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LAWN, LANDSCAPE AND SPORTS TURF FIELD DAY

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Check inside for information on: Poa annua Rutgers Lawn, Landscape And Sports Turf Field Day Maintaining Infield Lips Recap of Spring Field Day Water Management Upcoming Events MORE COMFORT. MORE POWER. MORE VERSATILITY. MORE CONTROL.

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Currently we have 219 new & renewed members. Sports Field Managers Association of New Jersey mailed invoices for 2019 membership dues to all current members. If you did not receive an invoice, please contact us at 856.514.3179 or download the membership form available at www.sfmanj.org. Mail membership dues direct to SFMANJ, PO Box 205, Pennsville, NJ 08070.

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(Continued from last issue)

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SFMANJ Adelphia Trade Show Wed. July 31, 2019 call 856-514-3179 for info

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of New Jersey Convention

This newsletter is the official quarterly publication of the Sports Field Managers Association of New Jersey.

For information regarding this newsletter, contact: SFMANJ at (856) 514-3179 or Brad Park at (848) 932-6327 Editor: Brad Park, Rutgers University, Email: park@aesop.rutgers.edu Layout and Design: Debra Savard, Email: mail@sfmanj.org

SFMANJ does not necessarily support the opinions of those reflected in the following articles.





By Don Savard, CSFM, CGM

I get many compliments in the early spring from visitors about how green and lush my playing fields look. In our business, we learn to take any credit we can get. I say thanks, give them a self-effacing grin and mumble modestly something about the weather conditions must have been right and we were just darn lucky.

Poa annua (annual bluegrass), you did it to me again. In a couple of weeks you will be a seedy mess, just before the sports playoffs. And just as soon as the pressure is off, there you are, looking real good again like nothing happened.

Like an insufferable coworker, just when I wish it would just go away, it surprises me and comes through for me in a clutch.

Read any of the trade publications and there are advertisements for new herbicide products that claim to control and even eradicate *Poa annua*.You might begin to believe that *Poa annua* is bad and feel there is something wrong with you because it is growing in your turf.

A weed is defined as a plant that is growing where it is not wanted. *Poa annua* grows wherever it wants. It is one of the most adaptable plants out there. If you are trying to grow a monoculture of anything (turfgrass to tomatoes), *Poa annua* would likely begin to invade the stand if given the chance. It seems to grow everywhere in the world, hot, cold, wet and dry locales. It has even appeared on King George Island in the Antarctic South Shetland Islands as an invasive species.

Poa annua is described as a cool-season winter annual. Winter annuals are plants that germinate in late summer to early-fall, overwinter, and produce seed in the spring. Typical winter annuals die soon after seed production as daytime air temperatures increase. *Poa annua* is anything but typical. And it is not exclusively annual. There are even perennial *Poa annua* biotypes. To confuse things further, there are low growing types, upright types, bunch types and stoloniferous types.

So, what is so bad about *Poa annua*, after all, it has been successfully managed on golf course putting greens for years?

Well, there is the aforementioned seed problem. *Poa annua* is a prolific seed producer in the spring time. These seeds manage to spread from site to site by natural means such as wind and water and on shoes and the wheels of grounds equipment, contaminating soil wherever it can. Sometimes it comes with purchased soil, plants and new sod. The seeds remain viable in soil for a long, long time.

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RUTGERS LAWN, LANDSCAPE AND SPORTS TURF FIELD DAY

Including SFMANJ-Sponsored Trade Show and Equipment Demos Adelphia Research Farm, Freehold, NJ

Save the Date - Wednesday, July 31, 2019

has In what become an annual tradition, the Turfgrass New Jersey Association (NITA), Sports Field Managers Association of New Jersey (SFMANJ), and Rutgers University will once again collaborate to hold the Rutgers Lawn, Landscape, and Sports Turf Field Day. This year's event will be held at Rutgers Adelphia Research Farm, Freehold, NJ on Wednesday, July 31, 2019.

by Brad Park

A trade show will be sponsored and administered by SFMANJ and is open to all vendors who sell products and services to the Green Industry. Coffee, bagels, Danish pastries, etc. will be served during the trade show. The trade show provides a great opportunity for attendees to network with other Green Industry professionals and examine the latest product offerings from Industry-supporting vendors.

After opening remarks, the education portion of the program will begin at 9:00 am. Groups will rotate between three 20-minute tour stops per hour. There will be four 3-stop rotations between 9:00 am and 1:00 pm; two of these stops will consist of vendor-sponsored equipment demonstrations administrated by SFMANI.

> Turfgrass species/variety, fungicide, and herbicide trials are annually conducted by Rutgers Faculty at the Adelphia Research and will be included as educational tour stops. Stark contrasts between effective and ineffective varieties and treatments are often visually apparent in these

trials providing attendees with useful information on turfgrass selection, product selection, application timings, and application rates.

Following the turfgrass education and equipment demonstrations, a fine lunch will be served to all of those in attendance. The trade show will also be open during this time. Following lunch, New Jersey DEP pesticide

recertification credits, and credits from neighboring states per

Continued on page 13







Update Sumer 2019







Editor's Note:This article first appeared in Sports Turf Manager (Autumn 2015) the official publication of Sports Turf Canada.

Much has been written about sports field drainage - an essential element in the playability of sports fields. Dr. Andrew McNitt, Penn State University, described methods in practical terms to improve sports field drainage in an article titled, Understanding Field Drainage that appeared in Sports Turf Manager (McNitt, 2006). The textbook, Sports Fields: A Manual for Design, Construction and Maintenance (Puhalla et al., 1999) provides excellent details on sports field drainage. The most comprehensive textbook in which the author is aware on the subject is Practical Drainage for Golf, Sportsturf and Horticulture (McIntyre and Jakobsen, 2000).

This article will attempt to add to the existing base of knowledge on this subject by discussing the author's own observations in dealing with sports field drainage as well as baseball/softball skin surface water management issues in a University Extension setting.

Sports field design and construction

It has been the experience of the author that many sports field architects and engineers have unrealistic expectations concerning the way native soils or sand-modified soils drain internally. Architects and engineers will often develop a specification for a sports field calling for construction using a sandy loam soil (or finer in texture), perhaps native to the site, and design the field with minimal surface pitch (i.e. slope) with the expectation that it will exhibit rapid internal drainage. Following field construction, often performed by a contractor who employs heavy road building equipment to manipulate soils during construction, the field drains poorly, negatively impacting the playability of the surface.

A sports field can be constructed with minimal surface pitch (e.g. 0.5%) if the rootzone conforms to specifications for golf course putting green construction developed by the United States Golf Association (USGA). While subtle deviations (i.e. greater fine and very fine sand, silt, and clay) from the USGA specifications may still allow for acceptable internal drainage and limited surface pitch, McIntyre and Jakoben (2000) do a very nice job describing how the internal movement of water though soil profiles (including 'golf' sands with too many fines and sandy loams) becomes increasingly restricted under greater compaction levels – compaction being a more-often-than-not sports field construction reality.

The most pragmatic strategy in working with non-USGA conforming rootzones and certainly native soils is to design sports fields using these soils with adequate surface pitch. For example, in the design of a soccer/lacrosse/North American football field using a native soil (e.g. sandy loam, silt loam, etc.), the plans should include a "crown" that has no less than 1.5% surface slope from the middle of the field (goal to goal; or endzone to endzone) towards the sidelines.

856-514-3179 www.sfmanj.org The multipurpose field dilemma

A reoccurring sports field design problem entails the creation of multipurpose fields constructed using native soils or soils poorly modified with sand that are tipped diagonally from one corner of the field to the other. These designs are desirable from the perspective of athletic directors, coaches, business administrators and other decision makers as an appearance is created that field space is maximized. Who could not resist fitting a baseball field, softball field, and soccer/lacrosse/field hockey field in one two-andhalf acre footprint? The author has often observed the placement of a baseball or softball skin surface in the lowest corner of the field where water is forced to surface drain (i.e. run down hill) onto the infield skin.

On the issue of multipurpose fields, Puhalla et al. (1999) note that sports fields should be treated as individual drainage units, and should not be expected to perform acceptably with water running onto a sports field from an adjacent field; moreover, within each field, an infield skin surface should not be lower than the outfield.

Improving drainage on existing fields

There are several strategies that can be employed to improve the drainage of existing fields as field reconstruction is typically not feasible. The following strategies are meant to improve, or 'augment', the surface drainage characteristics of a field with some existing surface pitch, either in the form of a crown or tipped from one side to another.

Sand-slit drains can be designed and installed as sand-filled trenches (e.g 3 to 4-inch wide; 12-inch deep) with a strip drain embedded in the base of the trench; the goal of this system is to intercept surface-draining water and rapidly move it off the sports field into a collector drain(s) (Puhalla et al., 1999). These authors provide excellent schematics of these systems and note that the drains should be installed at a 45-degree angle to the direction of the surface runoff. McNitt (2006) advises that after installation of a sandslit drain system core cultivation of the field should be followed by core harvesting and sand topdressing; this management style, similar to that of a 'push-up' golf course putting green, will preserve the integrity of the sand-filled trenches.

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Sports Field Managers Association of New Jersey

By Nicole Sherry

Editor's Note: The following article was written in 2006 when the author was Head Groundskeeper of Trenton Thunder, Double-A affiliate of the New York Yankees Baltimore Orioles.

b Servi

Usually, when I am called to look at fields in our area I notice the same thing over and over again: huge lips. I am talking about lips you could step-off and break a neck. So what causes this problem? I believe it all depends on maintenance practices. The first problem entails too much material on the infield. After it rains and you notice a pool of water in spots on your infield skin, the first cure is to add more material, right? Wrong. Yes, add material to soak up extra water and dry out the puddle, but afterwards remove all that extra stuff you added. Have you ever been to a rainy ballgame and the grounds crew comes out inning after inning with drying agent to help the teams get through the game? Well, what you don't know is that the next day we are scooping all of that extra material off the infield. Why? If we did not, those players would soon be playing on a beach. I went to visit one field last week and the lips on the field were two feet high and five feet wide. They thought they would need to strip all of the grass and add more root zone to get the grass even with the lips. I asked them to look at the field from a side view. "Look at your infield," I said. "See how it is raised almost two feet compared to the rest of the field? Imagine a giant knife slicing through the point at which the existing grass meets the lip and continuing all the way through to the backstop." I noted that it appeared as though loads of material just kept building-up so that it made almost a two-foot difference between the outfield grass and the infield skin.

The second problem for lips is wind. Wind will take hold-of that topdressing and blow it everywhere. A lot of it ends up in the grass edge. Can you ever stop lips from forming? No. You can, however, help control them by putting in a little extra effort about once per week. After each home stand, I have my crew use street sweeping brooms with really stiff bristles and broom from six to eight inches in the grass back towards the skin all the way around the field including inside edges, base paths, and the mound and plate grass

edges. This will damage your grass a little bit. Try to make sure you only broom the same spot a couple times and move on. Also, if it's a hot sunny day, your grass may yellow a little. Cloudy days are perfect. Once a month I sharpen all the grading rakes (iron rakes) and stand on the dirt. I place the rake in the grass edge about six inches back and rip through the hump in the grass pulling towards the dirt at an angle then go back over in a different direction and angle. It will rip the grass. Don't worry; it will also loosen up all the compacted lip areas. When done, broom all of your edges again to clean them out and then you can roll the edges and use an edger to even it out again. In extreme cases like the one mentioned above, you might have to use a sod cutter to rip out those lips, find a level grade, re-sod, and take out some of your infield material.

Lets face it, I know we all have different things going on in our lives; however, if we try to spend a couple of hours on the lips of our fields and our finished product is correct (level) the first time, it's easy to maintain. Let's give our players a field that is safe. There is nothing worse than someone trying to field a ball, and cannot focus because he or she is worried about tripping on the field and getting hurt.

Nicole Sherry is Head Groundskeeper, Baltimore Orioles; and 2018 recipient of the Sports Turf Managers Association (STMA) Dick Ericson Award



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POE ENNUE-MISUNDERSTOOD FRENEMY?

Continued from page 4

Some people don't like the light green color. Mixed in with more desirable turf grasses, it gives the sward a mottled appearance that is hard to mask with the addition of nutrients. Depending on the growth habit of the *Poa annua* biotype (upright or low growing) the textural differences between the *Poa annua* and surrounding turfgrass becomes noticeable and can affect ball roll.

Poa annua thrives in cool moist weather such as early spring and late fall. Hot summer weather can put it into stress causing the annual variety to die off. The perennial types are sensitive to environmental stresses and disease pressures, but if managed properly will do just fine. When the favorable weather conditions return, the *Poa annua* comes back and things go back to normal.

So whether or not *Poa annua* is good or bad really depends on your site specific criteria. For example, if you are growing a showcase stand of turf and have a solid management program, *Poa annua* would likely be your enemy. If you manage a highly trafficked high school practice field like mine (over 900 events per year), *Poa annua* can be tolerable if you know what to expect and how to manage it.

In the late spring, half of my sports field is relatively *Poa annua*-free. The other half is heavily infested and fully in seed. The reason is that we have been renovating certain areas, fully stripping the existing worn grass and resodding with good clean turf. Stripping the

old stuff off reduces the existing seed bank. Where we have not renovated really looks bad when it is in seed, but by summer will start looking good again once the seeds and stalks disappear. On our campus most of the use is over by the end of May, so I can begin feeding, irrigating, cultivating and growing my turf back in. It is amazing how 2 months of good agronomic practices can restore a turf stand. With all of this care, the *Poa annua* that has survived will thrive in the areas that receive heavy compaction or drain poorly. In early August, I control weeds so I can be relatively weed-free when I overseed. In mid-to-late August, I begin overseeding with improved varieties of Kentucky bluegrass. In September I switch to improved perennial ryegrass and continue seeding into November. I aerate weekly, irrigate and fertilize. I usually begin to notice *Poa annua* beginning to germinate in late October when we start to get frost.

By the late fall my practice fields have decent turf coverage, although it is a mixed stand of Kentucky bluegrass, perennial ryegrass and turf-type tall fescue with *Poa annua* mixed-in. The stand has acceptable density and holds up to play into December and beyond

as intramural flag football is played all winter if conditions permit. March I is the first day of spring preseason, and the *Poa annua* has helped to hold the soil and reduce erosion. The field will look pretty good once the soil warms up in April, and will look good until it goes to seed again in May.

So I guess I could describe *Poa annua* as my frenemy. At times it is a nuisance, at other times it is my friend. Eradication

is expensive and difficult. Prevention is almost out of the question. When it is looking good, nobody seems to notice. Funny how that is!

Poa annua

Seed Heads

Don Savard is a Certified Sports Field Manager (CSFM) and Certified Grounds Manager (CGM); Director, Athletic Facilities and Grounds, Salesianum School; and an advisor to the SFMANJ Board of Directors.

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Brad Park is Sports Turf Research & Education Coordinator, Rutgers University; Editor, SFMANJ Update newsletter; and a member of the SFMANJ Board of Directors since 2003.

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Sports Field Managers Association of New Jersey

Managing water for playability Continued from page 6

Sand-slit drain installation is a dramatically underutilized technology in the school/town sector of sports field management. Having made dozens of sports field consultations during the last 13 years, the author can only recall a handful of occasions where this sand-slit drainage has been employed. This drainage technique can be installed on both existing sports fields as well as part of the construction of new fields. Unfortunately, in the eyes of many decision-makers a sand-slit drainage system is viewed as an unaffordable 'luxury' that is only reserved for the premier field of the school, town, college, etc. During the last 10 to 15 years, the primary 'improvement' made to many school and town premier sports fields has been the removal of natural turfgrass and installation of synthetic turf considerable costs both at the time of installation and at eventual tear-out and resurfacing.

Newer machines (e.g. BLEC Sandmaster, WaterWick, etc.) have appeared on the market in recent years that mimic sand-slit drainage installation where sand channels can be more rapidly introduced into a sports field in lieu of traditional trenching practices, creation of spoils, etc. While these tools will effectively create sand-filled trenches and improve drainage, they do not provide the advantage of an installed pipe at the base of the trench that will accelerate water movement. Similar to slit drains, operation of these machines should be made at a 45-degree angle relative to the surface flow of water.

Baseball/Softball Infields and Infield Skin Surfaces

Several useful resources have been developed in recent years that provide practical information on the subject of baseball and softball infield skin surfaces. The Rutgers Cooperative Extension Fact Sheet, Skin Surface Selection and Management for Baseball and Softball Infields summarizes infield mix selection criteria developed by American Society for Testing and Materials (ASTM, 2007) and management information derived from field research and experienced sports field managers. This document can be accessed by performing a simple search using any web browser. Baseball and Softball Fields: Design, Construction, Renovation, and Maintenance is a textbook dedicated to this subject matter (Puhalla et al., 2003) and is a must-have resource for engineers and architects who are in the business of designing sports fields.

Infield design

There are two primary considerations when designing baseball and softball infields: I) The infield should be designed/constructed in such a manner to move surface water away from the infield towards the outfield and foul territory; and 2) Infield mixes/skin surfaces should not be expected to exhibit acceptable internal drainage and should therefore be part of the larger infield design to direct water towards the outfield and foul territory via surface pitch.

Don't Forget . . . SFMANJ Adelphia Trade Show Wednesday, July 31, 2019 Regarding the first design consideration, as previously noted in the discussion concerning multipurpose fields, surface water should never be directed onto a baseball/softball infield. Moisture management plays a key role in the maintenance of infield skin surfaces; the sports field manager needs to have the ability to apply water to the skin at his or her discretion to maximize the playability of the surface, not be preoccupied with unwanted surface water running onto an infield skin surface as a result of design flaws. Puhalla et al. (2003) show an excellent set of drawings to illustrate grading designs with added 'good', 'better', and 'preferred (best)' commentary in order of effectiveness in moving surface water both away from the infield and off the entire playing surface in the most rapid manner possible.

All good designs call for some minor pitch (e.g. 0.5%) to infield skin surfaces to provide surface drainage. While extremely sandy infield mixes may allow for some internal drainage, most contain enough fines that under compacted conditions internal drainage will be compromised resulting in surface pitch being a necessity.

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Sodding and seeding Aerification Infield mix, amendments, mound clay, bricks

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Managing water for playability Continued from page 15

Infield skin surface management

Skin Surface Selection and Management for Baseball and Softball Infields (Park and Murphy, 2009) summarizes the importance of water management in maintaining infield skin surfaces. In the most basic terms, water is needed to soften fine-textured infield mixes (high silt and clay content) and firm coarse-textured mixes (high sand content) (ASTM, 2007).

In the experience of the author, outside of natural rainfall events, water is not regularly applied to most school and town infield skin surfaces in New Jersey for the purpose of managing surface hardness and playability. The majority of mixes encountered by the author at schools and towns consist of approximately 80% sand and 20% silt+clay. While appropriately applying water could certainly improve the playability of these surfaces, many perform adequately considering the level of play in lieu of supplying water. On a cautionary note, high sand content infield mixes can be overscarified with motorized infield grooming equipment equipped with large 'teeth'. Without the ability to apply water to firm these mixes, the loose, cat litter-like conditions that result from overly-aggressive grooming are difficult to firm until natural rainfall supplies the necessary moisture.

Similarly, grooming practices should be performed in such a manner to maintain a grade that allows for surface drainage. Water will pool in low-spots, sometimes referred to as 'birdbaths', if grooming procedures regularly remove infield mix from one area of the skin surface and deposit on another location of the skin surface (i.e. creating a high spot). Periodic laser-guided grading of infield skin surfaces is a highly effective means of re-setting grades (and good surface drainage).

Conditioners (e.g. calcined clay) can be spread on top of skin surfaces to improve playability over a range of weather conditions. Conditioners are often used to soak-up excess water after rain; finer-textured conditioners work best for this purpose (Puhalla et al., 2003) but should be removed from the skin surface after play (Sherry, 2006). Skin surface water retention is a function of the amount of silt and clay in the infield mix, not the amount of calcined clay on the surface; calcined clay applied to the skin surface will often dry before the underlying infield mix resulting in some grounds managers applying unneeded irrigation water (Brosnan and McNitt, 2007).

Conclusions

A trained, competent sports field manager can employ the finesse that is required to manage water for playability. Sports fields design parameters and construction methods are not always conducive to good drainage – and the costs and/or field down time necessary to improve these problems dictate that a sports field manager must often "work with what he or she's got". Case in point: Poor sports field drainage can be compounded with bad irrigation management; that is, a timer/clock programmed irrigation system may be allowed to deliver additional water following a natural rainfall event rendering a sports field unplayable. A sports field manager with site-

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Brad Park is Sports Turf Research & Education Coordinator, Rutgers, The State University of New Jersey; a member of the Sports Field Managers Association of New Jersey (SFMANJ) Board of Directors since 2003; and Editor, SFMANJ Update newsletter.





Sports Turf Managers Association (STMA) President Elect, Jody Gill, representing Sports Field Managers Association of New Jersey, (SFMANJ) spoke at the Directors of Athletics Association of New Jersey (DAANJ) meeting at The Golden Nugget on March 13, 2019. His topic was "Meeting Expectations of Sports Field Quality".

This is the first year that SFMANJ had a booth or a presentation at the event. We would like to thank DAANJ for allowing us to participate this year!



Brad Park, SFMANJ Board Member and Update Editor, Jodi Gill, STMA President Elect, and Will Saudermann, Athletic Director for Pinelands Regional School District

Brad Park and Debbie Savard, SFMANJ Executive Secretary at DAANJ Convention,

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Vendors: If you are going to participate in the Adelphia Trade Show on July 31, please register with SFMANJ - NOT NJTA Attendees: Please contact NJTA to register - www.njturfgrass.org

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