Enhanced-Efficiency Nitrogen Fertilizers for Turfgrasses

White Grub Control on Athletic Turf

Plus, Updates from KAFMO
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Mike Stell, Quail Hollow Club
Penn State, Class of 2015

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It is my honor and privilege to write to you this spring as your new president of the Pennsylvania Turfgrass Council. I am grateful for the opportunity to lead an organization that has benefited so many turf professionals over the past 38 years right here in Pennsylvania.

I want to start by thanking all of those who have made the PTC an outstanding organization. More specifically, I first extend my gratitude to Mr. Jason Hurwitz, now past president of the PTC, for his countless hours of dedication in leading over the past two years. Mr. Hurwitz took on many challenges during his tenure and always led in the best interest of our organization. I also want to thank our past board members and officers for paving the way for our current leaders in the organization. I want to recognize Mr. Tom Bettle, former PTC president and current director of operations, for being instrumental by assisting our new management firm, NRKline LLC, with day-to-day management.

Many thanks go out to our vendors and sponsors for your continued participation in our annual events. Your contributions play a significant role in the PTC’s ability to support the turf project at Penn State each year. I also thank our turf team at Penn State for their continued excellence in being the leader of research and education of the green industry. And last, but not least, I thank you, our PTC members, for your ongoing support and attendance at our annual educational conferences.

PTC educational events continue to generate significant funds each year, supporting the turf projects at Penn State. The funds are utilized for student scholarships and technician employment, and ultimately, they support the Penn State faculty in producing research that educates you. The conferences sponsored by the PTC provide continuing education by revealing the most recent research performed at Penn State’s Valentine Research Facility, and this allows for you to also maintain your certifications.

By serving as a director on the PTC board over the past six years, I have come to understand the importance of the PTC and how it has benefited thousands of green-industry professionals across the state for many years. As I look ahead to the future of the PTC, I ponder how the PTC will excel to a greater capacity with an industry that is always changing, where dollars are already stretched further than ever before and where there are now more opportunities to stay educated than in years past. My answer is — help the PTC spread the good word!

This magazine is only one vehicle for PTC information to travel. I am confident that the quality of our PTC-sponsored conferences is at the top of available options from an educational and networking standpoint. My goal is to utilize marketing resources such as Twitter (@PaTurf), our website (paturf.org) and a committed membership to gain more interest in our affordable educational events and to grow our membership. I encourage our current members to reach out to friends or colleagues who may not currently be members of the PTC and ask for them to join. I also encourage you to invite friends and colleagues to a local PTC-sponsored conference in 2015 and beyond.

Finally, please take the time to share this publication with your friends and colleagues. I thank you for reading this update and for your continued support of the PTC. If the PTC or I can be of help to you, please do not hesitate to contact the PTC office (814-237-0767 or info@paturf.org) or me (610-451-3229 or andrewd@berkshirecountryclub.org).

Andrew Dooley
2015–2016 PTC President
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Choosing a fertilizer is an important management decision that affects the quality, color and durability of your turf. Because nitrogen fertilizer is a significant maintenance expense, some serious thought should go into choosing the most efficient product for your operation. Depending on when and how it is applied, the source of nitrogen also has implications on leaching and gaseous losses to the environment. Because of cost and environmental concerns, fertilizer companies have developed products called enhanced-efficiency nitrogen fertilizers.

According to the Association of American Plant Food Control Officials (AAPFCO, an organization of state/federal fertilizer regulators), enhanced-efficiency fertilizers allow increased uptake of nutrients with reduced potential of gaseous, leaching or runoff losses compared to soluble fertilizers such as urea or ammonium sulfate.

Enhanced-efficiency nitrogen fertilizers are divided into two groups: stabilized fertilizers and slow-release fertilizers. Stabilized fertilizers are products amended with additives that reduce the rate of nitrogen loss through ammonia volatilization or nitrification. Slow-release fertilizers release plant nutrients at a slower rate relative to soluble nitrogen products.

**Stabilized fertilizers**

Nitrogen-containing stabilized fertilizers on the turfgrass market act on two processes: the transformation of urea to ammonia gas (urea hydrolysis) and the conversion of ammonium to nitrate (nitrification). When urea is applied to turf and watered into the soil, it undergoes hydrolysis and is rapidly converted to ammonia and then to ammonium, which is a relatively stable form of nitrogen that can be taken up by the plant. If the urea is not watered in, some of the hydrolyzed urea-nitrogen can be lost into the atmosphere through a process known as ammonia volatilization. The urea-hydrolysis process is hastened by the urease enzyme, which is abundant in soil and thatch.

Chemical additives called urease inhibitors — NBPT and maleic-itaconic copolymer — inhibit urease enzyme activity and dramatically slow the conversion from urea to ammonia, thereby reducing volatilization. Products containing NBPT include LSN, UFLEXX and UMAXX. Maleic-itaconic copolymer is found in a product called NutriSphere-N.

It is important to realize that urease inhibitors are not slow-release fertilizers, and any potential improvement in nitrogen efficiency is a result of reduced ammonia volatilization. Benefits obtained with urease inhibitors will ultimately
depend on the potential for ammonia volatilization following application. If conditions favor volatilization after application (hot days, high pH, urea remaining on the soil surface or in thatch with no follow-up irrigation or rainfall), using urease inhibitors will likely result in more nitrogen uptake and less volatilization.

The other group of stabilized nitrogen products is the nitrification inhibitors. When nitrogen fertilizer is applied to turf, it is converted from ammonium to nitrate through a process called nitrification. Nitrification is a natural process in soils and is mediated by two specialized soil bacteria. One of these bacteria, *Nitrosomonas* spp., transforms ammonium to an intermediate nitrogen compound called nitrite, while the other (*Nitrobacter* spp.) converts nitrite to nitrate.

Nitrification inhibitors are designed to specifically target *Nitrosomonas* bacteria, so that the nitrogen fertilizer remains in the more stable ammonium form. Ammonium tends to be stable because it is positively charged and adheres to clay and organic matter. Nitrate is negatively charged and is more susceptible to leaching during rainy periods and in sandy soils.

Only one nitrification inhibitor, dicyandiamide (DCD), is currently used in turfgrass fertilizers. Products containing DCD include UFLEXX and UMAXX. The potential benefits in improved nitrogen efficiency from nitrification inhibitors will likely depend on the potential for nitrogen leaching following application. If conditions favor leaching after application, there is a higher probability of improved nitrogen retention in the soil using DCD. If conditions do not favor leaching, the benefits from DCD would be limited.

**Slow-release N fertilizers**

Slow-release nitrogen fertilizers provide a longer duration of nitrogen release than quick-release soluble fertilizers, and they are usually safer to use on turf because of their reduced burn potential. Also, recent studies have shown that under certain conditions, some slow-release nitrogen fertilizers are less likely to leach into groundwater than soluble sources. Disadvantages of slow-release fertilizers include their higher price per unit of nitrogen and slower green-up rate.

Whereas some slow-release fertilizers release nitrogen to meet the needs of the growing turf, others have reduced efficiency (a lower percentage of the applied nitrogen is used by turf) compared to quick-release soluble sources. Slow-release nitrogen fertilizers can be grouped into different categories, including the coated ureas, methylene ureas and natural organics (Table 1).

**Coated ureas**

Coated ureas include sulfur-coated urea (SCU) and polymer-coated urea (PCU). SCU is made by spraying urea prills or granules with molten sulfur. A sealant, such as wax or a mixture of oil and polyethylene, is often applied to seal the pores and imperfections in the sulfur. Nitrogen is released from SCU by microbial degradation of the sealant and diffusion of soluble nitrogen through pores and cracks in the sulfur coating.

Particles within a SCU product are not identical. If they were, you might expect all of them to release nitrogen at the same time. Nitrogen release occurs quickly with imperfectly coated particles; an intermediate rate of release takes place with particles in which the sealant has covered imperfections; and the greatest delay in release occurs with the more thickly and more perfectly coated particles. The slow-release properties of SCU come from the variability in coatings among the individual particles. Although turfgrasses usually show a good response to SCU applications, sometimes underfertilized lawns can appear “spotty” because particles are releasing at different intervals.

---

**TABLE 1**

<table>
<thead>
<tr>
<th>Product</th>
<th>% Nitrogen*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stabilized-Nitrogen Fertilizers</strong></td>
<td></td>
</tr>
<tr>
<td>LSN</td>
<td>46%</td>
</tr>
<tr>
<td>NutriSphere-N</td>
<td>46%</td>
</tr>
<tr>
<td>UFLEXX</td>
<td>46%</td>
</tr>
<tr>
<td>UMAXX</td>
<td>46% to 47%</td>
</tr>
<tr>
<td><strong>Sulfur-Coated Ureas</strong></td>
<td></td>
</tr>
<tr>
<td>Lebanon Pro SCU</td>
<td>39%</td>
</tr>
<tr>
<td>Poly-S</td>
<td>39% to 40%</td>
</tr>
<tr>
<td>X-Cote</td>
<td>43%</td>
</tr>
<tr>
<td>XCU</td>
<td>38% to 43%</td>
</tr>
<tr>
<td><strong>Polymer-Coated Ureas</strong></td>
<td></td>
</tr>
<tr>
<td>Duration CR</td>
<td>40% to 44%</td>
</tr>
<tr>
<td>Polyon</td>
<td>37% to 44%</td>
</tr>
<tr>
<td>Lesco PolyPlus</td>
<td>44%</td>
</tr>
<tr>
<td>XRT</td>
<td>44%</td>
</tr>
<tr>
<td>SurfCote-4</td>
<td>44%</td>
</tr>
<tr>
<td><strong>Methylene Ureas</strong></td>
<td></td>
</tr>
<tr>
<td>BOMU</td>
<td>39%</td>
</tr>
<tr>
<td>Coron</td>
<td>28%</td>
</tr>
<tr>
<td>Nitroform</td>
<td>38%</td>
</tr>
<tr>
<td>Nutralene</td>
<td>40%</td>
</tr>
<tr>
<td>Meth-Ex 40</td>
<td>40%</td>
</tr>
<tr>
<td>MESA</td>
<td>30%</td>
</tr>
<tr>
<td>Mutaex-L</td>
<td>39%</td>
</tr>
<tr>
<td><strong>Natural Organics</strong></td>
<td></td>
</tr>
<tr>
<td>Milorganite</td>
<td>6%</td>
</tr>
<tr>
<td>Sustane</td>
<td>2% to 8%</td>
</tr>
<tr>
<td>Nature Safe</td>
<td>10%</td>
</tr>
<tr>
<td>Ringer Lawn Restore</td>
<td>10%</td>
</tr>
</tbody>
</table>

* % nitrogen of product before blending with other compounds
PCU fertilizers are coated with a thin layer of polymer resin. For nitrogen release to occur from PCU, water is absorbed through the coating and then gradually released with dissolved nitrogen through the coating by osmosis. Different coating thicknesses may be used to obtain different nitrogen-release rates: the thicker the coating, the slower the release of nitrogen. Nitrogen release increases with higher temperatures and is less dependent on soil moisture levels, soil pH or microbial activity.

**Methylene urea**
These fertilizers are made by reacting urea with formaldehyde in various ratios. Methylene urea products typically contain 30% to 40% nitrogen and are classified as slow release. However, some contain enough water-soluble nitrogen to give a response closer to quick-release nitrogen sources than to slow-release sources. Others can be expected to give a relatively quick initial response but have a slightly slower release rate than the quick-release sources. Any urea-formaldehyde product that does not claim water-insoluble nitrogen as a percentage of the total nitrogen will probably release nitrogen quickly.

**Natural organics**
Natural organic fertilizers are typically derived from by-products of plant- and animal-processing industries. Considerable variation exists in the physical and chemical properties of different natural organic fertilizers, and nitrogen-release rates vary quite a bit among products. The natural organics can be characterized by relatively low nitrogen contents (usually below 10%), and they almost always contain phosphorus. Because release of nitrogen is dependent on soil microbes, environmental conditions that influence microbial activity (temperature, soil moisture and oxygen, and soil pH) affect the breakdown of natural organic fertilizers.
White Grub Control on Athletic Turf

By Danny Kline, Research Technologist in Turfgrass Entomology, Penn State University

With the snow melted, and warm spring temperatures climbing up, well-maintained athletic turf is being seen on TV almost every day. With this in mind, it would be a good time to review some common grub controls for white grubs on athletic field turf.

White grubs are the larval stage of many common beetles. These grubs feed on the turfgrass roots, destroying connective tissue and killing the grass plants themselves. Most white grub damage appears in the fall of the year. The grubs causing this damage hatch from their eggs in early to mid-July and begin to feed on the turf roots almost immediately.

Damage to the roots of the turf will cause large areas of turf to become unstable. With no roots connecting the turf to the soil, these areas of turf slide and move around like carpet that is not connected to the floor. Injuries to players can occur in this situation. Imagine a big linebacker running full speed, then suddenly planting his feet for a quick stop to change direction, only to have the turf come out from under him. Ankles can be turned, and knees can be injured. Also, birds, skunks and even raccoons will dig up the turf, looking for grubs to eat and causing further damage.

One of the biggest challenges the athletic turf manager faces in dealing with white grubs are the lights found around athletic fields. Most of the adult beetles are night flyers that are strongly attracted to lights. Of all of the species of white grubs that we deal with in turf, only two of the adults are active during the day: Japanese beetle and green June beetle. All of the other species are active at night and are attracted to lights. Northern masked chafer, Southern masked chafer, European chafer, oriental beetle, Asiatic garden beetle, black turfgrass atenius and May June beetle are all attracted to the lights, and they will then find the well-maintained turf below, where they will then lay their eggs.

Using a black light trap, you can easily observe the populations of these night-flying adults as they appear in mid- to late June. You can then watch their numbers begin to climb and, eventually, peak. When peak populations are reached, you know that the most adults are out, mating and laying eggs.

The labels of preventive grub controls recommend that you apply them prior to egg hatch. So, when these adults peak in your light traps, this is a good indicator that they are laying eggs, and now is the perfect time to apply, ensuring that you are making your application prior to egg hatch.

You can also catch the day-flying Japanese beetles. For trapping Japanese...
beetles, you use a pheromone trap. These traps use two different baits: a floral lure for attracting females and a sex pheromone lure for attracting males. These traps attract a lot of adult beetles each day, and you can destroy these adults, which can help reduce your grub populations. But you really want to use these traps to watch the numbers peak.

Green June beetles are much larger than their Japanese beetle cousins. You can easily spot these erratic day flyers. You find them out and about on warm, sunny late June through early July days. The larval stage of this species causes damage not so much from feeding but from tunneling. The tunnels allow air into the turf roots, drying them out and causing damage. The larvae also leave large mounds of soil when they dig their way to the surface. These casts could cause players to trip and could cause damage to mowing equipment.

All of these larvae or grubs have a series of spines, hairs and open spaces on their posterior ends. These raster patterns allow you to identify one species from another when they are in the larval stage. For example, a Japanese beetle has a V-shaped raster pattern, while a northern masked chafer has a random raster pattern. These grubs go through three molts or instars. You can determine what instar the grub happens to be in by measuring the width of its head capsule. These clues become important when making control decisions.

The easiest and surest way to take care of your grub problem is by using preventive controls. Preventive controls include the neonicotinoids, like Merit, Arena and Meridian, as well as anthranillic diamides, such as Acelepryn, and insect growth regulators, like Mach 2. Neonicotinoids and anthranillic diamides are systemic products. The plant takes up these products, so that any insect that feeds on the plant will also ingest the product.

These products need to be irrigated in. Please follow the label recommendations when deciding on how much irrigation water to put on after an application. These products also have long residuals and, when applied at the proper timing, will give you good control from mid-summer through fall, when the remaining white grubs begin to dig down into the soil to survive winter.

The insect growth regulator Mach 2 can also be applied prior to egg hatch. Mach 2 mimics the hormone ecdysone, which causes an insect to molt. Mach 2 causes the insect to molt continuously until it dies of exhaustion.

All of these products will give control well into the 90% range. Mach 2 can be put down somewhat later, up until grubs reach 2nd instar size. And Acelepryn can be put down from early April till early September. Since black turfgrass atenius grubs appear in April, you would need to treat much earlier for this grub than for the other species.

If you have a breakout in late summer or early fall, and you need to apply a curative or rescue treatment, you can use Dylox or Sevin. These can be spot sprayed to stop the damage and allow the turf to begin to heal. Please refer to the label before applying any product.

By paying attention to the emergence of the adult beetles during the summer, and using that knowledge to time your preventive applications, you can effectively control white grub populations in your athletic turf.
Meet Your New PTC Leaders for 2015
By Andrew Dooley, PTC President

Similar to many organizations, the leadership structure of the PTC changes each year. The PTC reorganizes during an annual meeting held at the Penn State Golf Turf Conference, and the newly elected officers and board members begin their terms effective January 1 following the November conference.

Terms ending in 2014
At this year’s reorganization meeting, the terms of one officer and one board member ended. Mr. Jason Hurwitz, golf course superintendent at Fox Chapel Golf Club, completed his two-year term as president, moving into the past president’s role. Prior to his presidency, Mr. Hurwitz served the PTC as a director for four years, during which he held the position of vice president in 2011–2012.

Mr. Rick Pagett, golf course superintendent of the Penn State Golf Courses, was reelected to serve another three-year term on the board as a director. Mr. Pagett has served the PTC as a director since 2012.

Finally, Mr. Matt Shaffer completed his two-year term as past president. Not surprisingly, Mr. Shaffer has faithfully served the board of directors for the maximum number of terms. Please join me in thanking him for his invaluable leadership and guidance.

Newly elected officers
As I move into the president’s role for the next two years, Mr. Pete Ramsey, grounds manager at Messiah College, will move into the vice president role. Mr. Ramsey has served the PTC since 2012, and two of those years he held the position of treasurer/secretary. Mr. Ramsey has been heavily involved with the Eastern Conference Planning Committee.

Filling Mr. Ramsey’s former position of treasurer/secretary is Mr. Chase Rogan, field staff representative of the Mid-Atlantic Region at GCSAA. Mr. Rogan is serving the third year of his first term on the PTC board. Mr. Rogan will help with the Western Conference Planning Committee.

Newly elected directors
Newly elected to the board in 2015 is Mr. Tom Fisher, golf course superintendent at Wildwood Golf Club. Tom will begin serving his first three-year term on the PTC board, Tom recently joined the Western Conference Planning Committee.

Remaining directors
Tom Bettle, Joseph Valentine Turfgrass Research Facility
Bill Brown, Turf Republic
Bob Capranica, E.H. Griffith
Dan Douglas, Reading Fightin Phils
Dave Foresman, Green Industry Consultant
Shawn Kister, Longwood Gardens
Dr. Peter Landschoot, Ph.D., Penn State University
Rick Pagett, The Penn State G.C.

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Northeastern PA Turf Conference and Tradeshow

By Andy McNitt, Penn State University

On January 29, the Penn State University Turfgrass Project and the PTC hosted another popular turfgrass conference at the Woodlands Inn in Wilkes Barre, PA. Attendance topped 290, and vendor support was strong for the event yet again, with 29 tabletop exhibits.

It was nice to see so many Pocono Turfgrass Association members in attendance. The golf session had a great slate of speakers, including Dr. Ben McGraw, Dr. David Huff and Mr. Elliot Dowling of the USGA. In the afternoon, more PSU faculty spoke, including Mr. Jeff Borger, Mr. Greg Hoover and recently retired county Extension educator, Mr. Scott Guiser. Mr. Chris Santore of the Pennsylvania Department of Agriculture gave an update on pesticide regulations.

A big thanks goes out to all those involved in holding this event. Thanks for all the vendor and attendee support over the years! See you next year!

Western PA Turfgrass & Ornamental Conferences

The Western Pennsylvania Turf and Ornamental Conferences were held on February 10–12 at the Doubletree by Hilton (formerly the Four Points Sheraton) in Mars, PA. The attendance this year was very good. Speakers included Dr. Ben McGraw, Dr. Mike Fidanza, Mr. Jeff Borger, Dr. Max Schlossberg, Dr. John Kaminski and Mr. Gary Nolan (all from Penn State University), Herb Stevens (Meteorologist, Grass Roots Weather), Dr. Dave Clement (University of Maryland), Dr. Dan Peck (Grass Systems Entomology), Mr. Chase Rogan (GCSAA), Ms. Sandy Feather (Penn State Extension), Mr. Chris Ecton (Pittsburgh Steelers), Mr. Rick Capozzi (Capozzi Group), Mr. Elliot Dowling (USGA) and Mr. Bun Montgomery (Scentworx).

The conference included a large tradeshow area, and we held our second industry social in the tradeshow after the sessions on Tuesday afternoon. Please save the dates for next year’s Western Conference, to be held at the Doubletree by Hilton in Mars, PA, on February 23–25, 2016. See you there!
Survey to Build Database on Turf Irrigation Water Quality in Pennsylvania

Irrigation water quality is usually a minor concern of turf managers in Pennsylvania. In some areas, however, contaminants in ground and surface water may pose a threat to turf and soil quality. Also, as the demand for potable water increases, users of irrigation water may have to consider alternatives sources, such as recycled water.

Recently, Penn State’s Agricultural Analytical Services Lab (AASL) began an irrigation-and drinking-water testing program, including a special program for turfgrass irrigation water. With a grant from the Stanley J. Zontek Turfgrass Endowment, we initiated a survey of golf course and sports turf irrigation water in Pennsylvania, with the short-term goal of building a statewide database of water-quality parameters (pH, bicarbonate, soluble salts, sodium absorption ratio, nitrate, etc.). The long-term goal of this project is to examine how certain water-quality parameters influence soil and turf quality, so that better guidelines for use and treatment can be developed.

With help from Eric and Danny Kline, golf course managers, and industry representatives, more than 100 samples have been collected, analyzed and recorded. This summer, we hope to collect samples from another 100 courses and sports turf venues. In keeping with AASL policy, all source information from water and soil tests is confidential, and results from a particular sample are shared only with the facility manager.

Update submitted by Pete Landschoot, Ph.D., (Professor of Turfgrass Science), Austin Marsteller (Junior, Turfgrass Science) and Chris Marra (Senior, Turfgrass Science), Penn State University

An Expanding Program!

These are exciting times in the Kaminski research program, which got a boost as I became the Tombros Early Career Professor in 2014. Interest from this $500,000 fund, set up by Peter and Ann Tombros, is being used to fund a new graduate student who started in January. (For more information on the Tombros Early Career Professorship visit http://psuturf.com/2015/01/penn-state-professor-selected-for-the-tombros-early-career-professorship/.)

In addition, Cameron Stephens will work for us this summer before starting his MS degree next spring.

In addition to our new students, my new lab in Tyson Building is currently under renovation, and we hope to move in by the end of the year. This will triple my lab space and allow me to increase our output.

With the help of my research assistant, we are also expanding the reporting of our research trials this summer. In 2015, we plan to provide expanded reports, summary PowerPoints, time-lapse videos and even mid-season YouTube updates. Our current research is investigating plant health surrounding tournament preparation, thatch-collapse management, chemical and cultural management of annual bluegrass, and various disease control trials.

Update submitted by John Kaminski, Ph.D. (Associate Professor of Turfgrass Management, Department of Plant Science), Penn State University
Did you know that the United Nations has declared 2015 to be the “International Year of Soils”? The purpose is to create a global celebration and promotion of all things soil, and to further the awareness and understanding of soil — our most valuable and limited resource! Various education tools and outreach activities have been assembled by the Soil Science Society of America (SSSA).

A new soils topic will be the focus for each month during 2015. For example, January’s theme was “Soils Sustain Life,” which provided an overview of soil formation and soil ecosystems. April’s theme was “Soils Clean and Capture Water,” and June’s theme is “Soils Support Recreation.” Want to learn more? Visit the SSSA website at www.soils.org or the United Nations website at www.fao.org/soils-2015.

If we celebrated an international year of “turfgrass soils,” we would have to pay homage to pioneers in the field, which would include our own Dr. Donald Waddington, Emeritus Professor at Penn State; Dr. Paul Rieke (Michigan State, retired); Dr. Robert Carrow (Univ. Georgia, retired), the late O.J. Noer (Milwaukee Sewerage Commission Turf Service Bureau) and the late Tom Mascaro. In fact, the next time you visit Penn State University Park, be sure to visit the Mascaro-Steiniger Turfgrass Museum to see turf equipment dating back to the 1900s. Best wishes during the International Year of Soils!

Update submitted by Mike Fidanza, Ph.D. (Professor of Plant and Soil Science), Penn State University, Berks Campus
Congratulations, Penn State Graduates!

Congratulations to these undergraduate, associate program and graduate students who graduated after this past Fall semester!

**Associate in Science, Turfgrass Science and Management**

Taylor Gray  
Brian Scott Johnson  
Luke William Kellerman  
Aaron T. Koontz  
Robert Shane Robinson  
Craig Michael Sondergaard  
Zack A. Stephens  
Lucas Anthony Wagner  
Richard Laurence Williams

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Congratulations to the Penn State students who took 1st place in the Two-Year division and 2nd and 3rd place in the Four-Year divisions of the Sports Turf Managers Association (STMA) Turf Bowl in Denver. We are Penn State! 🎉

We’re Also the 2015 GCSAA Turf Bowl Champs!

Congratulations to the 16 Penn State students who placed 1st, 3rd, 9th and 13th out of about 60+ teams during the 21st GCSAA Turf Bowl in San Antonio. 🎉

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**Penn State ALUMNI UPDATES**

**Tim Haverstick** (B.S. ’04) is now grounds and sports turf manager for The Harpeth Hall School in Nashville, TN.

**Jack McClenahan** (Cert. ’62) is now retired.

**Michael Olson** (Cert. ’81) is now the superintendent at Desert Island Golf & Country Club.

**George Peters** (B.S. ’11) is now working at Oklahoma State University as an assistant athletic field superintendent.
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Between the Lines

Dr. Andy McNitt and Tony Leonard Honored with STMA Founders Awards

At the national Sports Turf Managers Association’s annual Conference earlier this year, Keystone Athletic Field Managers Organization members Dr. Andy McNitt of Penn State and Tony Leonard of the Philadelphia Eagles were named Founders Award winners. Dr. McNitt was honored with the Harry C. Gill Memorial Award, presented for an individual’s hard work in the sports turf industry and to acknowledge his/her dedication to STMA. Leonard was honored with the Dick Ericson Award, presented to someone who plans and executes the sports-turf management of a facility, who effectively leads his/her team to accomplish specific goals in field maintenance and who positively impacts the sports turf industry.

KAFMO: Being bestowed with an STMA Founder Award is one of the highest honors in the sports turf industry. Why do you think you were chosen?

19th Annual KAFMO Athletic Field Conference Sponsors

KAFMO would like to thank the following companies for partnering with the association to present the 19th Annual KAFMO Athletic Field Conference, held this past February in Grantville.

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- World Class Athletic Surfaces

Tony Leonard, left, director of grounds for the Philadelphia Eagles, with Dr. Andy McNitt, Professor of Soil Science and Turfgrass at Penn State. The KAFMO members were honored by national STMA with the association’s most prestigious awards.
McNitt: I am truly honored, and the award was completely unexpected. STMA has done more for me than I’ll ever do for the organization. I hope to continue to be a positive contributor to the industry. As I said at the KAFMO event in February, this is really a team effort. From the giants in the turfgrass industry who established and built the Penn State turf program, to all the active KAFMO members and all my friends at STMA, nothing happens without everyone pulling in the same direction. I’m very proud to be one member of the team and want to thank all the other members who’ve made this industry so great!

Leonard: For one, it was a very special honor to be recognized by my peers and was an exciting moment in my career. I want to believe it was for thinking outside the box a little and doing what I could to provide a surface that is safe, playable and looks good for spectators. We had the support of our ownership and our front office to make the field right. Through research, talking with colleagues and trial and error, we were able to develop a formula for what worked in our situation. Part of that process is sharing that info with others. I take great pride and joy in educating others about our maintenance practices, whether they’re fans, other employees, the media or someone in the industry. As much knowledge and experience that we gain, it’s our obligation to give it back when we can.

KAFMO: How has being a member of KAFMO contributed to your successful career?

Leonard: KAFMO has been and continues to be one of the great chapters of STMA. The people join and are active in our KAFMO chapter because they have a passion for what they do. It doesn’t matter if you are at a high school, park system, university campus or professional sports team, we all share that common goal. The people associated with KAFMO have always been supportive of each other and are always available when you call. Having a local chapter to learn from and to help is important to our industry overall.

McNitt: KAFMO is maybe the best chapter in the U.S. A dedicated core group has built something incredible from nothing. This core group continues to be the drivers of the organization. I’m amazed every year at the Grantville show. While many conferences nationwide are shrinking, this one is growing, and that’s due to the hands-on, approachable, helpful members of KAFMO. The group is primarily concerned with helping its members succeed. The feeling of goodwill created within the organization is palpable. Individual members can see the hard work and helpful attitude of the leadership. The members demonstrate their appreciation through their support of the organization. I benefit by association. Sure I try to lend a hand, but really the group has benefitted my program in so many ways. The monetary support is so very much appreciated! It enables me to leverage the KAFMO support to gain other grants. It lends legitimacy to the research, and the support for student travel continues to build loyalty to KAFMO and the Penn State turfgrass program.

KAFMO: How do you think the athletic-field management industry will change in the next 10 years?

McNitt: Always the most important element for success is the people involved. Every year, I see more people interested in applying research-based practices to field improvement. Through many avenues, we are beginning to quantify what field improvement means. From the Playing Conditions Index (PCI) developed by STMA to the NFL field certification program, we are beginning to quantify field quality. Savvy sports-field managers can use these numbers to better communicate the effect of events and the need for resources to improve their fields. The numbers speak louder than opinion. I tell my students often, “It’s not always the best grass growers that rise to the top of this industry; it’s the best communicators.” Why? Because they can effectively communicate the right message to their superiors and thus garner the needed resources for field improvement. Field managers should not be afraid of field testing. They should embrace it, learn to effectively communicate the issues and use the numbers to their advantage. Fields are generally in better condition each year. Yes, there are setbacks, but over the long run, the trend is way up. I think about the high school fields I visited in the 1980s compared to today. You’ve all come a long way!

Leonard: Newer developments in turfgrass selection and varieties continue to be an important factor in all of our playing fields. The addition of cold-tolerant bermudagrasses has been very helpful to those of us in the Mid-Atlantic region. New techniques in turf maintenance, such as fraze mowing, could become part of a field manager’s general maintenance practices. With the Go Green movement, the use of more environmentally friendly chemicals, fertilizers and equipment will continue to develop.

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October 12, 2015
KAFMO CUP
GOLF TOURNAMENT
Dauphin Highlands Golf Course
Harrisburg, PA
Calendar of Events

July 9–11
TPI Live Show & Tell
(Turfgrass Producers International)
Portland, OR

July 19–21
PLANET Legislative Day
on the Hill
Washington, D.C.

July 27 – August 1
Perennial Plant Symposium
Hilton Baltimore
Baltimore, MD

July 29–30
Penn-Atlantic Nursery
Trade Show (PANTS)
Philadelphia Convention Center
Philadelphia, PA

September 15–17
NRPA Congress and Expo
(Nat. Rec. and Park Assn.)
Las Vegas, NV

November 10–12
Penn State Golf Turf Conference
Pennsylvania Convention Center
State College, PA

January 5–6, 2016
Eastern Pennsylvania
Turfgrass Conference
Valley Forge Casino Resort
King of Prussia, PA

January 19–22, 2016
STMA Conference and Exhibition
San Diego, CA

January 28, 2016
2016 Northeastern PA Turfgrass Conference and Trade Show
Woodlands Inn
Wilkes Barre, PA

February 6–11, 2016
Golf Industry Show
San Diego Convention Ctr.
San Diego, CA

February 23–25, 2016
2016 Western PA Turfgrass Conference and Trade Show
Hilton Garden Inn Cranberry
(formerly Four Points Sheraton)
Mars, PA

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