

TURFNEWS

The Official Publication of the Ohio Turfgrass Foundation | Spring/Summer 2022







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President's Message

Ryan DeMay

Members and Partners - While I hope you are all well, it behooves our great state and our industry to start this conversation with everyone's favorite topic: the weather. No doubt, it has been a tough spring on all of our industry sectors, including lawn care, golf, and sports turf, to gain traction in the rush to get the growing season started off right. Here's hoping for a tranquil summer filled with sunshine, timely rain, and maybe even a little time away from your place of business for some rest and relaxation.

With many of the challenges of the last two years behind us, I am humbled and grateful to be the leader of the Ohio Turfgrass Foundation in 2022. Much like those who have come before me and the many who will come after me, this organization has fueled my professional growth, grown my network of fantastic people, and been the one voice that represents all sectors of our industry in the state of Ohio.

As we enter our busiest time of year, think about how you got to where you are in your career today. Whether you are a student just getting your start or a seasoned pro on the cusp of retirement, your path wasn't forged by spending every minute of your professional life at work. It has taken and will continue to take many hours of building relationships, lifelong learning, and the ability to commit to being the best turfgrass professional you can be. With that said, there is a multitude of ways you can grow your skills, knowledge, and contacts with OTF.

Our popular Field Days series is back in full swing this summer through the generous support of our Partners. Here is a quick summary of what you can expect:

- Our Sports Turf Council kicks things off on June 16th in Columbus with a morning tour of Lower.com Field (home
 of the Columbus Crew), followed by Columbus Clippers (Guardians AAA Affiliate) game at noon. Golf and Lawn
 Care folks are cordially invited to enjoy the camaraderie with their fellow members and get a truly one-of-a-kind
 tour of both facilities.
- In conjunction with the OSU Turf Team, an educational field day will be held August 2 at the OSU Turf Research Facility at Waterman Farm in Columbus.
- Once again, the Ohio Lawncare Association is graciously extending invitations and member pricing to Ohio Turfgrass Foundation members for their Lawn Care Field Day to be held on August 3 at the OSU Turf Research Facility at Waterman Farm in Columbus.

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Executive Director's Message

Mark Bennett

Hopefully your 2022 is off to a good start. We at OTF are excited to have a number of events scheduled for this year including two sports turf field days, the OTF field day in August at OSU, the scholarship golf outing and the Annual Conference & Show.

Mark your calendars for the 2022 OTF Conference & Show, taking place December 5-8 at the Greater Columbus Convention Center. We have a number of new, fun activities planned as well as taking the awards presentations to a lunch to allow for greater attendance. We've already started to confirm speakers and events and look forward to seeing you all at this must-attend event.

OTF continues to partner with the Ohio Lawn Care Association (OLCA) by collaborating with its advocacy efforts at the Ohio Statehouse. The Batchelder Company, led by Chad Hawley and Troy Judy, continue to coordinate both organizations advocacy efforts. And we've recently unveiled the Ohio Turfgrass Foundation Political Action Committee (OTFPAC). This PAC is funded from donations from members like you and helps support candidates in the Ohio General Assembly who are friendly to the turfgrass industry. You may easily make a donation online by visiting the OTF website and donating under the Advocacy tab.

A few months ago, OTF launched a new scholarship initiative with Ohio State to support turfgrass students. OTF has committed to give \$100,000 to a scholarship fund, managed by Ohio State over the next five year. Ohio State will match OTF's donation. Once the donation has been completed, Ohio State will offer nearly \$10,000 worth of scholarships to turfgrass students annually on a go-forward basis. Since its founding, OTF and the Ohio Turfgrass Research Trust (OTRT) have given more than \$3.3 million to support OSU's turfgrass program operations, research and faculty as well as more than \$600,000 in student scholarships. How can you help OTF reach its \$100,000 goal? Make a tax-deductible donation today to OTRT by visiting the OTF website and click on the Make A Donation link on the OTRT tab. You also have the ability this year to attach your name or your company's name to one of OTF's scholarships. This sponsorship will not only help strengthen the future of the turfgrass industry, but also provide you and/or your company with additional exposure in the industry. Contact the OTF office at 614-285-4683 or Info@OhioTurfgrass.org to reserve your scholarship today!

Looking forward to seeing you all at an OTF event this year!

If you have any questions or comments, please feel free to contact me at 614-610-4624 or by email at mark@bennett-management-llc.com.





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Wear Maintenance on Sports Fields

Britt Barry, Facilities Manager, Warren County Convention & Visitors Bureau

With the year in full swing, we as sports field managers are focused on keeping our fields in the best shape possible. However, it can become very challenging with play scheduled often, coaches pushing to play in all weather conditions, and budgets being as tight as ever. We all know where our wear spots are on fields of the sports we manage and combatting that can be a challenge, especially without affecting the already scheduled field uses.

Let's start with the obvious, move your wear areas around. If you have the ability, moving a soccer field even 10 yards can make a big impact. You'll give the goal mouths a break, along with the high traffic of midfield and those ever-problematic referee runs. This isn't always an option for everyone depending on the layout of their facility but take advantage of it if you can. Another way to shift if you are limited on space is rotate the size of fields being used. If you've had a field set for 11 v 11 soccer for a while, try putting two smaller fields the opposite direction. This can help move your wear spots, allow turf to recover and seed to germinate.

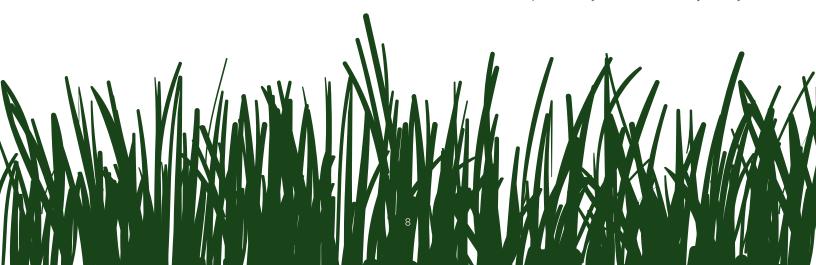
Aerify your fields as often as you are able. It doesn't need to be core aerification every time, solid tines or

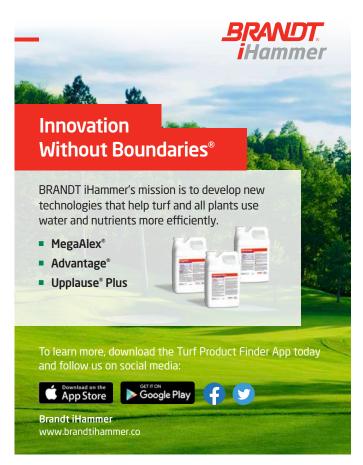
bayonet tines are great for giving your roots a breath of fresh air without leaving cores to clean up, allowing for play immediately after aerification. Anything to help alleviate compaction in these areas will help sustain healthy turf.

Seeding often allows for a seed bank to be established. As turf begins to wear, new seed is able to germinate and keep your high traffic areas in better shape. These areas can be slit seeded, or broadcast spread before play, letting the players work the seed in with their cleats. You may also play around with pregerminating seed to find what works best for your facility and type of seed used. Use a combination of soaking the seed and letting it dry, then spreading it on your fields. This can get you a head start on the germination process and allow turf to fill in quicker.

Focus your recovery fertilizers on the areas most needed. Do the corners of the fields receive as much wear as the middles or between the fields as much as goal boxes? With rising prices across the board, maximizing the efficiency of our applications is key. Use your budget where it is needed most.

Wear areas don't only happen in the grass areas. Keep an eye on your infield skin, and you may notice puddles after rain in sliding areas and position spots. If you are having problems with standing water, remove the conditioner, nail drag or scratch the low area before adding more infield mix, and level with a board or rakes. Make sure to roll the area tight before adding conditioner back over it. Yearly laser grading will help make sure you're shedding water to get your field ready as soon as possible. If budgets don't allow yearly, do as often as it will allow. Nail drag and float your infields in the meantime to level them up the best you can. Be sure to check our the OTF website for more information on our two field days we are hosting this year. These are amazing opportunities to meet colleagues and learn from the best turf managers from the state of Ohio and around the country. Good luck to everyone as we continue to roll through the sports seasons and I hope to see you at the field days this year!













Legislative Update

The Batchelder Company

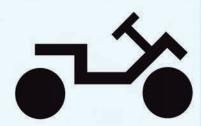
The Ohio Supreme Court most recently struck down the fourth set of maps drawn by the legislature's redistricting commission. However, on April 20 a federal three-judge panel decided on a May 28 deadline for the Ohio Redistricting Commission to pass a new map approved by the Ohio Supreme Court. If the Commission fails to do so, then the third map passed by the Commission and struck down by the Court will go into effect. The decision said, "State officials, not federal courts, draw state electoral districts," and that the U.S. Supreme Court has given a clear answer that federal courts must impose new maps only as a last resort.

Secretary of State, Frank LaRose noted that any primary held after August 2 could have serious consequences on the ability of election officials to carry out their duties. In a press release, the Secretary's office said of the OSC's decision striking down the fourth map, "The majority did not consider the fact that each state's election system is unique, or that Ohio's elections have their own statutory requirements, and because of these requirements it would require a violation of Ohio law for any primary to be held after August 2. In fact, the filing deadline for nominating petitions for nonpartisan races in the General Election, as set in Ohio law, is August 8, 2022. To be clear, any primary held after August 2 would directly conflict with the statutorily required deadlines of the General Election."

Members of OTF and OLCA's board recently met with Senator Steve Huffman (R-Tipp City) in his capacity as vicechairman of the Senate Agriculture and Natural Resources Committee to introduce themselves and discuss the impact of Ohio's green industry on its economy. As OTF's legislative team, we're grateful for membership who takes time out of their workdays to come to the Statehouse and make these introductions. We strongly believe that relationship building is the foundation for a successful advocacy strategy. We also have May 17th blocked off as a Statehouse advocacy day for board members to introduce themselves to members of each chamber's Agriculture committee.

Because 2022 is a campaign year, the legislature is working within a reduced timeframe for moving legislation before and after the primaries, which are to be determined, and later after the November general election. On the legislative front we are in the process of drafting language to prevent local governments from banning the use of pesticides in residential communities. We're also drafting language for a tax check-off program for turfgrass that mirrors the language already in statute for corn and soybeans. Lastly, we are closely monitoring any water quality related legislation that might be introduced, but as of now there are no bills pending that would impact the turfgrass industry. Thank you for the privilege of working on your behalf at the Statehouse, and we wish you a prosperous and happy Spring season.





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Wetting Agents and Athletic Fields –

Portions of this article originally published in Sportsfield Management Magazine

You probably did not work in turf management for long before realizing that water is pretty important. More specifically, proper soil moisture status is important, especially in stressed situations such as an athletic field. Proper soil moisture results in healthy rooting, improved nutrient uptake and in turn better plant health. Remember that the ideal soil is about 50% solids, 25% water and 25% air. When soil is too wet the pore spaces fill, resulting in diminished oxygen availability in the root zone. This is deleterious to the grass and can lead to decreased rooting followed by decreased plant growth. Traffic on wet soil can also lead to accelerated loss of soil structure, which exacerbates drainage and standing water issues. On the other hand, when soil is too dry we see wilting, decreased rooting, plant loss, and susceptibility to disease, all leading to loss of surface quality. In addition to the aesthetics, loss of surface quality increases risk of athlete injury.

Most issues about water on athletic fields concern drainage, or rather a native soil field's relative lack of ability to do so. We are seeing increasing numbers of mandates to reduce the use of water for irrigation of turfgrass, because a lot of our fresh water resources are used for turfgrass irrigation and people have taken notice of this.

Wetting agents, as a class of products, have been around for use in turfgrass management, primarily on golf courses and short cut turf, for many decades and have classically been used to "wet the soil" in order to break up hydrophobic dry spots on putting greens (more on this later). But, new types of wetting agent chemistry and new

products are being developed that are touted to help soil retain moisture as well. So the purpose of this article is to review what a wetting agent is, what they can and cannot do, and to provide some guidance as to the different types of products that are available.

Potential Applications for Wetting Agents on Athletic Fields

Before we can answer this question we should define what a wetting agent really is, that is, chemically. Water is a polar molecule, so it has a positive end and a negative end much like magnets do. Water molecules are attracted to each other but more so on its surface and it is these forces that cause water droplets to form (hence the term "surface tension"). The substances that cause development of hydrophobic dry spots are nonpolar. When water comes in contact with a non-polar hydrophobic substance it tends to bead rather than penetrating into the substance. Surfactants are a class of compound that reduces this surface tension, which can be between either two liquids or between a liquid and a solid. There are different kinds of surfactants, including detergents, wetting agents, and emulsifiers. So a wetting agent is a surfactant but not all surfactants are wetting agents. Wetting agents used in turfgrass management are a class of surfactants that reduce the surface tension of liquids, helping them to disperse, penetrate and percolate into soil.

Chemically, wetting agents are quite complicated molecules but all of them generally have a polar head (which is hydrophyllic or "water-loving") and a non-polar tail (which is hydrophobic, or "water-hating"). Think of a

mix of oil and water (ie salad dressing). Oil and water will always separate unless mixed with an emulsifier (another class of surfactant that helps to join two different liquids). Wetting agents used in turfgrass don't act as emulsifiers, but the polar head of the wetting agent can bond with water and the non-polar tail can bond to hydrophobic soils, thus holding water in place and increasing the opportunity for uptake into the soil. Because of how wetting agents work the classic applications have been to improve irrigation efficiency and to reduce dry or hot spots on the turf but there are other potential applications as well.

To Break Up Hydrophobic Dry Spots: Sand is used a lot on high intensity athletic fields to take advantage of rapid drainage. Sands tend to be hydrophobic or to become hydrophobic over time and so this problem tends to be more severe on sand based soils. However, almost all soils will develop some degree of water repellency over time. This is because decomposing organic matter, plant root exudates, and fungal hyphae will coat the soil particles. These coatings on the soil particle act to repel water, much in the same way that water beads up on the hood of your car after you have waxed it. These hydrophobic areas then appear drier, resulting in either a need for spot watering or increased irrigation over the whole field, which may lead to areas that are too wet. Wetting agents help to eliminate these dry spots by breaking this surface tension and increase the ability of water to absorb into the soil. There are also wetting agents that break down these hydrophobic substances and redistribute them in the soil profile.

To Improve Irrigation Efficiency: It's natural to assume that if water is uniformly applied to the soil surface that penetration of the water through the soil is uniform and thus the result is spatially consistent wetting of the soil. What is more typical is what is called fingered flow, where in cross-section the penetration of water appears as inconsistently spaced channels surround by zones of far less penetration by the water. This is partially because all soils will naturally develop channels, cracks and crevices in which water flow is more rapid. But it is also caused by hydrophobic compounds on the surface of the soil particles. So wetting agents can improve irrigation efficiency by improving the distribution of water penetration into a soil. Another potential benefit of wetting agents is that by increasing soils ability to take in water, the time the water sits on the soil surface is reduced, which will reduce water loss due to evaporation or run-off.

In addition to improving water penetration, certain wetting agents can increase moisture retention in the soil. Increased moisture retention means decreased irrigation requirements. A wetting agent program may be able to help improve uniformity of soil wetting thus increasing your irrigation efficiency. In some cases this is not trivial.

Research has shown that preventative applications of wetting agents prior to the onset of drought may reduce irrigation requirements by as much as 50 to 70 percent.

To Eliminate Wet Areas? Some wetting agents have been developed that help to move water through a soil. So, the big question for most athletic field managers that deal with standing water on fields is "can a wetting agent help eliminate wet areas?" Two things determine the answer to this question. One, a large enough amount of the right type of wetting agent must be present in the soil. But, more importantly, the soil has to already have some ability to drain. In other words, if there are layers or compaction, a wetting agent may not help as much. To put it another way, a wetting agent is not a substitute for sand. But, there are field managers who have used wetting agents with success to get fields back into play more quickly after a rain. Also, in wet areas of the field that have a Poa annua problem, wetting agents may help to manage or decrease these populations by reducing the wet soil conditions that favor the weed.

Other potential uses on Athletic Fields: A lot of research has been conducted on the effect that wetting agents have on turfgrass disease severity but with inconsistent results. But, another potential use of retention type wetting agents is to help retain moisture in the clay used for the infield skin of a baseball field, while also improving surface drainage and reducing ponding. There are, in fact, wetting agent infused calcined clay products on the market for this purpose. Finally, surface removal of dew may be of benefit on fields with early morning or late evening games. A surfactant applied the day before may reduce surface tension and thus reduce dew formation. This effect lasts typically for about 48 hours after application.

<u>Finally:</u> Wetting agents have the ability to evenly distribute water throughout the surface making it more consistent and from a player safety standpoint – this is a very desirable trait. A fear of when or when not to plant a foot due to inconsistency in the surface firmness and uneven distribution of water can lead to avoidable injuries.

Types of Wetting Agents

Interestingly, when products such as herbicides or fertilizers are discussed there is almost always a classification system based either on chemical properties or appropriate uses/intended targets. Printed classification systems for wetting agents are more elusive. Unlike pesticides, wetting agents are not regulated by the EPA. Because of this, the manufacturer is not necessarily required to divulge what the active ingredient in the wetting agent is.

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Figure 1. Areas of the field that dry out more quickly than others should be investigated by pulling a core. If a bead of water applied to the dry soil core remains on the surface and is not absorbed, then hydrophobic conditions are likely present and the field may benefit from the application of a wetting agent.



Figure 2. Some wetting agents have been used with success to reduce wet soil conditions, making the field ready for play in less time after a rain. One thing to remember though is that use of wetting agents for this purpose is most successful if the soil already has good structure and drains relatively well. In other words, wetting agents are not a substitute for sand.



Figure 3. Repeated applications of a range of wetting agents can reduce the impact of hydrophobic soils on short cut turf and aid with more even distribution of water through the soil profile reducing the loss of turf quality.

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This is further complicated because many of the new products that have been introduced in the last few years are either combinations of wetting agent chemistries or also may contain other ingredients, such as humic acids etc. But, honestly, sometimes chemistry confuses more than it helps. Just like MCPP and 2,4-D are both phenoxy herbicides but target very different weeds, there are wetting agents that are chemically related but behave very differently in different soils. Having said this, now is a good time to review what is commonly known of the different wetting agent chemistries in order to gain an understanding of the intended use or benefit when applied to turf.

Anionic wetting agents carry a negative charge. They can result in rapid wetting of dry soils but can also be phytotoxic to turf. Another issue with their use is that, when applied to clay, they can cause dispersion of the soil particles, which negatively impacts soil structure. Cationic wetting agents are not used in the turfgrass industry for the simple reason that at the concentration needed to be effective as a wetting agent they are quite toxic to plant life.

Most wetting agents used in turfgrass are nonionic, that is they carry no net charge. The earliest examples of these were called the Polyoxyethylene or POE wetting agents. They became available in about the 1950's. They may help with water repellency issues and may increase water movement into soil. Some of them can be phytotoxic. More recently introduced wetting agents tend to be less phytotoxic. These wetting agents may enhance moisture retention in the root zone or increase water movement in the soil, or both. As nonionic wetting agents have evolved, there have appeared products that are more effective at causing thinner and more continuous films of water around soil. Also, there are new products that claim to disrupt hydrophobic associations into smaller, more soluble compounds that then redistribute in the soil profile, which results not only in reducing dry spots but also improving moisture retention. Yet other wetting agents have been developed that break down in such a way that the initial breakdown products continue to serve as wetting agents, thus enhancing the products longevity in the soil.

How to Choose and Use The Right Wetting Agent Wetting agents are generally thought to be the most efficient way to deal with hydrophobic soils. There are many products on the market that will aid in water penetration and distribution. Depending on product

choice, they are available in liquid or granular form. Some are injectable and still others can be distributed via an irrigation system. Thus they are very easy to use. Some of these products are considered short term in their effects (perhaps 2 to 4 weeks) while others are long term products with effects that last from 1 to 3 months. Depending on product choice and timing of application some can cause some phytotoxicity to the turfgrass.

Not all wetting agents are the same. As sophisticated as the chemistries associated with wetting agents have become, a reliable method for choosing the correct one to use is somewhat elusive. As with all products, read and follow the label. When researching a product, make sure to find field evaluations conducted by University researchers or other third parties. Even with this, there are other variables that come into play, such as rate and timing of application, how much water was applied, turf species used, soil type and soil chemistry.

After choosing a product, it's a good idea to try it out on small area that includes an untreated check so that you can determine if it is accomplishing your goals. One application will typically not be sufficient. Remember that the use of wetting agents will involve a program of applications per the label direction and may take some period of time before results are achieved. If you do not achieve your intended result with a particular product, then research the use of another, perhaps in a different category or class of wetting agent.

One practice that should be added is in regard to the application of water post application on surfaces that have high organic matter content. Wetting agents can get bound up in this material rendering them ineffective and so following label recommendations for water volumes post application is critical to success regardless of whether the product is applied to high cut or short cut turf.









The History of Cool Season Turfgrasses, Part 1

David Gardner, Dept. of Horticulture and Crop Science, The Ohio State University Dominic Petrella, Agricultural Technical Institute, The Ohio State University

The best grasses for an athletic field should ideally be able to tolerate heavy traffic, recover quickly from injury, plus germinate and establish rapidly. They should also have good annual color, meaning both the ability to grow and look good at cooler temperatures but also can tolerate heat and drought. The perfect grass, based on these criteria, does not yet exist. However, in most (hopefully all) cases, the grasses you manage on your fields today are not your grandparent's grasses, or maybe even your parent's grasses. The industry of breeding new and improved turfgrasses for use in all facets of society is a big business and significant strides have been made in cultivar development for sports fields. This month's article focuses on the changes in the agronomic characteristics that have occurred in each of the major cool season turfgrasses that we manage as sports turf.

Poa – The bluegrasses

The most widely used species in the genus is Kentucky bluegrass (*Poa pratensis*). As a species, it has good heat tolerance and moderate to good drought tolerance. However, it has limited tolerance for shade or saline conditions. Kentucky bluegrass has finer texture, excellent mowing quality and, most importantly, the ability to spread by underground elongating stems known as rhizomes. As such, it can spread much more rapidly than bunch type grasses, such as the ryegrasses and fescues. Early Kentucky bluegrass varieties were selections out of pastures. With the advent of breeding and selection programs came the development of cultivated varieties

or cultivars. Remember that a cultivar is an artificially created group of plants that has some distinguishing characteristic(s) that when reproduced, retain those characteristics.

Kentucky bluegrass is the one species in which more cultivar development has occurred since it is apomictic. Apomictic means that a mother plant will produce seed resulting in plants exactly like the original plant. Breeding efforts and the fact that Kentucky bluegrass is apomictic has resulted in the development of cultivars that are quite distinctly different in their agronomic characteristics and agronomic requirements. Because of this there are cultivars available that will perform very well under certain environments and/or management conditions but perhaps quite poorly in others.

Some of the common types of Kentucky bluegrass that dominated turf stands last century are still available for sale and, in some cases, have appropriate or ideal uses. They are very different compared to more elite cultivars. Common Kentucky bluegrasses have an upright growth habit, with leaves ascending at a 45-degree angle, a coarse texture, and very thick vigorous rhizomes. These rhizomes give common Kentucky bluegrass the ability to spread aggressively. However, they are slow to breakdown, and as such contribute to what can become very thick thatch layers. These grasses are best suited for lower intensity management, with less fertility, less irrigation and higher mowing heights.

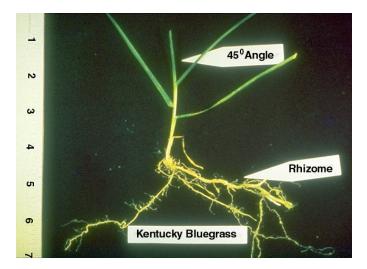
In 1947, the first cultivar of Kentucky bluegrass, 'Merion', was commercially released. A side-by-side inspection of the growth habit of this cultivar reveals some important differences between it and common Kentucky bluegrass (Figure 1). First, the leaf blades are finer textured and grow at more of a prostrate or 90-degree angle. The importance of this is twofold: 1) the mowing height can be lowered without removing too much of the leaf blade and 2) from eye level it gives the appearance of covering more of the turf surface (better density). The cultivar also had rhizomes that were less aggressive and fibrous. This gives the plant the ability to spread but reduces the potential for accumulating excess thatch. 'Merion' also responded better to higher maintenance.

After 'Merion', more cultivars were developed but some of these early ones were limited because they had a limited range in which they performed well. Beginning in the 1960's and 1970's, a method to take advantage of the apomixis of Kentucky bluegrass was developed at Rutgers University and since then literally hundreds of Kentucky bluegrass cultivars have been developed. Some of these cultivars are better for golf course turf usage and others for sports turf. Based on growth and stress performance from field research trials Kentucky bluegrass cultivars have been classified intro three general types: 1) Elite, 2) BVMG ('Baron', 'Victa', 'Merit', and 'Gnome'), or 3) Common types. Within the elite category, the cultivars are further subdivided into about 10 different groups based on parentage and/or agronomic characteristics. Breeding and selection efforts continue. The focus now is to further improve color and lower the growth habit as well as enhance tolerance to heat, shade, and various diseases. Another major effort is to improve seed production, which would lower production costs.

When selecting Kentucky bluegrass cultivars for an athletic field, you should choose a blend of elite types. It's best that the cultivars have similar color, texture, and growth rate. These improved cultivars will outperform common varieties in these shorter mowed and more intensively trafficked situations. However, to perform optimally, their cultural management requirements are significantly greater than the common varieties.

Within this genus are several other species that are managed as a turf, including annual bluegrass (Poa annua). Annual bluegrass appears on sports surfaces, but it mainly is managed as a weedy infestation. But it's important to understand that there are two naturally occurring varieties of annual bluegrass. Poa annua var. annua is a true annual. It is a bunch type grass with an upright growth habit and quickly produces a terminal inflorescence. This is one of our bigger weed issues. Poa annua var. reptans, however, is a perennial that produces stolons and has a more prostrate growth habit. These are not cultivated often, but rather a naturally occurring variety of annual bluegrass; however, cultivars such as 'True Putt' and "Two Putt' of Poa annua exist and have been in production for several years and can be purchased. The reptans variety performs reasonably well in the northern tier of states. In fact, some efforts have been made to develop cultivars of var. reptans annual bluegrass. However, to date, no significant commercial releases have resulted. Some cultivars of rough bluegrass (Poa trivialis) have been developed. The species is stoloniferous but lacks the heat and wear tolerance necessary to be utilized on athletic surfaces.

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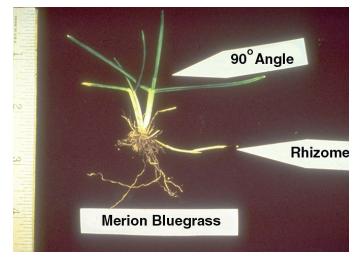


Figure 1. Common (left image) versus improved Kentucky bluegrass (right image – 'Merion' the first commercially available bluegrass cultivar). Compared to common varieties, newer cultivars have a finer texture, a prostrate leaf angle that allows for lower mowing heights, and more diminutive rhizomes that allow for spreading but with decreased potential for excessive thatch accumulation. Photo credit: Al Turgeon/Karl Danneberger

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They are mainly utilized as apart of winter overseeding programs for the golf industry.

Two other species, **Supina bluegrass** (*Poa supina*) and **Texas bluegrass** (*Poa arachnifera*) have been either investigated for use in certain parts of the country or for use in breeding programs. Supina bluegrass can be used in cooler parts of the country. It has average wear resistance but excellent recuperative potential because it is aggressively stoloniferous. It's more widespread use is limited by its lack of heat tolerance. Hybrid bluegrasses, such as 'Thermal Blue', which is a cross between Kentucky bluegrass and Texas bluegrass are becoming more popular due to improvements in rhizome growth (thus recovery potential) and drought tolerance.

Lolium – The ryegrasses

Two species of ryegrass are used in turfgrass, perennial ryegrass (Lolium perenne) and annual ryegrass (Lolium multiflorum). Perennial ryegrass is often mixed with Kentucky bluegrass because modern cultivars are similar in appearance, but ryegrass has the advantage of much more rapid germination (as few as 3-4 days) and establishment rate compared to Kentucky bluegrass. The first turf-type perennial ryegrasses became available during the 1960's. The older perennial ryegrass cultivars had a lighter green color, wider leaf blade, lacked density and had tough fibers in the leaf blade which reduced the mowing quality (Figure 2).

Perennial ryegrass breeding efforts and cultivars differ from that of bluegrass. Ryegrass cultivars are referred to as being synthetic, in which these cultivars are defined as advanced generations of open-pollinated populations composed of selected inbreds, hybrids, or clones.



Figure 2. Older varieties of perennial ryegrass were lighter in color, with less density. They also had tough fibers in the leaf, which reduced the mowing quality.

Because of this, a different system had to be developed to produce improved ryegrass cultivars compared to what is used to produce bluegrass cultivars. Early breeding efforts with perennial ryegrass focused on improving the color and producing finer textured leaf blades, better density, and the ability to be mown at lower heights of cut. Some improvements in mowing quality have also been produced, as well as a reduction in springtime stemmy growth following flowering.

Ryegrasses (as well as the fescues) may also contain endophytes. These symbiotic fungi can improve ryegrass and fescue resistance to certain surface feeding insects, such as billbugs. Breeding efforts to develop high quality endophytic ryegrasses began in the 1980's. The level of endophyte infection varies between cultivars, so the challenge has been to produce cultivars that are both highly resistant to insects but also have good agronomic qualities and many of the newer perennial ryegrass cultivars achieved both objectives. Another more recent and major accomplishment of ryegrass breeding efforts has been the development of cultivars that are more resistant to grey leaf spot ("GLS" cultivars), which can be very damaging on sports fields in the Midwest and transition zone.

There are also intermediate or transitional ryegrasses which are cultivars resulting from an artificial cross of perennial ryegrass and annual ryegrass. These grasses have characteristics that are intermediate (as the name implies) of the two parent species. They have moderate green color, finer texture, and slower growth of perennial ryegrass. They will germinate and establish in cooler temperatures but only last one or two seasons. Because of this, they will not over-dominate a turf stand the way that perennial ryegrass can when used for overseeding.

Schedonorus (Festuca) - Tall fescue

Within the fescues, the one species that is by far most frequently used on athletic surfaces is tall fescue. In class, we teach our students that learning Latin binomials is useful because a plant species may have many common names, which can cause confusion. However, with tall fescue there are also many Latin binomials that, since the turn of the century, have been used including Festuca arundinacea, Schedonorus phoenix, Schedonorus arundinaceus (the currently accepted binomial) and Lolium arundinaceum. So, there is much confusion about the classification of this species. Just think, its either closely related to perennial ryegrass, or to the fine fescues, or to neither (which is the current thinking). Regardless of its botanical classification, tall fescue has many agronomic characteristics that potentially make it quite desirable for use as an athletic turf.

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Most importantly is that it is very tolerant of wear. Its tolerance of heat and drought are also significant factors when choosing it for lower maintenance athletic fields.

The tall fescue of old, including the first commercially available varieties 'Kentucky-31' and 'Alta', were very different compared to the modern cultivars. Tall fescue has a very coarse texture and naturally performs better at higher heights of cut and with lower cultural intensity compared to Kentucky bluegrass or perennial ryegrass. Through breeding efforts, the first generation of improved tall fescue types was developed, including cultivars such as 'Rebel' and 'Falcon' during the 1980's. These cultivars have a finer texture and higher density (Figure 3). Further improvements resulted in release of cultivars such as 'Bonzai' and 'Trailblazer', which had yet finer texture and the ability to be mowed at lower heights of cut. However, they also are more susceptible to the disease brown patch and have reduced heat and drought tolerance compared to forage type tall fescue. Further breeding work has resulted in another category of tall fescues, including cultivars such as 'Millennium', 'Plantation' and 'Rembrandt'. These cultivars are intermediate, or semi dwarf in their growth habit but have fine texture, high density and are more disease resistant. They are also less restricted geographically compared to the dwarf tall fescues. Breeding efforts with tall fescue continue. Many of the newer cultivars have a fine leaf blade which allows them to be mixed with Kentucky bluegrass. They also respond better to lower mowing heights.

Through breeding and selection, the grasses we have available today are very different than the grasses 50 or even 20 years ago. Efforts to breed better grasses continues, including for grasses that are more tolerant of drought, more resistant to disease, and less reliant on fertilizer applications to perform at optimal levels for use as athletic turf.



Figure 3. Significant improvements have been made to tall fescue, including increased green color and density along with finer texture. In fact, tall fescue/ Kentucky bluegrass mixes can now in some cases be utilized with great success. *Photo Credit: Karl Danneberger*





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BWC News from Sedgwick

Premium discounts, safety & Ohio workers' compensation

Much of the discussion about workers' compensation surrounds group rating programs and group retrospective rating programs. Both programs can effectively reduce the amount of premium that you pay to the Bureau of Workers' Compensation (BWC). The group programs provide premium discount and rebate opportunities for employers. Qualifying for a premium discount or rebate depends on claim costs relative to an employer's size. Generally, employers qualify for the group programs by having a safe workplace with limited workers' compensation injuries and costs. The best injury is one that never occurs. If you do have a workers' compensation injury, there are strategies to help get the injured worker back to work. The goal should be to facilitate a prompt, safe return to work, limiting lost workdays and helping injured employees recover. A guick, safe return to work benefits both the injured worker and the employer.

Ohio's workers' compensation system is complex. A work injury can be an unsettling and stressful time for your employee and you. Sedgwick, as the administrator of our workers' compensation program, is here to consult with you about any specific workers' compensation questions, and we also offer various educational opportunities to help employers navigate Ohio's workers' compensation system.

There are numerous workers' compensation educational opportunities available to you from Sedgwick, the BWC and other sources. We recommend that you explore the educational opportunities that are available to you, which can help you implement strategies for a safer workplace and reduced workers' compensation costs. If you do have an injury, these educational opportunities will review ways to manage the injury to help the injured worker quickly get back to work and productivity.

Sedgwick has developed training options for our clients to assist in educating you on strategies to prevent an injury or limit the costs if an injury occurs. The resources page on the Sedgwick website (www.sedgwick.com/ohiotpa) includes safety resources and sample 'Toolbox Talks' to help you improve safety at your workplace. Additionally, Sedgwick holds webinars throughout the year on various workers' compensation and safety subjects. Our workers' compensation educational series is designed to familiarize you with Ohio's workers' compensation system and show you how to maximize your program. Webinar topics include:

- Introduction to Ohio workers' compensation
- Understanding your rate calculation
- Destination Excellence
- Seven steps to a successful workers' compensation program
- Cost containment strategies

The BWC's Division of Safety & Hygiene is also an excellent resource for training opportunities. You can find ample BWC training options on their website (info.ohio.bwc.org). Additionally, the BWC holds an annual Ohio Safety Congress & Expo each year. Typically, Safety Congress takes place in the first quarter of the year. The Ohio Safety Congress & Expo, which began in 1927, is the largest free workplace safety conference in the United States.

Additional training resources are Safety Councils which are located throughout Ohio. The BWC's Division of Safety & Hygiene sponsors Safety Councils across the state, organized through local safety-minded organizations. These Safety Councils provide their local communities with quality programs addressing occupational safety and health, workers' compensation and risk management education and information

There are many options to help you successfully manage your workers' compensation program. Leveraging your resources can help prepare you to minimize costs and preserve premium savings options. Additionally, leveraging your resources can help you position your employees to return home from work each day in the same healthy condition in which they came to work.

For more information, contact our Sedgwick program manager, Cordell Walton at 614.827.0398 or cordell. walton@sedgwick.com.

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 Our Sports Turf Council rounds out the Field Days series with a stop at Sylvania Schools on September 13th. Members and partners will have the chance to participate in hands-on equipment and product demos on the various campus sports fields.

Our organization is built to give back to all sectors of the industry. Whether you are in lawn care, golf, or sports turf, the impact your membership or partnership has on the industry is immense and far-reaching. OTF recently committed to donating \$100,000 to student scholarships at Ohio State. The University, in turn, pledged to match our donation for a grand total of \$200,000 which will be gifted as turfgrass scholarships for decades to come. This is in addition to the nearly \$4 million OTF has given to support research and scholarships.

It starts with participation and taking the time to pay forward with your presence at our events so we can all learn something from each other. While we may do things in different ways, ultimately, all of us are taking care of the same crop, in generally the same weather, with many of the same challenges regarding labor, supply chain, weeds, disease, insects, customers/members, turfgrass establishment, irrigation, drainage... The list is seemingly endless and the answers lie with learning and sharing with others in similar situations. Let's do this together and have some fun while we're at it!

To all of our members and partners, a sincere thank you. We simply could not fulfill our mission without your support, attendance, and volunteer efforts. Our history is rich and our impact is plainly evident but, it cannot continue without your support and for that we are all profoundly grateful. I wish you all the very best in navigating these next few stressful months. Take a day or an afternoon to share your time learning, growing, and celebrating being in this most fulfilling industry known as turfgrass!

Thanks to all who have supported OTF at this year's Virtual Grounds and Greens Training.

A special thanks to the turf specialists who joined us from all corners of the world to share their experiences in the turfgrass industry!

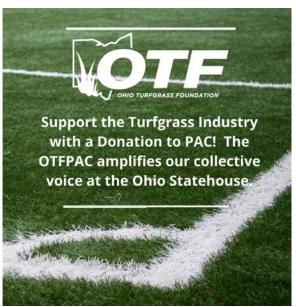








www.ohioturfgrass.org





March Board Retreat



In March the OTF Board met at Deer Creek Lodge to craft the future vision of OTF. We have some exciting things planned for 2022! This year's Conference & Show will feature a new tradeshow floorplan with room for some fun networking, games, and entertainment! If you are not getting updates, be sure to sign up! Email OTF at info@ohioturfgrass.org.



President's Award

Nick Janovich

It's been five months since Nick Janovich passed the torch to 2022 President Ryan Demay. Never fear these two amazing guys continue to work with the rest of the OTF board to advance the turfgrass industry through research, education and advocacy. Cheers to celebrating an amazing 2021 Conference & Show! Learn more about OTF at https://ohioturfgrass.org.

Where have the students gone?

Dr. Ed Nangle, Dr. Dave Gardner and Dr. Dominic Petrella, OSU/CFAES Wooster and Columbus

There are jobs jobs jobs EVERYWHERE – it may be the hottest job market in years – but no one wants a job. That refrain is from the restaurant industry where in July of 2021 even when the pandemic was still roaring – there were 1.2 million openings, while in May of that year 706,000 people quit those same jobs because of rude customers, rough hours, and poor pay. Some of this sounds familiar right?

The industry we serve is crying out with the same problems and yet we are still stuck – what has happened to the students you may ask? Well, its not an easy topic to give clarity to but here are some of the reasons we think that student numbers might be down. It is critical to remember that the words 'we think' are associated with this document as there is not a huge amount of hard data for our industry out there.

Pay: If a student comes to either Wooster or Columbus campus with a parent, one of the first questions asked is, "how much will my son or daughter make annually when they get out of school?" - and yes if people are not in the industry that is one of the most important factors that they consider – not just the love of the game. We have to be honest, and of course up to 5 years ago we were optimistic in saying \$40,000 annually. That has thankfully started to change and there has been a greater appeal because of increased pay, but the longer-term approach for us has been to discuss the average salary of GCSAA superintendents to help us raise some eyebrows. It's still a decision that ultimately, they have to make, and when parents realize that room / board and tuition for an instate student costs >\$25,000 for Columbus students and >\$21,000 for regional campuses it sometimes is hard to see how the education can pay off. We use salary data provided by the GCSAA that show where a 2- and 4-year degrees land a student on average as a superintendent, but we also show how much on average CGCS members make to give an idea of renumeration – and in many cases it is competitive.

Lifestyle: We emphasize to students that this is a tough job, and that summer is going to be busy in the northern part of the United States but that fall and winter makes up for it. Many prospective students may be somewhat aware of this, but they may not realize the full impact, and this is something where industry can help out with regarding time off during the summer. It is improving as the realization has kicked in that the 100 days can be a grind, and while the comment 'well that's what I had to do' is fine - arsenical chemicals aren't around anymore either for good reason. It is also emphasized to students that this is a lifestyle choice, but that if they want to succeed in ANY industry, hours and effort are going to be required – just maybe different hours and seasonal variations. There has been a shift towards more time off and its something we like to be able to talk about.

Competition: There are plenty of great turf schools and programs out there – what defines The Ohio State University? That is also a moving dynamic, the program in Wooster would say hands on learning whereas Columbus would say network – the point being everyone will try to find their niche – purely because students coming to the 2 different campuses may have different interests, so we try to cater to them. Recently there has been increased integration of the 2-year classes into the 4-year program. That pathway is returning to be a more attractive approach, but there are no guarantees that any student coming in will succeed in either situation. We can say and feel that we provide the best education but ultimately, it's mostly the individual students who make the difference

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Students who come in focused and willing to work and advocate for themselves will always succeed – again not everyone is the same in this boat – for some it takes more than others, but we try on both campuses to ensure as long as there is effort from the students side that we match them with promotion and engagement from our side.

In addition to this, a four-year degree versus an associate's degree versus a certificate as a debate is a moot point. All academics will tell you that they have had good and bad students regardless of which degree they obtained – if they don't then we would really wonder what they are looking at. A student with a certificate can do as well or better as a student with a four year degree – if the student has the passion and drive to succeed and most certainly vice versa. The only difference we might see is where the definition of success lies within each students mind and once again that's down to them.

Why do they go to the big name courses? When we have a prospective student come in, we have to sell the program and if that means showing TV golf or MLB stadiums with alumni to hook them then so be it — we don't have another way to compete with other careers. To that extent, however, if we can show the students career paths and experiences such as bringing the dog to work or the ability to travel then that helps too. Further, people who say we favor the bigger courses with interns that is absolutely not the case — we send all postings out equally, and ultimately its based on

what the students friends say and what other students tell possible interns is what may make their decision. One thing we need to bring back is to get students out to meet with superintendents more – things like round tables or interview panels are great ways to get students comfortable with possible employers and that's something both programs will look to reinvigorate.

Student population: Overall, the population of students in Ohio high schools is declining and this creates a problem for programs – limited access to students in technical high schools is an ongoing issue and as teachers who may have had a turf interest retire and are not replaced leads to invites to come talk drying up. Superintendents in each school district need to help us with this – if there is a retirement or in an event where a friend is moving into a high school position in your school district then we would love to know about it. On top of this, we need to do a better job in diversifying our workforce and looking to attract people from all backgrounds – if you don't change and make the effort then complaining about people not wanting work sounds more like – I'm not finding the people I want to work for me rather than we take all comers and see whether they can stick it out. Another area where the industry has started to improve but needs to continue to strive is on social networking. Turfgrass managers in whichever part of the industry they are in create something beautiful and unique every day – take a picture and let people know. Grumbling about hours and weather isn't appealing to the public – they have their own baggage with that – leaders and influencers are always optimistic on social media – take that cue.



Figure 1. Students graduating from all turf schools have lower numbers with some programs even shutting down – we need all the help we can get!

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This is an online course developed by industry experts and backed by The Ohio State University.

Entrance into a program: This is one area that many turfgrass programs have limited control over. For people who graduated prior to the year 2000 from any four-year degree there is an awareness of the ease of access. That has changed, and this is a decision that is way beyond all of our paygrades. The pandemic did change that again but it will be interesting to watch how universities will bring students in going forward, and to guarantee access it may be smarter to enroll in a 2-year program that has a pathway to finishing the 4-year degree as long as the students stay focused – there are many of these options out there. Further to this, there are 3,700 undeclared students on Columbus campus, and if it was possible to even attract 0.5% of them (18) it would be a vast increase in program numbers

Recruiting students: This is somewhat difficult to get faculty to focus on, advising, research, teaching and extension are already a load to carry. However, we have had recruiting events and continue to refine our efforts. Open houses, which bring students and parents in, and meeting with various youth organizations may have possibilities, but remember mom and dad need to be in attendance also – otherwise its in one ear and out the other. One area that we will be engaging with in 2022 is with Junior golf tours and tournaments – the aim here is to get exposure to students who are already interested

golf. Yes, we know some are looking to be pro golfers, but the vast majority don't even know about careers in the turfgrass industry. The fact that junior golfers may have spent their teenage years growing up on a golf course indicate to us its something to think about as an area for engagement. One other area where we are looking into is home and garden shows, a lot of DIY type suburban parents attend these events, and they may look at a career in this field as of interest to them and hopefully by osmosis for their kids – its one to keep an eye on.

Ultimately: We have a great industry, but 'demanding here and now' isn't going to fix any problems for getting more young people into our industry. Understanding there are different pools (retirees, high school students, teachers on summer vacation) that may want to work but for limited hours is one way to at least get over the hump and, who knows, maybe help with recruiting. But as a whole we need to do more rather than throw our hands in the air and complain— and yes, we know many are but its as always the squeaky wheel that gets the grease so giving up isn't an option.

OTF SCHOLARSHIPS DRIVE TURFGRASS INDUSTRY'S FUTURE

In addition to general support of The Ohio State University's (OSU) Turfgrass Program and Facilities, the Ohio Turfgrass Foundation directly supports students studying turfgrass science.

Since its inception, OTF has provided more than \$600,000 in scholarship support to students studying to enter the turfgrass industry.

This year, OTF announced a partnership with OSU to provide additional scholarships to students studying turfgrass science moving forward. Over the next five years, OTF will provide \$100,000 toward a scholarship program with OSU matching OTF's funds. Once the program is fully funded, it will provide nearly \$10,000 in additional scholarship money on an annual basis going forward. But in order to keep providing current and greater levels of financial support to students, we need your help. With shortage of workers affecting all industries, turfgrass is no exception. And we need more individuals interested in working in golf course lawn care, municipality and sports turf management.

How can you help future turfgrass professionals and strengthen our industry? Consider an online donation to the Ohio Turfgrass Research Trust (OTRT) under the "Make A Donation" dropdown on the OTRT tab on the OTF website homepage. No donation is too small and check with your tax advisor to see if your donation is tax deductible as OTRT is a 501c3 organization. We also are seeking sponsors for this year's scholarship program. This is your opportunity to have your company's name (or your family's name) attached to an OTF scholarship. Sponsors will have the ability to present the scholarship check directly to the student recipients at the OTF Show this December.

If you are interested in sponsoring an OTF Scholarship, please contact OTF Executive Director Mark Bennett at $614-285-4683 \times 101$ or mark@bennett-management-llc.com.



TURFWEEK

Advocacy Day

An incredibly productive advocacy day at the Ohio Statehouse for the Ohio Turfgrass Foundation and Ohio Lawn Care Association! Sports Turf, Golf and Lawn Care were all well represented. Thanks to our legislators for learning about the impact we can have together on Ohio's green industry!





Ohio Turfgrass Foundation 1201 Dublin Road Columbus, OH 43215

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