

THE OFFICIAL PUBLICATION OF THE **SPORTS TURF MANAGERS ASSOCIATION**

DECEMBER 2019

SportsTurf

SPORTS FIELD AND FACILITIES MANAGEMENT / www.sportsturfonline.com



Pitch Perfect

Merlo Field, University of Portland Portland, Ore.



See
pg 42

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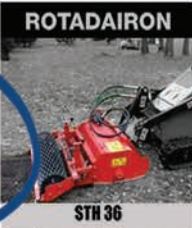
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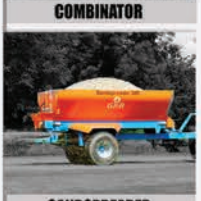
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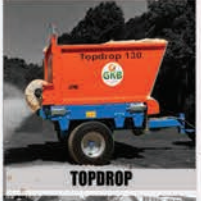
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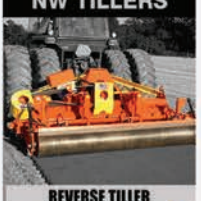
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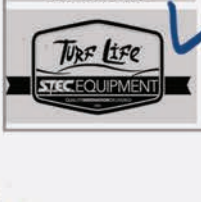
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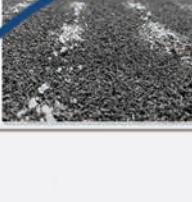
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1 : degree of excellence : QUALITY
2 : a new idea, method, or device : INNOVATION
3 : to send, make available, or bring to : DELIVERED





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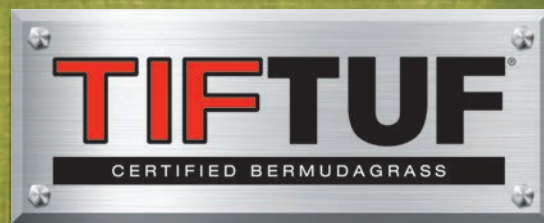
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On the cover: Kevin White, athletic field manager, Merlo Field, University of Portland, wrote in his FOY application: "The defining characteristic of this pitch is resiliency, its ability to bounce back to quality form after being put through the paces. It is tasked with handling an intense schedule of events, beginning in early February and lasting well into November or December, depending how our teams finish their seasons."

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FROM THE PUBLISHER

Seasons of Change



David Voll / Group Publisher / Dvoll@epgmediallc.com / 763-383-4421

CHANGE IS NEVER EASY. This is the first issue of *SportsTurf* magazine in nearly two decades that has not featured Eric Schroder on this page. As group publisher of *SportsTurf*, I want to thank Eric for all his hard work through the years, and his efforts to bring you the best industry information and content. We wish Eric the best in his future endeavors.

As we move into the New Year – and a new decade – we are also excited for a new beginning and new opportunities for *SportsTurf*.

We will, of course, continue to bring you top-notch editorial content, industry research, expert insight, news, industry innovations, Sports Turf Managers Association (STMA) updates, and more. But we also look to this new beginning as an opportunity to push ourselves and continually improve the content we provide.

Leading that charge on the editorial side will be John Kmitta, associate publisher and editorial brand director, who will take over lead editorial duties on *SportsTurf*. John will introduce himself in-depth with his column in the January issue, but he brings nearly 20 years of green industry editorial experience to *SportsTurf*, having served as lead editor on our publications and digital properties in a range of markets, including professional arboriculture, landscape, irrigation, golf, and outdoor power equipment.

But the changes to our editorial staff are not the only adjustments coming in 2020. Without divulging too much about what is in store, I can say that exciting things are on the horizon for *SportsTurf* in the very near future.

Of course, none of this would be possible without the support of Kim Heck and the entire STMA staff, the STMA Board of Directors, the STMA Editorial Committee, and all the STMA members who are so passionate about this industry. It is that tremendous zeal and support that makes this publication possible.

We look forward to seeing all of you in West Palm Beach, Fla., January 13-16, for the 2020 STMA Conference and Exhibition, and we wish you all a happy holiday season and a wonderful New Year. **/ST/**

Sincerely,

Dave Voll
Group Publisher

SportsTurf

// December 2019

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PRESIDENT'S MESSAGE



Time Marches On

Jody Gill / CSFM / jjill@bluevalleyk12.org / @JodyGillTurf

IT IS HARD TO BELIEVE that the 2020 STMA Conference is next month. Weren't we just in Phoenix a few months ago? A few months ago, committee work began. A few months ago, the new board began its work. A few months ago, I became president of STMA. I know, I know, it's actually been 11 months, but, seriously, where does the time go? The year 2020, really! When I was a kid, back in the late '60s, I really could not imagine what things would be like so far in the future. Color television was a pretty amazing thing. Then came the handheld calculator, humans on the moon and cell phones. Think about the technological advancements from then until now!

The 2020 STMA Conference in West Palm Beach is right around the corner. I love the conference theme this year since it is so timely and relevant. Leveraging Technological Change in our industry is critical as we face fiscal challenges, labor shortages and ongoing attempts at legislative oversight and control of our industry.

I hope you will take full advantage of the opportunities this conference will provide to help you deal with all the challenges ahead. The 2nd Annual Community Field Rebuild on Sunday afternoon [Jan. 12] is a great opportunity to not only give back, but also to share information and skills with your peers in a real sports field maintenance situation. Monday options include more on-field education and demonstrations, a full-day sports facilities tour or participate in a golf fundraiser for the SAFE Foundation. Tuesday and Wednesday mornings are packed with quality education followed by the largest sports-field-specific trade show in the world. Thursday includes more education, more time in the trade show and another outstanding tour on wheels of sports facilities.

This is also a great time of year for me to thank all of you who make the STMA such a great organization. We are so fortunate to have not only an amazing full-time staff, but also hundreds of volunteers who participate in 20 committees throughout the year to keep the STMA moving forward and accomplishing goals set in our strategic plan. I also want to thank our talented board of directors. This group works countless hours to improve the STMA and our industry. This year we have enhanced our educational outreach with the launch of the Institute of Sportsfield Management, we are making some major changes to our official publication, and we are investing in a National Sports Turf BMP document with regional customization capability.

Most of all, I want to thank the local chapter members. I know not all of you are national members, and not all of you are able to come to the conference, but you are vital to the future success and viability of our industry. We need all of you to participate at the local and national levels to help our industry meet the challenges ahead.

From my family to you and yours, we wish you a Merry Christmas and a safe, successful New Year! **/ST/**

Jody Gill, CSFM



@ANDYOMMEN1

Bloomington, Ill., October 13

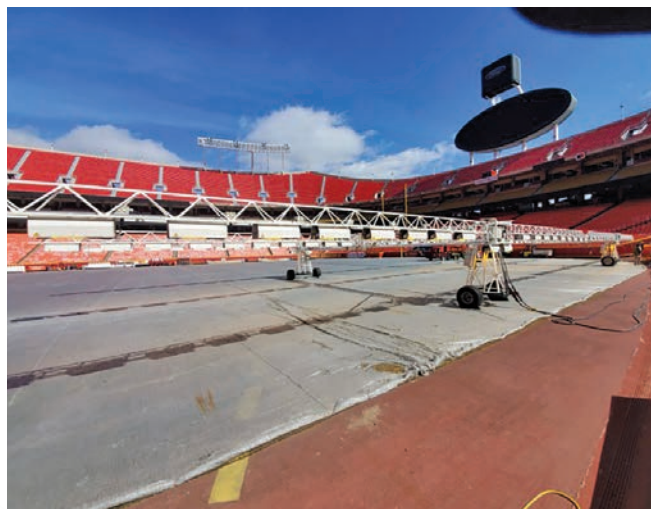
Moon set mowing this morning. Kinda cool!



@TOROGROUNDS

Louisville, Ky., October 17

Congratulations to our very own Paula Sliefert, honored with the Professional Grounds Management Society (PGMS) prestigious Distinguished Service Award at the annual 2019 School of Grounds Maintenance. We are proud of your dedication and hard work!



@JOEYTHOMAS91

Kansas City, Mo., October 16

Grow tarps and grow lights went out after overseeding with 1600 lbs of rye and aerating the center. She will be looking like a shag carpet in the next 5 days. Hopefully we won't be having to borrow the push mowers from the @royals



@HOOSTURF

Charlottesville, Va., October 20

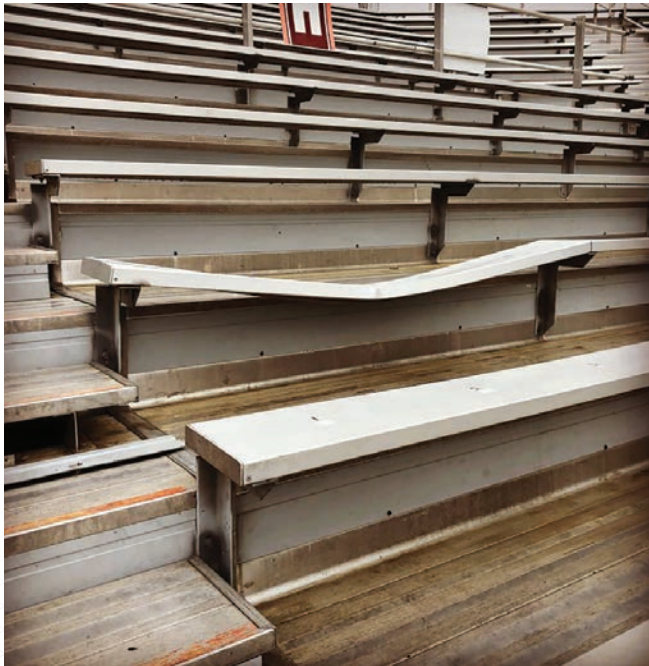
1 3/4" of rain this morning. Klockner needed a little manual help to get some of that water down into the profile and through some compacted areas such as goal mouths.



@SLBEEKEEPERS

Salt Lake City, Utah, October 22

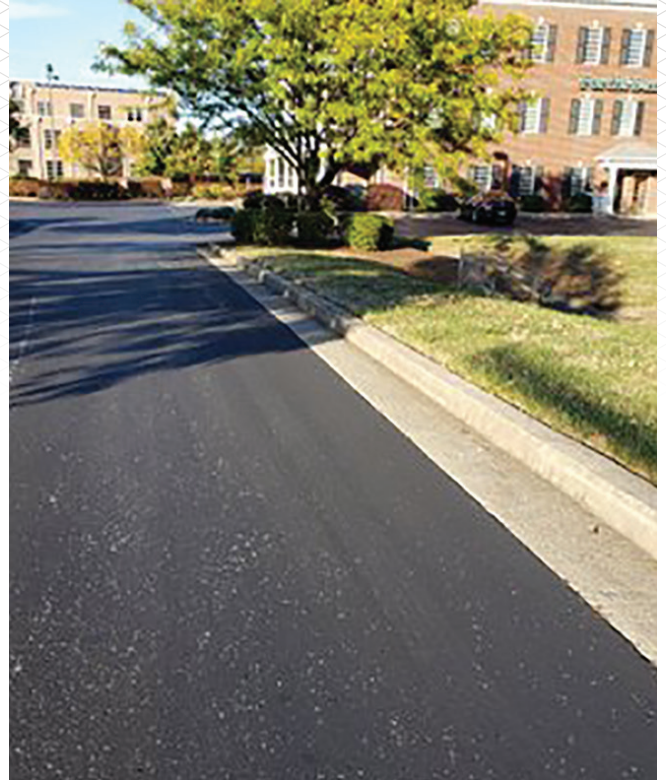
In spite of fighting a heart tumor, there is no stopping my Paw-sistant when there is work to be done.



@VT_GROUNDSREW

Blacksburg, Va., October 21

Start Jumping, we will fix it



@UKTURF

Lexington, Ky., October 23

Fertilizer left on hard surfaces wears me out! It's a known source of pollution for our water bodies and it's absolutely lazy and neglectful not to clean it up. I've seen more of it this year than ever before! Come on people, do better!



@RTDEMAYTURF

Columbus, Ohio, October 22

Next round of synthetic foul line installation has begun. This in-house project will put us over \$275k in direct capital savings for 2019.

The Appelfeller Report, Part II

// By WESTON APPELFELLER, CSFM

Editor's note: This is the second part in an ongoing series of articles following the progress of building a new soccer pitch for the Austin FC franchise that will begin play in 2021. Weston Appelfeller, CSFM, former STMA board member and an informal international ambassador, was hired by the club late last year to oversee the planning and design of the new surface. Appelfeller will share his experiences as the process plays out.

Hello! I hope everyone had a successful 2019, and is ready for what 2020 has in store. It's been a few months since the introduction to this series, and the progress of our project continues to move along. I am extremely excited for the next year. Having no grass to maintain has its positives (no weekends, no worries about weather, etc.) but also has its negatives. For the past year, I've had so many people question and comment about not having work to do because of not having grass. Trust me when I say, this may be one of the busiest years I've worked.

What's kept me busy? I've been working alongside our project management team (CAA Icon), our architect (Gensler Sports), construction partner (Austin Commercial), and our leadership group here at Austin FC to review everything regarding our stadium and training facility. This includes the researching, design review, budget management, and now, the build. I spent countless hours in meetings discussing most things not related to turf, waiting for that one moment we may discuss turf, oftentimes only for a minute.

A lot has happened with our field since the last article (in the May 2019 issue of *SportsTurf*). We have finished the schematic design (SD) portion, gone through the design development (DD) phase of our project, and straight into the closing documents (CD) process. For those unfamiliar with construction projects, there are three phases – SD, DD and CD. During the DD and CD phases, our field designer Dan Almond with



Artist's rendering of the new stadium.

Millennium Sports Technologies, Colorado, put our ideas onto paper, and it was passed on to field contractors who were bidding our project. The work that we have done finally has a feel of reality.

Since the last article, we've also been able to use our architect's (Gensler) drawings and information to gain an estimate on what our shade will look like in the stadium. From the outset on this project we knew that we would have a large roof. The Texas heat can be brutal, and we needed the supporters of our club to have a shade structure that would provide some relief from the sun. Like a few other stadiums currently being designed and built in MLS, we will have a roof that covers every seat in our building.

How does the shade affect our field build? Our roof is solid, blocking all sunlight from going through it. Our shade studies show that in the middle of the summer, with full sunlight, the center of our pitch will see about six hours of natural sunlight a day. Our South end will have significantly less than that. With the light requirements of bermudagrass being significant, this info provided a clearer vision of the decision we would need to make.

Coupled with our architect's shade renderings is our lighting needs analysis that we received from the lighting company Stadium Grow Lights (SGL). During the past eight months, we have worked closely with Simon Grumbrill, Matt Williams and the rest of the staff at SGL. We have passed on our stadium location, orientation, roof size, and projected event load, and received back their detailed analysis. This information helps us understand the amount of power we will use and what our field condition could be with and without lighting. We believe with the lighting our pitch will be roughly 25-30% better overall than if we didn't have the lights. Working closely with that group has been valuable in the design phase.

Having grow lights will help, but we can't have the lights on all the time. For understanding how to deal with that, I've leaned on Dan Bergstrom from the Houston Dynamo. Dan has worked through shade issues at both the Dynamo, and at his previous position at the Houston Astros. From day one of my move to Texas, Dan has preached for one key aspect that he believes will help Austin FC offset some of the shade issues – Platinum TE seashore paspa-

lum. This grass was developed by Dr. Ron Duncan more than a decade ago. In the last year, I'm not sure there's another person on the planet who has studied information and talked to more people regarding this species and variety of turf.

Why seashore paspalum over the more commonly used varieties of bermuda? That is a question I've lost many hours of sleep over. I currently have samples of three different bermudagrasses (Latitude 36, Tahoma 31, and TifTuf). Each of these varieties are unbelievable and extremely impressive. The developers of these varieties should be extremely proud of the advancements they have made in the lives of groundskeepers. But, the amount of sunlight bermudagrass requires is significant, and I fear we won't have proper sunlight to provide a quality turf over 100% of our field. Sure, the lighting helps to offset this, but, as mentioned, I won't be able to run the lights all day, every day. I also won't be able to provide artificial lighting to the entire surface at the rate we would need it to be for the shade we will have.

Paspalum is a strong, dense grass that was designed for hot, cloudy areas of the world. Its biggest asset is that it requires less light than bermudagrass to be successful. Most people would say its biggest drawback is that it is slower to recover than bermudagrass. I have four samples of Platinum TE, and haven't seen that to be the case. The paspalum with six hours of natural sunlight has recovered at a good pace in my trials.

The toughest part of making this turf decision is the second-guessing. Telling people that you're going with seashore paspalum in an area that only uses bermudagrass on sports fields is like telling people the name of your unborn child. Some people will like it, some will be confused by your decision, and some people react in a way that you know they think you're an idiot. Whenever I start to second-guess my decision, I call Dan Bergstrom. Each time, he reminds me that I shouldn't let anyone who has never tried to grow grass in extreme shade tell me how to grow grass in extreme shade. This has been my motto now for several months.

Picking a sod farm to supply the turf is also an extremely hard process. Very few farms have a Platinum TE license. We have researched Platinum TE sod from four different states. All of these farms have unbe-

lievable sod, operations and staff. We'd be lucky to have sod from any of them. In the end, we decided to go with West Coast Turf in Scottsdale, Ariz. We chose them because they are experienced with doing a custom sod grow, and it's a convenient non-stop flight for me from Austin to Phoenix to check out the sod as its grown in. The staff at West Coast have been phenomenal to work with thus far.

The fun part of this process is getting to tour facilities and talking with peers about what has worked and hasn't worked. I'd like to thank the following facilities and their groundskeepers for taking the time to show me their fields.

- **Baltimore Orioles** – *Nicole Sherry*
- **University of Texas** – *Weston Floyd*
- **NYCFC Training Facility** – *Chris Fox*
- **New York Red Bulls** – *Dan Shemesh and staff*
- **Portland Timbers Stadium and Training Center** – *JR Wyman*
- **Arizona State University** – *Brian Johnson*
- **LAFC Stadium and Training Facility** – *Gio Murillo*
- **Orlando City SC** – *Matt Bruderek*
- **Houston Dynamo** – *Dan Bergstrom*
- **Texas A&M University** – *Craig Potts and Nick McKenna*
- **Houston Astros** – *Izzy Hinojosa*
- **New York Mets** – *Bill Deacon*
- **Baltimore Ravens** – *Don Follett*

If I've failed to mention anyone who took time to give me a tour, thank you. Also, thanks to the groundskeepers from the 36 different states and four different countries that I've discussed this project with to this point. I've taken something from each conversation to make this as successful as possible.

Looking ahead, the first portion of 2020 will be focusing on the design of our new training facility, the Saint David's Performance Center. As we get to the middle of the summer, I will begin the hiring process to build our crew, and by mid-summer we'll be installing fields. Things are starting to get exciting, and I look forward to sharing the next portion of the journey. **IST!**

Weston Appelfeller, CSFM, is senior director of grounds at Austin FC.

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Nematode Diagnosis and Management of Sports Turf

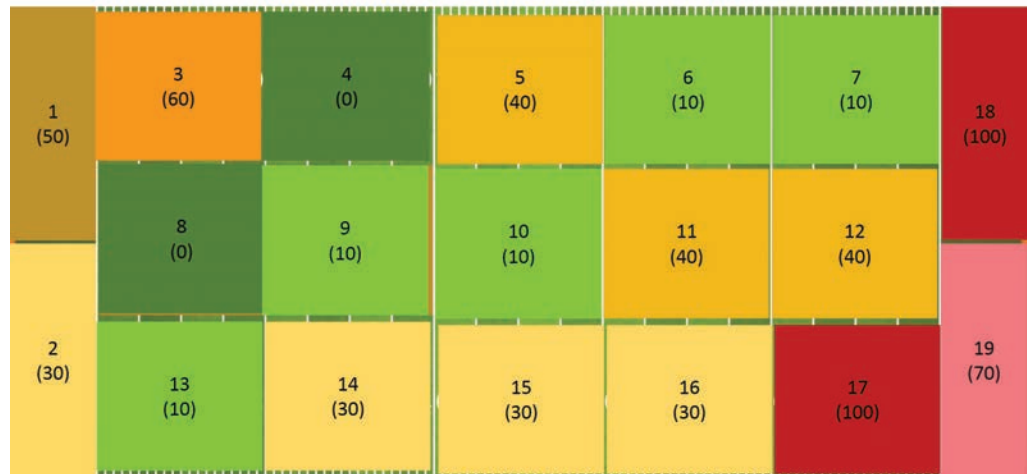
// By GLENN GALLE AND JIM KERNS, PH.D.

Nematodes are the most abundant animals on the planet. Only a few are plant parasites, but they can be destructive. A recent survey of nematode genera showed that there were 23 different genera of nematodes associated with turfgrasses. However, the most damaging are typically sting, lance, root-knot, stubby root and stunt nematodes. For the purpose of this article we will focus on sting nematode, as it is a common problem for athletic fields in the southeastern United States.

Sting nematode (*Belonolaimus longicaudatus*) is a large ectoparasitic nematode that feeds with a long stylet. It is a problematic parasitic on all species of turfgrass, and is found on golf courses, sod farms, and home lawns, as well as athletic fields. Nematode populations as low as 1-19 nematodes per 500cc of soil can cause severe damage to roots. Prescription athletic turf (PAT) systems are constructed with 11 to 20 inches of sand, which is an excellent environment for sting nematode, as it prefers soils with 80% sand or more. Moreover, many athletic fields are vegetatively propagated and can become infested with nematodes.

SYMPTOMS

Sting nematode feeding damage manifests itself in both above- and below-ground symptoms. Above-ground symptoms typically include thinning, wilting or death of turfgrass. These symptoms usually occur in irregularly shaped patches, and slowly increase in size and severity if left unmanaged. Below-ground symptoms on turf include short, stubby root



Above is an example of sting nematode sampling on a football field. The field was split into thirds and sampled in 20-yard sections. The bottom number is the number of sting nematodes per 500cc soil.

systems. Dark lesions on roots are also a symptom of nematode feeding damage. Sting nematode targets the root tips while feeding, resulting in a blunted root system with limited feeder roots.

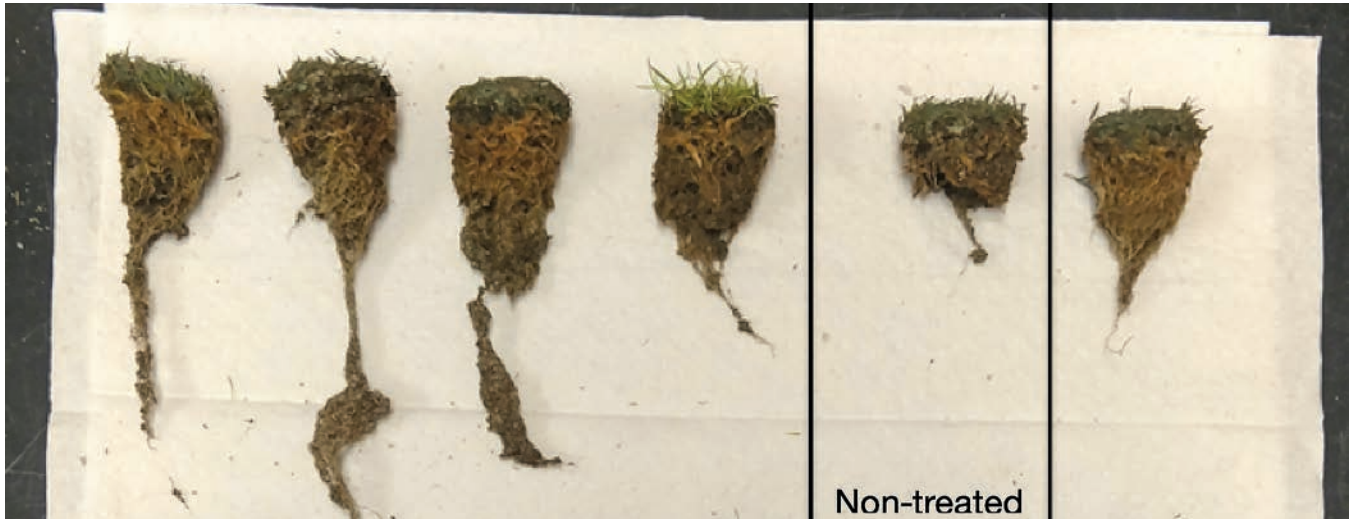
Diagnosing nematode issues from stand and plant symptoms alone is challenging. Stand symptoms often mimic abiotic stresses such as heat or drought

stress because the weakened root system cannot access water and nutrients. Suspected areas of heat and/or drought stress that do not respond to supplemental irrigation or fertility may have an underlying nematode issue. Without nematode sampling, proper diagnosis of nematode issues is difficult.

SAMPLING

Sampling is a requirement to determine how best to manage nematode issues on athletic turf. The sampling report will include the nematode species present, as well as population counts – both of which are important for determining management practices. Nematode identification is crucial, as different nematode species can cause different issues or react differently to nematicide applications. For example, sting nematode is a very damaging species and needs to be managed immediately if detected, whereas other species, such as ring nematode, only cause severe issues when populations are extremely high.

SAMPLING IS A REQUIREMENT TO DETERMINE HOW BEST TO MANAGE NEMATODE ISSUES ON ATHLETIC TURF.



The above picture demonstrates the severe damage that can be caused to the root system by nematode feeding of creeping bentgrass. The non-treated core has no roots due to nematode feeding, and is thus highly susceptible to abiotic stress. The other five cores were treated with a nematicide, and the roots were protected from nematode feeding.



An example of the damage sting nematode can do to a putting green. The image on the left shows a severe reduction in turf quality, including turf death in several areas. When nematode feeding is managed with a nematicide, damage can be reduced and turf health can be maintained.

Population counts are important in determining the extent of damage expected, and can be useful in deciding how aggressive to be in management. The population counts will often be accompanied by a population threshold number. This threshold number is the minimum amount of nematodes necessary in a soil sample where nematode

damage symptoms are likely to occur. Sting nematode is highly damaging at low numbers (1-19 nematodes/500cc soil), and therefore low population counts should be treated as aggressively as possible. Other species of nematodes may be present, but if their populations do not exceed the damage threshold, symptom development may not occur,

or they may be minor and likely only require supplemental irrigation and fertility for management.

Sampling should be performed if a nematode issue is suspected in a turfgrass stand. The area to be sampled should first be split into manageable sections. Too large of an area will result in a diluted sample. Sections of 2,000-5,000 ft² is a good size to take a sample from. Ten to 20 soil cores should be taken with a 1-inch-diameter soil probe randomly throughout the section (a zigzag pattern is a useful method). Cores should be taken no deeper than 6 inches. The cores are combined into a plastic bag, and must be treated carefully. Nematodes are very fragile, and are highly sensitive to heat. Keep the sample cool, and immediately send in the sample for counting and identification. Temporary storage in a refrigerator is possible, but should not exceed two to three days. Check with your local turfgrass extension specialist for potential nematode assay laboratories.

CULTURAL CONTROL

The use of cultural control methods to reduce the stress on turfgrass is very important, particularly during the summer months. Cultural control methods are unlikely to reduce nematode population

numbers, but help the turfgrass to tolerate feeding damage when stressed. Most cultural practices for nematode feeding pressure aim at increasing the root system.

Irrigation: Follow irrigation requirements listed for each turfgrass species in each state. Most university turfgrass programs have management calendars or recommendations for irrigation amounts to sustain excellent turf. Over and under watering will promote a shallow root system, which could also promote nematode damage. Our research has shown that periodic use of soil surfactants helps with minimizing nematode damage, and also assists with infiltration of nematocides into the root zone.

Fertilization: Nitrogen fertility is very important for turfgrass stressed by nematode feeding. Supplemental nitrogen applications may be necessary to increase root growth. Remember, nematodes feed on the roots, which could impair nutrient uptake; thus, increasing N rates is an excellent way to overcome nematode damage. As mentioned, nematodes are the most abundant animals on the planet, and are present in every turfgrass system. Swards with limited nutrient holding or management styles that limit nitrogen can enhance nematode damage.

Aeration: Regular aeration is necessary for robust root systems. By allowing more space for roots to grow and increased oxygen availability to the roots, turfgrasses can sustain root systems to counter the loss of roots to nematode feeding. To minimize the disruption of the playing surface, regular venting (solid tine aerification) can help, or machines such as the A2G2 could also help sustain rooting in an athletic field.

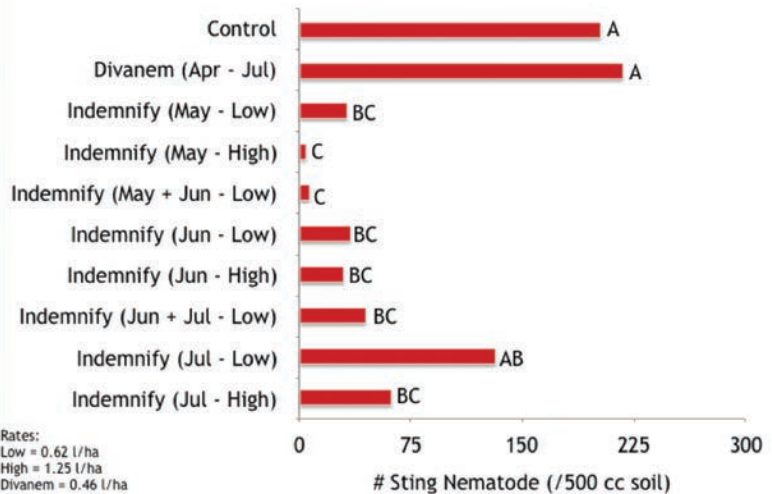
CHEMICAL CONTROL

Chemical control products may be required to manage nematode populations and reduce their impact on turfgrass. Application of nematicides is recommended from March-June. Applications should not occur until the soil temperatures reach 50° to 60°F.

One of the most effective products for management of sting nematode

NC STATE UNIVERSITY

2017 Fluopyram Timings



Research from 2017 on putting green turf shows that May applications of fluopyram are the most effective at reducing sting nematode populations throughout the summer. The high rate (17.1 fl oz./acre) was the most effective at reducing populations, but the low rate (8.5 fl oz./acre) was also sufficient at reducing populations. Use of the lower rate does provide the opportunity to use a second application in the fall that will help with year round nematode population management.

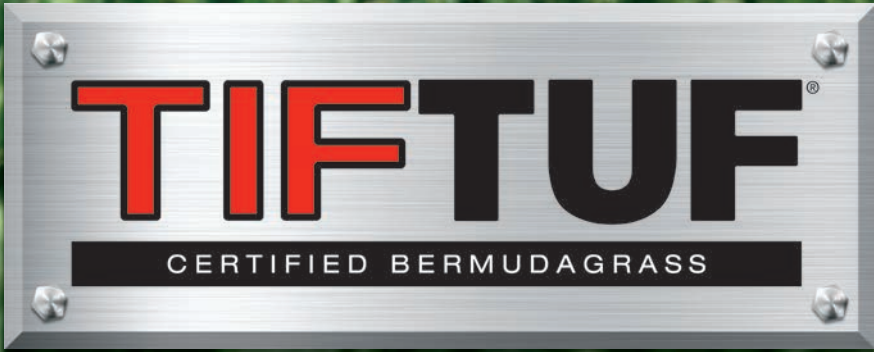
is Indemnify (fluopyram). Timing is critical for this product, and applications should be made in May and possibly October to manage sting nematode. Our research clearly shows that sting nematode populations increase on bermudagrass and creeping bentgrass in April and May, and are within the top 2 inches of soil. Nematode populations continue to increase during the summer months, but most of the population is below 2 inches, making it challenging to get a nematicide to them. In sand-based systems, it is difficult to move fungicides and nematicides past the top 2 inches of soil, even with immediate post-application irrigation. Therefore, applications in June, July and August are likely to be ineffective, as feeding has occurred on any new roots, and the nematodes are deep in the soil escaping nematicide applications. However, in October, nematode populations come back up into the top 2 inches of soil, and nematicides are effective again.

Applications rate can vary depending upon the severity of the nematode issue. With extremely high population (>100

nematodes/500cc soil), the highest rate of 17.1 fl. oz./acre is necessary to reduce the initial population in the spring. With lower population counts, the lower rate of 8.5 fl. oz./acre may be sufficient at reducing populations. A second application is beneficial in September or October at reducing populations during the fall and into the winter. **IST/**

Glenn Galle is a Ph.D. student at NC State University who has successfully defended his Ph.D. dissertation. His work focused on the biology and management of sting nematode in golf course putting greens.

Jim Kerns, Ph.D., is an associate professor and extension specialist of turfgrass pathology, NC State University, Department of Entomology and Plant Pathology. His program focuses on diseases of both warm- and cool-season turfgrasses. Specifically the program is currently researching how fungicides move in sand-based rootzones after post-application irrigation, sting nematode biology and management, Pythium root rot biology and management and take-all root rot of ultradwarf bermudagrass etiology and epidemiology.



SEC TOURNAMENT TOUGH.

Effects of IPM on Weeds

// By EMILY BRAITHWAITE, BRIAN MCDONALD, TIM STOCK AND ALEC KOWALEWSKI, PH.D.

It is speculated that using proper cultural management practices on turfgrass can reduce weed populations without the use of herbicide applications. New laws are emerging, restricting access to certain pesticides for turfgrass managers, particularly those managing school grounds. There is an increased pressure to move away from traditional chemistries, thus implementing an efficient and conscientious cultural management strategy is important.

Throughout the United States, Integrated Pest Management (IPM) centers are focused on providing education and training to turfgrass grounds and field managers in an effort to implement appropriate IPM plans. The goal of these programs is to promote healthier school communities by reducing pests, pesticide use, and pest management costs in and around public schools. Part of Oregon State University's commitment to healthier school communities is teaching IPM coordinators and grounds staff the proper turfgrass management practices – primarily mowing, fertilization and irrigation. These cultural practices improve turfgrass health and reduce the reliance on herbicides for management of invasive weeds. To supplement this training, a series of research projects evaluating the effects of mowing, fertilization and irrigation on mixed stands of cool-season turfgrass were initiated in spring 2018. The primary objective of these projects is to determine how variations in the cultural practices effect weed populations, and to provide demonstration plots for extension events.

MATERIALS AND METHODS

Three field research trials were initiated in the fall of 2017 and will conclude in the fall 2020. These trials are being conducted on a mixed stand of turfgrass (consisting primarily of tall fescue and



The three primary cultural practices for successful turfgrass management are mowing, fertilization, and irrigation. Photo by Tom Cook

perennial ryegrass) at the Lewis-Brown Horticulture Research Farm, Corvallis, Ore. Six weeks prior to initiation of each trial, two herbicide applications of Speedzone (Carfentrazone-ethyl, 2,4-D, 2-ethylhexyl ester, Mecoprop-p acid, and Dicamba acid) were administered (1.8 fl. oz./1,000ft²) with a 4-week interval between sprays, which allowed trials to begin with a clean stand of turfgrass and no weeds. Perennial ryegrass was then overseeded (9 lbs./1,000ft²) to fill in voids left by weeds.

Experimental design for the mowing height and frequency trial is a 2 by 3 factorial randomized complete block design with four replications. The mowing heights of 2 inches and 4 inches, and the mowing frequencies of one, two, and four times per month were selected based on the typical practices IPM coordinators use in the Pacific Northwest. With the exception of the initial applications, traditional

herbicides are not being applied to the trial area. Fertilizer applications for this study occur four times per year at a rate of 1.0 lbs. Nitrogen/1,000ft² per application, twice in the spring and fall. This trial also receives regular irrigation during the summer.

Experimental design for the fertilizer rate and frequency trial is a randomized complete block design with four replications; fertilizer rates within this study were 0, 2, and 4 lbs. N/1,000ft² annually. Fertilizer applications occur either two or four times per year at a rate of 1.0 lbs. Nitrogen/1,000ft² per application. As with the mowing trial, traditional herbicides are not being applied to the trial area and the plots receive regular irrigation during the summer months.

Experimental design for the irrigation rate and frequency trial is a randomized complete block design with four replications. Treatments include a non-



CAN YOU IDENTIFY THIS SPORTS TURF PROBLEM?

JOHN MASCARO'S PHOTO QUIZ

JOHN MASCARO IS PRESIDENT OF TURF-TEC INTERNATIONAL

////////

ANSWER ON PAGE 33

PROBLEM:

Tree on field

TURFGRASS AREA:

Recreational rugby field

LOCATION:

Northwestern United States

GRASS VARIETY:

Ryegrass/fescue blend



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irrigated control, 1.0 inch applied once a month, 0.25 inch applied four times per week, and water applied four times per week with rates adjusted to replenish evapotranspiration (ET).

A non-irrigated control was included since there are several incidences of areas in the Pacific Northwest where irrigation is not applied during the summer months. An infrequent irrigation treatment (1.0 inch once a month) was included to determine if minimal irrigation would help maintain turf density while using minimal resources. The idea being, watering enough to limit available areas for weeds to move in, which will likely occur after complete desiccation. A rate of 0.25 inch applied four times per week reflected current recommendations made to IPM coordinators.

Previous research conducted determined that 0.25 inch applied four times per week was not optimal in late July and August in Corvallis; therefore, a treatment with rates based on ET data collected from the weather station at the Lewis-Brown farm. The frequency remained the same, but rates were increased to 0.3 inch in July and August. Fertilizer applications occur four times per year at a rate of 1.0 lbs. Nitrogen/1,000ft² per application. With the exception of the initial applications, herbicides were not applied.

Visual quality (1-9 scale, where 1 = worst, 9 = best, and 5 = acceptable) is being assessed every other week. Weed counts are being collected with a 20 in x 40 in transect with 36 intersects four times per year. An initial count with the transect showed each trial beginning with no weeds.

PRELIMINARY FINDINGS

Preliminary findings showed that a higher mowing height (4 inches) resulted in significantly fewer broadleaf weeds, but the frequency of mowing (once, twice, and four times per month) did not have an effect on weed populations. Over the course of this 3-year study, we expect to see mowing frequency also show significance, with lower-frequency mowing resulting in higher weed populations. Infrequent mowing at both



Mixed stand of cool-season turfgrass in Corvallis, Oregon maintained at 4" have fewer weeds than when maintained at 2". Photo by Alec Kowalewski, taken in August 20, 2019.

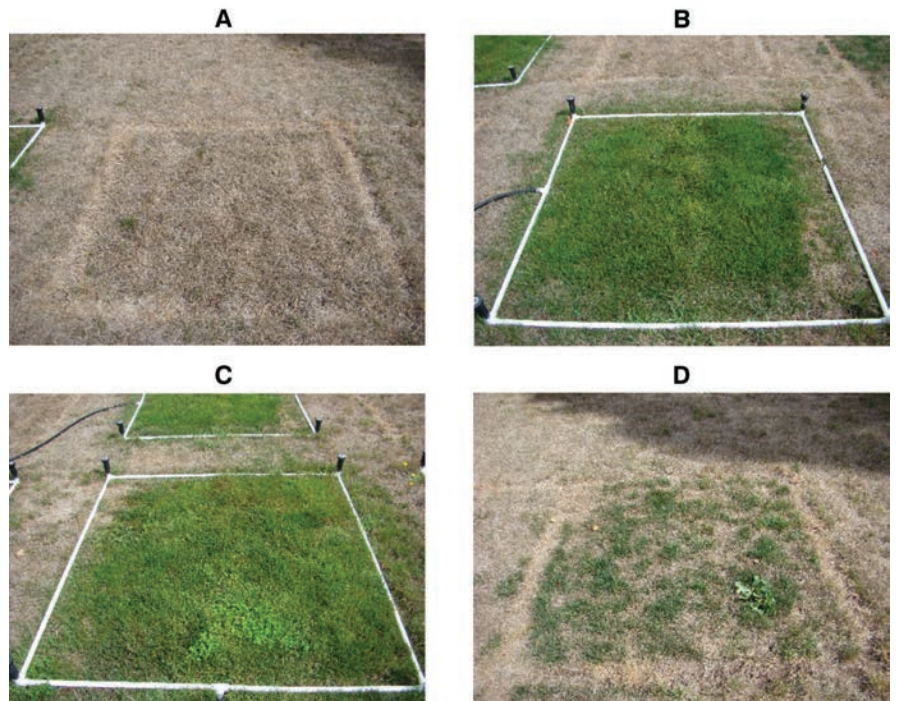


Figure 1: Irrigation plots three months after initiation of trial (taken Sep 2019): A) no irrigation applied; B) irrigation applied at 0.25 inch four times per week; C) irrigation adjusted monthly based on evapotranspiration (ET) rates from weather station data; D) irrigation applied at 1.0 inch once per month.

2 inches and 4 inches generates large amounts of debris left on the surface, which smothers the grass beneath it, opening areas for weeds to move in.

Fertilizing turfgrass with 2 or 4 lbs. Nitrogen/1,000ft² annually reduced weed population as compared to non-fertilized turfgrass (Table 1), with higher



Fertilizing twice in the spring and twice in the fall at 1 lb. N per 1,000 sq. ft., totaling 4 lbs. N per 1,000 sq. ft. annually resulted in plots with the least amount of broadleaf weeds in Corvallis, Ore. Photo by Doug Voderberg.



Cool-season turfgrass that received light and frequent irrigation (4 applications per week) were the healthier than plots that received deep infrequent irrigation. Irrigation rates can be determined using an empty tuna fish can or a rain gauge. Photo by Alec Kowalewski.

Fertilizer Rate (per year)	Percent Weed Cover (%) 21-May	Percent Weed Cover (%) 10-Sep
None	4.2	7.6
2 lbs. N/1000ft ²	1.4	0.7
4 lbs. N/1000ft ²	0.0	0.0

Table 1: Effects of nitrogen application rate on percent weed cover within a mixed stand of cool-season turfgrass maintained at a 2 inches height in Corvallis, Ore. 2019.

rates showing the lowest incidence of weeds. Applications of nitrogen increased the density of the turfgrass. The dense stands made it more difficult for weeds to move in. Plots that did not receive any fertility had more voids where weed seed was able to germinate and move into the plots.

Analysis of the irrigation plots showed no significance of treatments on weed incidence, but we expect to see the differences over the course of this trial. Plots that received no irrigation over the summer months had the lowest turfgrass density and quality ratings (Figure 1).

As the trial progresses, there will be space for weeds to encroach into the unirrigated plots and subsequent grid counts should reflect this. Plots receiving 1 inch per month had a slight improvement compared to plots that were not irrigated. The plots that received 0.25 inch four times per week, and the plot receiving irrigation rates adjusted monthly according to evapotranspiration rates had the highest turf density and increased plot quality.

CONCLUSION

The addition of legislation that restricts access to certain pesticides, as well as an

increased interest in finding alternative methods to managing weeds in both school grounds and home lawns, relies on research to explore both the benefits of cultural management practices and the best ways to implement them. Previous research in other areas of the United States has showed that mowing, fertility and irrigation can significantly reduce weed incidence. The goal of this research is to find optimal rates and frequencies of those primary practices that can then be demonstrated and taught to IPM coordinators and others managing these turfgrasses in the absence of traditional herbicides. **IST/**

Emily Braithwaite is a faculty research assistant, Brian McDonald is a senior faculty research assistant, Tim Stock is senior instructor of environmental and molecular toxicology, and Alec Kowalewski is associate professor, turf specialist – all for Oregon State University in Corvallis.

Chemical Control of Annual Bluegrass in Wisconsin

// By DOUG SOLDAT, PH.D., AND NICK BERO

Control of annual bluegrass on athletic fields is a huge challenge for sports field managers in the Midwest and all over the world. Annual bluegrass is a light green, bunch type grass with a weak root system and poor stress tolerance. When soils become wet and compacted, desirable turf thins and annual bluegrass gains a foothold in these bare areas, which it will not easily relinquish. While it is classified as a winter annual in the handbooks, there are many biotypes that allow this weed to behave like an annual or perennial. Annual bluegrass can form a nice turf cover at certain times of the year, but because of its poor stress tolerance it is often not there for you when you need it most.

The long-term solution to an annual bluegrass invasion is to alter the growing conditions that are causing the desirable grass to thin. In most cases, these aren't easy fixes. Rootzones might need to be replaced, drainage might need to be added, trees (that may not be on your property) might need to be cut down, or fields might need to be added to distribute the traffic effectively. When cultural fixes such as these are impossible or impractical, managers turn to chemical control practices to keep annual bluegrass in check. As the name suggests, annual bluegrass is closely related to Kentucky bluegrass, so finding an herbicide that controls annual bluegrass without killing the desirable Kentucky bluegrass is difficult. A handful of partial or conditional chemical control options exist, but the industry is still searching for a silver bullet. To get a better handle on how the various chemical control options perform, the Wisconsin Sports Turf Managers Association (WSTMA) funded a study to evaluate different combinations, timings and rates of three herbicides (Prograss, Xonerate, and Tenacity) for the control of annual bluegrass in a Kentucky bluegrass athletic field.

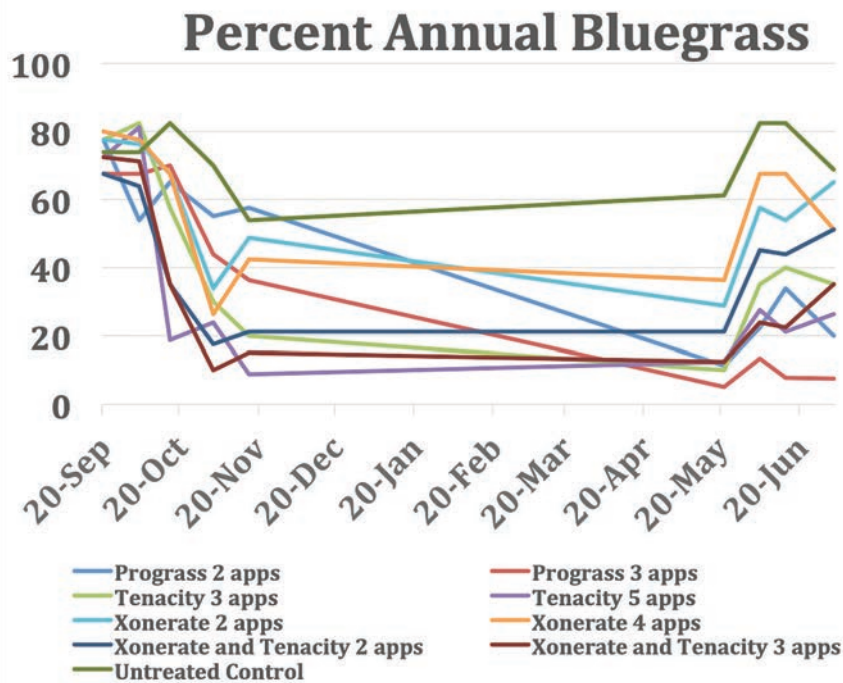


Figure 1. Visually estimated percent annual bluegrass coverage over time as affected by chemical treatment.

MATERIALS AND METHODS

This study was conducted on a silt loam Kentucky bluegrass practice athletic field infested with annual bluegrass at Oregon High School in Oregon, Wis. We sincerely appreciate the assistance of Ron Novinska (2012 STMA Football Field of the Year Winner) for allowing us access and maintaining the site during the trial. The trial began during the fall of 2018 and continued through the 2019 season. The study was designed as a randomized complete block design with eight treatments and four replications (see Table 1 on page 22). It would be impractical to evaluate all possible rates and timings and tank mixes, so we worked with the WSTMA to pick a reasonable number of combinations that we felt would provide useful information. Individual plots

measured 6 feet x 4 feet. The herbicides were applied using a CO₂-powered backpack sprayer calibrated to deliver 86 gallons per acre. Approximately twice per month, we evaluated the percent cover of annual bluegrass, desirable turf, and bare soil. We also assessed any injury to desirable turf on a 0 to 9 scale with 0 being no injury and 9 being complete turf death. Treatment means were separated using Fisher's Least Significant Difference at alpha = 0.05.

ANNUAL BLUEGRASS CHANGE OVER TIME

Annual bluegrass comprised about 70% of the plot area on the study site at the onset of the trial, with the remaining 30% consisting of Kentucky bluegrass. The trial was located on the south end of the athletic field, near a

tree line that partially shaded the plots. From Figure 1, you can see that all the chemical programs reduced annual bluegrass cover to less than 50% by the following spring. However, at the end of the evaluation period in July 2019, the percentage of annual bluegrass was highly variable depending on the chemical treatment. The most effective chemical treatment was the three fall applications and one spring application of Prograss, which had single-digit levels of annual bluegrass in July. The next group, which was moderately effective against annual bluegrass, consisted of a group of four treatments including both of the Tenacity treatments, the treatment with two fall applications of Prograss, and the treatment consisting of three applications of Xonerate and Tenacity. In this group, annual bluegrass coverage ranged from 20% to 35%, showing a reduction in annual bluegrass populations of 50% or more. The remaining three treatments, which all contained Xonerate, were not very effective at controlling annual bluegrass under the conditions of this study with annual bluegrass coverage above 50% by July 2019 – less than 30% weed control. For those that want to dig deeper, all data from Figure 1 and statistical differences are shown in Table 2 (on page 22).

OTHER CONSIDERATIONS

In addition to understanding how the chemical treatments affected the annual bluegrass, we wanted to evaluate their impact on the desirable turf. Chemical control of annual bluegrass is difficult because of the genetic similarities it shares with desirable grasses, so we also quantified the impacts of the applications on the Kentucky bluegrass. The only substantial injury we observed in this trial was from the treatments containing Tenacity (Figure 2). Tenacity injury is unique, and while it did not result in death of the desirable Kentucky bluegrass, it turned some of the plants white, reaching unacceptable levels of injury for three of the Tenacity treatments around four weeks after the initial application. However, all Tenacity-treated turf had acceptable levels of injury at six weeks after initial application and after.

Please note that Prograss can be damaging to certain Kentucky bluegrass varieties. The Prograss label lists varieties of Kentucky bluegrass and perennial ryegrass that can endure the herbicide, and singles out several varieties of Kentucky bluegrass that

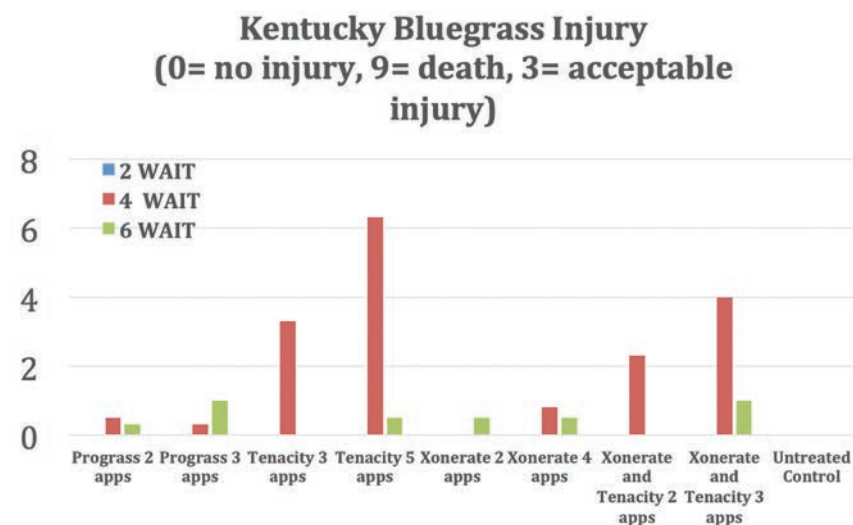


Figure 2. Kentucky bluegrass injury as affected by treatment. The injury scale is 0 – 9, with any injury above 3 considered unacceptable. WAIT = weeks after initial treatment.

cannot endure the application. None of the mentioned varieties on the label matched with varieties that Novinska regularly uses

for overseeding. Because of the large amount and ever-changing grass varieties on the market, this is likely to be the case for many po-

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Treatment Description	Rate	Timing	Application Interval	Application Dates
Prograss 2 apps	1.5 oz/1000 ft ²	2 apps fall	21 days	9/20, 10/12
Prograss 3 apps	1.5 oz/1000 ft ²	3 apps fall + spring follow up	21 days	9/20, 10/12, 11/5, 5/21
Tenacity 3 apps	5.3 oz/acre	3 apps fall	14 days	9/20, 10/4, 10/19
Tenacity 5 apps	3.2 oz/acre	5 apps (2 per wk) fall	3-4 days	9/20, 9/24, 9/27, 10/2, 10/4
Xonerate 2 apps	2 oz/acre	2 apps fall	14 days	9/20, 10/4
Xonerate 4 apps	1 oz/acre	4 apps fall	7 days	9/20, 9/27, 10/4, 10/12
Xonerate and Tenacity 2 apps	1 oz, 4 oz/acre	2 apps fall	14 days	9/20, 10/4
Xonerate and Tenacity 3 apps	1 oz, 4 oz/acre	3 apps fall	14 days	9/20, 10/4, 10/19
Untreated Control	n/a	n/a	n/a	n/a

Table 1. Treatments and application rates for the products used in the trial.

Treatment	20 Sept	4 Oct	16 Oct	2 Nov	16 Nov	21 May	4 June	14 June	3 July
----- % of plot cover -----									
Prograss 2 apps	77.5 a	53.8 c	65.0 ab	55.0 ab	57.5 a	11.3 e	22.5 ef	33.8 cd	20 cd
Prograss 3 apps	67.5 a	67.5 abc	70.0 ab	43.8 bc	36.3 abc	5.0 e	13.3 f	7.8 e	7.5d
Tenacity 3 apps	77.5 a	82.5 a	57.5 b	30.0 bcd	20.0 cd	10.0 e	35.0 de	40.0 cd	35.0 bc
Tenacity 5 apps	72.5 a	81.3 a	18.8 c	23.8 cd	8.8 d	12.5 de	27.5 def	21.3 de	26.3 cd
Xonerate 2 apps	77.5 a	76.3 ab	67.5 ab	33.8 bcd	48.8 a	28.8 bc	57.5 bc	53.8 bc	65.0 a
Xonerate 4 apps	80.0 a	77.5 ab	67.5 ab	26.3 cd	42.5 ab	36.3 b	67.5 ab	67.5 ab	51.3 ab
Xonerate and Tenacity 2 apps	67.5 a	63.8 bc	35.0 c	17.5 d	21.3 bcd	21.3 cd	45.0 cd	43.8 cd	51.3 ab
Xonerate and Tenacity 3 apps	72.5 a	71.3 ab	35.0 c	10.0 d	15.0 cd	12.5 de	23.8 ef	22.5 de	35.0 bc
Untreated Control	73.8 a	73.8 ab	82.5 a	70.0 a	53.8 a	61.3 a	82.5 a	82.5 a	68.8 a

Table 2. Visual estimate of annual bluegrass cover by date during the study. Different letters indicate statistically significant differences ($p = 0.05$).

tential Prograss users. Make sure you consult the label and test the application on a small area before implementing a program. In addition, it is important to know that Prograss has post-emergent and pre-emergent weed control properties. Kentucky bluegrass cannot be seeded until six weeks after a Prograss application. This restriction makes the logistics of an overseeding more challenging compared to a program with Tenacity or Xonerate.

When selecting a chemical control strategy on an area with a high percentage of annual bluegrass, you should also consider how the field will look as the annual

bluegrass is being controlled. When we evaluated the Kentucky bluegrass injury and percent cover by annual bluegrass, we also evaluated the amount of bare soil visible. We saw large differences in bare soil among the chemical control options in the fall (Figure 3). The Tenacity treatments rapidly reduced annual bluegrass levels, which resulted in high amounts of bare soil. In contrast, the treatment consisting of two fall applications of Prograss resulted in very little bare soil in the fall and quite similar levels of bare soil as the Tenacity treatments in spring. The Prograss pro-

gram with three fall applications and one spring application had the greatest amount of bare soil by the end of the trial (Figures 3 and 4), but was also the most effective chemical control program in the trial.

All things considered, the two Prograss treatments (two fall applications or three fall applications plus 1 spring application) were the most effective under the conditions of this study. They provided a high level of control with little observed injury of the desired turfgrass. Prograss also appeared to work more slowly than the other effective chemical in this trial (Tenacity), which re-



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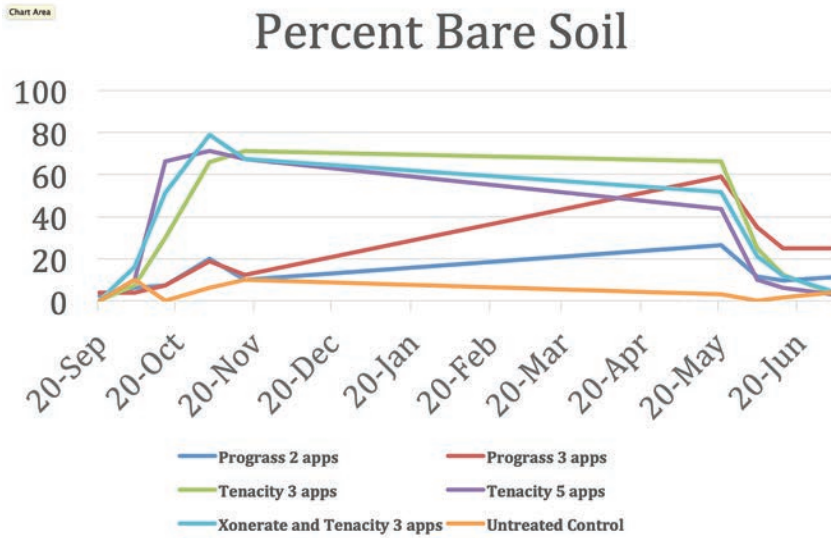
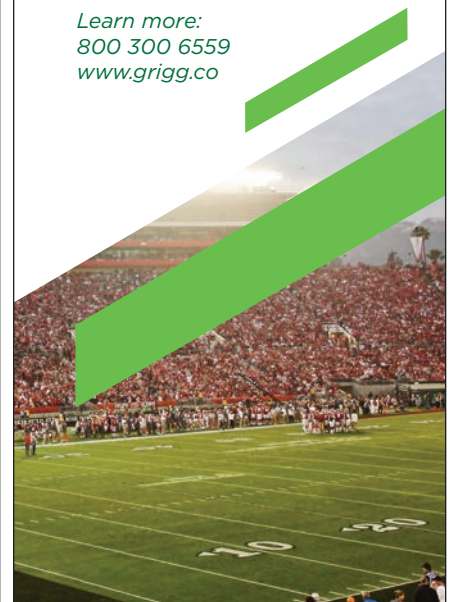


Figure 3. The percent bare soil over the study period as affected by the five most effective annual bluegrass control options evaluated in this trial.

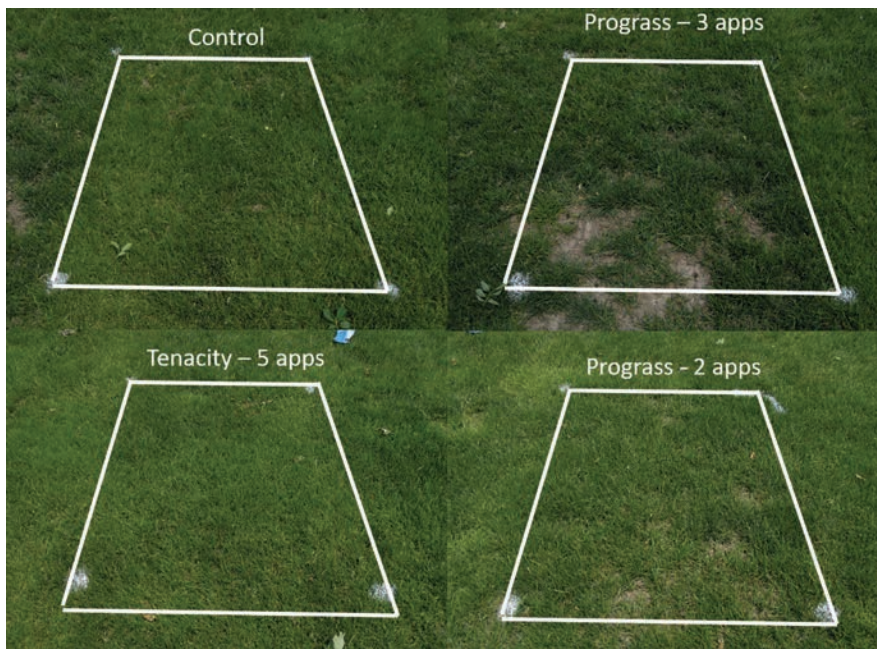


Figure 4. Pictures from June 14, 2019 of some plots from some of the better performing treatments in the study relative to the non-treated control plot.

sulted in less bare soil in the fall with Prograss treatments. The five fall applications of Tenacity provided a good level of control by the following July, however, and should not be written off. In this trial, treatments containing Xonerate did not appear to be effective for controlling annual bluegrass. However, keep in mind that these results are specific to this location, soil, and grass

varieties and results may differ for your area. Contact your local turfgrass extension specialist for the best annual bluegrass chemical control options in your area. **IST/**

Doug Soldat, Ph.D., is a professor in the Department of Soil Sciences, University of Wisconsin-Madison; Nick Bero, MSc, is a research assistant for the department.

WHERE ARE THEY NOW? STMA SCHOLARSHIP WINNERS REVISITED

We thought it would be fun to catch up with some former STMA scholarship winners, so we reached out to several past winners to find out what they are doing now and to discuss the influence of STMA on their careers.

CASEY REYNOLDS

■ **What was your specific area of study as an undergrad?**

Crop Science

■ **From what school?** NC State University. I have a bachelor's, master's, and doctorate degree in Crop Science – all from NC State University.

■ **What was your first job out of college?** I was in sales with a construction company where I sold construction site dumpsters, pretty random, huh?

■ **Where else have you worked before your current**

job? I was a research technician at NC State University from 2003 to 2013, and then an assistant professor and extension specialist at Texas A&M University from 2013-2017.

■ **What is that current job and where are you located?** I am currently the executive director for Turfgrass Producers International, a 501c6 trade association representing natural grass seed and sod producers, as well as equipment manufacturers and suppliers. Our company is based in Lombard, Ill., but I work in Raleigh, N.C.

■ **How has being a member of STMA helped in your career?** It has helped me to surround myself with people who have a passion for this industry and want to work hard to promote it.



Casey Reynolds, Ph.D., executive director, Turfgrass Producers International

BRIAN SCOTT

■ **What was your specific area of study as an undergrad?** Ornamental Horticulture with a Sports Turf Management emphasis.

■ **From what school?** Cal Poly Pomona. I have my Master of Science in Agricultural Sciences from Cal Poly Pomona as well.

■ **What was your first job out of college?** I was hired to run the irrigation division of a landscape company located in San Bernardino, Calif. I eventually moved up into the operations manager position for this company.

■ **Where else have you worked before your current job?** After college, my only other “job” was being self-employed as a landscape contractor

(C-27 License) where I specialized in custom residential landscape design and installation. Prior to college (in high school), I was employed by a wholesale nursery for two years.

■ **What is that current job and where are you located?** I am a professor of Horticulture at Mt. San Antonio College in Walnut, Calif. I am in my 19th year here.

■ **How has being a member of STMA helped in your career?** My career is centered around students finding their pathway to successful careers. STMA has helped open countless doors for my students to walk through. STMA has also helped me learn current, relevant information to share with students. The annual conference, student challenge and scholarship programs have made a profound impact on dozens of students

through the years, and it has put Mt. SAC students on the map on a national level, which helps with career options. These opportunities have also given students a tremendous amount of confidence in their knowledge and abilities to be amongst the top students and eventually professionals in the country. When I received this award, I was at the banquet with my mentor, Dr. Kent Kurtz. He paid for my plane ticket and hotel so I could travel to Florida to receive the award in person. I sat and had dinner with Dr. Kurtz and Harry Gill that night, and I will never forget being in awe of those pioneers. I am still in awe of their tremendous foresight into the need for having an organization to raise the level of professionalism and knowledge in this industry. It has always



Chase Straw, postdoctoral research associate, University of Minnesota (then and now)

motivated me to continue down the path of self-improvement. That was again validated when I was awarded the Dr. William H. Daniel Founders award in 2014. I am humbled at being recognized for simply paying it forward.

CHASE STRAW

■ **What was your specific area of study as an undergrad?** I have a B.S. degree from the University of Kentucky (2010), and M.S. and Ph.D. degrees from the University of Georgia (2014 and 2017, respectively). All are in Turfgrass Science.

■ **What was your first job out of college? Where else have you worked before your current job?** My first job after college is my current job as a postdoctoral research associate at the University of Minnesota. During almost my entire four-and-a-half years at the University of Kentucky, I worked on their grounds crew, except when I interned with the Boston Red Sox summers of 2008 and 2009 and the Cincinnati Bengals for eight months in 2010.

■ **What is that current job and where are you located?** I'm a postdoctoral research associate at the University of Minnesota in St. Paul, Minn.

■ **How has being a member of STMA helped in your career?** I've been a member of the STMA since I was 18 years old. Attending the national conference each

year during undergrad led to my internship opportunities, which ultimately helped me make the connections to get into graduate school. Now as a turfgrass scientist, one of my primary interests is athletic field research. The relationships that I've made and the knowledge that I've gained through the STMA help tremendously in my efforts.

DON FRANTZ

■ **What was your specific area of study as an undergrad? From what school?** I graduated with a Bachelor of



Don Frantz, regional sales representative, PBI-Gordon Corporation (then and now)

Science degree in Landscape Horticulture: Turf Management, from Colorado State University. This scholarship was a tremendous honor for me, and really helped promote my career goals.

■ **What was your first job out of college? Where else have you worked before your current job?** I started as an intern and later a seasonal at Coors Field under Mark Razum, an intern at the former AAA Richmond Braves under Chad Mulholland, and a head groundskeeper in Kansas City for the independent T-Bones, and a sports stadium manager for Jeffco Schools in Colorado.

■ **What is that current job and where are you located?** Currently, I am a regional sales representative for PBI-Gordon Corporation, and I cover Colorado, Kansas and Wyoming, based in Denver, Colo. PBI-Gordon formulates and manufactures herbicides and fungicides for the sports turf market.

■ **How has being a member of STMA helped in your career?** I can remember my first Conference, as a result of the Dr. James Watson scholarship, which opened up some great opportunities for me. Since then, I have tried to participate as much as possible in STMA events, as well as with the local Colorado STMA chapter as well, which does a terrific job! Knowing people in the sports turf industry has been incredibly valuable in my career.

ROB GALDIERI

■ **What was your specific area of study as an undergrad?** I graduated from Delaware Valley College in 2009 with a B.S. degree in Agronomy and Environmental Science, with a specialization in Turf Management

■ **What was your first job out of college? Where else have you worked before your current job?** My first job after graduating was as operations manager/assistant groundskeeper for the Scranton/Wilkes-Barre Yankees (AAA NY Yankees). I spent six years in that position and eight total with SWB.

■ **What is that current job and where are you located?** Since September 2014, I have been the sports turf manager for Marywood University in Scranton, Pa.

■ **How has being a member of STMA helped in your career?** Being a member of the STMA has greatly helped me professionally; I was awarded STMA Fields of the Year in 2016 for both college baseball and college softball. Those awards not only brought honor to the University, but they also helped me to acquire more equipment and a bigger operating budget. Being a member of STMA also gets me in contact with nationwide vendors and other sports turf managers across the country.



Rob Galdieri, sports turf manager, Marywood (PA) University



John Cellon Pridgen, president, Sportscape Services

JOHN CELLON PRIDGEN

■ **What was your specific area of study as an undergrad?** I graduated in 1993 from Lake City Community College (now Florida Gateway College) with a semester hour Associates of Science Degree in Golf Course Operations.

■ **What was your first job out of college? Where else have you worked before your current job?** My first job actually started my last year of college. I was promoted to sports turf manager of what is now Steve Spurrier Field at Ben Hill Griffen Stadium for the University of Florida. From there I went on to Disney's Wide World of Sports as an opening team member with responsibilities as head groundskeeper of the multi-purpose fields, track complex, and beach volleyball

venues. I also served as interim head groundkeeper for the softball complex. I then went back to the University of Florida as athletic field supervisor for the athletic department.

■ **What is that current job and where are you located?** While there [at the University of Florida] I started my own business, Sportscape Services, doing side work. I soon transitioned to running the company full time, doing full-service sports turf management for 20 years.

■ **How has being a member of STMA helped in your career?** Being a member of STMA for past 26 years has been an opportunity to meet great people, cultivate friendships and being able to continue to learn from each other.

RYAN KASPIZKE

■ **What was your specific area of study as an undergrad?** I was attending the University of Toledo, while working to the Lucas County Recreation Center (at that time, home of the Toledo Mud Hens). I enjoyed the work, and read an article about Michigan State University's two-year certificate for sports turf management. I met with University of Toledo advisors and presented my plan to get my B.A. degree then heading to MSU. I took classes at Toledo that would transfer and help in my career path.

■ **What was your first job out of college? Where else have you worked before your current job?** Upon completion of my certificate at MSU, I had a seasonal job with the Indianapolis Indians and worked for Mike Boekholder. I did my internship with the Durham Bulls the year before, where Mike allowed me to experience all aspects of the maintenance and professionalism of being a groundskeeper in professional baseball. I was in Indianapolis for a short time. I was hired by Dennis Brodin, who, at that time, was the superintendent for the New England Patriots. Dennis shared and taught me his fundamental approach to maintaining turf at the NFL/MLS level, as well as hosting full field concerts and events. Working

for Mike and Dennis gave me a solid foundation to start and build my career. I have had many stops on my career path: Dayton Dragons, Salt Lake Bees, J and D Turf, and Texas Tech University. I've been fortunate in my career to have great staff and supportive supervisors who allowed me to succeed.

■ **What is that current job and where are you located?** Currently at the University of Notre Dame (as asst. superintendent, landscape services/athletic fields).

■ **How has being a member of STMA helped in your career?** STMA is a resource for networking, staying up to date on product and what others are doing and facing from the magazine articles. /ST/

BRAD PARK

This month in “The *SportsTurf* Interview,” we meet Brad Park, sports turf research & education coordinator, Rutgers University, New Brunswick, N.J. Park currently performs traffic stress research on cool-season turfgrass species commonly established for sports fields, and routinely visits athletic facilities in New Jersey to assist turf managers in solving problems associated with high-traffic sports fields. He was elected to the Sports Field Managers Association of NJ (SFMANJ) Board of Directors in 2003 and is a member of the Sports Turf Managers Association (STMA). Park was recognized by SFMANJ for his “Continuous dedication and service to the Sports Field Managers Association of New Jersey” in December 2013, and was recipient of the New Jersey Turfgrass Association’s Recognition Award in 2016. He earned a Master of Science in Agronomy from Penn State University, and worked for Penn State as a research support technician prior to his current position at Rutgers, which he has held since 2003.

SportsTurf: *What attracted you to the turfgrass industry?*

PARK: In addition to mowing a very modest number of lawns growing up in suburban Pittsburgh, most of my springs, summers and falls were spent working around golf, and finding extra time to play golf. I spent a number of years caddying and working in the bag room at South Hills Country Club (just south of the city limits), which culminated in working on the grounds staff of the golf course. I envisioned being in a career that involved working outside in some sort of hands-on capacity – that led to two degrees and a full-time job at Penn State University prior to my current position at Rutgers University, which I have held since 2003.

I was asked to talk about my “story” to a group of interns at the New York Botanical Gardens this past summer; it gave the opportunity to think about this question as well as make a “pitch” for turfgrass. I used the opportunity to note that the pragmatic nature of turfgrass management – sports turf management, in particular – continues to attract me to the business. There is a mindset, and I think it’s growing, that turfgrass is nothing but an exercise in aesthetics. Turfgrass is a surface on which athletes at all levels compete, not just the ones on television. Passive recreation is a big part of it too.

Turfgrass fills that need. Being a part of the research, education, and public consulting side of the turfgrass industry remains rewarding.

ST: *What are your main responsibilities? And what does a regular working week entail?*

PARK: Like any other position in this business, particularly in regions of the United States where it gets cold in the winter, my job responsibilities vary significantly from one season to the next. It keeps the job interesting; my position does not entail doing the same thing every day. One day I may be outside fertilizing a trial area; the next day I could be in front of a group giving a talk.

During the growing season, a significant portion of my time is spent outdoors performing various research functions: applying treatments, collecting data, preparing for and seeding research trials. Additionally, I will make a handful of site visits to sports field facilities in New Jersey in a public consulting capacity. The vast majority of these visits are with schools and towns. I am most frequently asked to provide a general review of a public entity’s inventory of sports fields and make recommendations for improvement. I almost always include soil testing as a part of the service. In addition to sports fields, I routinely visit



PHOTOS PROVIDED BY BRAD PARK

managed residential communities, and have worked with the municipal golf sector as well.

As fall transitions into winter, I spend a lot of time on data summarization and report generation – specifically those research trials performed during the summer. I annually attend various state, regional and national conferences during the late fall and winter season in a number of capacities including presenter (research poster and/or oral presentation), session chair, audio/visual coordinator and coach/chaperone for the Golf Course Superintendents Association of America (GCSAA)-sponsored Turf Bowl. I am very active as an instructor and in-class course emcee for several Rutgers continuing education courses, including our 2-Day Athletic Field Maintenance and Construction Course. The class has been running continuously since sometime in the late 1980s or early 1990s and was developed and emceed by Dr. Henry Indyk, a longtime faculty member at Rutgers and influential STMA member. As someone who has a penchant for history and nostalgia, being able to continue in the same role as Dr. Indyk relative to this class has been a great honor.

ST: Working in a university extension program you meet a lot of turf managers. What are they saying are the biggest obstacles to overcome for them to be successful today?

PARK: I think sports turf managers working at professional facilities are challenged by the number of events their field(s)/facilities are hosting above and beyond the sport in which their field/facility was originally intended. For natural turf surfaces, re-grassing has become routine for many managers. From my perspective, suppliers have attempted to respond to this demand. Turf milling equipment and contractors performing turf milling operations have made removal of existing surfaces more streamlined. Moreover, growers are now providing “game-ready” sod options where installed sod is managed more closely to professional standards at the sod farm than previous.

Managers working at schools and towns are struggling on a number of fronts. The quantity (and quality) of labor and budget always seem to be at the forefront. At a more macro level, I’m not convinced that many school and municipal officials truly realize the labor and expertise needed to maintain sports fields and grounds to standards that those same officials require. How can sports fields at a school be managed at an acceptable level when the grounds staff is constantly being taken away from managing outdoor assets to set-up the cafeteria for an assembly? Towns contend that the resources are not available to support STMA chapter memberships or registration at chapter field days for municipal sports field and grounds employees; however, resources are invariably found for a myriad of other discretionary expenditures. Ultimately, this is what motivated me to author the article, “The Importance of Sports Turf Managers for Schools and Municipalities,” which appeared in the January issue of *SportsTurf*. There are schools where sports (and sports fields) are a very low priority relative to reading, writing and arithmetic. In my opinion, that’s okay, and acknowledging those priorities is a good thing. However, if sports and quality sports field surfaces are a very high priority and integral part of the culture of a school or town, then



competent managers need to be hired and retained. My goal for that article was for it to serve as a sort of white paper that can be distributed among school and town officials that have authority over personnel and hiring decisions.

ST: How should turf managers deal with the increasing number of municipalities banning herbicides, etc.?

PARK: Let’s first acknowledge that the ban (or severe restriction) of EPA-registered pesticide products is happening at both the municipal and school sectors. Several states, including New York and Connecticut, have applied these regulations to schools statewide.

In many cases, schools and towns faced with these bans will not attempt to adjust their practices to compensate for the removal of synthetic pesticides from their programs, in part because they are not making the applications in house, and are subsequently disconnected from the agronomic details of the applications. While outsourced broadcast pest control applications are often generic and lack site-specificity, these applications may be the only reasons fields are relatively free of weed and insect issues.

The end result of pulling the plug on EPA-registered pesticide use will be

greater insect populations and weed encroachment. Pest pressure may not balloon within the first year or two, but left untreated and without any adjustment to cultural practices, turfgrass pest populations will develop. I’ve seen it firsthand. Summer annual weeds such as crabgrass, goosegrass and knotweed will become problematic. Dandelions, white clover and plantains will become the perennial broadleaf weeds of note. While weed encroachment may or may not render a field “unsafe,” I certainly think it’s fair to say that playing surfaces can be made more uniform where weeds are kept in check using threshold-driven application decisions (i.e. integrated pest management). Ignoring white grub populations can render a field unusable.

Back to the importance of a sports turf manager: He/she will be necessary to orchestrate cultural practice changes necessary to compensate for a loss of EPA-registered pesticides; namely increased overseeding, cultivation and fertilization. Necessary increases in these practices will be dramatic compared to what is happening (or not happening) currently in many situations. Surface milling followed by re-sodding is a non-pesticide strategy for addressing fields that exhibit severe weed populations. The cost of these services and the



prospect of field downtime will dictate the plausibility of this option.

In most situations where resources are limited, fields will require prioritization to determine which receive elevated cultural inputs compared to others. A competent sports turf manager is necessary to explore the options (including whether alternative products are a pragmatic option), work with all parties involved to communicate a plan, and ultimately try to do his/her best with the reduced set of options that these bans present.

ST: How has your career benefitted from being a member of STMA?

PARK: Being a member of STMA, and, in particular, attending the STMA Annual Conference each year has been beneficial to me for a number of reasons. First and foremost, as a regular presenter of sports field and grounds topics at local, state and regional meetings, it is very useful for me to hear what other academics (and non-academics) are presenting. It serves as a sort of barometer in which I can assess what I'm presenting relative to other academics and industry professionals.

As a member of the Sports Field Managers Association of New Jersey Board of Directors, I help to guide educational programming content for both SFMANJ

Field Days, as well as our annual New Jersey Green Expo in Atlantic City. Attendance at STMA serves as a sort of brainstorming exercise for educational topics and speakers for Atlantic City.

The networking possibilities at the annual STMA show are almost endless. I have forged many contacts and friendships with fellow STMA members who are actively involved with their state-level chapter or state turfgrass association. It is extremely beneficial to interact with other STMA chapter board members and absorb how their chapter handles events and "keeps their buses running."

ST: How do you think the profession and industry will change in the next 10 years?

PARK: The nature of sports field management is different than some other industries in the sense that a surface is ultimately required for a sport to be played. A brick-and-mortar bank is not necessarily required for personal finance needs to be met. A mall is no longer needed for shopping to occur. Printed media is not required for information to be disseminated. How do you play baseball without a field? Skinned surfaces will need to be groomed. Pitcher's mounds and batter's boxes will require repair. Grass will require mowing. Lines

will need to be painted. The list goes on. Ten years ago, the hands-on labor required to complete these tasks was necessary. Ten years from now, that labor will still be necessary. Synthetic turf fields play a big role in filling labor voids; however, natural turf and skin surfaces will never go away completely.

There is a lot of discussion right now in the green industry about labor needs. In some regions of the golf market, there is a shortage of assistant superintendents. This shortage has translated into a bidding war for talented people and increased wages. Will this ultimately develop in some spheres of the sports field market? Time will tell.

I'm routinely evaluating cool-season turfgrasses, including commercially available varieties (new and old), as well as experimental selections that have yet to be commercialized. Turfgrass breeding continues to produce improved varieties with better turfgrass quality, enhanced tolerance to disease, and greater traffic tolerance. The future is always promising in this regard.

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

PARK: Golf has always been my sport. I find myself increasingly enjoying the participatory nature of the game and deciding how to navigate the golf course, what club to hit, how to hit a shot, etc. I rarely take a cart when I play, so it's great exercise.

While I play most of my rounds at a local muni, one of my hobbies involves identifying "value" public golf courses that are architecturally interesting. I've played a number of courses built prior to 1940 designed by the likes of Charles Banks, A.W. Tillinghast, Donald Ross and William Bell. Robert Trent Jones came along a little later, but he's another one of my favorites. Not all these courses have been immaculately groomed – but that's certainly okay. Experiencing interesting putting surface contours, green surrounds, bunkering, and tee complexes is what it's all about. I play a lot of walk-up golf where I put my name on the starter's list and play with whoever is looking for a game or an extra player. I've encountered a lot of interesting people along the way, and I have a large bucket list of courses remaining. **/ST/**

Get Ready, Field Managers:

Thanks to a diverse population, cricket is growing

// By MARY HELEN SPRECHER

Thanks to better equipment and improvements in surfaces, sports are always evolving. Something else that pushes the evolutionary envelope, however, is population change. And that's why many field managers will find themselves being asked about cricket. Since an educated response beats an open-mouthed stare any day, it's time to do a quick meet-and-greet on the sport that is quickly gaining popularity in the United States.

Cricket is extremely popular in England, India and Australia. However, with the increasing movement of individuals to the United States, the sport has come over as well, and is now being seen recreationally in parks, as well as on college campuses and in clubs throughout the country.

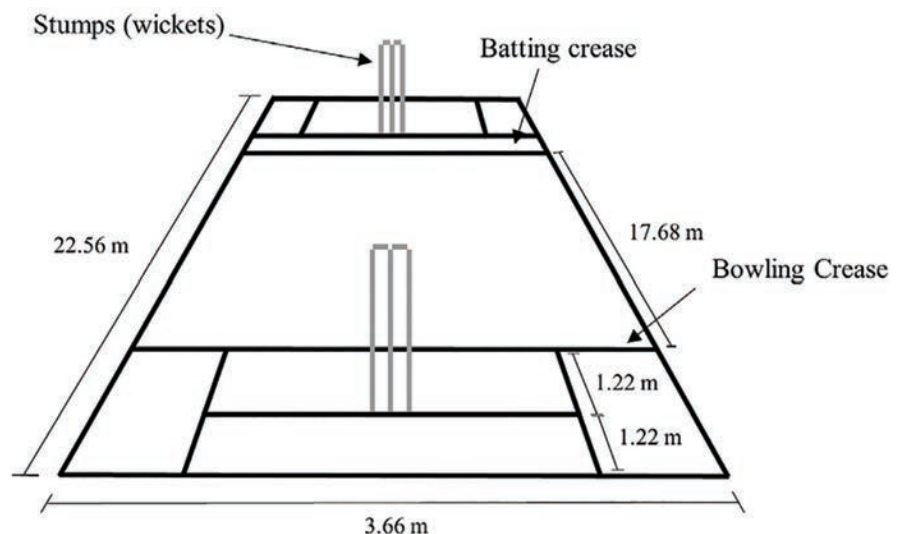
Which leads us back to the need for field management. Sooner or later, someone is going to pose the question of lining a field for cricket, or even setting aside a dedicated space that needs to be marked. You're going to want to know how – and Google isn't always going to produce a definitive resource – so it's imperative to acquaint yourself with the facts.

First, the basics: if you know baseball, you can figure out cricket. Like baseball, it's a bat-and-ball sport with pitchers, runners and fielders, as well as umpires and spectators. The game goes to the team with the most points scored. The highest governing body is the International Cricket Council (ICC), although, as with other sports, there are national governing bodies and related organizations.

So far, so good. But, beyond those facts, there are certainly plenty of differences in rules, and (more importantly for us here) in field layout. Whereas a field in baseball (or softball, for that matter) is diamond-shaped, the cricket field has two shapes: an interior, rectangular area known as the pitch, where batters (there



Photo courtesy of the International Cricket Council, www.icc-cricket.com.



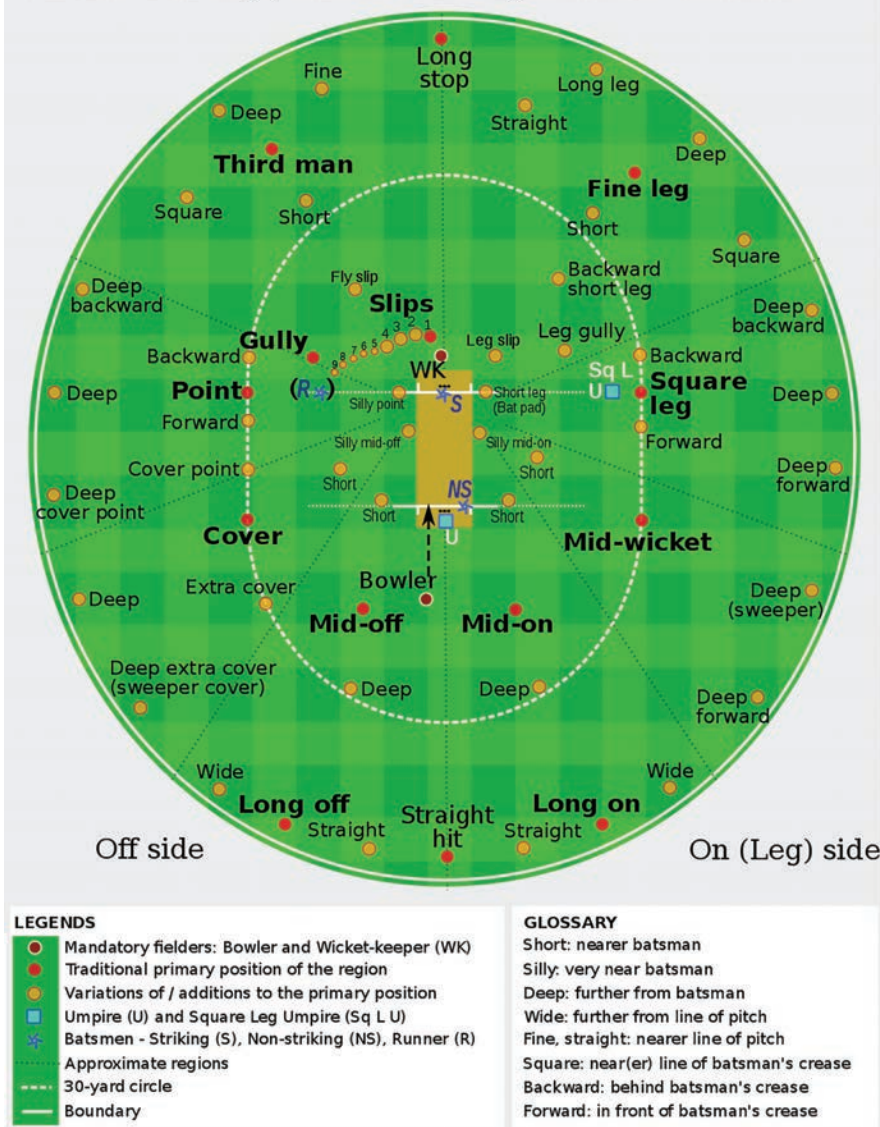
Diagrams provided by the U.S. Youth Cricket Association, usyca.org

are two) and pitchers (also two) stand; and an exterior field that is generally pictured as rounded, but has also been described as elliptical and oval (see diagrams).

Surfaces are important but not as important as you might think.

“Natural turf is used for the highest level of cricket,” said Ranjeet Singh, president of the U.S. Youth Cricket Association (USYCA). “However, it has a huge maintenance cost. About 98 percent of pitches in the U.S. are artificial turf and owned by

Cricket: Fielding positions for a right-handed batsman



parcs or schools. There are only a handful of natural pitches across the county.”

In much the same way that other sports fields or courts made of natural grass wear quickly in certain areas, so does cricket. A lacrosse field, for example, will show wear most quickly at the crease, and a grass tennis court will have worn areas along the baseline. In cricket, much of the action takes place on the pitch (the rectangular strip area mentioned earlier) so that wears more quickly. But, just as in soccer, that doesn't mean athletes don't have preferences.

“Natural turf is preferred by all competitive players,” said Singh. “Recreational players don't care.”

In fact, cricket is growing at that recreational level despite some drama in the U.S. Previously, the USA Cricket Association (USACA) was the recognized NGB in this country; however, in 2015, the ICC removed it and instituted a new organization, known as USA Cricket, headquartered in Colorado Springs, Colo.

Still, said Singh, there is an increasingly strong and vocal population that wants the game in the United States.

“There is a huge push to grow the game and build quality infrastructure, and up to a billion dollars is expected to be invested on that line,” he said.

New York, Florida and California have long been seen as pockets where

cricket is prevalent, and Florida's Central Broward Regional Park is home to the United States' first purpose-built cricket stadium (a venue that continues to host ICC league matches). There are club teams at the college level and leagues in all 50 states. And, as more tech workers started moving to the United States for jobs in the 1980s and '90s, they brought with them an enthusiasm for, and a commitment to, cricket.

It hasn't made it into the Olympics yet, but as more countries apply to host the Summer Games, expect to see cricket presented as a showcase sport, much the same way baseball and softball will be presented in Tokyo in 2020 (and likely in Los Angeles in 2028, though not in Paris in 2024).

The sport is also growing because of a youth movement; some schools are implementing it in gym class since it involves more players on the field at one time than baseball or softball. There's plenty of running, bringing in the active play schools crave.

For those who doubt that cricket could catch on in the United States, and who consequently think there is no reason to familiarize themselves with the game, consider this: The game of soccer didn't enter the United States until the mid-1850s when immigrants brought it over. It wasn't until 1915 that the sport even had a governing body here. These days, it's hard to drive past a field without a game in session, or to miss it on TV.

In short, the evolution of sports is inevitable. And it's the responsibility of field managers to keep up or get left out. **IST/**

Mary Helen Sprecher wrote this article on behalf of the American Sports Builders Association (ASBA), a non-profit association helping designers, builders, owners, operators and users understand quality construction of many sports facilities, including sports fields. One of the Association's resources is the book, Sports Fields: A Construction & Maintenance Manual. The ASBA sponsors informative meetings and publishes newsletters, other books and technical construction guidelines for athletic facilities including running tracks and sports fields. For more information: 866-501-ASBA (2722) or www.sportsbuilders.org.

WATER MANAGEMENT

It sure did rain a lot in my area this spring. I live in northeast Illinois, and records for rainfall were broken this year. As a matter of fact, numerous rainfall records around the country were shattered – not an ideal situation for spring sports. Access to fields for preparation and play were significantly limited – bad news for the players, patrons and sports field managers.

Healthy and playable sports fields are an important contribution to the teams and communities that use them. They provide a much-needed area for competition, exercise and recreation. Managing the agronomic programs to attain the appropriate conditions needed for each field is certainly not an easy task, especially when Mother Nature is constantly throwing you curveballs. My hat goes off to all of you sports field managers who are cranking out playable conditions for your communities all season long. It is not an easy job.

You work hard to provide a delicate balance between safety, playability and aesthetics. A healthy turfgrass plant and properly maintained surface are integral in achieving that balance.

Nutrients, seed, soils, pesticides and other inputs are important commodities needed to produce the desired results. The performance of many of those inputs, and the condition of the fields themselves, are all greatly affected by one thing – water.

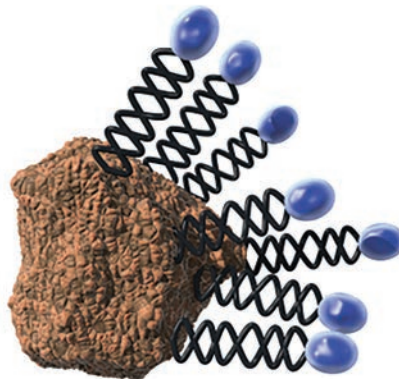
Water is a precious resource, and its management has the greatest impact on your field's performance. Water positioning, availability and uniformity heavily influence plant health and the playability of the surface. Being able to influence the behavior of water at the surface and in the soil helps give the sports field manager more control over conditions. One of the tools that helps give you that control is a soil surfactant.

That is not to say that soil surfactants are the only tool that you will need to manage water. Proper irrigation techniques,

layout and design, drainage and cultural practices all play a huge role in how moisture from rain or irrigation affects your fields. Realistically, not all these factors consistently fall into place or are able to be implemented across every property. Soil surfactant applications can provide sports field managers added water movement and retention to give them an edge.

WHAT IS A SOIL SURFACTANT?

Many of you might be saying, "Hey, that sounds great. But what the heck is a soil surfactant?" Well let's start with an overview of what a surfactant is. The word



surfactant itself is a combination of three words that describe their performance characteristics: SURFace ACTive AgeNTS. These chemistries perform by reducing the surface tension between two liquids, or between a liquid and a solid surface. The basic anatomy of a surfactant molecule is a head that is attracted to water and a tail that is attracted to organic matter. So how is that going to help you move or hold water on your fields?

HOW WILL A SOIL SURFACTANT HELP ME DURING WET CONDITIONS?

Excessive thatch, compaction and tight soil pore spaces are among the factors that

contribute to a lack of water infiltration at the surface and poor water distribution uniformity in the soil. Another factor is the surface tension of water. Surface tension is created at the "surface" of water droplets through the strong bonds between water molecules. The best way to describe that bond is like a film that holds the water droplet together. It keeps the water from flowing freely into the soil at the surface. Water is kind of lazy, as it always follows the path of least resistance. Therefore, water from rain or irrigation that has not been treated with a surfactant will seek out the largest pore spaces to facilitate infiltration into and throughout the soil. This leads to a condition called preferential flow.

Preferential flow is when water seeks out the easiest path to travel downward. Once the first water droplet finds the easiest route, his buddies that are near him follow right behind. This is partly attributed to the strong surface tension bond. A similar occurrence can be seen on your car windshield when it's raining. When the first water droplet streaks down a path from top to bottom many of the droplets in that general area will follow that same path down. This phenomenon leads to slower water infiltration at the surface, as well as less uniform distribution throughout the soil.

The soil surfactant molecule helps by breaking the surface tension bond of water. Think of it as punching holes in the film that was holding the droplet together. Doing this allows water to flow more freely into and throughout the soil. Instead of just seeking the larger soil pores for infiltration, it can now flow more easily into the smaller pores and through other barriers such as heavy thatch. In short, surfactants help move water off the surface and through the soil. This leads to a drier surface and more uniform distribution of that water in the soil.

EDITOR'S NOTE: This material was provided by Precision Laboratories, LLC, and was written by Justin Olmstead, turf product manager.



**JOHN
MASCARO'S
PHOTO QUIZ**

*JOHN MASCARO
IS PRESIDENT OF
TURF-TEC
INTERNATIONAL*

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**ANSWER
FROM
PAGE 17**

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This photo comes from a frequent contributor to the Quiz and is from the Northwestern United States. Upon first glance, the improperly placed tree located inside the playing area of this rugby field might seem like vandalism or a high school prank. However, the tree was actually planted here on purpose, before the field was painted. As it turns out, this rugby field was recently renovated because new buildings were being added to the property. During reconstruction and to delineate the field, corner pins were installed for the rugby field's outline. After the construction was completed, some trees were planted to beautify the sidelines. When the maintenance company arrived to paint the field for the first time, they laid out the field and noticed that a new tree had been planted inside the playing area even though he told the construction company to keep any plantings to at a minimum of 10 feet from the corner pins that delineated the field. To show more clearly the problem



caused by this, he went ahead and painted the field anyhow, creating this awesome photo. A couple days later when he returned to the property, the tree had been removed, the hole filled in and the area re-sodded, so we are guessing his approach proved his point about the 10-foot buffer being needed.

Photo submitted by Mike Hebrard, owner of Athletic Field Design, Clackamas, Ore.

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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Better infiltration and more consistent water distribution keep surfaces uniform in terms of playability and safety. It also allows the sports field manager to start working those surfaces sooner after heavy irrigation or rain events.

HOW WILL A SOIL SURFACTANT HELP ME DURING DRY CONDITIONS?

Soil surfactants can be particularly beneficial during hot and dry periods of the season. During these conditions the evapotranspiration rate is greatly increased. Turf and soil surfaces are losing water at a much faster rate, which can lead to conditions like wilt. There are also organic coatings on soil particles that can lead to hydrophobicity, which repels water from the soil. That leads to conditions like localized dry spot. Localized dry spot (LDS) is a condition where you may have adequate soil moisture and green healthy turf right next to a spot where the turf is straw brown and the soil is dry as talcum powder.

Once surfactant-treated water is off the surface and in the soil, the tail of the surfactant molecule seeks out organic matter coatings on the soil particles. When the tail anchors to the organic coating of the soil particle, the head of the molecule attracts water in the root zone, holding it in place over time. Surfactant molecules that are carried through the root zone by treated water result in attachment to more sites, creating better hydration in areas affected by LDS.

Uniform water distribution and availability in the soil provides a much healthier surface for natural turf fields. A healthier playing surface is also a safer surface. A more vigorously growing grass plant recovers from traffic much faster, which reduces bare soil areas on the field that could potentially become a tripping or slipping hazard for the players and patrons.

Grass is composed of nearly 80 percent water by weight. Adequate water is obviously essential for plant health and survival. Soil-bound nutrients are taken up by the plant roots in a soluble solution. Plants don't eat, they drink. Soil surfactants are an input that can help keep water available in the soil for longer periods of time and rewet the soil more efficiently.



Treated field (All photos provided by Precision Laboratories, LLC)



Untreated field

Plant systems can perform at optimum levels with the proper balance of moisture in the soil.

WHICH SURFACTANT SHOULD I USE?

Choosing the proper soil surfactant for your needs can be confusing. There are many options from which to choose. They can differ in performance characteristics and application techniques. Some products are formulated to simply improve water infiltration. They excel at moving water off the surface and through the soil but do not hold it over time. Other soil surfactants

are built to facilitate better hydration. They aggressively hold water for a long period of time, which may mean they are not as good at moving standing water off the surface, sometimes creating softer playing conditions. There are also a wide variety of products that fall somewhere between those two extremes. When choosing a surfactant, you always need to take your conditions into consideration. A few things to consider are turf type, soil type and weather conditions at application.

There are quite a few options regarding how you can apply these products. The widest number of soil surfactants come



Treated (left) vs. untreated



Treated (left) vs. untreated

in a liquid form. You mix them at the appropriate rates with water in the tank of a broadcast sprayer. Then the soil surfactant is sprayed onto the leaf surface. After the application, it becomes necessary to water the surfactant with irrigation or rain to activate the chemistry and position it in the soil where you want to move or hold water. To maximize performance, it is usually recommended to water the product in directly after application. That being said, there are newer formulations of soil surfactants that can be sprayed and left on the leaf surface for a period of time and watered in later. But even the

performance of those is best when watered in immediately.

Many of the liquid formulations can also be injected directly into a central irrigation system. This allows you to apply the soil surfactant as you irrigate your surfaces with overhead sprinklers. This requires some specialized equipment to be retrofitted onto the irrigation system. Once it is set up, injection can be a very easy way to apply across large acreages. It can save on labor and time associated with the application.

Another option for soil surfactant application comes in a solid form and looks like a hockey puck. In the industry, this is

known as a surfactant tab. These tabs are placed in a hose end applicator and can be applied while hand watering. It is a great option for small areas and newly laid sod. As the water from the hose passes through the bowl that contains the tab, the water becomes treated with the soil surfactant. As you hand water, the soil surfactant is applied to those areas. A single tab will usually treat somewhere between 8,000 to 16,000 square feet, depending on how they are formulated.

One of the most flexible options for sports field managers is the granular soil surfactant. These products have the surfactant technology either sprayed on or impregnated into a granule of some type. These granules can be fertilizer or inert carriers. Granular product allows the sports field manager to apply it with a walk-behind or broadcast spreader. These products need to be applied to dry turf or soil surfaces. The surfactant chemistry is washed off and activated once rain or irrigation is applied to the granule. Consult the label or manufacturer representatives regarding the recommended amount of irrigation needed to fully activate the surfactant technology incorporated in the granule, as requirements may vary depending on desired field conditions.

A benefit to the granular soil surfactant formulations is that they can be applied preventatively ahead of heavy rain or irrigation. The surfactant is dormant until moisture is introduced. You can apply it a couple days before a rainstorm and the surfactant won't start working until the rain comes. We have also recently learned that making a fall application to your surfaces before the snow comes helps to facilitate better water movement in the spring.

As you can see, there are many types of soil surfactants that can be applied many different ways, giving sports field managers a variety of tools to fine tune moisture across a diverse array of fields and conditions. Water management is an important part of providing safe and playable fields. Figuring out how to start a soil surfactant program can be difficult. Local distributor and manufacturer's representatives are a great resource for more information regarding these technologies. **/ST/**

CVCC TURF MANAGERS TRAINING CENTER

// By STEVE E. PEELER, CSFM

Three years ago, at the back entrance to Catawba Valley Community College (CVCC), two athletic fields and a campus golf hole were thought to be history when expansion took place. The Work Force Solutions Center was designed and constructed in the heart of the horticulture and turfgrass management technology grounds. A premier baseball field and soccer field were used to host workouts, games and physical fitness activities. However, once the expansion began, things looked gloomy for the fields. A new access road was going to be constructed through the middle of the soccer field, and the baseball field was to be used as a staging areas for construction materials, which also required the backstop and dugouts to be demolished. The par-5 golf hole was thought to be totally lost, as it once stood out of sight and mind of the general public.

Where there is progress, there is opportunity! Before the Workforce Solutions Center was completed, a vision came to mind for the abandoned areas that were once functional sports fields. Why not convert the remaining areas into a horticulture and turfgrass management training center? A new parking lot was going to be constructed, the irrigation system was still in place, and everything on the baseball field remained in place. Additionally, the size of the area could be increased to include turf plots, landscaping, and herbal/crop gardens.

A plan was put in place to revive the overall area into the new CVCC Turf Manager Training Center, (TMTC). The complex would have a regulation baseball infield, one regulation softball infield, a partial soccer field, and the Harry Dubose par-4 golf hole. Since the construction of the Workforce Solutions Center required



The work of two students on the TMTC

a large area, many trees and wooded areas had to be removed, graded, and retaining ponds also needed to be built to handle all the runoff of storm water from the impervious surface of asphalt. Also, the golf hole could now be seen by everyone on campus.

What once was thought to be an unusable area had now become more important than ever before. CVCC now has both golf and sports turf outdoor training areas where students can gain much-needed experience in one sector of the industry or both. Students are able to lay out, construct, maintain and manage the facility while also having the opportunity to learn from their mistakes prior to getting an actual job.

The CVCC TMTC would not exist without work to perfect the facility. This presented even more opportunities for the students. The entire irrigation system will

need to be modified, drainage will need to be installed, grading is still required in some areas, erosion control methods will need to be designed, and training on all types of equipment could be conducted. Most importantly, the TMTC offers a facility that has continuous growth and technical education with all types of surfaces. There will be a section that will be designated for synthetic turf, which will allow students the opportunity to construct, install and maintain a synthetic playing surface.

Probably one of the greatest attributes to the CVCC TMTC is that the facility will serve as headquarters for the college's baseball and softball programs, as well as a high school baseball and softball program as a workout complex. The Harry Dubose golf hole will also serve as a practice hole for the newly formed golf team at CVCC.

STUDENT ACTIVITIES PERFORMED AT THE TMTC

The first and foremost activity that will be performed by the students is design and layout of different stages of construction phases. Each class taught at CVCC will be connected by class lessons and class labs. For example, TRF 120 (Turf Irrigation Design) will actually design and install a fully modified and functional irrigation system that uses the latest technology on the market. HOR 166 (Soils & Fertilizers) will perform lessons in class lectures, and use the knowledge to design and install proper soil modifications, proper soil nutrients, and optimum infiltration rates for the soils. Each section will have different variations so research data can be compiled and stored for future reference.

TRF 110 will utilize the turf plots for turfgrass identification (for freshmen students) for warm-season and cool-season cultivars, with the ability to remove and closely examine

in full detail everything from top of the turf canopy to the bottom of the drainage system. There will be a special section that will contain seeded hybrid bermudagrass such as Princess 77, Arden 15, Yukon, plus non-seeded hybrids such as Tiway 419, TifSport, Tiftuff, and Tifgrand.

The fields are not without their faults, as this is intentional. There will also be a section that will be weed identification where pre-emergent herbicides were not applied next to a boom width of 15 feet so the impact and weed control can actually be seen. This is something that the students never had an actual location on campus to perform. Observing the results visually, and being able to actually apply herbicides in both pre-emergent and post emergent control in the same location each year, will also be an added feature for the horticulture and turfgrass programs at CVCC.

Training with the latest technology is key to the students' success once they



Learning midfield logo painting

have completed all the requirements for graduation. STI (Smith Turf & Irrigation) from Charlotte has expressed interest in partnering with CVCC as a home base for Toro technician training (in exchange for supplying a certain amount of Toro equipment and giving veteran technicians, as well as students who are interested in the mechanical side of the industry, a real-world equipment experience that is being used on the TMTC).

Every spring in TRF 250 Golf Course & Sports Field Design & Construction, the students actually go through a real-world exercise where they have to construct an 18-hole golf course and a four-field sports complex from square one. Each student selects a folded/closed piece of paper from the front of the class on the first day. When the folded piece of paper is opened, it gives the name of the position and what capacity they will serve during the construction process of the golf course and sports field

complex. Job descriptions are given for each position and what they are responsible for on the project. There is a sports field and golf course architect, general contractor, construction superintendent, assistant superintendent, sports field manager, and subcontractors such as clear and grub, mass grading, drainage, irrigation, fine grading, and even a construction inspector in the event the project is not within code regulations. The instructor of the class serves as the owner. Specifications are given for the construction of the projects, and all material samples must be submitted the proper way with testing data and supplier information to the architects of record. A budget is formulated, submitted to the owner, which he then places certain restrictions on the project of how to cut the budget down to a certain percentage.

A weekly construction meeting is held with all students present and discussing weekly progress, planned progress, and if the project is on schedule. Weather is used to place possible delays, so the students have a challenge to see how to get back within budget and stay on schedule. The combined project takes the entire semester, and is required before being eligible to graduate. There was only a small issue in the past with this class and the lab work – it all had to be to a much smaller scale to fit in our CVCC greenhouse. Now that the TMTC is available, the class will add the outdoor version to the class project while continually improving the facility.

SPORTS TURF TRAINING

Given that there are three fields on the complex of a modified version, students will get hands-on training on how to lay out specific sports fields, construct pitching mounds and maintain infield skins after real play has taken place, as well as stencil layout, field painting, center and

end zone logo painting for all sports and golf course markings. Although different students want to focus on a certain sector of the turf industry, we encourage each individual student to be versatile and double major in Horticulture and Turfgrass Management. For many sports facilities that are multiple fields, horticulture and landscaping knowledge is becoming an advantage, and makes the sports turf manager more valuable to an organization.

There are future ideas for the CVCC TMTc. Square footage is available to add a full-size baseball field, a full-size softball field, and an outdoor plyometric course. Presently, the CVCC baseball program plays all its home games at Hinkle Alley Field,

which is located 1.5 miles off campus. The idea to construct a baseball stadium on campus has always been the goal. The baseball program has been very successful and has made two appearances in the JUCO World Series in the 10 years of existence. Plus, CVCC added a women's college softball team this fall. The TMTc could house both stadiums, if so desired, in the future. Should this idea come to fruition, the Horticulture and Turfgrass Management Technology program would play an important role in the overall design, layout, and construction of both fields, which would be a unique opportunity for each student in the program.

TURF MANAGER ON SITE MANAGEMENT PROGRAM

Hands-on experience is key to gaining knowledge and experience in the industry. As an overall program, we want each and every student to be



maintain fields. Safety was a big concern on most of the local high school athletic fields. Therefore, each year, a special training clinic and seminar will be conducted to host all coaches and athletic directors at the high school level to come to the facility and perform tasks in the proper fashion, see and learn how to maintain fields for safety, how to select the right materials for their actual playing surface, mowing practices, cultural practices, steps to renovation and construction, and the opportunity to enroll in our Turfgrass Certification program. Educating high school personnel within the region so that they can better maintain playing surfaces and safe fields would pay off in the long run.

very valuable to the organizations in which they start their career. Having the ability to manage, and management experience, advances the students' knowledge even more. Therefore, each individual student researches, develops, manages and maintains certain sections of the TMTc. Each plan must present an equipment list and budget, hiring of personnel, designing fertilization programs based on soil test results, create an irrigation plan based on environment and infiltration rates, and design and develop an herbicide, insecticide and fungicide program based on the turf type, seasonal stresses and location.

SPORTS COMMUNITY INVOLVEMENT

When the idea of the CVCC TMTc started, one of the most important items to be created was local sports field training for regional coaches, athletic directors, and parents who volunteer to

THE OPPORTUNITY

What started out as just a vision has turned into a reality, with much more to come in the future. None of this would even be possible with the support of Dr. Garrett Hinshaw, president of CVCC; Dr. Keith Mackie, vice president of CVCC; Dean Gary Muller, Business, Industry, Technology and Fine Arts; Brandon Hensley, CVCC special project manager; David Clanton, sr. professor, CVCC Horticulture & Turfgrass; Jordan Phillips, turfgrass management instructor; Mollie Townsend, CVCC Horticulture & Turfgrass Management; and the many dedicated students in our program who strive each day to be the best. Special thanks to each one for his or her dedication and support. **IST/**

Steve E. Peeler, CSFM, is director of horticulture and turfgrass management technologies, Catawba Valley Community College Environmental Life Science.

Back to Grass: The Razorbacks' Field Renovation, Part 2

// By STACIE ZINN ROBERTS

The University of Arkansas Razorbacks won their Southeastern Conference season opener 20-13 August 31 against the Portland State Vikings. While the win was welcome, the story of the day wasn't so much the play on the field, but the field itself.

A little more than three weeks earlier, on August 5, after about a decade of playing on artificial turf, some 635 big rolls of Tahoma 31 bermudagrass sod, developed by Oklahoma State University, arrived at Donald W. Reynolds Razorback Stadium. Harvesting at Winstead Turf Farm began in the wee hours the night before. It took 32 refrigerated truckloads to move that much natural grass from the farm near Memphis to the football stadium field in Fayetteville, Ark. The Razorbacks partnered with J.B. Hunt Transport to help get the grass across the state to its new home.

University of Arkansas management, coaches, suppliers, the field crew and a gaggle of media were on hand to document the moment as the first rolls of sod were forklifted off the truck and installed on the sand-based field surface. Looking at the open end of the Tahoma 31 sod rolls, it was obvious there was something different about the way the sod was grown. Sandwiched around the pinwheels of green grass, a thick mat filled with tan-colored sand where traditionally a darker soil would be visible.

That mat was the Evergreen Turf Matrix system, a sand-based profile that includes an interwoven mesh combined with the root system of the turf, to maximize sod strength and stability without compromising drainage or turf management practices.

THE INSTALLATION

"I thought the installation went about as well as it could," said Pat Berger, STM, CGCS, director of sports turf operations for the past



Left to right: Jordan Davidson, Chris Chapman, Billy Sullivan, Pat Berger, Corbin Estes, Luke Bubb, Doug Estes, Mark Warwick, and Paul Saad.

18 years at the University of Arkansas. The coordination from farm to truck to stadium was orchestrated so smoothly, Berger said, that "the sod really didn't get a chance to go through a lot of shock from being removed from the farm itself."

Prior to installation, Berger put down a 5-6-6 pre-plant organic fertilizer. Before the sod arrived, he gave the sand base a good soaking. Once the sod was installed, Berger turned on the irrigation system to move water through the roots, the Matrix and into the sand below.

Just four days after installation, roots of the Tahoma 31 bermuda were visible through the bottom of the Matrix mat.

"Four days later, we could pull the sod up at a seam where the sod came together. When we picked it up you could see the bot-

tom of the Matrix, and the roots had reached about four inches below that," said Berger.

The reaction? "Well, I thought it was kinda neat," said Berger. "Everybody else was whoopin' and hollerin'."

At that point, Berger hit the turf with a 10-20-20 foliar starter fertilizer. "So now we're adding the phosphorus and we're putting the potassium out at the same rate with 50 percent less on nitrogen," he said.

He gave it about a week before the first mowing at a 1-inch height of cut.

"I wanted to go down a little lower, but I think with the demands of how fast we were mowing, it appeared that if we went down to three-quarters, it was just a little too short. So I thought 'there's no problem with going at one-inch through the season and we'll be fine 'til next spring,'" said Berger.

THE BIG GAME

The true test, of course, was how the new Tahoma 31 natural grass surface performed when it really counted – on game day.

In an interview with Whole Hog Sports immediately following the game, Berger was quoted as saying, “It did great,” adding, “This was our first big test: three times in less than 24 hours” referring to practices on Friday by both teams, then the game on Saturday, after which no divots were visible.

Berger compared the new field grown into the Evergreen Turf Matrix mat to older grass fields he’d grown in the stadium and for other sports on the university campus. With the older sod systems, it was not uncommon for a player to take a chunk out of the turf half the size of the bottom of his shoe.

“In the past you could create large divots. In this case, none were evident,” said Berger.

Because the new turf roots were grown directly into the Matrix mat, it’s literally a whole new ballgame.

“You know, in the old days you could tear a whole piece of turf out there. This wasn’t that way. It only scratched the top. It never really went deep on any plays. The damage was minimal. We had about an inch of sand on top, and then, of course, we had the Matrix and the roots were tied to that. So really, you couldn’t get a chunk out of it if you kicked it with your toes,” said Berger. “There were only scuffs in the turf. No divots at all. I think the Matrix did what it’s supposed to do because the roots now have something they are anchored to which is not able to be brought to the surface.”

The Winstead Turf Farms team was on-site for the installation and attended the season opener to see the grass they’d grown in action.

“We felt the field’s performance was amazing. It performed like we expected and will only improve with time. This field performed as good as any in the country and was only 18-weeks old (from initial planting at the farm through harvest, installation and grow-in) at the time of the first game,” said Doug Estes, Winstead Turf Farms general manager.

When the field was installed in August, Arkansas became the very first university



Night installation.



Four-inch roots through the mat in just four days.

team to grass a football stadium with Tahoma 31 and the Matrix system. However, throughout 2019, it has quickly been ad-

opted by dozens of golf courses and sports teams at all levels. In the NFL, the Tennessee Titans have the grass on practice fields.



First painting of new field.



Synthetic on the sidelines, matching the color.

Indiana University and Louisville City FC use it for soccer. Duke University has Tahoma 31 on soccer and lacrosse fields. Uni-

versity of Maryland at Baltimore has it on baseball fields, among others, and the list continues to grow.

The last time the Razorbacks had a natural turf field in the stadium, it was seeded with Riviera bermudagrass. Some of the University's baseball fields are grassed with Latitude 36, developed a decade ago by Oklahoma State University. Comparing the grasses' performance, Berger said, "The Latitude is nice and smooth and tight. This, the Tahoma 31, I think is actually tighter."

The growth pattern is also different than grasses he's previously grown.

"We don't get a lot of upright growth. There's more of a horizontal growth pattern. So if we fertilize the tar out of it, we still didn't see this massive amount of growth or spurt of growth," Berger said. "It's a good thing when it's growing laterally. You know when you play you've got a nice stable, firm surface. I think the internodes are a lot closer, which would definitely make it more of a tighter surface."

The horizontal growth also adds to the turf's tensile strength. "There seems to be a lot more strength, I think, than the other grasses. It's hard to pull it apart because it has that horizontal growth."

BACK TO GRASS: THE VERDICT

In the media, Razorback players and coaches have weighed in on the renovation from artificial turf back to natural grass. Coach Chad Morris said in an interview, "It doesn't get much better than that. When it's perfectly manicured, it's a special sight. More than anything, it's the true element of football. Especially in a place like Arkansas which is the Natural State."

Berger said the feedback he's received has been overwhelmingly positive.

"I think it came out better than they thought it would... the whole university and the state are standing behind us. Everybody's glad about it. I have not heard anyone say anything negative about the field at any time."

Then Berger added with a chuckle, "Well, the guy that's doing the laundry may have to do a little harder work on natural grass but that's a win-win for them, too." **/ST/**

Stacie Zinn Roberts frequently writes about sports turf, and is the founder of What's Your Avocado? Marketing and PR, Mount Vernon, Wash.



► FIELD

MERLO FIELD UNIVERSITY OF PORTLAND

► LOCATION

Portland, Ore.

► **Category of Submission:** College Soccer
 ► **Sports Field Manager:** Kevin White
 ► **Title:** Athletic Field Manager
 ► **Education:** Bachelor of Science, Ornamental Horticulture-Turfgrass Management
 ► **Experience:** I received my first exposure to sports turf maintenance under the late Dr. Kent Kurtz at Cal Poly Pomona, when we would perform an annual renovation of Scolinos Field. In 2010, I was hired at Seattle University to maintain their athletic facilities, and ultimately earned the 2013 FOY award for Championship Field. For the past 3.25 years, I've been at the University of Portland, where I am able to expand my sports turf management skills by not only maintaining fields for an NCAA Division I program, but also by preparing Merlo Field for hosting the USL Portland Timbers 2 home game schedule, as well as many other professional and international soccer organizations, again earning Field of the Year recognition in 2016. Furthermore, from 2015 until this year, I worked with the Portland Timbers grounds staff, educating and training them in the art and

science of field management as they transitioned to taking on maintenance of their grass practice facilities in-house.

- **Full-time staff:** Rene Saldana
- **Part-time staff:** Mark Beshoar
- **Original construction:** 1990
- **Turfgrass:** Perennial ryegrass: Fiesta 4, Wicked, Karma
- **Kentucky Bluegrass:** HGT
- **Rootzone:** 100% sand
- **Overseed:** We will overseed the entire field at roughly 5#/1000 monthly from August through October, and spot seed high wear areas as necessary.
- **Drainage:** Herringbone system
- **Previous winner:** U of P also won this award in 2016. What was done differently this year? This year has been an especially challenging year for me professionally. It was the busiest season we've ever had, combined with record-setting weather extremes, from cold, wet, heat and drought. However, near the end of the fall soccer season last year, the workload finally caught up to me both physically and emotionally. Ultimately, I made the decision to leave the University of Portland and the

The Field of the Year Awards program is made possible by the support of sponsors Carolina Green Corp., Precision Laboratories, and World Class Athletic Services.

profession I absolutely love in search of anything that would allow my body to get the rest it desperately needed, as well as allowing me to spend more quality time with my family. However, a short-lived stint in sales and being able to work out the major grievances I had with the University proved that this is indeed the work I truly enjoy doing.

Why should STMA consider your field a winner?

Merlo Field is a 5,000-seat-capacity soccer-specific stadium on the campus of the University of Portland that serves as home to the Portland Pilots soccer teams, and since 2015, the USL Timbers 2. The defining characteristic of this pitch is resiliency, its ability to bounce back to quality form after being put through the paces, and it is tasked with handling an intense schedule of events, beginning in early February and lasting well into November or December, depending how our teams

finish their seasons. And, at the end of each season, when I sit down to tally up the number of events and total hours of field usage, I am always amazed at how much we continue to push this field, and how well it continues to perform despite the challenges we have faced and have overcome. This year we totaled 700 hours of scheduled field usage through 64 competitive matches, numerous trainings, and seemingly endless weeks of camps. How much further can we push it? I'm certain we will continue to see an increase in scheduled events, so we will continue to try new techniques, equipment and practices, and research new products to help in achieving that demand. After all, that's the fun part of this challenge! Other challenges however, were not so fun. With weather patterns ever changing, and other events out of our control, maintaining and sustaining playability can be quite frustrating. For instance, this past year, Portland went from experiencing its wettest





winter on record to facing the longest, hottest and driest summer in recorded history. To make an already challenging summer for maintaining cool-season turfgrass more exciting, the construction of an academic building on campus severed our looped irrigation mainline in May, with no plans for reconnection until late in the year. With our athletic fields now being at the end of the mainline run, we quickly discovered the overcompensated general campus irrigation was effectively “robbing” us of adequate water, many times not even enough pressure to pop up the heads. This setup required a very open line of communication and coordination between the grounds manager and us to satisfy both our irrigation needs. Very stressful to say the least – fortunately we love what we do! Overall, we made it through with a few minor blemishes, and our teams and end-users were none the wiser to the issues and challenges we were facing, which wouldn’t have been possible without the dedication and drive of this amazing crew!

SportsTurf: *How did you become interested in sports field management?*

WHITE: It wasn’t until I got out of golf and began working in the grounds department at Seattle University in 2010 that I truly became interested in sports field management. I was assigned to a section of campus as a gardener, but with my background in turfgrass management, soon began helping on the athletic fields. That eventually led to becoming the

lead athletic field specialist, in charge of fields and landscapes associated with athletic facilities. I wasn’t fully hooked until we hosted Manchester United for training one summer. Admittedly, I wasn’t even all that interested in soccer – it wasn’t a sport I grew up with in southern Illinois. However, after experiencing the excitement of that event, I was all in! Now I absolutely love soccer and sports field management, and can’t see anything that would ever draw me back into golf.

ST: *What are your biggest challenges working at the Division I level?*

WHITE: Staffing and budget are undoubtedly my biggest challenges. We’re a two-person team at a small DI school with limited revenue sources. However, we do continue to add athletic facilities, but seem to fall short on capital funding to include the necessary equipment to maintain those new facilities in each new project. Additionally, our sports continue to increase their demands on all facilities, and, as I’m quite sure many fellow sports field managers can relate, we become further stretched to keep up with maintenance. I’m very fortunate to have a dedicated and qualified sports field manager in my assistant – thank you, Rene Saldana!

ST: *How are you dealing with those challenges?*

WHITE: To deal with our staffing and budget challenges, Rene and I prioritize our levels of maintenance to each field based

on department-defined expectations, which sport is in season, the intended purpose of each field – game field, training field, or rec/club sports field, and type of surface – natural versus synthetic. We focus most our efforts on Merlo Field.

ST: What changes if any did you make on the winning field in 2019?

WHITE: We are always trying to make improvements, some more noticeable than others. This year, we upgraded all the irrigation heads to an opposing nozzle model during our Frazee mow closure, looking for an increase in uniformity and to reduce the runtime window for pre-game watering.

ST: What's the greatest pleasure you derive from your job?

WHITE: I really love the science aspect of growing grass, but I think the greatest pleasure comes at the end of game day setup, when you're a little exhausted yet still buzzed from the day's hustle, but you finally get the opportunity to stand back and take in all the pieces of the puzzle that have come together to create a beautiful picture. It's the satisfaction of a job well done.

ST: What's the best piece of turf management advice you have ever received?

WHITE: There are many to choose, but I'd say the best piece of advice was to not be afraid of killing grass. That's a hard pill to swallow, but many times failure is the best teacher.



ST: How has your career benefitted from being a member of STMA?

WHITE: Our association consists of very talented individuals who are more than willing to offer guidance, support or whatever is needed to help their fellow sports field manager succeed. By being a member of the STMA, I feel fortunate to have made acquaintance with many, and know I benefit as a field manager from the knowledge gained through those connections.

ST: How are using social media at work?

WHITE: I use Twitter to interact with other turf and industry professionals. It's a great tool for turfgrass managers, and I have used it to solve equipment problems, get ideas for unique methods and tools, and to engage in turf- and some non-turf-related conversations.

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

WHITE: If we manage to have the same days off, my wife Carol and I still really enjoy each other's company after nearly 20 years together, and either go exploring in the Columbia River Gorge or venture out to the coast. Watching and listening to waves crash on the rugged Oregon coastline is very therapeutic and highly recommended. *IST/*



STMA Announces MiLB and FOY Winners

STMA announced the winners of two of its national awards programs: The Minor League Baseball (MiLB) Sports Turf Manager of the Year, co-sponsored by Echo Tools, and the Field of the Year program, co-sponsored by Carolina Green Corp., John Deere, Precision Laboratories and World Class.

MILB AWARD WINNERS INCLUDE:

- Triple-A** – Matt Parrott, Charlotte Knights, Charlotte, N.C.
- Double-A** – Brock Phipps, Springfield Cardinals, Springfield, Mo.
- Single-A** – Mitch Hooten, West Michigan Whitecaps, Comstock, Mich.
- Short Season or Rookie** – Ross Barron, Vancouver Canadians, Vancouver, B.C.

Since 2000, STMA and MiLB have honored members who manage fields in Triple-A, Double-A, Single-A and Short Season or Rookie divisions. Winners are selected via a 12-member awards committee. Each nominee is independently scored on cultural practices, game day routine, resource utilization, staff management and the groundskeeper’s involvement and support of the sports field industry. Award recipients will receive this top honor at the Major League Baseball Winter Meetings during the Awards Luncheon on Monday, December 9, at the Hilton San Diego Bayfront in San Diego, Calif. President Jody Gill, CSFM, will present the awards.

Each year, STMA presents the industry’s “Field of the Year” honors to members who manage baseball, football, soccer, softball and other sporting playing surfaces at the professional, collegiate, schools (K-12), and parks and recreation levels.

THIS YEAR’S HONOREES INCLUDE:

Professional

- Baseball:** Louisville Slugger Field, Louisville Bats, Louisville, Ky., Tom Nielsen, head groundskeeper
- Soccer:** Rio Tinto Stadium, Real Salt Lake/Utah Royals FC, Sandy, Utah, Dan Farnes, director of fields and grounds

College & University

- Baseball:** Russ Chandler Stadium, Georgia Tech Athletic Association, Atlanta, Ga., Chris May, director of athletic grounds
- Football:** Scott Field, Davis Wade Stadium, Mississippi State University, Starkville, Miss., Brandon Hardin, superintendent-sports turf
- Soccer:** Captains Field, Christopher Newport University, Newport News, Va., Chris Webb, associate director of grounds
- Softball:** Patricia Wilson Field, Stetson University, DeLand, Fla., Steve Barnard, field technician
- Sporting Grounds:** Koskinen Stadium, Duke University, Durham, N.C., Scott Thompson, CSFM, superintendent of sports fields and grounds

Schools/Parks

- Baseball:** Park Hill South Baseball Field, Park Hill School District, Riverside, Mo., Eric Jones, head groundskeeper
- Football:** Walsh Field, Pace Academy Riverview Sports Complex, Mableton, Ga., Daniel Prince, sports complex facility manager
- Softball:** Open Space Park, City of Sioux Center, Sioux Center, Iowa, Lee Van Meeteren, parks director/head grounds superintendent



Russ Chandler Stadium, Georgia Tech Athletic Association, Atlanta, Ga.



Rio Tinto Stadium, Real Salt Lake/Utah Royals FC, Sandy, Utah



Linda Reeves Field, Christ Church Episcopal School, Greenville, S.C.

Sporting Grounds: Linda Reeves Field, Christ Church Episcopal School, Greenville, S.C., Brian Dossett, CSFM, head turf manager

A panel of 11 judges independently scored entries based on playability, appearance of surfaces, utilization of innovative solutions, effective use of budget and implementation of a

comprehensive agronomic program. Judges may not award a field in each category. Winners receive a plaque, recognition at the STMA annual Awards Banquet, and will be featured in a 2020 issue of *SportsTurf* magazine, the official monthly publication of STMA.

Awards will be presented at the 31st annual STMA Conference and Exhibition in West Palm Beach, Fla., on Jan. 16, 2020.

REGISTER FOR CONFERENCE NOW AND SAVE!

The 31st STMA Conference & Exhibition is next month, and registration is open! Taking place Jan. 13-16, 2020, in West Palm Beach, Fla., attendees will experience best management practices from academics and industry experts through case studies, hands-on learning, traditional presentations and in-depth classes.

Take advantage of the lowest registration rates by registering online before January 3. Visit STMA.org, log in at the top of the page, go to the shopping cart, and click on "2020 Conference Registration." All of the options for the conference will appear for you to complete the registration.

New members of STMA receive free registration to the upcoming conference. Members who have never been a member, or not since the year 2000, who are in the Sports Turf Manager, Academic or Commercial membership categories are eligible for the complimentary conference registration. All new member registrations must be done online before the January 3 deadline. Step-by-step instructions on how to sign up as a new member and receive the free conference registration can be found on STMA's conference webpage, www.stma.org/conference.

Current members of STMA can also receive discounted conference rates by referring new members to join STMA. For referring that person, you receive a \$100 credit to be used for any STMA service, such as conference registration, renewal fees and certifications. And there is no limit to the number of people you can refer. Just remind the new member to note your name in the referral box on the printed or online membership application.

For more information, visit www.stma.org.

STMA MEMBERSHIP – RENEW NOW!

The holidays are here – and so is the end of our membership year! Every year, STMA works hard to produce new educational materials, recognize certification and award recipients, and push for the safety of all fields around the globe. Invoices have been sent out, so we urge all members to avoid interrupted membership by renewing before the December 31 year-end.

Your STMA membership is an investment for your future, that's why we pride ourselves in providing a membership that connects you with a network of peers who are willing to share their best practices, provides opportunities for education to help you do your job better, and quick access to information and resources to help you save time. If you are considering joining STMA, the recognized leader in championing the sports turf industry and its professionals, we are sure to have a membership for you. STMA has specific membership categories for every professional in the sports field management industry.

Benefits of membership

- A monthly electronic newsletter that communicates association and industry information.
- Access to the Member's Only section of STMA.org, which has a real-time membership directory and hundreds of technical educational resources that are specific to sports field management.
- Access to Michigan State's Turfgrass Information File, the green industry's greatest resource for up-to-date technical information, a \$100 value.
- Ability to enter your field in the nationally recognized Field of the Year Awards Program.
- Opportunity to become a Certified Sports Field Manager (CSFM) to showcase your professionalism and to have your facility certified as Environmentally Responsible.
- Significant savings on registration to STMA's annual and regional conferences, and discounts to other organization's education.
- Opportunity to participate in volunteer leadership positions.
- Opportunity to join one of STMA's affiliated chapters for a strong local network. (Each chapter sets its own local dues.)
- *SportsTurf* magazine each month, a \$40 value.
- The ability to apply for scholarships (students only).
- Discount on advertising in *SportsTurf* magazine and discounted exhibitor booth at the annual conference (commercial members only).

How to renew

Make sure to renew your membership before the December 31 year-end deadline to avoid missing out on these great benefits! Renew online by logging into your account and adding your membership to your cart through our Products page. Any questions about membership or how to renew can be directed toward STMA HQ at 800-323-3876 or stmainfo@stma.org.

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

Mid-Atlantic STMA: www.mastma.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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Q&A with **PAMELA SHERRATT**

Sports Turf Extension Specialist

The Ohio State
University

Questions?

Send them to Pamela Sherratt at 202 Kottman Hall, 2001 Coffey Road, Columbus, OH 43210 or sherratt.1@osu.edu

Or, send your question to Grady Miller at North Carolina State University, Box 7620, Raleigh, NC 27695-7620, or email grady_miller@ncsu.edu



Innovative approaches to recruitment

Q: *Can you please share this internship/job opportunity with your students?*

A: This is the most prevalent question I get from people in the industry. My answer is always “yes, of course.” But the student demographic is shrinking, and I find that demand far exceeds supply. We are all in the same boat, looking for ways to grow student numbers and be innovative in our approaches to recruitment, so I’d like to share some thoughts on this topic.

Most of us stumbled across our sports turf career and grew to love it. It wasn’t something we planned or aspired to. The same thing happened to me with Scouting. Being a mum to young kids, I was at a pack meeting when I was given a job to do. “Voluntold” is the official phrase, I do believe. Fast-forward several years, and I’m a leader at the pack, troop and district levels, putting in almost as many hours in Scouting as I do for my career. Turns out Scouting, like sports turf, is my passion and where I know I can make a big difference in the lives of young people.

As a Scout leader, I’m constantly drawing parallels between the students I teach and the Scouts I lead. They all have one thing in common: they are all looking to be noticed, to matter. Making connections with youth by mentoring them and making those heartfelt connections is what will ultimately entice them into the sports turf industry. No amount of flyers, social media posts, or other marketing efforts come close to actually connecting with young people and letting them know they matter.

The Scout movement in the UK has gotten this message loud and clear and membership has grown by 20,000 since 2014. Scouting has become so popular, in fact, that 60,000 kids are on the waitlist to join. How have they done this? They’ve widened their appeal by physically going into the schools and announcing that Scouting is not only for white, middle-class kids. They have focused on poor urban areas throughout the country, recognizing that, “Scouting does not always reflect the diversity of our local communities or reach all the young people who could benefit most.” Of course, this new approach is further bolstered by having a celebrity adventurer, Bear Grylls, as their chief Scout, and by creating modern, informal uniforms. But, ultimately, their message of inclusion, delivered right to their local communities, is what’s led to their growth.

The message of inclusion is extremely important to youth today, particularly Gen Z. When I was at the IOG/SALTEX show, it was announced that

the Institute of Groundsmanship (IOG) would be changing its name next year to better represent the industry. Whenever I give a presentation, I make sure that people on my slides/videos are diverse. It’s only a small thing, but it’s important for youth to see people of all sexes, races and cultures in our industry, and to know that this is an inclusive, welcoming career option. With only 3% woman and ~4% non-white people in the industry, there is fantastic opportunity for growth. And while the U.S. sports turf industry has a fairly young demographic (the average age of turf managers per the 2016 STMA survey is 44 years old), we need to do more to engage those under 24 years of age, who account for only 1% of our membership.

So, as you chat with your colleagues this winter, maybe brainstorm about some of the things you could do in your local community. Could you speak at your local school, attend a career fair, host a STEM camp, reach out to your child’s coach or teacher? Some high schools throughout the country are teaching sports turf programs (STMA has a curriculum, should you wish to start one) and many sports turf managers are opening their doors to local schools and offering internships or game-day experiences. One sports turf manager I know is working with his professional sports club to develop a sports turf academy for young grounds staff, similar to the academies offered to athletes. That is one inventive turf manager!

Perhaps your local STMA chapter could sponsor an award at the Invention Convention, 4-H or FFA event. Invite your local Scout pack or troop to do a service project with you. Maybe reach out to your local refugee agency. There’s a whole group of young people looking for a job and a way to integrate into their community. I’ve had the privilege of getting to know refugees recently, and it’s one of the most rewarding things I’ve ever done. In our little piece of Ohio, we have also started a middle school STEM camp and we have created online certificate programs for turf professionals who are working and can’t attend college. Whatever you come up with, it will be totally worth it.

Lastly, remember that every human interaction you have is important. A quote by Toni Morrison that I try to live by – whether teaching or Scouting – is, “When a child walks into the room, your child or anyone else’s child, do your eyes light up? That’s what they’re looking for.” **/ST/**



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