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UPDATE Sports Field Managers Association of New Jersey

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A Review of 2015

Brad Park

At the conclusion of each year, the weather experienced during the year is always an integral part of sports field management conversations. Certainly, 2015 was no different.

Is it winter yet?

According to records compiled by the Office of the NJ State Climatologist, monthly average temperatures during January through March 2015 were below normal (February was the 3rd coldest February on-record in New Jersey averaging almost 12-degrees F below normal). Below normal temperatures in March impacted sports field preparation in the midst of the beginning of the spring sports season.

During the month of October, I am frequently asked the question, "Is it too late to seed?" My response, "Go for it" – assuming it involves overseeding into a sports field or grounds location where the objective is to improve the density of existing turf cover. In mid-fall, I would not recommend embarking on turf establishment processes that involve nonselective control of existing turf cover or other strategies that would result in having to seed into bare soil.

While various factors affect the success of mid-to-late fall overseeding programs, turfgrass species choice and weather tend to be overriding factors. Sitting on an overseeeding "go or no-go" decision in mid-October, what does one have to risk by overseeding other than the cost of the seed? The chance that late fall could be above average (i.e. November 2015 [5th warmest] and December 2015) is an argument to for late season overseeding. Of the cool-season turfgrasses recommended for sports field use in New Jersey, perennial ryegrass is the least sensitive to cool soil and air temperatures; thus, this species can play the role of an 'insurance policy' in the event mid-to-late fall temperatures are average or below normal.

Come rain or come shine

Following a dry April and the 3rd driest May on-record, we experienced significant rainfall during June 2015 (4th wettest). Similar to 2013 (wettest June on record), summer patch disease was a major problem at our Rutgers Hort. Farm 2 location in North Brunswick, particularly on hard fescue. Albeit not a turfgrass species recommended for sports field use, hard fescue (one of the fine fescues) can be established as a monostand or with other cool-season turfgrass species for lawns and general grounds. The species has a high level of sensitivity to summer patch disease, among the most devastating diseases observed in cool season turfgrass. The patch disease is caused by a root-infecting fungus (infection occurring mid-May to late-June) with classic frog-eye symptoms expressing themselves in susceptible turf around the 4th of July.

Rainy weather in June 2013 and 2015 provided ideal soil moisture conditions for the summer patch causing fungus to fully infect summer patch susceptible turf species in both years. We observed severe summer patch symptoms in hard fescue by late June 2015.

In contrast, precipitation during July, August, and September 2015 was below normal. Coupled with the 3rd warmest September, those that were managing sports fields in lieu of irrigation had a difficult time this summer and into early fall. Turfgrass quality and sports field performance expectations should be reduced where irrigation is not present. Photo-documenting dormant turf in mid-to-late summer and seed sitting on the surface of goal creases waiting for natural rainfall to germinate can be powerful images to 'sell' the installation of an automatic irrigation system – particularly for varsity game fields.

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Welcome! *New and Renewed SFMANJ Members*

Currently we have 282 new & renewed members. Sports Field Managers Association of New Jersey mailed invoices for 2016 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.

Kyle Harris	*Monmouth University*
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Welcome New Members from the 2015 Fall Field Day

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Pat Comito	*Georgetown University*
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Connor Manning	*Student*
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Michael O'Connor	*Bergen County Tech School*
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MISSION STATEMENT

Committed to enhancing the professionalism of athletic field managers by improving the safety, playability and appearance of athletic fields at all levels through seminars, field days, publications and networking with those in the sports turf industry.

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National Organization
Sports Turf Managers Association
www.stma.org

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

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A Message from the President . . .
As I look back at the year that was 2015. . .

by Rich Watson

As I look back at the year that was 2015, I have a deeper appreciation for the industry that has supported me for the last 27 years and the relationships it has allowed me to form. This year was a difficult year for me from a professional and personal perspective. The interesting thing about tough times is: It makes you realize that family, friends and health are what really matter. I have made a lot of really good friends over the course of those 27 years. These friends have been an outstanding support system for me as I get ready for new challenges in 2016. For that I am truly grateful.

SFMANJ: 2015 and Beyond

This was my first year as your President. It has been a great experience. I have been on the board of directors since 2010 which has allowed me to learn from top notch people. Past Presidents Don Savard, CSFM and Matt Olivi are true leaders and have been there for me all year long. The real success of any organization is driven by the quality of people that are at its core. The SFMANJ Board of Directors is comprised of volunteers that take time out of their work and personal schedules to focus on the needs of our organization. They are an exceptional group of people. We enjoy taking on challenges in order to provide the best possible information, services and education to you, our membership. This coming year (2016) is going to be full of new issues and topics to discuss and plan for. If we are not moving forward and looking to be better in the future, we are just standing still. Let's look to 2016 for new ideas and innovation. Maybe this could be the year that you get involved.

There are many ways that a member can become more involved with SFMANJ. Attend a board of directors meeting. We hold these meetings on the first Wednesday of each month. This is a good opportunity to get a peek behind the scenes to see how our organization operates. Another good way to get involved is to write an article for our newsletter Update. It is an opportunity to show off your writing skills and maybe help out fellow members by sharing some of your ideas and techniques. Think about offering your site as a spring or fall field day venue. We are always looking for sports field managers that are willing to host one of our events. It is a great way to showcase your facility. If you can't host a field day, maybe you could volunteer to help us out running one. There are many things that we need help with in preparation for an event as well as during the field day. Contact Debbie Savard at our office for more information if you are interested (856-514-3179).

Getting Involved

Getting involved is a great way to help out SFMANJ and make a difference in our industry. I am a good example of this. For many years I was the guy at the field days, going to the NJ Green Expo and attending continuing education classes at Rutgers but didn't think I had anything to offer to anyone else. However, I was fortunate enough to be asked to speak on a panel at Expo 2005 about communicating with administrators from a field manager's perspective. This was the event that changed the trajectory of my career. I was just a guy in the room up until that point. That is when I found my voice. It was the moment when I realized that I was part of something that was bigger than the property I worked on every day. There were other people that had the same problems that I had. It was great to vent about them and sometimes find solutions that I hadn't thought about. Fast forward to 2016 and the world is a lot different for me. I am the president of one of the most successful STMA Chapters in the country. It is an honor that I would have never been able to imagine sitting on the Expo panel in 2005.

Get Involved! SFMANJ President 2020 could be you.

Rich Watson is SFMANJ President

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Management of Natural Turf Sports Fields – Part 2

By Brad Park and Dr. Jim Murphy

Editor's Note: This article was derived from a new Rutgers Cooperative Extension Fact Sheet (a revision of Maintaining Athletic Fields FS105)

Maintenance Practices

Investments in the establishment, renovation, or reconstruction of sports fields can be wasted unless an appropriate maintenance program is implemented. A sound maintenance program requires a well thought out budget to properly allocate materials, equipment, and personnel as well as a conscientious and knowledgeable grounds manager being available to implement and oversee the program. In cases where natural turf maintenance tasks are outsourced to contractors, the owner (school district, town, etc.) should retain at least one employee with a thorough knowledge of sports field management to author appropriate bid specifications and provide oversight of contractor performance.

The primary goal of a maintenance program is to produce conditions favorable to the growth and development of a vigorous healthy turf. All natural turf fields do not require the exactly the same maintenance practices; however, any maintenance program should include attention to the following cultural practices – mowing, fertilization, irrigation, overseeding, and soil cultivation.

Mowing

Mowing once or twice per week is an acceptable frequency for many sports fields that are cut at a height of 2.0 to 2.5 inches. Mowing as often as three times per week may be necessary during periods of rapid growth (for example, after spring fertilization and rain) or when the sport requires mowing below 2.0 inches.

Natural turf fields used for sports such as field hockey, soccer and baseball are often mowed lower than 1.5 inches and require the most frequent mowing. Reel mowers are the best type of equipment for mowing at low cutting heights. Rotary mowers set below 2 inches can scalp (damage) turf rather than mow it, especially if the field has an uneven surface.

Mow sports field as often as needed so that no more than 1/3rd the height of the turf is cut off in a single mowing. This will allow return of leaf clippings without interfering with play. Returning clippings to the turf also recycles fertilizer nutrients to the turf (reducing fertilizer needs) and eliminates clipping disposal issues.

Regular sharpening and adjustment of mower blades, reels, and bedknives ensures that mowers will cut cleanly rather than tear and bruise leaf blades. Mowers that are operated everyday will probably need weekly sharpening of the cutting edges. Similarly, mowers cutting turf grown on sandy soil will need more routine sharpening of dulled blades, reels, and bedknives than turf grown on loamy soils.

Employees should be thoroughly trained on the proper operation of mowing equipment and the ability to recognize the need for mower adjustments.

Fertilization

Soil test results are needed to optimize a fertilization program for a sports field. Sample the soil once every 3 years and send to a soil testing laboratory for analysis of soil acidity, nutrient status, organic matter content, and soil texture. For more information about soil testing visit the Rutgers Soil Testing Laboratory web site http://njaes.rutgers.edu/soiltestinglab/ or a commercial laboratory.

Lime. Properly managed soil does not require annual liming. Apply limestone only when soil test results indicate it is necessary (high acidity, i.e. low pH). Lime is applied to neutralize excess soil acidity and adjust the soil pH into a range of 6.0 to 6.7, which renders many essential nutrients more available to plant roots. Do not guess at the need for liming; excess liming can harm plant growth by tying up essential plant nutrients such as phosphate, manganese, iron, and others. Soil test results are used to determine whether calcitic or dolomitic limestone is needed and the amount of limestone that needs to be applied. Greater amounts of lime will be needed in soil containing more organic matter and clay, which can be assessed in a soil test. Liming is more effective after it is incorporated into the soil, so it useful to apply before any soil cultivation especially during late summer and fall. Details on liming during the establishment of natural turf sports fields can be found in the Rutgers Cooperative Extension Bulletin E300 Turfgrass Establishment Procedures for Sports Fields.

Nitrogen (N). Nitrogen is the nutrient that has the greatest impact on turf vigor and growth. Unfortunately, N recommendations cannot be developed solely from soil test results. Other important factors need to be considered including the age and vigor (health) of the turf, soil organic matter content, mowing (clipping removal), and availability of irrigation. For example, older turfs growing on high-quality soil will not require as much N fertilization as a new field constructed of poor soil. Additionally, more N is needed as the playing intensity (damage) increases on a field. Nitrogen application guidelines outlined in Table 1 can be used to develop a bimonthly N fertilization program based on the intensity of play (damage to the turf) and maintenance on a sports field.

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FIELD OF PAIN

By Bernard Luongo

A STORY WAS TOLD THIS PAST SPRING AND SUMMER
OF FIELDS ONCE IN GLORY THAT TURNED INTO A BUMMER.

THE LACK OF RAIN, A THING CALLED DROUGHT
THAT PUT ON A GROUNDS KEEPERS FACE A POUT.

ALL THAT HARD WORK OF SEASONS AGO
MOST OF IT GONE NOTHING TO SHOW.

BUT WAIT IN A DISTANCE A LITTLE GREEN PUFF
AMONGST THE DEAD BROWN THAT WAS ONCE GENTLE FLUFF.

HOW DID THIS HAPPEN HOW COULD THIS BE
WHEN ONCE FIELD #2 WAS A SEA OF GREEN?

MANY YEARS AGO THAT FIELD WAS A MESS
UNDER THE SAME CIRCUMSTANCES, UNDER THE SAME STRESS.

WHEN IT CAME TO PASS AN IDEA WAS HATCHED
THAT OLD #2 WOULD GET THATCHED.

NOT ONLY THAT IT WOULD GET AN AERATION
A DEEP ONE AT THAT SO IT WOULD HAVE SOME DURATION.

NOW CAME THE DECISION OF A PARTICULAR SEED
ONE TO GERMINATE QUICKLY TO FILL OUR NEED.

AFTER MUCH DICUSSION, A DECISION FROM HIGH
WAS TO USE THIS BLEND OF RYE.

IT CAME UP QUICK, IT FILLED THE SPOTS
FOR SIX YEARS RUNNING THAT FIELD WAS HOT.

THEN CAME THE DROUGHT AS PREVIOUSLY SAID
NOW #2 IS PRETTY MUCH DEAD.

BUT WHAT OF THOSE LITTLE GREEN PUFFS THAT ARE THERE
THE ONE'S THAT REMEMBER WHEN THE FIELD WAS DEAR?

WHAT WAS THE SEED THAT CAME TO THE RESCUE?
THE ANSWER MY FRIEND WAS GOOD OLD TALL FESCUE.

Bernard Luongo is Lead Groundsperson, Northern Burlington County Regional School District, Columbus, NJ; and SFMANJ Vice-President.

Calendar of Events

2016 STMA CONFERENCE AND EXHIBITION
January 19-22, 2016
San Diego, CA
800.323.3875
www.stma.org

2016 RUTGERS NJAES OCPE COURSES
Two-Day Athletic Field Maintenance
February 16-17, 2016

Natural & IPM Strategies for Sports Turf
February 19, 2016

Baseball & Softball Skin Surface Selection & Management
February 23, 2016

Rutgers Cook Campus
New Brunswick, NJ
732.932.9271
www.cpe.rutgers.edu

MANAGING WATER FOR PLAYABILITY

By Brad Park

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

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Management of Natural Turf Sports Fields – Part 2

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Table 1. Sample nitrogen (N) fertilization program based on the intensity of play (damage to the turf) and maintenance on a sports field.

Intensity of Play & Maintenance	Approximate Timing of nitrogen (N) Fertilization [a]				Annual
	March-April	May-June	August-September	October-November	
	pounds of N per 1000 square feet [b]				
Low	0.5	0.5	0.5	0.5	2.0
Moderate	0.8 [c]	0.8	0.8	0.8	3.2
High	1.0	1.0	1.0	1.0	4.0

a Time the application of N fertilization to increase turf vigor immediately before and recovery immediately after intense periods of play (damage). Uptake of N fertilizers by turfgrass is most efficient when soil temperatures are warm and light-to-moderate rain or irrigation occurs soon after application. New Jersey law prohibits application of N (and P) fertilizer after December 1st and before March 1st.

b Adjust the amount (rate) of N to increase or decrease turf vigor based on the expected amount of damage or need for more or less recovery of turf cover and density. Multiply by 44 to convert number to pounds per acre.

c Use fertilizer containing slow release N at application rates greater than 0.7 pounds of N per 1000 square feet (required by law).

Deviations from the suggestions in the table should be based on the condition of the turf and soil and quality expectations of the playing field. The following are some generalized relationships between N fertilization and sports field management and use expectations.

For low maintenance sports fields, older turfgrass stands, and/or sports fields subjected to minimal traffic intensity, apply N fertilizer one to two times per year at an N rate of 1 pound per 1000 square feet per application. Use a fertilizer with at least 30% slow-release-N. For spring sports such as baseball, applications during early spring followed by a mid-to-late spring application are generally appropriate.

For sports fields that have intense traffic events and receive regular overseeding, apply the maximum amount of N (4.25 pounds per 1,000 square feet or 185 pounds per acre) allowed by New Jersey law. Nitrogen fertilization should be timed to mirror those periods of intense field use and overseeding. Greater fertilization is needed when recuperation of turf and development of new seedlings (from overseeding) is expected. For example, sports fields used for fall sports should have N applied several weeks before (late summer) the start of season. Make the first N fertilizer application in mid- to late-August followed by a second application in September or October to encourage turf recovery during the season as well as after fall play. Apply N at a rate of 0.5 to 1 pound per 1,000 square feet. Additional N fertilizer should be applied in early spring if the turf has not completely recovered from the damage incurred during the previous fall play. Apply N at a rate of 0.5 to 1 pound per 1,000 square feet. If there is adequate recovery of turf, spring fertilization can be delayed until the turf shows signs of reduced growth and vigor in mid- to late spring.

Fields with intense use during summer (June, July, and August) will need some N fertilization during the summer to maintain turf vigor and encourage recovery from damage. Irrigation will often be required as well. Apply N at rates between 0.3 and 0.7 pounds per 1,000 square feet as-needed to maintain turf vigor and density during summer play. Time the application to precede rain or irrigation which will enhance turf response to the fertilization. Avoid excessive applications of N fertilizer (> 0.7 pounds per 1,000 square feet) during summer which can have detrimental effects on turf and may encourage diseases such as brown patch and Pythium blight.

This discussion of N fertilization is intended to provide a reference from which to design a fertilization program. Modifications will be necessary to accommodate the varying site and environmental conditions encountered at individual facilities.

Phosphorous (P) and Potassium (K). Soil test results should be used to determine the necessity and quantity of P and K applied to sports fields. Per New Jersey Law, P may not be applied as a maintenance fertilization without justification of need provided by soil testing or if turf is being established for the first time or being repaired.

Soil test recommendations for phosphate, potash and other nutrients are used to calculate the nutrient ratio needed to select a fertilizer grade that will apply the correct proportions of recommended nutrients.

Organic Fertilizers. Organic fertilizers are fertilizers that are permissible for use in organic production systems per United States Department of Agriculture (USDA) National Organic Program (NOP) standards. Synthetic fertilizers and fertilizers that contain sewage sludge (biosolids) should not be used where a claim of organic management is being made.

Organic fertilizers typically contain a small percentage of N compared to synthetic counterparts. Thus, organic fertilizers need to be applied in large quantities of product to apply a modest amount of N. Also, organic fertilizers often contain P and use of these fertilizers may result in the application of P – even if it is unnecessary per soil test results. New Jersey Law allows up to a 0.25 pound of P per 1000 square feet to be applied in lieu of soil testing if the fertilizer source is derived from a natural organic source.

Organic Matter Additions. A soil test for organic matter content is the primary criterion for determining whether organic matter should be added to a soil. The Rutgers Soil Testing Laboratory can determine percent organic matter for submitted samples and subsequently characterize the organic matter level (e.g. very low, low, medium, high, and very high) relative to soil texture.

Ideally, organic matter (e.g. peat moss or high quality composts) should be incorporated into soils during the sports field construction process. Composts can be applied to the surface (topdressed) of established sports fields; however, repeated

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PHOTO RECAP SFMANJ FALL FIELD DAY 2015

Photos by Debbie Savard

Vendors

Education

Our Host

Lunch

BRICK TOWNSHIP, NJ, NOVEMBER 5, 2015










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New Jersey Green Expo 2015

The Borgata, Atlantic City, NJ

Dec. 8-10, 2015

Photos by
Adam Simmons and Debbie Savard

MANAGING WATER FOR PLAYABILITY

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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.

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-and-half 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 sand-slit 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.

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

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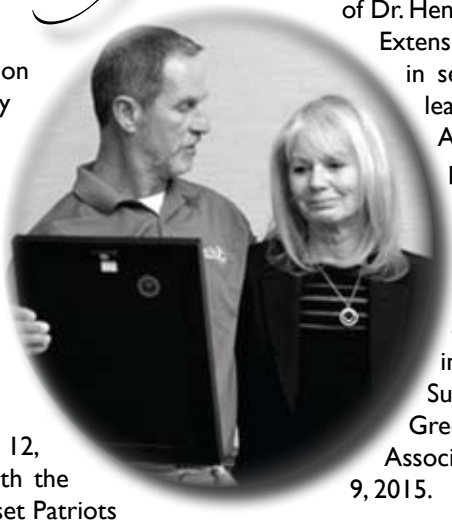
A Review of 2015

Passing of a legend

The sports field industry lost a true Champion in the passing of Ray Cipperly in October. Ray served as Athletic Director for Middlesex County Vocational and Technical Schools and was instrumental in the development and maintenance of Tiger Field at East Brunswick Vo-Tech, the finest high school baseball field in which I am aware in New Jersey. His sports field management resume included time as the Head Groundskeeper at the Trenton Thunder and Somerset Patriots.



Published on myCentralJersey.com on October 12, 2015 ('The GMC lost a great person today' with the passing of Ray Cipperly' by Greg Tufaro), "Somerset Patriots owner Steve Kalafer called Cipperly a 'compulsive perfectionist,' noting that Joe Torre and Don Zimmer, upon visiting TD Bank Ballpark in Bridgewater, raved about the condition of the field Cipperly painstakingly manicured.

'With all due respect for Yankee Stadium, which is fabulous, this is a major-league field of Yankee Stadium quality', Kalafer recalled. 'Many people may not always remember the names and the numbers of our ballplayers, but they remember the first time they walked into TD Bank Ballpark, saw the field and said, 'This is perfect.' Ray set the standard for Dan Purner, his successor, who learned from Ray and has taken everything Ray has taught him and expanded upon it.'"

Ray maintained a strong relationship with Rutgers University for many years, prominently serving as an Instructor in the annual 2-Day Athletic Field Maintenance and Construction Course since the course's beginnings in the early 1990's. Recruited to serve as an Instructor by Dr. Henry Indyk, long-time Extension Specialist in Turfgrass Management at Rutgers, Ray was consistently rated among the best presenters per his delivery of Infield Maintenance Procedures, a talk in which he pragmatically described baseball and softball skin surface management methods to what was traditionally a school and municipal audience of sports field managers.

Fittingly, Ray was the recipient of SFMANJ inaugural Dr. Henry Indyk Memorial Award for 2015. The award is presented in honor of Dr. Henry Indyk (1921-2005) the consummate Turfgrass Extension Specialist who had an extraordinary interest in serving sports field managers, evidenced by his lead role in creating the Sports Turf Managers Association's Certified Sports Field Manager program as well as Sports Field Managers Association of New Jersey. The purpose of the award is to honor an individual who has demonstrated a tireless commitment of service and hard work contributing to the advancement of the both sports fields and sports field managers in New Jersey. The award was presented to Mrs. Sue Cipperly (Ray's wife of 27 years) at the NJ Green Expo in Atlantic City in December during the Association's Annual Business Meeting on December 9, 2015.

Looking ahead to 2016

I would like to congratulate Rich Watson on a successful 2015 – his first year as SFMANJ President. The Association held three successful Field Days in 2015: Spring Field Day hosted by SFMANJ Member Scott Klein at Eastampton Sports Complex and Rancocas Valley Regional HS; Annual Summer Field Day (Trade Show and Equipment Demonstrations) in conjunction with Rutgers Lawn, Landscape, and Sports Field Day; Fall Field Day hosted by SFMANJ Board Member and Past-President Ken Mathis at Brick Township.

The Association continues to work closely with New Jersey Turfgrass Association (NJTA) and other allied organizations in developing the Sports Field Program at the NJ Green Expo. The gathering of sports field managers at Expo continues to be a significant networking event as well as an opportunity to obtain pesticide and fertilizer credits. The Sports Field Program at this year's Green Expo was highlighted by Bill Deacon, Head Groundskeeper, NY Mets and thought-provoking presentations delivered by Jerad Minnick.

Good luck to all in 2016. See you at an upcoming SFMANJ or Rutgers event,

– Brad

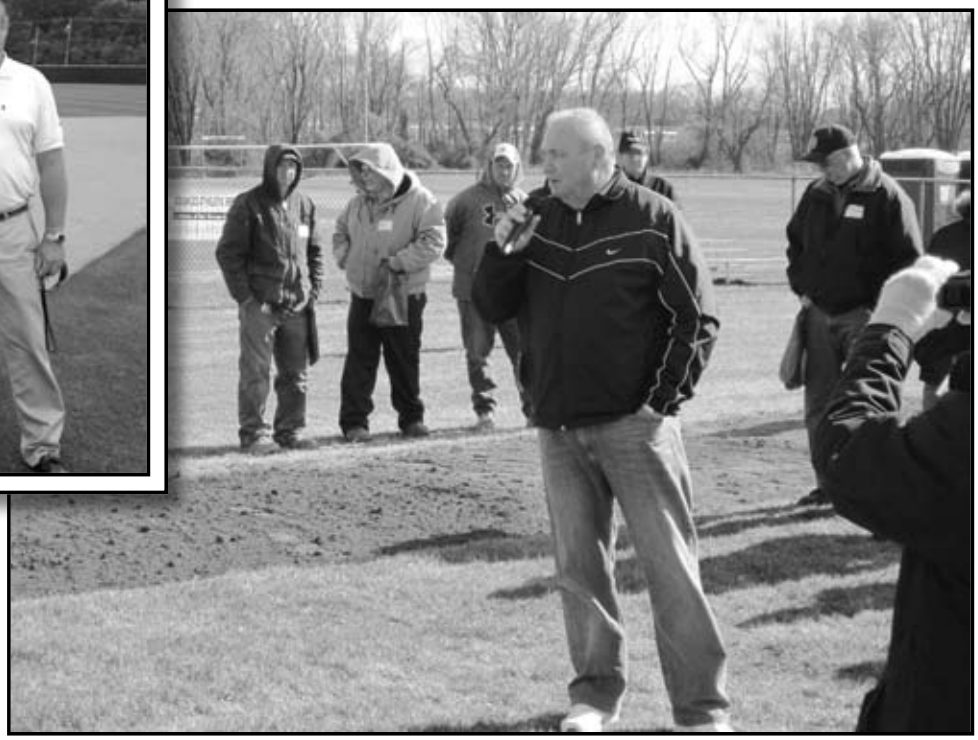
Brad Park is Sports Turf Research & Education Coordinator, Rutgers University; Editor, SFMANJ Update newsletter; and a member of the SFMANJ Board of Directors.

REMEMBERING RAY CIPPERLY

Ray Cipperly (right) visiting with Brad Park (left) and Matt Olivi (middle) at Tiger Field, Middlesex County Vocational-Technical Schools, East Brunswick, NJ

Previous page:
Scott Bills presenting the Dr. Henry Indyk Memorial Award for 2015 to Sue Cipperly

Ray Cipperly speaking at the SFMANJ Spring Field Day held at Northern Burlington Regional School District in 2013



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MANAGING WATER FOR PLAYABILITY

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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: 1) 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.

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.

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 over-scarified 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-specific experience will have the feel/finesse to properly irrigate a poorly drained sports field to maintain plant vigor yet provide good playability on a surface that is highly susceptible to being compromised with over-watering.

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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.

Management of Natural Turf Sports Fields – Part 2

Continued from page 8

applications are needed over time to avoid the development of an excessive layer at the surface. Light applications of compost applied as a topdressing (~1/8-inch) followed by core cultivation (aerification) will assist in compost incorporation and minimize layering potential.

Irrigation

Where an irrigation system is available, apply water as infrequently as necessary to maintain proper growth and avoid drought-stress of the turf.

Soil texture and degree of compaction will control how much water can infiltrate and be stored in the soil, affecting the quantity and rate at which water can be applied through irrigation.

For example, turf grown on sandy soil needs to be watered more often than turf grown on loamy or clayey soils. However, sandy soils hold less water and require smaller amounts of water applied per irrigation event. In contrast, turf growing on a loamy or clayey soil should be irrigated less often but with larger quantities of water per irrigation event.

Excess irrigation wastes water to evaporation, runoff and leaching. Excess irrigation can also increase the amount of weeds that will invade a sports turf. As a general rule, thorough watering once or twice a week during drought periods is often preferable to light daily sprinkling. The exception is very sandy soil which may need irrigation three times per week during hot dry conditions. Apply sufficient water in a single irrigation event to wet the entire root zone. (How do we estimate how deep that is?

Do not apply irrigation too rapidly, otherwise water may runoff and collect in small depressions (pond) on the field. If this occurs, adjust the irrigation so that only the amount of water that does not cause ponding is applied. Move the sprinkler or switch to another station (on automatic controllers) before water starts to pond. If this is not enough water to completely wet the root zone, allow the applied water to soak into the soil before apply the remaining portion of water. Repeat this cycling of irrigation and soaking until all the water is applied.

Use a soil probe to assess the need for irrigation as well as how deeply the root zone needs to be wetted. Place small rain gauges or tin cans on the turf to catch and measure the amount of water applied during irrigation. Quantify the amount (inches) of water applied during a specific time to calculate a precipitation rate (inches per hour) for the irrigation system. This information is need to know how long an irrigation system should run to deliver the required amount of water. Under moderate temperatures, sports turf will need about one-inch of water per week to maintain growth. Thus, when it rains less than one-inch in a week, subtract the amount of rain that occurred from one-inch to estimate how much should be applied. Use the soil probe to confirm that the root zone has been adequately wetted after irrigation.

Keep in mind that irrigation is of little or no value if liming, fertilizing, mowing and other practices are neglected or done improperly.

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UPDATE

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