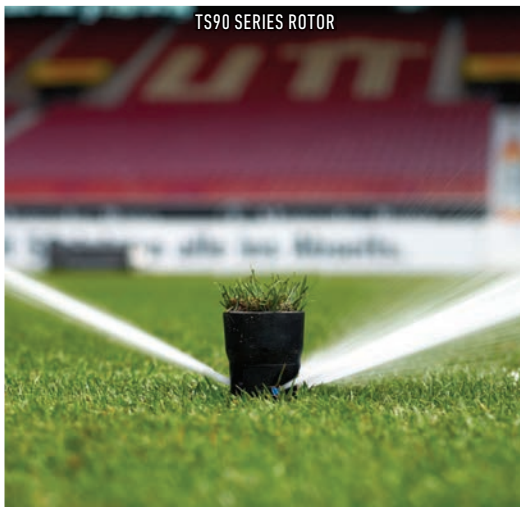
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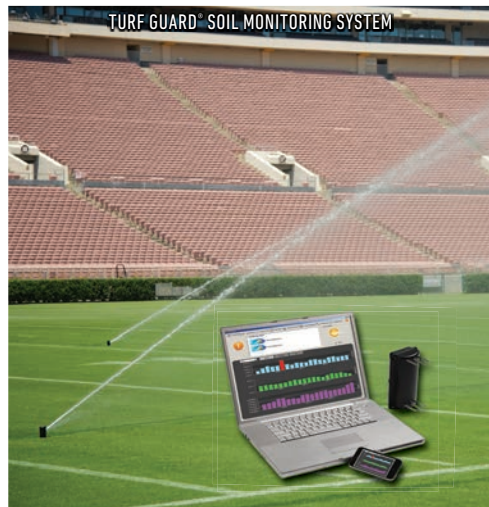
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How to choose the best fertilizer for your sports turf

*This article was supplied
by Koch Turf & Ornamental.*

Fertilizer. It's part of almost everyone's field maintenance program,

but sometimes, we don't give it a whole lot of thought.



Turf needs nutrients, and fertilizer has them. Simple, right? Not necessarily. According to Eric Miltner, PhD (pictured left), agronomist for Koch Turf

& Ornamental, not just any fertilizer will do. Selecting the right fertilizer for your turf depends upon a few important factors.

"First of all, a field's conditions and environment certainly impact the type of fertilizer you should choose," Miltner says.

"That includes things like location and climate, turf species, season of use and soil conditions. The difference in fertilizer selection has less to do with the type of sports field (football, soccer, baseball) than the turf species present and local climate."

Soil also plays a particularly crucial role in proper fertilizer selection. Because fertilizers are used for supplemental nutrition, it's important to know a soil's nutrient levels so that you can select a fertilizer that will provide what the soil cannot. A sandier, low-organic-matter soil must be managed differently than a finer-textured, higher-organic-matter soil. Factors such as cation exchange capacity (a measure of the soil's ability to hold and release plant nutrients) and potential nutrient mobility (leaching) are critical. If this is starting to sound

too complicated, don't worry.

"Slow- or controlled-release fertilizers can be a great solution for just about any type of sports field and any soil type," Miltner explains. "These fertilizers release nutrients slowly at a pace that the plants can really use them. So, they stick around instead of being flushed from the system. And, controlled- and slow-release fertilizers can be a better investment from the standpoint of nutrient efficiency and environmental quality."

FERTILIZER 101

While slow- and controlled-release fertilizers can be a great all-around solution, the fact remains that not all fertilizer blends are created equal. It's important to know what ingredients are in a bag of fertilizer and in what amounts.

"You wouldn't buy a piece of equipment without understanding what you're getting," Miltner says. "Fertilizer may not cost as much as a mower or other equipment up front, but it's at least as integral to turf health. Understanding what's in the different fertilizer blends will help you choose the right product for the best possible results."

If you're at all familiar with fertilizer, you know that the primary nutrients in a typical bag are nitrogen (N), phosphorous (P) and potassium (K). Nitrogen is critical for the production of amino acids, proteins, enzymes, nucleic acids and chlorophyll. Its effects are seen in plant color, density and growth rate. It also impacts turf's tolerance to diseases, insects and weeds.

"Many fertilizers contain mostly quick-release nitrogen in the form of ammonium nitrate or urea," Miltner says. "Quick-release sources have nitrogen contents ranging from 11 to 46 percent and generally are less expensive than slow- or controlled-release sources. While they help turf green up quickly, they require frequent reapplication. So, they can end up being more expensive in the long run."

Phosphorous is critical for energy delivery in cells, as well as building nucleic acids and

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cell membranes. It's rare to visually diagnose a phosphorous deficiency in turf, which is another reason to periodically test your soil.

"Some areas are now restricting phosphorous application due to water quality concerns," Miltner says. "In those areas, you need to test your soil for a phosphorous deficiency before you can apply it. Don't be fooled into thinking phosphorous is unnecessary or dangerous because its use may be restricted—it's still critical for turf health."

Potassium regulates water content in cells, helps enzymes work and builds cell walls. Its role in building cell walls is what makes potassium an important factor in turf traffic tolerance—a must for sports fields that get used frequently. For this reason, some sports turf managers apply just as much potassium as they do nitrogen, or even more. But should they?

"In many situations, it's not necessary to apply a high rate of potassium everywhere on the field," Miltner says. "Targeted potassium applications in high-traffic areas (between the hashes, goal mouths, outfielder positions) can give these areas the boost they need. If you do apply high potassium rates, consider using a sulfate of potash which has a lower salt index and less burn potential compared to a muriate of potash."

ENHANCED EFFICIENCY

Now that you know that controlled- or slow-release fertilizers deliver consistent nutrition, and you know what each of the primary fertilizer ingredients do, how do you select the blend that's best for your turf? Miltner says that because of varying conditions and environments, no one size fits all. However, the best fertilizers are those that aim to optimize nutrient performance and minimize nitrogen loss.

"Look for blends containing controlled-release or slow-release fertilizers," Miltner explains. "These enhanced efficiency fertilizers, or EEFs, are formulated to support consistent plant growth with fewer applications, which saves time and money while boosting productivity. Because more nitrogen is available for plant uptake, sports



turf managers can get the most from each fertilizer application. In other words, the turf gets more of the nutrients you're paying for."

EEFs can be incorporated as components of any fertilizer blend. They differ from urea or ammonium sulfate because they offer increased nutrient uptake and less loss to the environment through volatilization, leaching and denitrification. In fact, Koch Turf & Ornamental has been conducting research over the past

6 years that shows these products result in up to 60 percent greater nitrogen uptake over urea. On any type of soil, these products have been found to offer more consistent nutrition with fewer applications, which can produce a positive ripple effects throughout an organization or business.

"Because every sports field is different, there is no one fertilizer blend that can meet every field's needs," Miltner says. "Choosing a fertilizer depends on variables including location, turf species, soil conditions and more. However, there are a lot of Enhanced Efficiency Fertilizer technologies that turf managers should consider as an alternative to quick-release products. They bring increased value through consistent nutrition and growth and greater efficiency leading to better playability, tolerance to stress, and better plant health and viability throughout the season."

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PRODUCTS AT STMA

GameDay athletic field marking paint

Pioneer Athletics has established a new and brilliant standard color pallet for its GameDay premium athletic field marking paint. By utilizing new advanced colorant technologies, sports turf managers will now be able to enjoy consistent color intensity regardless of whether they apply the paint straight or diluted. This advancement gives flexibility to those turf managers who sometimes need to stretch their pails a little with dilution. The new colorant system will also benefit those who need custom GameDay colors for their sports fields. The new standard colors will first be displayed in booth 601 at the STMA trade show in Orlando.

Pioneer Athletics



Campey Imants introducing equipment at STMA Conference

Campey Imants is showcasing their Vredo Super Compact/Compact and Turf Fix Series and the Koro FTM Universe rotor at this month's STMA Conference. The Vredo series seeders are accurate and extremely precise disc seeders; due to the unique action of the Vredo seed application, the grass seed is placed in direct contact with the soil in a V-shaped slit, at a pre-set depth of between 5 mm and 25 mm deep. The slits are then closed by a compaction roller and a level surface re-established. A double row of discs give 35 mm seed spacing, providing a one-pass operation with no disruption to play. The Vredo Turf Fix Series is a compact, multi-function, for seeding, dressing and aerating turf. This multi-function machine is perfect for professional landscapers, contractors and clubs, looking to carry out a number of renovation and maintenance tasks with just one machine. A new machine to the US is the Raycam Uni Rake, which will also be on display at STMA trade show.

Campey Imants



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Grigg Brothers' foliar technology

Grigg Brothers means quality, performance, compatibility and proven efficiency. We recognize that innovation through research and development are vital to maximizing budget dollars while providing the best agronomic solutions. Grigg Brothers solutions for sports turf managers are

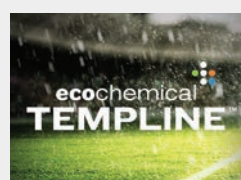
designed to increase turf vigor, overall quality, wear tolerance, and provide quick establishment.

Turfgrass managers all over the world are taking advantage of the highly efficient Proven Foliar technology. This product line is designed with the highest quality ingredients and unique formulations for unparalleled nutrient uptake and assimilation with proven results. Grigg Brothers is a science-based company and leads in research and education. We are dedicated to validating the use of all products through university research and proven field results.

Grigg Brothers

Paint that works as hard as you do

Templine is proud to present a new natural grass paint product designed to out-perform the competition in brightness, coverage and staying power. Elevate your game without breaking the



bank, and discover what a top quality paint can do for your field. You deserve a paint that works as hard as

you do, and Templine Top Line Natural Grass Paint delivers in both performance and price.

Eco Chemical

Mountain View Seeds offers new products

Mountain View Seeds new Kentucky bluegrass blend

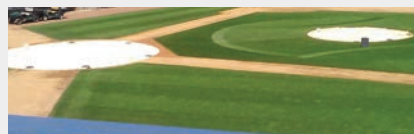
365ss (super sport) sets the standard for extreme wear tolerance, turf quality and playability. Chosen by The Rose Bowl, 365ss is the ONLY choice for the most discriminating sports turf manager. If your application calls for perennial ryegrass or tall fescue, Mountain View Seeds offers Lateral Spread (LS) varieties in both species. Lateral Spread varieties offer high wear tolerance, regrowth capabilities and extremely fast germination and



PRODUCTS AT STMA

spring green-up. The LS tall fescue varieties offer excellent anchoring to hold up in high traffic areas. They are fine bladed, dark green and require less water and fertilizer than other species. For all your sports turf needs turn to Mountain View Seeds.

Mountain View Seeds



Athletic field rain covers

Why delay the game due to wet conditions! GreenJacket athletic field rain covers are waterproof. Sure to keep rainwater away from the playing field. The material is made of UV-resistant cross laminate poly. We offer two materials, overall thickness of 10 mil or 12 mil, providing excellent puncture resistance. The string-reinforcing filament within the body of the material insures strength and tear resistance. If a tear or puncture does develop, it will remain small. All seams are joined by a lamination process keeping the seams of the cover waterproof. Outside edges all have double folded sewn seams with grommets in 3-ft. intervals. Available in custom sizes.

GreenJacket

Avant Tecno synthetic turf maintenance attachment

The ATA 1200 | Artificial Turf Maintenance and Cleaning Solution attachment technology will



keep sport surfaces maintained and cleaned for optimum playing conditions and extended life. In a single pass the

combination of an Avant multi-functional loader and ATA 1200 deliver a hydraulically driven operation that de-compacts infill with a de-compaction rake, processing most of the infill by screening and vacuuming and returning infill back into the turf, removing and collecting coarse debris, fine particles, dust and broken fibers. The ATA 1200 attachment cleaning width is 47 inches, total width 57 inches and fully hydraulic. The attachment can be equipped with a rotator to allow it to pass through smaller access gates, doors, and other tight places.

Avant Tecno

ABI Force infield groomer

The ABI Force is a zero-turn, stand-up, self-propelled infield groomer packed with purpose-built features designed specifically for infields. It is built to give operators the control necessary to prepare and maintain the safest and most playable infields possible. At the heart of the Force's innovation is its patented, mid-mount spring system that hydraulically provides downward force for multiple attachments to address different applications. When the mid-mount spring system is combined with ABI's patent-pending VibraFlex attachment, operators can apply the perfect amount of force to break up surface



tension as deep or as shallow as an infield needs. This leaves a perfectly consistent 1/2" of playing surface

with no surprises hidden underneath. With the Force's profile blade attachment, operators can eliminate the need for roto-tilling and re-grading. The profile blades slice through the infield at a precise depth, de-compacting and aerating the ground without changing the grade. The infield can then be reset with the VibraFlex attachment and rigid drag mat and, in a couple of hours, completely change the way an infield plays.

Absolute Innovations, Inc.

CoverSports launches redesigned website

Humphrys-CoverSports, the source of the widest range of product options for covers for athletic surfaces, has launched a completely redesigned mobile-friendly website, www.coversports.com, allowing visitors to more easily browse the complete product line by type, sport, venue or branding needs. "We have re-organized our product categories so that navigation is more precise and user-friendly," said Shana Brenner, CoverSports' Director of Marketing, "as well as making the product information easier to follow so users understand the product's benefits and can visualize it in their own facility. Branding is so emphasized in our culture, so our new site reflects how our products not only protect players and surfaces but also provide branding opportunity for the team or organization." In addition, the resources section that includes information regarding warranties, tech specifications, terms and conditions, is more visible and robust. The site now makes it easier for users to request samples, a current catalog and an accurate price quote.

CoverSports

Diamond Master from Bannerman

The Diamond Master, which restores and levels surfaces with every pass, can give your community ball diamonds a surface just like professional teams



demand and reduce the time, effort and labor required to do the job. With the Diamond Master, once you get your diamonds in shape, it's simply a matter of re-dressing the surface before and after every game (or even between innings). This groomer is 6 feet wide and incorporates five separate tools that are all individually and easily adjustable with the aid of screw jacks. Standard equipment includes: Ripper to move large amounts of material or breakdown ridges as required; rake, adjustable from light to heavy raking or severe scarification; leveler, a double bladed leveling device floats by way of parallel linkage; roller, designed to give firmness without compacting the top layer; and brush that adds that well-groomed or maintained professional look.

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Wood Bay

STMA: how being a member is important to your career

The beginning of a new year is often a time for reflection and goal-setting for the coming year. As an individual within the green industry, involving yourself in something that can not only benefit yourself, but your facility, sounds like the best way to do that. That's why we are here. At Sports Turf Managers Association, our mission speaks for itself: "STMA advances professionalism in sports field management and safety through education, awareness programs, and industry development." There are many benefits for individuals to join STMA and attend our national Conference every year. We asked some of our newest members to elaborate on what makes their membership important.

STMA provides opportunities for education to help you do your job better. Through webinars, access to our website's unlimited educational resources and a subscription to *SportsTurf* magazine, members can

continue their education both on and off the field. "I am a big believer in education, continuing education and networking. I feel that if I can receive or pass on information from someone, it benefits both parties," says Collin Doebler, grounds manager of Las Vegas Convention & Visitors Authority. "Being a member of STMA is one of the easiest ways to do that."

For those who are still in school, being involved helps to build a network and kick start a career in the green industry. Heading to the conference is one of STMA's hubs for networking and education. New members of the association receive free registration for the annual Conference their first time attending. Heading to her first Conference in January as a student challenge participant, Amy Wilber, a freshman at Ohio State University, explains how STMA will be important to her career: "As a hopeful sports turf manager, I think it will be important

to know a network of people who can guide me in my future and give tips and pointers as I am learning the business."

The knowledge, skills and abilities you gain by accessing STMA's education and information can help to prepare to take that next step in your career.

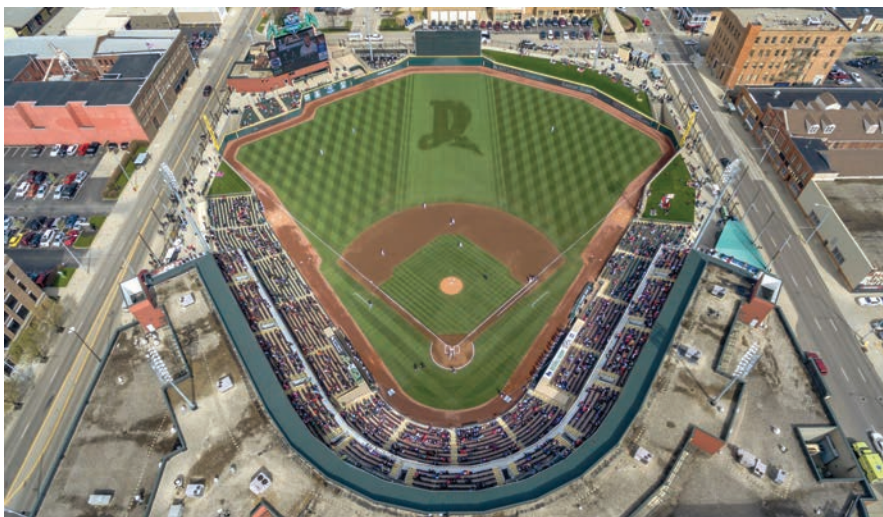
Sports Turf Manager's Association's annual Conference allows its attendees to attend speakers, educational sessions and a trade show with hundreds of exhibitors from the turf industry. Since the association has members from all over the nation, and even worldwide, many individuals use this time to learn from others. Will Lieb, maintenance worker at University of Illinois Division of Campus Recreation, believes it's a great way to help his facility. "Being able to read the magazine and travel to the conference allows us to see how other STMA members are working their facility. Seeing what the members at a larger scale are doing and then implementing it into our own procedures."

Building relationships through STMA and the conference provide life-long contacts to help with any scenario.

Career recognition and job security can also be attributed to STMA's membership. STMA's advocacy with groups such as athletic directors, parks and recreation directors, coaches, and parents enhances the image of the entire profession. "I take a lot of pride in my profession and being a part of the main organization of that profession is big for me," says Patrick Wynja, turf maintenance supervisor for the City of Ames, IA. "Being a part of your industry instead of just working in the industry is a big thing for me."

Members can take their membership even further with the opportunity to participate in volunteer leader positions.

These amazing perks are accessible by paying a small yearly fee. Not only is STMA affordable, it provides something invaluable to its members. "STMA is



MOWING PATTERN CONTEST WINNER

Britt Barry, sports turf manager for the Dayton Dragons, won the 4th annual STMA Mowing Patterns Contest. Barry was selected via a Facebook voting contest for his intricate design at Fifth Third Field, home to the Dayton Dragons, Single-A affiliate of the Cincinnati Reds.

a great resource that I don't know if people who are not members, that are in turf, realize how valuable it is," says John Clintsman, assistant sports turf manager of Nashville's The Ensworth School. "That \$110 is nothing compared to what you're getting out of it. It's worth so much more."

Enrollment for STMA members is held between October and April. Additional information can be found at our website at www.stma.org. **ST**

STMA'S MEMBERSHIP BENEFITS

STMA members cite the top three benefits of membership as networking, education and information. The products and services STMA provides to you as a member include:

- New Members - Complimentary Conference Registration, a \$375 value
- Renewing Members - Refer a new member and receive a \$100 credit for each new member referred!
- Monthly *SportsTurf* magazine and online newsletter
- Educational resources, including bulletins, booklets, DVDs (English & Spanish), online classes & webinars
- Certification Program
- Awards Program, Scholarships (students) and Grants
- Discounts to the Annual Conference & Exhibition (each January, this year in Orlando)
- Employment & Career Resources
- STMA Industry Sourcebook
- A subscription to Michigan States Turfgrass Information File (TGIF)
- Chapter Resources
- Leadership opportunities—Committee and Board of Directors service
- 24/7 Online Membership Directory

STMA Affiliated Chapters Contact Information

Sports Turf Managers Association of Arizona: www.azstma.org

Colorado Sports Turf Managers Association: www.cstma.org

Florida #1 Chapter (South):
305-235-5101 (Bruce Bates) or
Tom Curran CTomSell@aol.com

Florida #2 Chapter (North):
850-580-4026,
John Mascaro, john@turf-tec.com

Florida #3 Chapter (Central):
407-518-2347,
Dale Croft, dale.croft@ocps.net

Gateway Chapter Sports Turf Managers Association:
www.gatewaystma.org

Georgia Sports Turf Managers Association: www.gstma.org

Greater L.A. Basin Chapter of the Sports Turf Managers Association:
www.stmalabasin.com

Illinois Chapter STMA:
www.ILSTMA.org

Intermountain Chapter of the Sports Turf Managers Association:
<http://imstma.blogspot.com/>

Indiana - Contact Clayton Dame, Claytondame@hotmail.com or Brian Bornino, bornino@purdue.edu or Contact Joey Stevenson, jstevenson@indyindians.com

Iowa Sports Turf Managers Association:
www.iowaturfgrass.org

Kentucky Sports Turf Managers Association: www.kystma.org

Keystone Athletic Field Managers Org. (KAFMO/STMA): www.kafmo.org

Michigan Sports Turf Managers Association (MiSTMA):
www.mistma.org

Minnesota Park and Sports Turf Managers Association: www.mpstma.org
MO-KAN Sports Turf Managers Association: www.mokanstma.com

New England STMA (NESTMA):
www.nestma.org

Sports Field Managers Association of New Jersey: www.sfmanj.org

Sports Turf Managers of New York:
www.stmony.org

North Carolina Chapter of STMA:
www.ncsportsturf.org

Northern California STMA:
www.norcalstma.org

Ohio Sports Turf Managers Association (OSTMA):
www.ostma.org

Oklahoma Chapter STMA:
405-744-5729; Contact:
Dr. Justin Moss okstma@gmail.com

Oregon STMA Chapter:
www.oregonsportsturfmanagers.org
oregonstma@gmail.com

Ozarks STMA: www.ozarksstma.org

Pacific Northwest Sports Turf Managers Association: www.pnwstma.org

Southern California Chapter:
www.socalstma.com

South Carolina Chapter of STMA:
www.scstma.org

Tennessee Valley Sports Turf Managers Association (TVSTMA): www.tvstma.com

Texas Sports Turf Managers Association:
www.txstma.org

Virginia Sports Turf Managers Association: www.vstma.org

Wisconsin Sports Turf Managers Association: www.wstma.org

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F ☐ Sports Complex G ☐ Athletic Field and/or Park Architect/Designer T ☐ School, College or University P ☐ Park
H ☐ Other (please specify) _____

2 Which of the following best describes your title? (check ONLY ONE)

A ☐ EXECUTIVE/ADMINISTRATOR — President, Owner, Partner,
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B ☐ MANAGER/SUPERINTENDENT — Superintendent, Landscape/Ground Maintenance Manager, Foreman, Supervisor
C ☐ GOVERNMENT OFFICIAL — Government Commissioner, Agent, Other Government Official
D ☐ SPECIALIST — Architect, Designer, Consultant, Agronomist, Horticulturist, Certified Specialist
F ☐ COACH
E ☐ Other (please specify) _____

3 Do you have the authority to buy, specify or recommend products
and/or services for your business or organization? Y ☐ Yes N ☐ No

4 Yearly operating expenditures (excluding salaries)

F ☐ Over \$1 million C ☐ \$50,001 - \$100,000 E ☐ \$500,001 - \$1 million
B ☐ \$25,001 - \$50,000 D ☐ \$100,001 - \$500,000 A ☐ \$25,000 and under

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Q&A with Dr. Grady Miller

Professor, North Carolina State University

Questions? Send them to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady_miller@ncsu.edu. Or, send your question to Pamela Sherratt at 202 Kottman Hall, 2001 Coffey Road, Columbus, OH 43210 or sherratt.1@osu.edu

How to bring about change

Q: Hearing some of the speakers and looking at all the new products and equipment at the NC-SC Sports Turf Managers Association Conference and Trade Show made me think about how I do almost the same thing with the same products every year. How do I know what to buy and should I change what I'm doing?

A: A number of years ago I wrote about shopping for a new grass and used the story of my wife and I selecting our next family car as a metaphor for picking a new grass. As I summarized then, our laborious research ultimately resulted in our getting the same car model only newer. It just so happens that your question coincided with my replacing my trusty old truck. Years ago we were replacing an 8-year old car, whereas this time I replaced a truck twice that old. I found the jump in truck technology over 16 years is pretty significant. It sounds like you are in a similar situation. Things can be better with new products and practices.

I do find it interesting how quickly early adopters jump on new things while some people (the laggards) just never want to change anything. Then there is the majority middle group that needs some proof before they will dip their toes into the "new pool" of products or practices.

For instance, a new herbicide gets released on the market. A few managers will immediately go out and purchase it for future use but others scoff at it while thinking there is nothing wrong with what they have been using. The majority middle group considers it for a while but forgets about it until a year or two later when they are visiting another facility and get curious how the field manager has kept his fields so weed-free. Upon asking they find out that the not-so-new product works much better than what they have been using for

the past 15 years. After this confirmation they get a sample to try out during the year. If they are pleased with their own test results, then they will adopt it as part of their program.

Sure, not every new product or practice performs up to the hype, but I would add that many new products and practices are not as new as you may think. They may be new to you, but they are often not new to others. Highly regulated products like pesticides are often tested for a decade before they are ever labeled. And innovative turf managers are constantly tinkering with new practices. So your challenge is finding out good information on these products and practices.


This is where doing your homework becomes important. Today, with the Internet, email, cell phones, and old fashion networking at STMA meetings, one can learn a lot about products and practices that you are not currently using but others have already refined. Use all your resources to investigate and you can become comfortable with change. With a little time you can open up a new world of opportunity.

It reminds me of how we went about purchasing that car 8 years ago versus the truck this year. To narrow down our selection back then we went from dealership to dealership driving cars, asking salespeople questions, and looking at brochures. These were traditional, effective techniques to learn about a variety of cars and their options and performance. The research took a lot of time driving around and visiting with salespeople and managers, but in the end we were educated on what we wanted and we got a nice car for an acceptable price.

For my recent purchase all the research was done using Internet searches while eating lunch at my desk. I targeted website forums for vehicle models that I was

interested in purchasing. This allowed me to learn about vehicles from owners that were already driving a model I thought I might want to buy. Rather than trying to separate the sales pitch from performance, I read the good and bad from people with actual experience with their trucks. To this vast network I could post questions for them to answer and then use their responses in my considerations. I believe this research technique provided me a greater understanding of what to expect with each vehicle rather than talking to a salesperson.

After making a decision on the make and model I wanted, finding "my truck" took about 20 minutes on the Internet. A few emails to online sales representatives at nearby dealers and I had a negotiated price for "my truck." Most of the purchasing paperwork was handled via computer correspondence. The next day I showed up at the selected dealership for a quick test drive to be sure it was what I expected, signed my name a few times, and then drove "my truck" home. Despite my old-fashion tendencies, I had taken a new path and embraced change.

I believe you can have the same experience evaluating new products and practices to better help you make a decision. Look on the Internet for research information. Find websites that people openly share their experiences. Go to STMA meetings and other people's facilities. Ask questions. This industry will openly share information especially when asked. In the end you need to be comfortable with the product or practice because change really can make your life easier and your fields better. With careful research there should be minimum surprises (if any) when using new products or practices. Now if I can just figure out what all the dashboard symbols represent on my new truck. 

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