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UPDATE

Sports Field Managers Association of New Jersey

Spring 2020
Vol. 20, No. 1

P.O. Box 205, Pennsville, NJ 08070 • 856-514-3179 • www.sfmanj.org • e-mail: mail@sfmanj.org

SFMANJ Spring Field Day

Thursday, April 2, 2020

MetLife Stadium

See inside for details!

Also:

- Green Expo, STMA Conference and NJRPA wrap-ups
- The New Jersey Fertilizer Law
- Field Day Registration Form
- Budget Planning
- The Imaginary Groundskeeper

Welcome! *New and Renewed SFMANJ Members*

Currently we have 180 new & renewed members. Sports Field Managers Association of New Jersey has mailed invoices for 2020 membership dues to all current members. If you did not receive an invoice, please register on our website, www.sfmanj.org. Contact us at 856.514.3179 with any questions. Checks can be mailed to SFMANJ, PO Box 205, Pennsville, NJ 08070.

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Daniel Andrus	*Blair Academy*
Louis J. Bader	*Colts Neck Twp.*
Anthony Barone	*Down To Earth Landscaping, Inc.*
Gustavo Baxes	*Colts Neck Twp.*
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Paul Burk	*Manalapan Twp Dpw*
Rob Byrnes	*Brick Parks Dept*
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Jeffrey Dorer	*Morris Hills Regional District*
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Daniel Fick	*Profile Products, LLC/Turface*
Diane Flannery	*Twp of Burlington Parks And Rec*
Bill Foelsch	*Morris Township*
Chris G. Fox	*The Landtek Group, Inc.*
Matthew Geary	*Hopatcong BOE*
Tim Hamfeldt	*Twp of Morris Parks & Rec*
Blake Hoerr	*New York Jets*
Frank Jacheo	*SiteOne Landscape Supple*
Scott Johnson	*Retired*
Rob Johnson	*Fisher & Son Co., Inc.*
Jeff Johnson	*Gill St Bernard's School*
David Karl	*Borough of Fair Haven*
Tony Kowal	*Monroe Twp.boe*
Peter Kusion	*Ocean County Utilities*
Phil Lavoie	*Morris Twp. Parks Dept.*
Jason Lehmann	*Barrington Boe*
Joe Lovallo	*Voorhees Twp.*
Ken W. Mathis	*Brick Township*
Cris Matos	*Hammonton Public Schools*
Larry Mauriello	*Laurel Equipment*
Dave Mitchell	*Mitchell Products*
Kevin Mitchell	*Mitchell Products*
Gregory S. Moore	*US Pitchcare*
Michael Morvay	*Lakewood Blueclaws*
Steve Nitahra	*Nothern Burlington School Dist.*
Kenneth Olson	*Colts Neck Twp.*
Jeffrey Olszyk	*Players Development Academy*
Mark Ozoroski	*City of Summit*

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2020 SFMANJ BOARD OF DIRECTORS

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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.

PO Box 205 • Pennsville, NJ 08070
Web site: www.sfmanj.org • Email: mail@sfmanj.org
Phone: 856-514-3179 / Fax: 856-514-2542

National Organization
Sports Turf Managers Association
www.stma.org

New Website www.sfmanj.org

INSIDE THIS ISSUE

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: bradley.s.park@rutgers.edu
Layout and Design: Debra Savard, Email: mail@sfmanj.org

A Message from the President

Best of Luck in 2020

By Zach Holm, CSFM

Fellow Sports Turf Managers, before we know it the season will be in full swing (might have already started for some). Teams will be practicing, playing games and grass will be going.

The beginning of the year is often hectic as suddenly there is a push for everything to be done at seemingly one time. Remember good communication, education and planning will set us up for success. As always SFMANJ is here for questions or problems you might incur, please do not hesitate to reach out.

Best of luck with the 2020 season and as the year gets busy let's not forget to take care of ourselves and spend time with loved ones at home. I look forward to seeing everyone at Spring Field Day on Thursday, April 2nd at Metlife Stadium.

Zach Holm, CSFM is a Certified Sports Field Manager (CSFM), member of the New York Red Bulls sports turf management team, and SFMANJ President

See you at the SFMANJ Spring Field Day at MetLife Stadium

If you did not receive a registration form, please visit our website, www.sfmanj.org

GREEN EXPO 2019 WRAP UP

by Chris Carson

Editor's Note: This article first appeared in Clippings (Issue 1; 2020), a publication of the New Jersey Turfgrass Association

When the Expo Committee gets together to discuss how to make our conference and show better, we first take a hard look at how the most recent show did, and I am pleased to report that our show performed very well indeed in December 2019.

Attendance was up, our business partnerships grew, and sponsorships were at historic highs… but what interests us more than our numbers is if our 1200 attendees enjoyed themselves and received value from being present. With that in mind, throughout our three days in Atlantic City, the NJTA Board solicited feedback from our vendors and attendees, and I am pleased to report that the responses received from those queries were very positive indeed. It was great to hear from first-time attendees that the show exceeded their expectations, and that they will be back "for the high quality education" and the "chance to meet and interact with industry leaders" that are helping to lead the way in improving our turfgrass and green industry profession. Long-time attendees told us that they "wouldn't miss the chance to get together with friends to talk turf, and to discuss their needs with business vendors who have solutions to their problems." And business partners expressed the view that "this show is a must-attend conference, where we have the chance to socialize and talk business with so many of our existing customers while also getting to talk about our services with people we've never met."

Allied Associations have leveraged the opportunities made available by Expo to strengthen their groups as well. The Golf Course Superintendents Association of NJ had a Monday afternoon Board meeting to discuss board responsibilities and objectives, for example; and the Sports Field Managers Association had a similar get together on Thursday. Rutgers Office of Continuing Professional Education held a nice social hour on Tuesday evening, as did our friends at the NJ Landscape Contractors Association. These happenings, in addition to longstanding events like the Allied Association Luncheon, the Rutgers Turfgrass Advisory breakfast and the GCSANJ Wednesday night social, illustrate the value of a large conference like Expo: when the entire industry gets together in one place, a lot of important work can get done in an efficient manner. And let's not forget that, as always, the Grass Roots Wednesday night Mix 'n Mingle was packed, and this event, open to all, has become the keystone social event to Expo. In short, Expo 2019 was a great place to strengthen old business relationships and develop new ones, and for attendees to hone their professional skills in the classroom by learning from some of the best educators and scientists in the country.

Do you have anything to add to the discussion? If so, the Expo planning committee wants to hear from you! Please let your thoughts be heard by contacting any member of the NJTA Board, or by reaching out to me by email at echolakecc@aol.com. We've already received a number of excellent suggestions that will be incorporated into our planning for Expo 2020, including some thoughtful ideas on reducing waste in our attendee packets and shaking up some of our food presentations on Tuesday night. We really do want your ideas, big or small, so please make your voice heard with an email or phone call.

Our planning for the next several Expos is already well underway, and we also have important events to consider, including the 45th anniversary of Expo, the 50th anniversary of the founding of the New Jersey Turfgrass Association, and the rapidly approaching retirement of several key members of the Rutgers Turfgrass Faculty. These milestones will be honored and celebrated, as will the important role that the entire New Jersey green industry has had in shaping and contributing to the strong partnership that exists between the industry and Rutgers. Stay tuned for updates on these important landmark events, and be assured that planning for Expo 2020 and beyond is continuing with one dedicated purpose: to advance our profession by making our show and our Association as strong as possible.

Chris Carson is Golf Course Superintendent, Echo Lake Country Club, Westfield, NJ; and NJ Green Expo Chairman

The New Jersey Fertilizer Law:

Update on Certification of Professionals

By Dr. James Murphy

On January 5, 2011 Governor Christie signed into law New Jersey Act, P.L. 2010, c. 112 (C.58:10A-64). The Act is intended to protect all New Jersey surface and ground waters from impairment by minimizing nitrogen and phosphorus pollution that may be derived from fertilizer. It addresses the application, sale, and use of fertilizer for turf. Both specialty fertilizers sold at retail for turf and professional fertilizer applicators making applications to turf are affected by this law. As defined in the law, "Turf means land, including residential property and publicly owned land, that is planted in closely mowed, managed grass, except golf courses or land used in the operation of a commercial farm". Please note that, while golf course turf is exempted from the fertilizer restrictions in this law, those individuals applying fertilizer to golf courses are considered professional fertilizer applicators and are required by law to participate in the certification program. Fertilizer applications to commercial farms are not affected by this law.

A "Professional Fertilizer Applicator" is defined in the law as any individual who applies fertilizer for hire, including any employee of a government entity who applies fertilizer within the scope of employment. The law requires that a certification program for professional fertilizer applicators be established by the Rutgers New Jersey Agricultural Experiment Station (NJAES) in consultation with the Department of Environmental Protection (DEP). Please note that this certification program for professional fertilizer applicators is not part of pesticide licensing administered by the DEP. Thus, the fertilizer certification program is separate from the pesticide licensing program and you will need to participate in both programs to legally apply both fertilizer and pesticide as a professional in NJ.

To become certified, the law specifies that professionals must receive training in the five subject areas outlined below and pass an exam which addresses these subjects:

1. The proper use and calibration of fertilizer application equipment;
2. The hazards involved in, and the environmental impact of, applying fertilizer, including nutrient pollution to the State's waterbodies;
3. All applicable State and federal laws, rules and regulations;
4. The correct interpretation of fertilizer labeling information; and
5. The best management practices developed by the NJAES for nutrient management in turf.

An online program for Professional Fertilizer Applicator Certification Training is now available; type ProFACT.rutgers.edu in your web browser to register and begin online training. The website records and documents your progress in the online training. Once the training is complete, registered users will be qualified to take the online exam.

The exam is intended to certify that individuals possesses sufficient knowledge of the laws, rules and regulations, standards and requirements applicable to the use and application of fertilizer as required by law. The certification exam was available online at ProFACT.rutgers.edu on January 30, 2012. See the website for more background and instructions for the online training and exam as well as other program details.

The law allows two general classifications for professional fertilizer applicators: certified and trained. Individuals that make decisions on selection of fertilizer products and application rates and timings; calibrate and setup of application equipment; develop spill response protocol as well as make applications should become a Certified Fertilizer Applicator. For a professional to become a Trained Fertilizer Applicator, the individual must also receive training on the laws, rules and regulations, standards and requirements applicable to the use and application of fertilizer by a Trained Fertilizer Applicator. Trained Applicators can only apply fertilizer under the direct supervision of a Certified Fertilizer Applicator. Trained fertilizer applicators will need to receive annual training and registration with the ProFACT program. The details for training Trained Fertilizer Applicators will be released shortly and made available through the ProFACT website.

The law also requires NJAES to maintain a list of all Certified Fertilizer Applicators and make the list available on its internet website (ProFACT.rutgers.edu). A list of Trained Fertilizer Applicators along with the Certified Fertilizer Applicator(s) that supervise them will also be maintained.

Visit ProFACT.rutgers.edu for more information on the certification program.

Dr. James Murphy is Extension Specialist in Turfgrass Management, Rutgers University; and Advisor, SFMANJ.

UPDATE

Update is published quarterly, Spring, Summer, Fall, and Winter. The Newsletter is edited by Brad Park., Sports Turf Research & Education Coordinator, at Rutgers University and SFMANJ Board Member. The design, layout, distribution, and advertising sales are currently managed by Debra Savard, SFMANJ Executive Secretary.

Past issues of Update, dating back to 2001, can be assessed through the Michigan State University Libraries.

To access this archive, visit:

http://archive.lib.msu. edu/tic/updat

Sports Field Managers Association of New Jersey

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Pennsville, NJ 08070
Phone: 856-514-3179
Fax: 856-514-2542
www.sfmanj.org • mail@sfmanj.org

ANNUAL SFMANJ SPRING FIELD DAY

Thursday, April 2, 2020 • Indoor event

MetLife Stadium

1 MetLife Stadium Dr., East Rutherford, NJ 07073

Trade Show, Tours, Education, Credits, Breakfast and Lunch Included

VENDORS PLEASE GO TO OUR WEBSITE FOR REGISTRATION INFORMATION

TENTATIVE SCHEDULE

6:30 – 7:00 AM	Vendor Registration and Set-up
7:00	Attendee registration
7:00 – 10:00 AM	Trade Show OPEN
8:15 – 8:30 AM	Vendor pass the mic
8:30 – 10:00 AM	MetLife Stadium Tours (*Running concurrently with Trade Show*)
10:00 – 12:00 PM	Cultural and chemical strategies to manage diseases in sports turf *Dr. Bruce Clarke, Rutgers University* Getting sports fields ready for spring play *George Van Haasteren, CGM, Dwight-Englewood School* Cultural and chemical weed control strategies for sports turf during spring *Dr. Matt Elmore, Rutgers University*
12:00	Lunch, Announcements and Pesticide Credits

REGISTRATION FORM

Please return to with your payment: SFMANJ, P.O. Box 205, Pennsville, NJ 08070

Name Company _____

Address _____

List of Those Attending _____

_____

Total Attending _____ Contact Person _____

E-mail _____ Phone Number _____

Member: Number attending _____ @ $25/each = $_____

Non-member: Number attending _____ @ $50/each = $_____

❑ **Return form with check** OR ❑ **Pay by Credit Card** ❑ Visa ❑ MasterCard ❑ Discover ❑ AMEX

Card Number _____ Exp. Date _____

Cardholder Name _____ Security Code _____

Cardholder Billing Address _____ Zip Code _____

Please Sign _____ Date _____

Total _____

SOIL COMPACTION IN TURF

By Dr. Beth Guertal and Dr. Dave Han

Editor's Note: This article first appeared in the Winter 2012 issue of Turfgrass Times, a publication of the Alabama Turfgrass Association

The effects of traffic and compaction in turf are usually easy to see: thin turf, worn paths, areas of bare ground that do not respond to applications of fertilizer or water. Turfgrass growing in compacted areas has shallow rooting, causing greater susceptibility to drought and other stress. The soils in compacted areas have low air porosity and reduced infiltration. Such compaction is most likely to occur in fine-textured soils (those with a higher clay content), but over time all soils are susceptible to compaction.

Turf managers know that one key to correcting soil compaction in turf is aerification. Aerification is performed using a wide range of equipment which drills, slices, spikes, punches or water-injects the turf and its underlying soil to various depths. Sometimes the equipment removes a plug of turf, and sometimes it only cuts a slit or punches a hole. With some equipment there is the additional benefit of a small amount of thatch control, as the slicing or core removal also removes some thatch. Regardless of the exact piece of equipment used, almost every turf manager has a piece of aerification equipment in their shed.

Factors affecting the effectiveness of aerification include soil wetness, tine size, depth of aerification, soil texture, aerification frequency, and equipment type. Turf aerification research is somewhat difficult to perform. Studying soil compaction requires large plots, uniform areas of compacted (and non-compacted) turf, and possibly many different pieces of equipment. Additionally, collecting the data required to show treatment differences requires intensive sampling and a lot of labor. Typical data collected from compaction studies may include soil bulk density, soil penetrometer resistance, surface hardness, water infiltration, shoot density, and root length or weight. The objectives of this article is to provide explanations of the type of data collected in turf compaction experiments, and to discuss some past and current turfgrass compaction research.

Things we measure in turfgrass compaction experiments

Soil Bulk Density

Bulk density is defined as the mass of a unit volume of dry soil. To collect a bulk density reading a sample of known depth and diameter (typically 6 inches deep and 3 inches in diameter) is removed from the soil. The soil sample is dried and weighed and the bulk density is expressed as the mass per volume (grams per cubic centimeter). As the soil is compacted the bulk density increases, because more soil particles are forced into a smaller volume and soil pore space is reduced. Sandy soils typically have a higher bulk density than soils high in clay or loam, because sandy soils have few of the very small pores associated with fine-textured soils that have clay and organic matter. Additionally, sandy soils that contain sand in a range of sizes (as is a typically sand-based putting green) are already tightly packed, as smaller sand grains fit in between larger.

Typical bulk densities for clay and silt loam soils may range from 1.0 to 1.5 g/cm3, while the bulk density of sand-based soils may range from 1.3 to 1.8 g/cm3. At the upper end of these ranges the bulk density is great enough that root penetration may be inhibited. As comparison, the USGA recommendation for bulk density of putting green rootzone mix is 1.2 to 1.6 g/cm3. It's important to note that bulk density is highly variable from location to location. One sample will usually not be an indicator of the bulk density of an entire field or turf area.

Soil Penetrometer Readings

A soil penetrometer is a device used to measure the compaction of the soil. What is actually measured is the resistance, or amount of pressure needed to push a tipped rod through the soil. The rod tip is equipped with a load-sensing cell, and the soil strength is recorded as the tip is pushed down through the soil. Soil penetrometers used for research are very sensitive, and require some practice to use correctly to obtain accurate measurements. They are also very expensive (~$6,000.00).

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SFMANJ Spring Field Day at MetLife Stadium

Education, credits and a behind the scenes look at a professional football stadium

If you haven't registered yet, please call 856-514-3179

Photo Recap - STMA Conference

Photos by Debbie Savard

January 13-16, 2020, West Palm Beach, FL

See you next year!

SOIL COMPACTION IN TURF

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Hydraulic Conductivity

Hydraulic conductivity is the ease with which soil transmits water. In turfgrass what we often measure is the saturated hydraulic conductivity, which occurs when all soil pores are filled with water.

Saturated hydraulic conductivity is typically measured using a double ring infiltrometer, which consists of two metal rings (one around 12 inches in diameter and the other around 18 inches), with the smaller placed inside the larger. Water is added to both rings until a height of water is maintained for a period of time, which indicates that the underlying soil has become saturated. The drop in the height of water inside the smaller ring during a given period of time is used to calculate the saturated hydraulic conductivity, which is reported in units such as inches per hour.

Small-diameter (6 inches) infiltrometers can be purchased from many turf supply catalogs. The intended use of these units is to provide turf managers the ability to measure infiltration rates of their turf soils quickly, and directly in the field. Because research has shown that double-ring infiltrometers with an inside ring diameter of at least 12 inches produce the most accurate measurements of water infiltration, the accuracy of 6 inch diameter rings is a concern. A 1991 research study by D.H. Taylor compared single and double-ring infiltrometers with inner-ring diameters of 6, 8 and 12 inches on a variety of turf areas, from golf greens to football fields. They found that infiltration rates varied widely within each sampled turf area, even when the largest diameter rings were used. The conclusion from their work was that infiltration rates measured with ponded water should be used only as a rough estimate, and results should be used with caution (Taylor et al., 1991).

Clegg Impact Readings

Typically used to measure the hardness of a turf surface, the Clegg hammer calculates the hardness of a surface based on its reaction to a weight dropped on the surface from a consistent height.

A diagnostic tool for discovering differences in surface hardness due to aerification treatments, work has also started on calibrating Clegg hammer readings to field hardness or softness. For example, a survey of 24 high school athletic fields had Clegg values that ranged from 33 to 167 Gmax. For comparison, a tiled concrete basement floor had a Gmax reading of 1280, which was reduced to 260 when the floor was covered with a carpet pad (Rogers et al., 1988). In another study, compacted Kentucky bluegrass plots had a value of 206 Gmax, while plots that were not compacted had a value of 93 (Rogers and Waddington, 1992). A survey of college and professional soccer players compared their perceptions of soccer fields that had been used to collect Clegg data. Typically, fields with a hardness reading between 90 and 120 Gmax could not be differentiated by players (Miller, 1999).

Continued on page 18

2020 Calendar of Events

SFMANJ Spring Field Day
April 2, 2020
Metlife Stadium
East Rutherford, NJ
856-514-3179
www.sfmanj.org

Rutgers Turf Research Golf Classic
May 4, 2020
Fiddler's Elbow Country Club
Bedminster, NJ
973.812.6467
www.njturfgrass.org

Rutgers Turfgrass Research Field Days
Golf & Fine Turf
July 28, 2020
Rutgers Hort Farm No. 2
North Brunswick, NJ
Lawn, Landscape, and Sports Turf
Includes SFMANJ-sponsored Trade Show & Equipment Demonstrations
July 29, 2020
Rutgers Adelphia Research Farm
Freehold, NJ
973.812.6467
www.njturfgrass.org

New Jersey Green Expo
December 8-10, 2020
The Borgata
Atlantic City, NJ
973.812.6467
www.njturfgrass.org

2021 STMA Conference and Exhibition
January 11-14, 2021
Palm Springs, CA
800.323.3875
www.stma.org

Don't forget the SFMANJ Field of the Year Contest
Details on www.sfmanj.org

THE IMAGINATION OF AN IMAGINARY GROUNDSKEEPER

By Bernard Luongo

NOW THERE'S A TITLE THAT CAN COVER MANY THINGS
ANYTHING FROM DROUGHT TO FAIRY RINGS

ON A WHIM I DECIDED TO WRITE THIS MESS
WHERE IT GOES IS ANYONE'S GUESS

SO HERE IT GOES-ENJOY THE READ
MAYBE IT'LL TURN INTO THE GROUNDSKEEPER'S CREED

IMAGINE ONE DAY GOING TO WORK
WHERE MAYBE A CO-WORKER ISN'T A JERK

OR HOW ABOUT A SUNNY DAY
WHERE A CUT FIELD DIDN'T TURN INTO HAY

IN OUR IMAGINARY LAND THERE IS WEEDLESS SKINS
THE HOME TEAM ALWAYS GET THE WINS

LIPS HERE ARE A THING OF THE PAST
EVEN WITH THE PREVAILING WIND BLAST

WHAT'S NEXT IN THE LAND OF IMAGINARY MYSTERY?
LESSON'S LEARNED FROM PAST TURF HISTORY

BUDGETS THAT ARE NEVER CONSTRAINED
TO EXPANDING IRRIGATION IN CASE OF NO RAIN

ATHLETIC SCHEDULES PLAY SECOND FIDDLE
SO GROUNDSKEEPERS CAN SOLVE THE ROTATION RIDDLE

NOW IMAGINE A RYE THAT DOESN'T DIE
THAT'S SUN RESISTANT AND DOESN'T FRY

WEEDS THAT WILT WITH H_2O
AND A VARIETY OF GRASS THAT DOESN'T NEED TO GROW

GROWTH BLANKETS THAT NEVER TAKE FLIGHT IN THE NIGHT
STAKES IN THE GROUND THAT ALWAYS STAY TIGHT
FLAKES THAT MELT WHEN HITTING ASPHALT
AND FOOD WAS THE ONLY ITEM FOR SALT

I CAN GO ON ABOUT ZEROS, FERT, AND SEED
I THINK YOU'VE HAD ENOUGH, SO I FEEL NO NEED

AS YOU CAN SEE THINGS HAVE GOTTEN PERVERSE
BUT IN REALITY ALL WRITTEN JUST REVERSE

HAVING DONE ALL THAT, PREVIOUS WRITTEN HAS BECOME TRUTH
YOU'RE NOW PART OF THE IMAGINARY
GROUNDSKEEPER'S SPOOF.

Bernard Luongo is a retired sports turf manager, immediate SFMANJ past-President, and SFMANJ Poet Laureate.

More from the STMA Conference

Photos by Debbie Savard

Fred Castenschiold and Paula Sliefert

Brad Park

Don Savard and Zack Holm

Debbie savard and George Toma

Photo by Don Savard

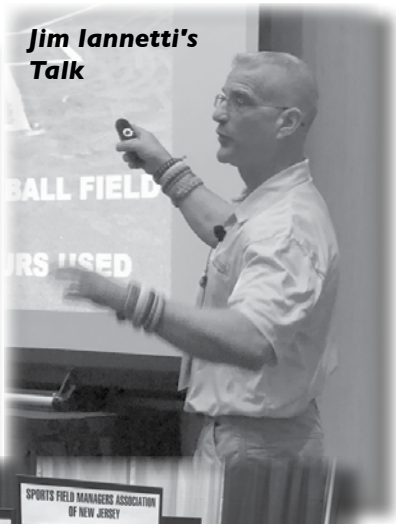
SFMANJ at the NJRPA Conference

Photos by Debbie Savard

February 23-25, 2020 at Harrahs, Atlantic City NJ

Jim Iannetti at Trade Show

Guy Gurney, Kevin Hoban and Fred Castenschiold



Jim Iannetti's Talk

Scott Bills' Talk

The Band

Debbie Savard at Trade Show

Photo by Jim Iannetti

Great Education and Trade Show!

Planning Next Year's Budget- *Do You Know Your Costs?*

Don Savard, CSFM, CGM

It's that time of year again and sports field and grounds managers are planning the Operating Budget for the next fiscal year. Unlike a Capital Budget which is for the purchase of major pieces of equipment, or a Program Budget which is for special projects such as a major field renovation or construction, an Operating Budget is a financial plan for managing the day-to-day operations of a sports field or grounds maintenance operation. We are talking about things like grass seed, mowing and marking paint. Whether you have been given a dollar amount to work with or are starting from zero and must justify every expense, your must mission is to learn what your costs are and estimate what you expect to spend. If you don't know where to begin, here are some tips to help you get started.

Track your historical data. Collect receipts, and all records pertaining to your facilities grounds or sports field operations for the last fiscal year. A ledger book or a computer spread sheet program will be very helpful for organizing this data.

Find out what is expected. You must know exactly what the site will be used for. For example, is it an open space used for a variety of activities, or will it is used for a single purpose such as exhibition baseball games? What are the expectations of the owner? Will certain rules or conditions apply such as the amount and severity of use, use during inclement weather? Different sites will have different budgets based on their maintenance levels. Find out the expectation of the owner first. Without the support of the owner, it will likely waste your time to budgeting for a higher level than what your owner envisions. Consider the following differences in maintenance levels.

Maintenance Levels:

Level 1 Showpiece facility (professional sports facility)

Level 2 Comprehensive stewardship (College facility or high end sports facility)

Level 3 Managed care (well maintained high school or park)

Level 4 Reactive management (minimal care, mowing, no irrigation, occasional fertilizer)

Level 5 Crisis response (neglected, occasional mowing)

Inventory the Site. Take measurements of the area, identify weed and pest pressures and grass types and have a complete chemical and physical soil test performed. This information is necessary for designing a turf maintenance program. Perform an irrigation audit to quantify the effectiveness of the irrigation system and the drainage of the soil. Evaluate the effectiveness of the current maintenance system. Determine the thresholds for acceptable wear damage, weeds or pest pressures that you will tolerate before corrective measures will be taken? Think about what can go wrong and how you would respond.

Conduct an inventory of your resources. Who will do the work? What equipment, materials, and time will be needed to get the work done? You will also need to find out how much money was spent in the past and whether it was adequate to meet expectations.

Make a list of all the activities in your program. For each activity list:

- The frequency of each activity
- Number of people and the man-hours required and the cost
- Time constraints
- The equipment needed and cost
- Materials needed and the cost

Create a calendar showing when the activities will occur. This is helpful for scheduling resources and time around scheduled events. This will help you create a realistic picture of what tasks your organization can do in-house, outsource or eliminate. Be sure to include any overhead expenses that your operation is charged, such as rent, utilities, or other line items.

Check your figures carefully and submit your budget. Present your proposal neatly, in an easy to read and understandable format such as a spread sheet. It is likely that your budget will be challenged by a budget committee. Above all, remain flexible. The people we work for often are unaware of the true costs of maintaining a safe and playable sports field, so remember to be tactful, diplomatic and professional.

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

Continued from page 3

New and Renewed SFMANJ Members

Paul Parascondolo	*Old Tappan Golf Course*
Sam Pepe, CEFM, IPM Co-Ord	*Central Regional School District*
Matthew Pinkerton	*Byram*
Michael Plut	*Twp of Morris Parks & Rec*
Terry Prem	*Turfware, Inc.*
Daniel Purner	*Somerset Patriots*
John Redman	*Advanced Landscapeing*
Ross Reed	*Borough of Fair Haven*
Andrew Remm	*North Brunswick Twp.*
Fred Rivera	*Madison Borough Parks Dept.*
Charles Rogers	*Plainsboro Township*
Phillipe Roux	*Lakewood Twp.*
Frank Russo	*North Brunswick Twp.*
Salvatore Salsa	*City of New Brunswick*
Andy Schuckers	*Paramus Golf Course*
Jamie Specca	*Student*
Blair Spencer	*Twp. of Burlington-Rec Dept*
Kevin Sponxo	*Seton Hall University*
Brian Stevens	*Twp. of Burlington-Rec Dept*
Jim Sweeney	*Princeton Day School*
Steven Ternosky	*Morris Hills Regional District*
Craig A. Tolley	*County College of Morris*
Heath Traver	*Rain Bird Corporation*
Mark Troyer	*Sport Care Synthetic Field Maintenance*
Jay Trstensky	*Delaware Township*
Chris Tufano	*Township of Freehold*
Rich Vancamp	*The Lawrenceville School*
Kyle VanHaasteren	*Paramus Golf Course*
Rich Watson	*Laurel Lawnmower*
Jeff Weld	*Bayer*
Bill Wisbeski	*South Hunterdon Regional High School*
Greg Witt	*Lakewood Blueclas*
Michael Woebse	*Twp of Morris Parks & Rec*
Tom Wolgast	*The Lawrenceville School*

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sfmanj.org gets a facelift!

SportsField Managers Association of New Jersey is updating our administrative system and web site. Now information for all events will be posted on our website with registration handled on the website as well!

Now ALL membership renewals, as well as new member registration, will be handled on the website also.

This gives you the ability to enter your profile the way you would like it and add a bio and picture as well. Members who download the Member Directory will see what you want them to see. This is especially helpful to vendors.

How To View and Login To Our Website

Please take the time to explore the new site at sfmanj.org. Use the login instructions and create a password for yourself.

Who Can I Contact If I Have Questions?

If you have problems please contact Debbie by email at: mail@sfmanj.org or by phone at 856-514-3179.

Debbie Savard
SFMANJ Executive Secretary

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SOIL COMPACTION IN TURF

Continued from page 13

The Research

Our previous work at Auburn University found that aerification was less likely to have an effect in noncompacted soils as compared compacted. We looked at the effects of using a deep, hollow tine aerifier (8 inch deep, 3/4 inch diameter) at two locations: a heavily trafficked and compacted marching band practice field, and a lightly trafficked field at the Auburn University Turfgrass Research Unit.

At the heavily-trafficked site, every additional core aerification in a given year decreased soil resistance. This was not the case at the lightly compacted site. Only one aerification was need in a given year to produce a significant reduction in soil resistance. At the heavily trafficked site, the effects of deep-tine aerification usually lasted about three weeks. This supports the conclusions of previous workers that frequent aerification might be needed on compacted sites. However we did not evaluate the effects of different equipment (e.g. tine depth, solid vs. hollow tine) on compaction in trafficked turf. We also wondered if continuous aerification would allow a compacted layer of soil to form at the bottom of the tine working depth. These "aerification pans" can form over time from the effect of tines pressing down on the soil below the level where they actually penetrate and remove soil.

This research examined three different pieces of equipment (a pull-behind aerifier, a GA-60 standard tine aerifier, and a Soil Reliever deep tine aerifier) using both solid and hollow tines. Plots were aerified four times per year and traffic was artificially applied with a heavy roller to induce compaction. Compaction was evaluated by measuring soil resistance to a soil penetrometer at depths down to 12 inches.

The equipment used has a large effect on the amount of compaction relief and where it occurs. The deep tine aerifier (eight inches deep) reduced soil resistance when either solid or hollow tines (5/8 inch diameter) were used. The standard tine aerifier (four inches deep) often produced a significant reduction in resistance when hollow tines (5/8 inch diameter) were used.

The deep tine aerifier reduced soil resistance from 3.5 to 7.6 inches, but did not reduce compaction in the top 3.5 inches. The standard tine unit did reduce resistance significantly in the top three inches, but had no effect deeper in the soil.

The long term effects of continued aerification with a standard tine unit fitted with solid tines (5/8 inch diameter) for three years in a row were assessed. At a depth of 2.3 to 5 inches, there was significantly more resistance compared to non-aerified plots. This indicates that a layer of compacted soil (known as a "pan" or "aerification pan") had developed near the bottom of the tine stroke. This illustrates the need for periodic deep tine aerification to avoid this problem. The pan of compacted soil was less severe when hollow tines were used, but still could build up over time.

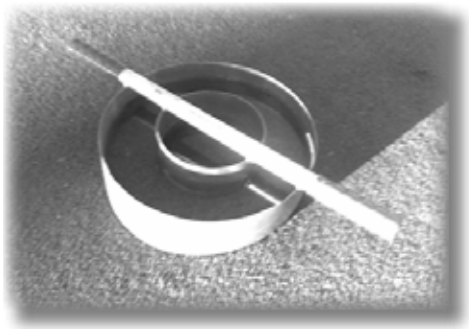
When the surface hardness of the turf was measured using a Clegg hammer, all forms of aerification produced a softer surface at least for one week after treatment The standard tine aerifier with hollow tines tended to produce the softest surface.

Conclusions

- Compaction of turfgrass soils lowers the percent macropores in the soil - a decrease in macropores limits soil aeration, which hurts root growth.
- Core aerification, especially solid tine, may not help eliminate thatch.
- Effects of aerification in heavily trafficked soils may be short-lived (~ 1 month).
- Diagnostic techniques for detecting compacted soils, such as infiltration measurements or soil penetrometer readings, are widely variable, even across supposedly uniform surfaces such as a putting green.
- Compacted "pans" develop over time at the bottom of the tine's penetration into the soil, especially when using solid tine equipment.
- Deep tine equipment is more effective at reducing soil compaction at depths below 2.5 inches.

A Remik CP-20 cone penetrometer was used to measure the resistance of soil to the insertion of a probe .

A double ring infiltrometer was used to measure infiltration rate of water into the surface of the soil on a putting green.



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Dave Han is Associate Professor of Agronomy & Soils, Auburn University, Auburn, AL.

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