SIDELINE REPORT

March 2016

SPRING FEVER

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News From the Turf Office

By: Randy Robinson, Chapter Executive

As your seasons begin to ramp up, here in the office we start to wind down a little bit. This the time where we can look back at what has been successful and not so successful for the ISTMA. First, we will look at the Iowa Turfgrass Conference in January. That being said, let me first thank all of those that helped throughout the process of planning a conference. From the educational sessions to the ISTMA social, you know who you are and I appreciated all of the planning, emails, and phone calls everyone did in order to make things successful.

As far as the education at the Iowa Turfgrass conference, we could use more feedback. For those of you that took time to fill out the surveys in the workshop and each of the sessions, I say thank you. Other than having a person to person conversation with each of you, the surveys are the only way we can get feedback on how everything was received. Please don't hesitate to call or email us to let us know. We already have some changes, concerning the ISTMA, in mind for next year.

The silent auction was again a huge success. We don't have all the funds in yet, but it looks to be somewhere around $8000.00 in sales. That, I believe, is a record year for the silent auction. Thank you to those that worked behind the scenes to make it a success. And most of all, thank you to all those that donated to the auction!

We have had a lot of returned mail here at the office. This is almost always due to bad contact information online. Please take time to go online to check and make sure all of your information is correct and update anything needing updated. The contact information online is used for mailings, emails, and phone calls. If it isn't correct, you won't be getting any updates etc. You can access this at: https://netforum.avectra.com/eWeb/DynamicPage.aspx?Site=ITI&WebCode=LoginRequired

While you are online, check out the events tab where you can find a slate of very impressive events for the 2016 season. Here is a link to the events page: http://www.iowaturf-grass.org/istmaevents.htm.

Thanks again to everyone that has helped Shawn and I adapt to the Turf Office. We are excited to work with you and excited to help take the ISTMA to new levels. As always, if you need anything, please don't hesitate to get a hold of us.

President's Message

By: Troy McQuillen, Kirkwood Community College

Let me be the first to welcome readers to the *Sideline Report* for the 2016 season. I am excited for the opportunity to lead this organization and look forward to working with our new Board of Directors. I would like to welcome our newly elected members: Shaun Eberhart with Northeast Goose Lake School District, Brad Thedens with the City of Sioux Falls, Ben Grimm with Iowa City School District, Zach Smith with the City of Council Bluffs and Colin Stuhr with the City of Iowa City Parks.

I also want to take the opportunity to recognize Jason Koester, CGCS, Chad Peterson and Jeff Bosworth, CSFM, for their service, leadership and dedication to the Board over the last few years. We appreciate everything you guys have done for the Board and thank you for your service.

This year the Board is excited about the opportunities for our membership to join together and learn from one another. We have several workshops already set for the 2016 season and more details will be handed out in upcoming mailings. Please get these dates into your calendars:

- Spring Workshop - April 27
  - Burlington School District, Host - Paul Swafford
- Summer Workshop - June 29
  - City of Pella Sports Complex, Hosts - Kevin Vos & Chandler Nunnikhoven
- Fall Workshop - September 7
  - City of Sioux Center, Host - Lee Van Meeteren
- Winter Workshop - December 1
  - Kirkwood Community College, Host - Troy McQuillen

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As a member, we also ask for your help in volunteering for our committees. The committees are an important part of our operations and if you have any interest please e-mail me at troy.mcquillen@kirkwood.edu. Committee opportunities are:

1) Conference Education Committee
   - To develop all content, sessions, workshops and select speakers and moderators for the next year's conference that will make it a "must attend" event for members and nonmembers; to recommend strategies that will drive attendance to the exhibition and will add value to exhibitors.

2) Workshop Committee
   - To develop content, locations, and scheduling to assist our host in the four ISTMA workshops.

3) Newsletter Committee
   - To insure that the ISTMA *Sideline Report* contains information relevant to the sports turf manager; to provide ideas and contacts for articles for publication. Work directly with Shawn Fopma with editing and publication deadlines.

4) Website and Social Media Committee (new)
   - To insure that the ISTMA website contains information relevant to members, prospects and the green industry in an easily accessible and consumable format.

5) Membership Committee
   - To develop initiatives to drive membership growth and retention; to recommend programs that add value for each member.

6) Award and Scholarship Committee
   - To judge the association's award's program applicants selecting the Field of the Year winners and Sports Turf Manager of the Year; to develop strategies to enhance the programs.

7) Environmental Committee (new)
   - To develop environmental strategies that position ISTMA and its members as leaders in environmental stewardship and the related health and safety issues that impact fans and players.

As this year's president, I have some goals for the organization and Board of Directors to accomplish. First, its time update our strategic plan for the future of our organization. As a Board, we will be looking for better ways to grow, communicate and recognize our membership for what they do. Second, is that we need to continue developing our relationship with our vendors. As an organization we need to make sure that we support and recognize our vendors as partners in accomplishing our goals.

Please don't hesitate to call or e-mail if you have questions or would like the opportunity to volunteer. I look forward to this year and seeing everyone at an ISTMA event.

(Photo: McClanahan Studio in Ames)

At Super Bowl, ISU Student on Her Own Turf

By: Courtney Crowder, The Des Moines Register

Give Georgeanna Heitshusen a minute to catch her breath.
She just finished Wednesday night's run-through of the Super Bowl 50 halftime show, and for the North English native, it was an actual run through.

Heitshusen and the rest of the crew have about eight minutes to set up the show on the field of Levi's Stadium in Santa Clara, Calif., and another eight to clear it, she said. But Heitshusen isn't concerned with halftime act Coldplay's stage or sound or even its wardrobe and its possible malfunctions.

Her only concern is the turf — and making sure Coldplay's hoopla doesn't muck it up.

Originally Published: http://www.desmoinesregister.com/story/entertainment/2016/02/05/georgie-heitshusen-super-bowl-turf-crew/79869440/

Heitshusen, an Iowa State University junior studying horticulture and turfgrass management, spent the week leading up to the big game learning from the top turf crew in the National Football League through the Toro Super Bowl Sports Turfgrass Training Program.

She's the first woman and the third student from Iowa State University to be selected for the intensive internship, awarded annually to one undergrad from any of the nation's turfgrass programs.

But exclusivity isn't new for Heitshusen: She's the only woman enrolled in ISU's turfgrass program and the lone woman on the student-run turf crew at Jack Trice Stadium.

"To me, the Super Bowl is the biggest stage I could have to show other girls that they can do this," Heitshusen said during a phone interview from the Santa Clara stadium. "To show them that they can make a career in turf management also, and a darn good one."

When Heitshusen takes to the field Sunday, she said, she's keenly aware she'll be breaking a barrier, but she's also just as excited to be living out her childhood dream of going to a Super Bowl.

For the past week, Heitshusen lent a hand painting, mowing and taking care of the field where the Denver Broncos and Carolina Panthers will play. She has had the opportunity to work with giants in the turf industry, like George Toma, who has worked on the grounds crew for every Super Bowl.

“It’s crazy and exciting,” Heitshusen said of getting to spend the game on the field next to Toma. Most of the time, the crew camps out near the sidelines, she said, but unlike tuning in on TV, they can’t exactly sit and watch.

“We’re sort of like a NASCAR pit crew,” she said. “Whenever something happens, we have to be quick about fixing it; got to get out there, make an adjustment and get back to the sidelines as fast as possible.”

Her Green Thumb Isn't New

Agriculture is in Heitshusen’s blood. Her family owned a farm in eastern Iowa, she said, and she’d often pass weekends working in the garden with her mom.

“We would can tomatoes and pickles; it was our way of providing for ourselves during the winter,” she said. “I fell in love with plant science, learning how to get the best vegetables and have the healthiest plants. And it taught me how to appreciate all the hard work that goes into good food.”
Heitshusen’s love of plant life continued through horticulture classes in high school. She knew she wanted to go into an agriculture-related field but wasn’t sure exactly what area, until she read about a student who landed an internship with the Minnesota Vikings’ turf team.

Heitshusen's interest was piqued, and she’ really never has looked back, she said. Soon after orientation at ISU, adviser and mentor Barb Clawson helped Heitshusen set up meetings with the Iowa Cubs, for whom she worked in summer 2014, and- with Amy Fouty, Michigan State University’s field turf manager, under whom she interned last summer.

“Georgie reminds me a lot of myself at that time in my career — charismatic, hard-working, willing to jump right in and help, passionate about working outside,” Fouty said.

After working with Fouty, Heitshusen returned to Ames more pumped than ever, Clawson remembered. And when the Toro opportunity came around, Clawson told Heitshusen she simply had to apply.

(Photo: McClanahan Studio in Ames)

“This is the biggest dance floor, this is the game to be at if you are interested in turf management,” Clawson said. “I told her, ‘Getting to do this, getting this internship, this is my dream for you,’”

Getting Prepped for the Big Stage

But Heitshusen wasn’t just pumped at the possibility of getting Toro’s internship when she returned from East Lansing, Mich. — she was prepared.

Over the summer, she had learned a little of everything: mowing, field fertility, aerating, top-dressing, irrigation and game preparation. And that information only added to the knowledge she gained from being a part of the Jack Trice turf crew, where she had to prep the field, work games and halftime shows, and hold fans at bay.
“She already understands what the collegiate-level football field has to look like before a game, so it shouldn’t be too hard for her to switch to working on a professional level,” Clawson said.

Or as Tim Van Loo, manager of ISU athletics’ turf and grounds, likes to say, his kids aren’t on the bench, they’re in the game.

“They’re not just holding the hose, they’re actually painting” he said. “They’re actually mowing. They’re laying down the stripes for game day.”

Breaking the Grass Ceiling

Heitshusen is the first woman who has worked on the turf crew under Van Loo, and she has seamlessly broken into the male-dominated shop, he said.

“The crew has a different feel when she’s working,” he said. “She’s usually very happy and always laughing. When you are working a long day and long hours, the fun aspect of what we do can get lost, but she brings it out every time.”

The turfgrass industry is challenging whether you’re a man or a woman, said Fouty. Professionals are working in a team environment with a living, growing organism, and that requires deep knowledge of biology, chemistry and physics paired with an artistic eye and creative sensibility.

And, yes, it is physical. So at just about 5 feet 2 inches, Heitshusen understands the importance of knowing your limits.

“I’m not going to be able to lift as heavy of objects as some men, but there are so many ways to contribute on the field,” she said. “I have to be just as tough mentally and, really, physically as anyone else. Everyday unique situations and challenges pop up, and you have to be able to drop what you’re doing and tackle them. And I know I can do that just as good as any guy.”

For Heitshusen, the stress and the sweat and the muscle strain are all worth the final product: a crisp, clean green field. After a summer spent aerating and fertilizing and top-dressing, there is no better feeling that watching the lights go up Saturday night.

“To be a part of the process from the beginning to the end, putting every ounce of effort you have into the field, and then to see a team on it, knowing it’s safe and playable and looking great at the end of the season, there’s just no better feeling,” she said.

As for the turf at Levi’s Stadium, Heitshusen can’t say much besides that she thinks players and fans at home will be very impressed.

But, she added, Wednesday night’s break is almost over, and she has to get back to work because, until Sunday's final whistle, her only concern is the turf.

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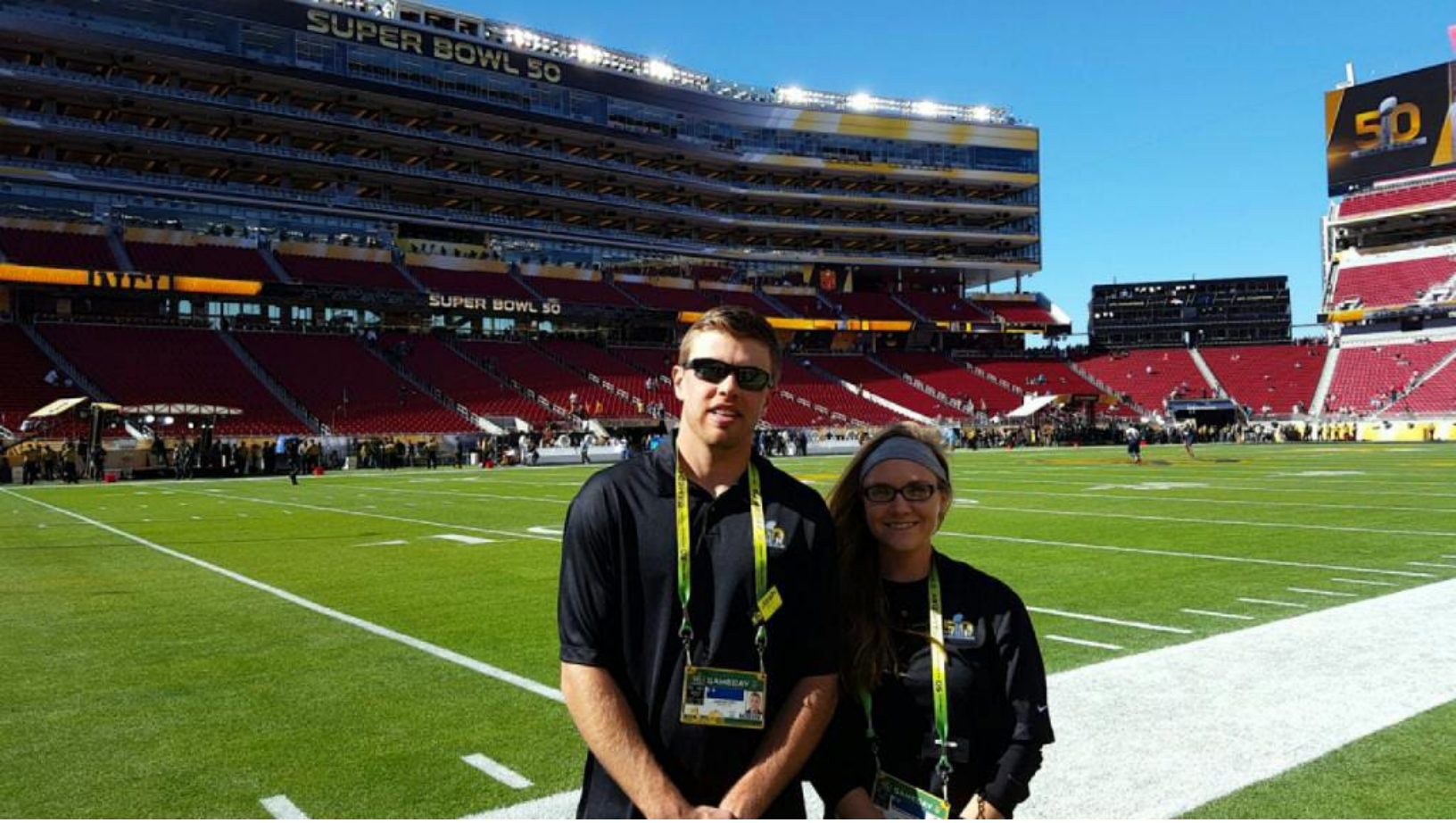

Congratulations

The Iowa Sports Turf Managers Association and the Iowa Turfgrass Office would like to congratulate Iowa State University students Josh Lenz and Georgeanna Heitshusen on their extraordinary efforts in preparing the Levi's Stadium field for Super Bowl 50. Thank you for proudly representing our association!

In 2003, Toro teamed with the NFL to create the Super Bowl Sports Turfgrass Training Program, providing students in the field of turfgrass management the opportunity to assist the grounds crew in the field preparations for the NFL's biggest game. Since the creation of the Super Bowl Sports Turfgrass Training Program, Iowa State University has had three students selected for this incredible opportunity, more than any other school.

STATE

Iowa Turfgrass Conference Review

By: Lee Van Meeteren, City of Sioux Center

It's hard to believe that we are getting close to getting fired up for our crazy spring schedules. For me, it feels like we just finished over-seeding right before our first snow. If you had a winter like we had here in Sioux center, you are ready for warmer weather so we can at least get to the trees we need to trim.

Since I'm finishing my first year on the Board and going into my second year, I couldn't be prouder of the things we were able to accomplish. I'm looking forward to working with a great new bunch of guys that you, the members, voted in. I will be the first one to say that I was a little nervous moving the show to the eastern side of the state. I wondered how our numbers were going to be affected since the last two shows were in different places, but I was extremely surprised by great turnout and another great year of speakers and socials.

After eight years of building a network in the state, the friendships I have started to create are becoming the most important tool I have at work! I am a very strong believer that being a part of associations like this is a huge factor in my personal and professional growth. The opportunities for education that are available in the state of Iowa are some of the best in the nation. The people who find speakers for our wonderful conference every year, and who also end up teaching in some way or another in our round table discussions or at the ISTMA social have become a highlight in everyone's trip.

My perspective grew just by having the chance to go to the national conference and then turn around and attend the Iowa conference. I could see our educational agendas compared to national agenda and I am blown away. As a newer supervisor in the industry, I was impressed by the excitement the people in our industry have. Where else can you sit at a table with an irrigation icon, a ball field construction manager, and three other guys that manage sports complexes sitting at a table together? You can have a couple-hour discussion about how to build a sports complex, and I can dream of my own new complex. These types of things only happen when you take the opportunity to become members and put yourself out there and get involved.

So, ladies and gentlemen, as I sit here trying to review the conference of 2015, all I can really think of is excitement for where our industry is going. I have a new-found confidence in knowing that I'm not alone, so please, please, PLEASE put the 2017 conference on your calendar and look for the workshop schedules for 2016. Remember to never be afraid to call any of the Board members and we can either help or we will find the right people to help with any questions.

God bless and good luck in 2016!

Congratulations to Doug Watt, of West Marshall High School, for being awarded the 2015 Terry Mellor Continuing Education Grant at the 2016 STMA Conference and Exhibition in San Diego, California.

The Terry Mellor Continuing Education Grant winner is given $1,000 with the purpose of covering a portion of the expenses incurred while attending the STMA Conference each year.

Any member of an STMA affiliated chapter is eligible to win, and must be nominated with a letter of recommendation written by a National STMA Member.

This award serves as a remembrance of Terry Mellor, brother of long time professional groundskeeper David R. Mellor. David is currently Director of Grounds with the Boston Red Sox. This scholarship is in keeping with the commitment to professional development through continuing education, a philosophy shared by the Mellor brothers and TURFACE Athletics®.

Winterkill of Iowa Athletic Fields

By: Ryan Adams, Iowa State University Turfgrass Extension

Winterkill of Iowa athletic fields is dependent on several factors. Spring turf death can be caused by abiotic and biotic stress conditions before and during the winter season. This is particularly true of perennial ryegrass, tall fescue, and annual bluegrass, which are very susceptible to the winter stresses common to Iowa. Winterkill can be a result of poor freeze acclimation and direct low temperature kill, crown hydration, hypoxia (lack of oxygen), desiccation, or diseases like snow mold. These environmental effects can vary depending on location, making it difficult to characterize and predict. In addition to these winter stresses, overall plant health plays a vital role in determining the amount of damage to expect. Throughout this article, we will address each environmental condition, and offer suggested maintenance practices to reduce the severity.

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Freeze Acclimation

As the weather cools down in the fall, cool-season turfgrass vertical shoot growth slows, leaf area diminishes, and the plant begins to accumulate lipids and carbohydrates in preparation for winter. The colder weather and shrinking day lengths trigger these physiological and structural changes inside turfgrass cells. Turf requires several cycles of freezing to allow the plants to acclimate to winter. According to DaCosta and Watkins (2010), this occurs in two phases, with the first occurring between 32-45°F degrees, followed by a second stage of adaptation when subjected to below freezing temperatures (22-32°F degrees).

In addition to storing these carbohydrates and energy, the plant begins to release water. The tissue water content drops during the acclimation process from approximately 85% to 65-70%, as creeping bentgrass begins to enter dormancy (Beard, 1998). The low-temperature hardiness for creeping bentgrass is comparable to that of Kentucky bluegrass, and more than likely has a similar drop in tissue water content and accumulation of carbohydrates. In contrast, perennial ryegrass is unable to lower its water content below 80%, increasing the likelihood of a direct low temperature kill (Beard, 1998). Overall, the temperature at which the turfgrass can make these physiological and structural changes inside the cells relates to the overall freezing tolerance of the plant.

Research from Hulke et al., (2007, 2008) at the University of Minnesota found that perennial ryegrass has a lethal temperature with 50% death (LT50) from 7 to 14°F depending on cultivar. In contrast, Hoffman et al., (2010) at the University of Massachusetts-Amherst determined that annual bluegrass has a LT50 at approximately 0.1°F. Consistent with Hoffman's work, Minner (2007) found the LT50 of Poa ranged from -4 to 14°F.

In a "normal" winter, which I personally have not seen in the seven years of living in Iowa, the ground freezes several inches deep before the first substantial snow accumulation. When this phenomenon occurs, turf usually overwinters correctly due to reaching both acclimation stages as reported above. Although, when the soil remains unfrozen and high soil moisture persists at the time of the first snow, the turf is unable to perform necessary physiological and structural changes. As a result, the frost enters the crown and kills the unhardened plant.

Species Selection and Cultural Practices

Below you will find a chart looking at the low temperature hardiness of several turfgrass species produced by Beard (1973).

Low - Temperature Hardiness	Turfgrass Species
Excellent	Rough Bluegrass
Good	Kentucky Bluegrass
Medium	Annual Bluegrass
	Tall Fescue
Poor	Perennial Ryegrass

Species Selection and Cultural Practices (continued)

Selection of the correct species in Iowa is dependent on several factors. One must consider the overall function, desired aesthetics and maintenance, and location in the state. The potential for winterkill often plays an important factor in the species selection process. As a general rule, I do not recommend tall fescue use above Highway 20, because of the increased potential for winterkill. In addition, the establishment of perennial ryegrass north of highway 80 tends to see increased winterkill. The winters of 2008 and 2014 led to extensive perennial ryegrass death across central Iowa. While perennial ryegrass has several great characteristics suited for Iowa athletic fields, its ability to withstand Iowa winters is not one of them.

The overall maintenance of these species plays a vital role in determining winter damage. Late season management to increase overall plant health can be one of the most important factors to prevent winter damage. Adding nitrogen late in the fall stimulates growth, which as a result increases succulence, and prevents the plant from acclimating properly. Prior to full-dormancy, plants tend to bruise easily following mowing. The bruising is a result of low crown hydration, which slows metabolism and subsequent regrowth. Succulence can also lead to increased desiccation. While nitrogen late in the season can cause additional problems, potassium applications throughout, and late in the season, can increase cold temperature tolerance. Studies have shown that potassium applications play an essential role in stress management.

In addition to fertility, there is a higher mortality rate in recently seeded areas and areas of intense traffic. Any stress throughout the year that compromises the roots will increase winterkill susceptibil-

ity. For example, shade, poor drainage, compacted soils, low mowing heights, etc. may decrease winter survival. Perennial ryegrass and annual bluegrass species are most susceptible to desiccation, crown hydration, and/or ice cover. Furthermore, permeable covers can be used to reduce winter desiccation, limit winter traffic, increase temperature, and increase spring green-up. Impermeable covers also may be used to reduce moisture and the formation of ice around the plant. Improving drainage by opening channels through the slush and ice will help prevent damage. It is important to remember that maintenance and turf selection play a vital role in winter survival.

Spring Crown Hydration

Crown hydration occurs when the plant begins to take up water during the warmer days of late winter. Warmer temperatures and/or rainfall melt leftover snow prior to the soil thawing. Poor infiltration in unfrozen to semi-unfrozen ground causes water to pond in low-lying areas. Warmer temperatures followed by a hard freeze of water surrounding the plant lead to the rupture of saturated plant cells. The upward movement of water during a typical winter thaw compounds the problem.

Species that emerge from dormancy first, such as poa annua and perennial ryegrass are usually more susceptible to crown hydration. In addition, the potential for crown hydration increases the longer the warm-up period exists, or if conditions exist with higher quantities of surface water at the time of rapid refreeze. One of the biggest difficulties related to crown hydration is that the damage is not evident until warmer temperatures of spring arrive. The crown hydration damage only begins to turn brown as chlorophyll pigment fades from the leaves. Turf in low areas, poorly drained soils, or any area that accumulates standing water may be affected by ice encasement and crown hydration. Increasing surface drainage in these areas will help move water and reduce damage.

Ice Hypoxia

Fluctuations of temperature and moisture are common in Iowa during December and January. These variations of rain, freezing rain to snow events, occur throughout the early winter months. Because of these transitory thaws and freezes, turf is potentially developing an ice layer over the top of the turf canopy. The thickness and type of ice is dependent on the weather and site specific conditions. When, thick dense ice coats the surface, it can create hypoxic conditions (lack of oxygen) in combination with high concentrations of carbon dioxide and other toxic gases. When ice-snow layers are present, it is not as much as a priority due to consistent gas exchange.

While there is a high level of concern across the industry in ice coverage, there is great debate on the longevity required to cause damage. The factors that contribute to ice accumulation are difficult to quantify and replicate. A general consensus across the industry believes a majority of turfgrass can survive 70-90 days under ice. Prolonged ice coverage can begin to lose air and cause extensive turf

damage. One of the most difficult decisions is whether to remove the ice. Several factors can be used to influence your decision, which include ice cover duration, current and future temperatures, and labor. It is important to understand that turf damage may occur regardless if the ice is removed. Physical removal of ice can also cause unintended mechanical damage and expose turf to unfavorable future temperatures/ice conditions.

Dessication

Desiccation occurs when dormant leaves dry out during the winter. Desiccation injury is usually greatest in elevated areas that have high surface, internal drainage or exposed to wind. In addition, snow acts as a natural cover and protects the turf from winter desiccation. As snowfall totals across western Iowa and Nebraska diminish, there is an increase in desiccation injury. As previously mentioned, the winter acclimation process drops the tissue water content from approximately 85% to 65-70% in some species. Turf exposed to wind and other winter elements can further reduce the water content in the tissue, reaching levels that kill the plant. In relation, this is comparable to drought stress turf that reaches the plant wilting point. Consistent snow coverage is one of the best defenses against winter desiccation due to reduced exposure to winter wind and conditions.

Snow Mold

The two diseases commonly called snow mold are Typhula blight- gray snow mold and Microdochium patch- pink snow mold. Gray snow mold is caused by Typhula spp. and requires extended periods of snow cover; while pink snow mold (Michrodocium nivale) can occur with or without snow cover. In Iowa, pink snow mold is more likely, while gray snow mold occurs more frequently in the upper transition zone. Damage from both pink and gray snow mold will usually recover as spring temperatures rise and growth resumes. Heavy late season applications of nitrogen can increase the likelihood of snow mold development and lead to poor cold acclimation. Snow mold also thrives under growth blankets, and conditions when early fall snowfall develops over unfrozen ground. If snow mold injury is a recurring problem, preventive fungicide applications are the best control option.

Conclusion

The extended forecast looks like the cold weather is behind us, and the snow will begin melting in upcoming weeks. With warmer temperatures, we can start looking towards the 2016 growing season. The first step is to determine the extent of the damage and begin developing a plan of action. I always recommend grabbing a sample as soon as possible. Place the sample in a greenhouse or inside where it will receive adequate light, nutrients, water, and warmer temperatures. If you begin to see new green color and growth within a few days/week, you should be good to go.

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2016 ISTMA Scholarship Recipients

Ryan May

Gary Peterson ISTMA Scholarship - $1,000

Todd McQuire

Gary Peterson ISTMA Scholarship - $1,000

Zachary Olinger

Gary Peterson ISTMA Scholarship - $1,000

Eberhart Board Introduction

By: Shaun Eberhart, Northeast Community School District

To start, let me be the first to thank everyone who attended the Iowa Turfgrass Conference this past January in Coralville. It's always great to catch up with other turf professionals across the state; and I hope you took as much away from the conference as I did! Secondly, thank you for electing me to be the newest At-Large Director on the ISTMA Board of Directors. I'm truly honored and look forward to helping making the ISTMA an association everyone finds to be beneficial.

With that, I'd like to introduce myself to people who may not already know me. My name is Shaun Eberhart and I'm currently the Director of Grounds for the Northeast Community School District in Goose Lake, Iowa. My love of sports turf began because of three simply reasons: I loved mowing grass, I loved sports, and I enjoyed being outside. My first job in the turf industry was with the Clinton Lumberkings as a grounds crew member in high school.

After high school, I attended Kirkwood Community College where I graduated with an A.A.S. degree in Golf Course/Sports Turf Management. While at Kirkwood, I worked for the City of Iowa City under the direction of Joe Wagner and also did an internship at Fenway Park in Boston, Massachusetts. From Kirkwood, I transferred to Upper Iowa University where I earned a B.S. in Applied Plant Science. During my time at Upper Iowa, I worked the university's ground department, the Minnesota Twins, and the Reno Aces, a AAA Affiliate of the Arizona Diamondbacks.

Which leads to me where I'm currently employed, the Northeast Community School District. I was employed by them in November of 2013. I currently oversee all outside maintenance of the 70 acre campus. During my time on the ISTMA Board of Directors, I really want to stress the benefits of ISTMA membership and the importance of properly maintained fields to facilities where resources may be slim or proper cultural practices aren't being executed.

Spring is right around the corner so with no further a due, I wish everyone a great growing season! May we all continue to grow as turf professionals to continue to provide safe and aesthetically pleasing athletic facilities for athletes of all ages.

2015 Baseball Field of the Year &
2015 Sports Turf Manager of the Year

Jesse Roeder

Cedar Rapids Veterans Memorial Stadium

2015 Football Field of the Year

Cory Jenniges

Mason City Mohawk Football Stadium

2015 Golden Cleat Award

Lynda Wightman

Hunter Industries

Stuhr Board Introduction

By: Colin Stuhr, City of Iowa City

With spring fast approaching, I hope all of your fields are coming out of the winter season on a high note, with fast spring green ups and minimal large rain events.

I look forward to getting to know everyone in this industry at a professional and personal level as time goes on, but to get things started, here's a little bit of information about myself to help you get to know me. Without even knowing it, I began my career at the age of 11 when I began mowing yards for my family and friends. I continued to make money throughout my high school days by being a solo act in my own lawn care business. Then as I approached my college years, I was uncertain on what I wanted to do with my life and thought, "Well maybe there is something behind this turf industry."

In my life, my biggest passion has always been for sports. I thought, what could be better than combining my interest in turf and my passion for sports into one. Ultimately, my passion changed from solely sports to the maintenance of sports fields. In my career I have seen many different levels of athletics from recreational sports to minor league baseball. My love of the game and my appreciation for maintaining a nice playing surface was found at the recreational level, which is what made me decide that I wanted to bring my passion for sports turf to this level and see my fields used daily by youth athletes.

I have enjoyed being outdoors from a young age. I started hunting at the age of eight, shot my first duck at the age of ten and my first deer at the age of twelve. My first buck that's mounted on my wall was shot when I was thirteen. Being a hunter I decided to get a bird dog, and I now have a four-year old chocolate lab named Stuhr's Chasin' Waterfowl. He goes by Chase and I have trained him since he was a puppy. I recently got into bow hunting and I shot my first deer with a bow on November 8th, 2015. I have lived in Eastern Iowa for my entire life and I now own a home in West Branch. My love for the outdoors and wanting to stay in Eastern Iowa led me to my position as a Sports Turf Manager for the City of Iowa City, which is a perfect fit for me.

As I have become more involved in the Sports Turf Industry I have always made it a personal ambition to hold a seat on the Board of Directors for the ISTMA. A goal of mine as a board member is to make education workshops and conference sessions more available and useful for ISTMA members. Another goal that I have is to create more benefits for all Turf Managers and finding out what Turf Managers and employers need concerning these benefits. I would also like to get younger Sports Turf Managers involved and improve their knowledge on the Sports Turf Industry. With the knowledge and resources that we have within our chapter, I have always felt the need to help the less fortunate communities and school districts, via workshops or workdays, and help them to realize the importance of having a Sports Turf Manager on staff in their organizations. I consider it an honor to be on the Board of Directors for the ISTMA, and I encourage you to contact me at any time and I will do my best to be of assistance in any way possible.

Best of luck in the upcoming 2016 season!

$8,000 +

Thank you!

The Awards and Scholarship committee would like to thank the vendors and individuals that donated goods to the ISTMA Silent Auction at the Iowa Turfgrass Conference and Trade Show.

Money raised through the Silent Auction enables ISTMA to award scholarships to Iowa students pursuing careers in the Sports Turf Industry.

ACME Materials Company
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STMA National Review

By: Tim Van Loo, CSFM, Iowa State University Athletics

The warmth and sun of San Diego, California was as advertised. Also, the STMA 27th Conference and Exhibition was not only well attended, but it broke our attendance record that was set a year ago in Denver, Colorado. The rise in attendance has been encouraging for the STMA, the sports industry and the sports turf manager. The excitement and energy that the conference has is intoxicating and carries over into the growing season. This year was no different; I will try to highlight a few things that I experienced.

Tuesday was a day of choices. The choices were the SAFE Golf Tournament, the Tour on Wheels or some extended education opportunities. The Tour on Wheels was well attended and I personally heard nothing but good things. I was unable to take the tour, but when I have in the past I know I was always able to take things away from others that I have put into my programs here at Iowa State. I think the opportunity to see success at other sporting venues is important to furthering our industry, and these tours allow for a lot of opportunity to further our industry by simply showing what has worked for that particular sports turf manager. The education opportunities for Tuesday are usually longer presentations that go further into detail on specific topics. The extended time allows for a deeper background and learning opportunity for attendees. The topics this year were very good, and many people attended and took the opportunity to further their knowledge on a specific topic. The SAFE Golf Tournament was a four-man scramble and was a great event. Let's face it, golf in January is always fun!!

Wednesday was when the education really kicked off. The day started with a few teasers and quickly moved into the different education tracks. I tended to stay with the injury focused talks and what we as Sports Turf Managers should be doing to help prevent them. The NFL is now showing an increased statistical difference in lower leg injuries on artificial turf when compared to natural grass. The type of shoes that athletes wear on the artificial turf is a huge factor in potential injury. Concussions are also a very hot topic; the data can be very scary if not understood. There are also a lot of unknowns with head injuries, but the science is coming and we will have many answers in the near future. Wednesday is always capped off with the welcome reception. This year it was outside in perfect temperatures with a great atmosphere. It's a time to catch up with those you know or meet and network with people that you don't.

Thursday starts with education in the morning. All classes were well received throughout the conference and I heard nothing but good things. The STMA annual meeting happens after lunch and the keynote speaker. The keynote speaker was very educational and entertaining, his focus was on the physics of football primarily. Once you understand the physics and see some of the hits that cause injury, you can then back up and try to understand how to prevent injuries. This is similar to test dummies in the auto industry. The annual meeting went very well. The STMA is financially very healthy and looks to continue to find ways to use our resources to better our industry and product. Jeff Salmond, from the

...continued on next page

University of Oklahoma took over as President. Jeff is a great leader and will serve the STMA as best he can. After the annual meeting is when the trade show opens. This year we had a new record for vendors which made for a great trade show. It was an opportunity to find solutions to any problem you might be having and see what's new for 2016. Thursday afternoon is also when the student challenge happens. Kirkwood Community College had three teams compete and Iowa State University had two teams compete. This year Iowa State University finished 2nd in the 4-year school division.

Friday morning is more trade show and education. The education was sport specific panels. The panels were well attended and are an opportunity to ask questions to some of the industry's best, even though I was on one of the panels, the people up there with me were very good! Friday afternoon was another opportunity for a tour on wheels, education or COTS for those that are involved in chapter office positions. The conference ends with a banquet and awards ceremony. This is always my favorite part of the conference. It's when you see all the scholarship winners and field of the year winners as they are presented with their winnings. Than the final part is the presentation of the Founders Awards. This is when you see people that have gone above and beyond for the STMA to be recognized for their efforts.

If you ever have the opportunity to attend the STMA national conference I promise you will not be disappointed. I simply am better at my job because of the STMA and owe much of my success professionally to the STMA. Next year is in Orlando, Florida, and will be as great as years past.

Above: Iowa State University students attend the STMA Conference and Exhibition in San Diego.

Below: Kirkwood Community College students attend the STMA Conference and Exhibition in San Diego.

Topdressing - Mostly Art with a Little Science

By: Ryan Adams, Iowa State University Turfgrass Extension

Throughout my travels, I have come across several different topdressing strategies within Iowa sports turf managers. While there are similarities, opinions vary on application methods, frequency, equipment, and material handling. Regardless of whom I visit, the goals of each topdressing program seem to revolve around organic matter management, thatch control, improving internal drainage, and field consistency/smoothness.

One of my first questions when addressing topdressing programs is particle size distribution. The all too common answer is “I don’t know, same as we’ve always used”. While consistency in the product is good, source quality can change over time, making it crucial to occasionally measure sand size and quality within a topdressing program. Throughout this article we will talk about whether a topdressing program is right for you, how to incorporate through cultivation, general cost of topdressing, the importance of sand particle size, and how much sand is needed when surface applied and also following aerification.

Implementing a Topressing Program

Before determining a proper topdressing material, one must consider the overall purpose of the topdressing program. A well-defined and consistent program can:

- Modify and/or dilute thatch
- Increase long term water infiltration and percolation through gradual soil modification
- Increase seed germination
- Smooth/level playing surface

The essential first-step is selecting the right material. Soils across Iowa vary depending on location from; very fine, heavy-textured clay/loam soils to very coarse; sandy soils. As a result, it is highly recommended to first test the underlying

soil texture (sand, silt, and clay content). After determining soil texture, locate a product that fulfills the particle size criteria required. The material selected and original soil needs to be carefully considered to meet the goals of the overall program. The success of a topdressing program is reliant on the ability to find equivalent materials that are slightly coarser than original soil composition.

A common mistake is adding fine texture material over a course-textured soil. This can occur when sod is laid over an existing root zone and through improper topdressing. In addition, placing fine over course material will create distinct layers that clog internal drainage. The entire fine-textured portion will need to saturate with water before advancing into the course-textured material. Therefore, always place coarse textured material over finer textured material to increase percolation, provided there is adequate pore space between particles.

Modification Through Cultivation

When modifying an existing root zone, adequate cultivation is necessary to insure proper incorporation of the material. The more a topdressing material varies from the existing root zone in relation to its texture classification, the more cultivation required. Without sufficient cultivation, there remains a high potential for layering to occur. Anytime there is a layer created in the soil, the layer interface can negatively affect hydraulic conductivity, root penetration and air/gas exchange characteristics.

The objective of all topdressing programs is to reach 75% sand by weight in the root zone. At 75% sand by weight, macropores are created allowing the sand particles to bind and reduce particle density. The large pore spaces reduce the probability of a field to become severely compacted. In addition, aerification holes backfilled with sand can create deep channels that allow water to move through soil rapidly. Lapses or inconsistent programs can cause major infiltration and layering issues in the future. Topdressing is a multi-year process and once started needs to continue for the life of the field. Frequent topdressing is also used to dilute thatch layers that develop over time. Thatch is an intermingled layer of living and dead crowns, stems, roots, and rhizomes. A small thatch layer under athletic fields between 0.25-0.5 inches can provide stability and padding for athletics, however an excessive thatch layer (>0.5 inches) can prevent water infiltration, as well as, create a favorable environment for pests. Diseases and insects thrive in saturated environments caused by excessive thatch. In addition, the consistently wet surface and concentrated thatch layer can discourage roots from developing deep into the soil profile. Fields with poor rooting reduce field stability and negatively influence an athlete's traction, resulting in more injuries.

Fine sands range from 0.5 to 0.25 millimeters, while granular particles greater than 2 millimeters in diameter are considered fine gravel. As a general rule of thumb, uniform rounded medium coarse sands (0.25 – 1mm) should be used on Iowa's native soil fields. United States Golf Association (USGA) recommended sands with 60 percent by volume in the medium-coarse size range would be optimal. Rounded sands are also preferred for modifying native fields due to the large pores and higher macro-porosity. Finer sands will ensure surface stability in sand-based fields. In general, increasing the coarseness of the sand reduces the overall stability.

On average, a majority of the topdressed fields in Iowa receive 25-50 tons (1-2 truckloads) each year. The timing of application is dependent on the total number of events and sport turf manager's maintenance program. Some fields are topdressed several times with light topdress-

ing, while others focus on heavy applications after aerification. Regardless of method and timing, topdressing should only happen during periods of active growth, unless used late in the season as a desiccation prevention technique.

Topdressing Costs

The biggest cost associated with topdressing are the fees required to transport material to a given location. Current cost of freight is determined by adding the base rate ($3.40/mile) and fuel surcharge ($0.70 cents/mile), which is usually 20% of the base rate. Total freight cost may be listed as two separate line items, or combined as a total transportation cost. The fuel surcharge will fluctuate during a given year as the base rate changes. Commonly, overall freight costs around $4.00 per mile. Therefore, transporting a truckload of sand 100 miles would cost about $400 dollars. The freight cost often exceeds the price of sand.

Current estimate of sand costs:

- USGA Sports Turf Sand 90/10: $31.40 per ton
- Class 2 USGA Sports Turf Sand: $13.50 per ton
- Mason sand: $12.00 per ton

Generally, the cost of topdressing material increases with increased particle size specification. Additional vibrated reflux classifications and screening processes to distinguish varying particle sizes increase the overall cost. As a result, increased cost typically means higher consistency within a given material. With the expense of transportation, and difficulty in finding high-quality sand, it is important to consider site-specific management, transportation and sand costs, as well as the overall the goal of the application prior to purchase.

Quality Assurance

While the cost often equates to the overall quality of the sand (consistency and size), the most vital factor is sand size in relation to your initial root zone mix and/or previous material used. Just because a USGA 90-10 'Sports Turf Mix' is the high cost in this example, does not mean that it is the best selection for all situations. As is the case in some situations, cheaper mason sand may be required to prevent layering. The mason sand may be coarser and less consistent than the USGA 90-10, but it may be optimal based upon your original soil texture, past topdressing material, and current/future maintenance strategies.

I recommend semi-annual testing through universities or independent labs to insure quality. Additional testing is required whenever changing sand sources. A simple test

for a nominal fee can prevent one “bad” topdressing event from compromising several years of work. I also recommend inquiring about the underlying soil prior to purchasing and installing sod. Confirming establishment and growth on comparable soils will help prevent layering and summer patch in the future.

How Much Sand Do I Really Need?

The table below can help determine surface topdressing requirements to specified depths. For example, an entire football field and surrounds at 1/8 in. would need 0.56 tons/1000 sq. ft. or 33 tons/60,000 sq. ft.

Sand needed for Surface Application (ton/1000 sq. ft.)		
+ 1/8”	+ 1/4”	+ 1/2”
0.56	1.12	2.24

Aerification can be beneficial in combination with a sand topdressing program to improve the internal drainage of a field, reduce thatch, improve fertilizer uptake efficiency, as well as providing a uniform surface. To determine material needs for backfilling aerification holes and surface application depth, one must account for the size and frequency of aerification holes. The following table provides specific requirements and areas impacted for various core aerification and topdressing depths. The general assumption that sand weights 1.45 ton/cu. yd. and there is 100% aerifier efficiency is used. Modified table originally created by Dave Minner.

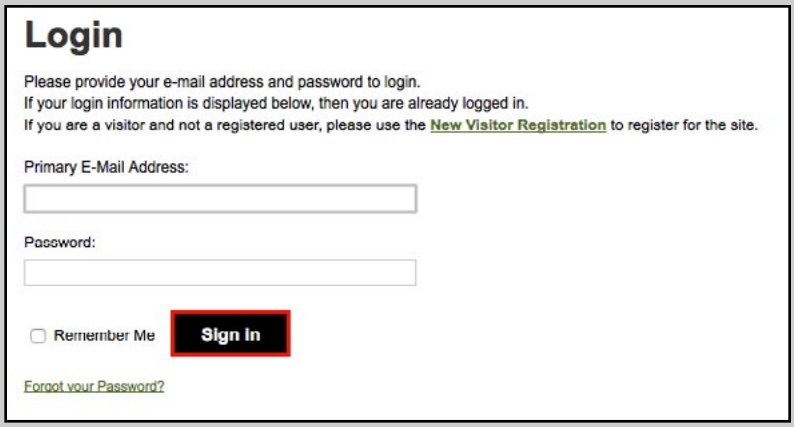
Sand Required and Areas Impacted for Various Coring and Topdressing Programs										
Core Spacing (inches)	Holes Per SQ FT	Tine Diameter (inches)	Tine Depth (inches)	Sand needed to fill holes & surface (ton/1000 SQ FT)			Area Removed Each Pass (%)	Number of passes with aerifier to impact a given area of field		
				+ 1/8”	+ 1/4”	+ 1/2”		50% Removed	25 % Removed	10 % Removed
2	36	0.5	3	1.22	1.78	2.89	5.0	10	5	2
			8	1.76	2.87	4.00				
		0.75	3	2.04	2.60	3.72	11	5	2	1
			8	4.51	5.08	6.19				
3	16	0.5	3	0.85	1.41	2.53	2.2	22	11	5
			8	1.34	1.90	2.93				
		0.75	3	1.22	1.78	2.89	5.0	10	5	2
			8	2.32	2.87	4.00				
4	9	0.5	3	0.72	1.28	2.40	1.3	40	20	8
			8	0.99	1.55	2.68				
		0.75	3	0.93	1.49	2.61	3.0	18	9	4
			8	1.55	2.10	3.22				
6	4	0.5	3	0.63	1.19	2.31	0.5	90	45	18
			8	0.75	1.31	2.42				
		0.75	3	0.72	1.28	2.40	1.3	40	20	8
			8	0.99	1.55	2.68				
8	2.25	0.5	3	0.60	1.15	2.28	0.31	161	81	32
			8	0.68	1.22	2.35				
		0.75	3	0.65	1.21	2.33	0.69	72	36	15
			8	0.81	1.36	2.48				

In conclusion, topdressing is a valuable tool for all sports turf managers, and when used correctly it can improve field quality and safety. It is vital to select the right material when implementing a topdressing program. Selecting the correct material can lead to increased longevity of the field and provide a better surface for the youth of tomorrow.

Update Your Membership Information

1) Begin by visiting the ISTMA homepage: http://www.iowaturfgrass.org/istmahome.htm

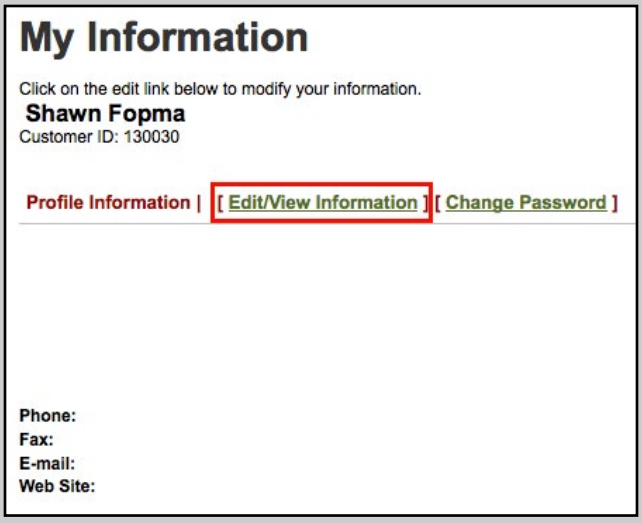
2) On the ISTMA homepage, click the “Manage Your Membership” link.



3) Enter your login information. If you do not know your e-mail address or password, please contact the Turfgrass Office for assistance.

4) Click “Sign In” once you’ve entered your login information.

5) Click on the “My Information” link of the left side of the page.



6) Click on the “Edit/View Information” link and make sure your contact information is up-to-date.

7) Once your information is updated, click “Save”

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