Update

Sports Field Managers Association of New Jersey

January/February
2005
Vol. 5, No. 1

e-mail: hq@sfmanj.org
www.sfmanj.org

2004 Student Scholarships

SFMANJ presented $500 student scholarships to Rutgers University students Daniel Purner and Rob Shortell. For the first time an award was given through Rutgers Center for Turfgrass Science to a student who's major and interest lies in Sports Field Management. For the second year SFMANJ presented a Rutgers student a scholarship at the 2004 business meeting at the NJTA Expo Athletic Field Education session in Atlantic City.

Both students have a keen interest in athletic field management and research, they have above 3.8 point averages, are involved in work related to sports fields and are members of SFMANJ.

All students who applied this year were very qualified. We hope to be able to give additional scholarships next year so students, please apply next year and remember we welcome your involvment in chapter activities. ◆

Brad Park(left) presents scholarship award to Daniel Purner(right) at the Rutgers Center for Turfgrass Science award dinner.

Inside This Issue

This newsletter is the official bi-monthly publication of the Sports Field Managers Association of New Jersey.

For information regarding this newsletter, contact: SFMANJ at 908-730-7770

Co-editors:

Jim Hermann, CSFM and
Eleanora Murfitt-Hermann, CRS

2004 SFMANJ student scholarship recipient, Rob Shortell overseeing his infield demo plots at the Rutgers Snyder Farm.

SFMANJ Business

Next Board of Directors Meeting –
Feb. 2nd, at Storr Tractor at 4:30PM

Welcome New & Renewed SFMANJ Members

In the beginning of November, SFMANJ mailed invoices for 2005 membership dues to all current members. If you did not receive an invoice, please contact us at (908) 730-7770 or download the 2005 membership form available at www.sfmanj.org. Remember to mail your renewal/payment direct to SFMANJ, PO Box 370, Annandale, NJ 08801. ◆

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Additional member from facility	$25
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Additional member from company	$30
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Send with Check or voucher to:
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2005

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Mission Statement

Committed to enhancing the professionalism of athletic field managers in New Jersey 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.

Contact us at:
P.O. Box 370
Annandale, NJ 08801
Web Site – www.sfmanj.org
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National Organization
Sports Turf Managers Association

www.sportsturfmanager.com
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Continued on page 4

Continued from page 3

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Continued on page 6

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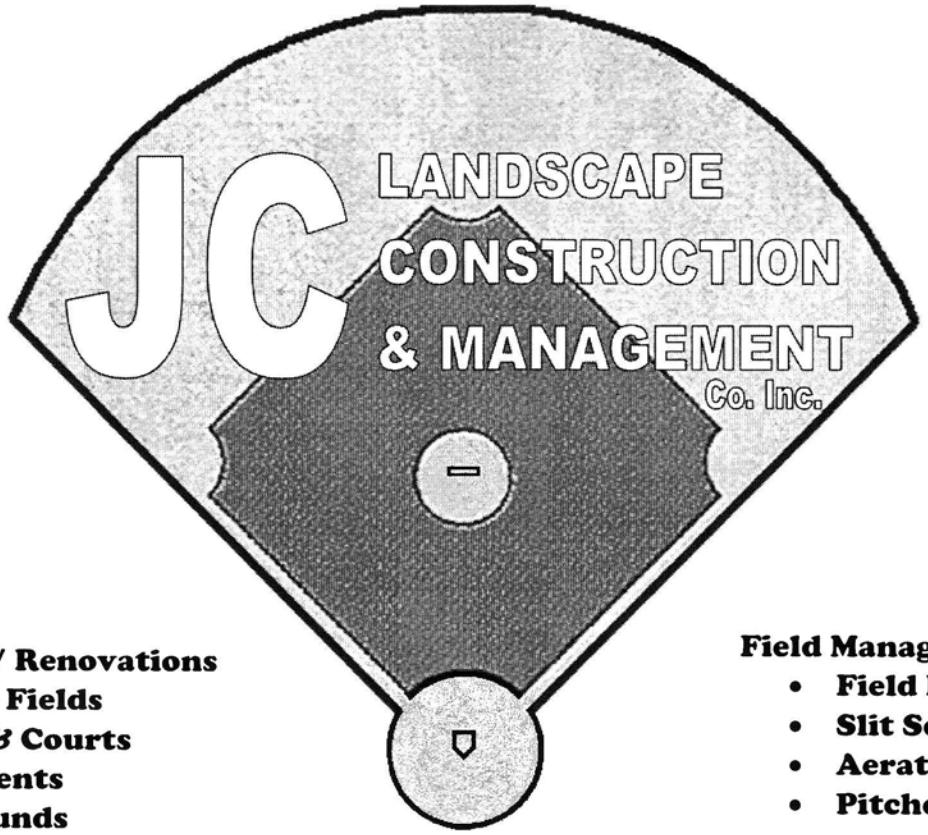

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Calendar of Events

(IANJ) Irrigation Assoc. of NJ Winter Technical Seminars & Trade Show:
February 7-11, Holiday Inn-Jamesburg, NJ – SFMANJ member receive member rates! See insert

(NJLCA) NJ Landscape Contractors Assoc 28th Annual Trade Show & Conference:
March 3rd, Meadowlands Exposition Center in Secaucus – See insert

Rutgers University Winter Courses:
February 22-24, **3-Day Athletic Field Construction & Maintenance Course**
March 1, 8, 15, 22, **Athletic Field Special Topics: Soils, Turf, Athletic Field Construction and Synthetic Turf Products** -10% off to SFMANJ members mention this newsletter. To register call 732-932-9271 ext. 630 ◆

Expo *was* even more in '04!

By Brad Park, Rutgers University
park@aesop.rutgers.edu

From Tuesday, December 7 – Thursday, December 9, 2004, the New Jersey Turfgrass and Landscape Expo lived-up to its billing as "*Even more in '04*" by providing numerous educational sessions for green industry professionals including sports field managers, lawn and landscape personnel, and golf course superintendents. As usual, the location of Expo – The Trump Taj Mahal in Atlantic City, NJ – proved to be a great location for learning, networking, and playing the slots and table games on the floor of a world-class casino.

The sports field sessions commenced on Wednesday afternoon with talks focusing on construction of natural and synthetic turf fields. Sports Field Managers Association of New Jersey board member Jeff Cramer delivered a talk describing his own personal experiences dealing with sports field construction problems. Jay Warnick, BYU-Idaho, gave a very pertinent talk on synthetic infill system management as many fields in New Jersey are being converted from natural turf to synthetic infill surfaces.

Following the Wednesday afternoon educational session, the Expo trade show resumed and included a new twist for 2004. A Mardi Gras atmosphere was incorporated into the trade show and featured a live Dixieland band, numerous entertainers, and as was customary for the Grand Reception held in past years, good food and cold drinks.

As is commonly the case, managing turfgrass and infield mixes are seldom the limit of responsibilities held by the typical sports field manager; therefore, Don Russo, a recreational facility consulting engineer, was invited to speak on Thursday morning to discuss surface restoration of running tracks.

A highlight of Expo 2004 was the inclusion of renowned sports field manager Floyd Perry to the program. Floyd's talk titled, "Work harder, not smarter" detailed practical, innovative techniques one can use to improve fields. Floyd spoke again in the Thursday afternoon session and discussed strategies to improve sports field safety and subsequently reduce the potential for costly litigation.

Sports Field Managers Association of New Jersey held its annual business meeting on Thursday afternoon to elect and re-elect board members for the upcoming year. Rob Shortell, a Rutgers student, was awarded a scholarship on behalf of SFMANJ at the meeting. In addition, Ken Mathis, Jeff Cramer, and the Rutgers Center for Turfgrass Science were recognized for hosting the three SFMANJ field days held in 2004.

It's never too soon to begin thinking about next year's Expo. Be sure to keep an eye out for New Jersey Turfgrass Association mailings and updates in SFMANJ's newsletter for program and registration details for Expo 2005. See you in '05! ◆

Criteria For a Benchmark Infield

By Jim Hermann, CSFM

While working with a local township, the request was made to develop a criteria or set of standards with which each of the infields within the township could be compared. Infields that didn't meet the criteria would be slated for reconstruction.

So many times we as sports field maintenance personal participate in discussions directed toward maintenance strategy on that perfect infield. An infield with ½ % pitch starting at a point directly behind the pitchers mound and extending in all directions to a perfectly maintained turf perimeter constructed on a gravel blanket, grown in a sand based root zone and most certainly mowed with a gazillion dollar triplex mower. What's wrong with this picture?

I'm sorry but I just can't relate. I have the utmost respect for those involved in the maintenance of such an infield but the truth of the matter is that that's a totally different animal than most of us are involved with.

The purpose of the criteria for a benchmark infield is to provide a reference for all infields. Comparing any infield to these criteria can help maintenance personnel identify potential problem areas. Once identified and corrected, a proactive strategy can be developed to minimize their reoccurrence. This strategy is essential in providing a safe and playable atmosphere for the leagues and teams that utilize these facilities. Based on my experience and to the best of my knowledge, the following represents much of which is desirable in any infield

Every infield should:

1. Maintain positive surface drainage within a range of .75 to 1.5% slope to minimize standing water or erosion.

a. At a distance of 50' a 5" rise in elevation would be an approximate .83% slope. At a distance of 40' a 4" rise in elevation would equate to a .83% slope and so on. This is a good reference.

b. This criterion is field specific. Every reasonable effort should be made to provide positive surface drainage the shortest distance possible to evacuate surface water from the infield to minimize erosion

- Crowning from the middle of an infield to the edges would best serve this purpose

c. Every reasonable effort should be made to prevent funneling of water to minimize erosion

2. Exhibit a smooth transition into adjacent turf areas

a. Lip management is essential in maintaining this objective

3. Be elevated so as not to allow for surface runoff from adjacent turf areas onto the infield skin

a. Multiuse facilities are notorious for this error in construction design

4. Provide a home plate with a 1% or 1" minimum rise in elevation from any point a distance of 9' from that home plate

5. Be constructed with ease of maintenance as a paramount objective

a. Provide an adequate distance between the base paths and adjacent turf perimeter to minimize migration of infield mix into the turf and as such minimize lip buildup.

6. Be constructed with safety as a paramount objective

7. Be constructed with a consideration for the drainage capacity of the sub base and surrounding soils and as such the potential for a high water table to negatively impact on the playability of that infield

a. Where a high water table is identified, a subsurface drainage plan should be considered to evacuate that water and maximize playability

8. Provide reasonable accuracy in mandatory dimensions such as:

a. Baseline and diagonal distances

- The diagonal distance from furthest outside corner of 3rd base to furthest outside corner of 1st base should be 84' 10 ¼" for a 60' base line
- The diagonal distance from furthest outside corner of 3rd base to furthest outside corner of 1st base should be 127' 3 1/3" for a 90' base line

b. Pitching distance

It is interesting to note that the baseline and pitching distances are the

Continued on page 13

Rutgers Corner – The Clegg and measuring playing surface hardness

By Brad Park, Rutgers University
park@aesop.rutgers.edu

A common attribute of heavily-used natural turf fields and worn-out synthetic surfaces is unacceptable playing surface hardness. In the case of natural turf fields, soil compaction and surface hardness are the all-too-often results of the disintegration of turfgrass cover. For synthetic fields, older surfaces are often replaced due to surface hardness issues and subsequent concerns over player safety.

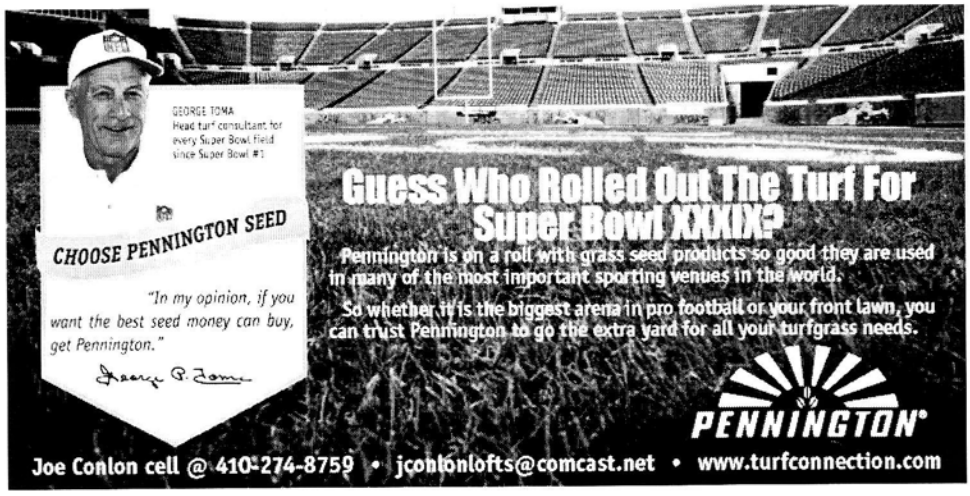
A systematic means is necessary to measure and evaluate the surface hardness of sports fields. The American Society for Testing and Materials (ASTM) has developed a set of procedures utilizing a device called the Clegg Impact Soil tester (CIST) to assess the surface hardness of North American football fields (ASTM F 1936-98).

The Clegg Impact Soil Tester (CIST) is a device that can be used to measure surface hardness. The CIST consists of a cylindrical impact missile enclosed in a tube that creates minimal friction. The missile is dropped at a prescribed height of 2.0-ft on the surface to be tested. The CIST is equipped with an acceleration transducer and a hand-held electronic display that allows the user to record values generated by the CIST in units of G_{max}. G_{max} is a measure of peak deceleration, which is the impact energy of the missile absorbed by the surface. The higher the peak deceleration value (G_{max}) the more energy being returned to the object contacting the surface, or the harder the surface. To put this in perspective, Rogers et al. (1988) found a concrete basement floor produced a value of 1280 using the CIST and was reduced to 260 when the same floor was covered with a carpet pad.

The American Society for Testing and Materials guidelines for testing the surface hardness of North American football fields calls for a "drop test" using the CIST at six specified points throughout a football field, including a goal line, hash mark on the 25-yd line and mid-field at the 50-yd line. According to the specifications, a drop test consists of three successive drops with 3-minute pauses allowed in between individual drops. The G_{max} values are recorded and the 2nd and 3rd value are added and the sum is divided by two and rounded to the nearest whole number. The G_{max} value from the 1st drop is disregarded.

Numerous parameters should be reported at the time of testing. In a natural turfgrass system, the surface temperature of the field should be measured at a depth of 0.5-inch. Additionally, a visual assessment of turfgrass cover (e.g. 25%, 90%, etc.) and soil moisture (dry, damp, wet, saturated, etc.) should be made should be recorded at each test point.

Under a *Performance Requirement* heading described in the ASTM Standard, the average G_{max} value at any single test point shall not exceed 200 when tested from a drop-height of 2.0-ft. The standard further notes that the surface system (natural turfgrass or synthetic) should be replaced either in full or in part if one or more of the tested points



is determined to have an average G_{max} value exceeding 200. ASTM adopted the maximum impact level of 200 average Gmax for use because this value was accepted by the U.S. Consumer Product Safety Commission for similar test methods.

References

ASTM. 1999. Standard specification for shock-absorbing properties of North American football field playing systems as measured in the field. Designation: F 1936-98.

Rogers, J.N., D.V. Waddington, and J.C. Harper. 1988. Relationships between athletic field hardness and traction, vegetation, soil properties, and maintenance practices. Pa. Agric. Exp. Stn. Prog. Rep. 393. ◆

Sports Field of The Year

(F.O.Y.)

Proud of Your Field?

Want to Show Off Your Hard Work?

SFMANJ is inaugurating an annual New Jersey "field of the year" contest. Individual awards will be presented to the school, **"F.O.Y."** and parks/ recreation "**F.O.Y.**"

ENTERING is easy, send to:
SFMANJ Contest, Po Box 370, Annandale, NJ 08801
Entries must be received by September 30, 2005

ELIGIBILITY:
*two categories; School or Parks/ Recreation fields only
*current member of SFMANJ
*natural grass fields

SEND:
*color photos of your natural grass field (10 maximum)
*name of facility and location
*name of owner
*your name, position and contact number

CRITERIA for awards:
*playability and appearance of the playing surfaces
*based on photos and a site visit by the SFMANJ Award Committee
*feel free to have sports groups in your photo

AWARDS:
Winners will be honored with a plaque at New Jersey Turf Grass Expo in December 2005 and be interviewed for a feature article in SFMANJ "UPDATE" (Also receive a two-night stay at Taj Mahl, Atlantic City and three days of education)

NOTE:
*photos will not be returned and may be used on SFMANJ website and promotional settings. ◆

Question and Answer

Question: How do I calculate the amount of topdressing needed for my athletic field?

Answer: To calculate the amount of topdressing needed for your athletic field multiply the length in feet x width in feet x depth in inches x .0031.

Example: Calculate the amount of topdressing needed to topdress a soccer field measuring 360' x 210' with ¼" topdressing.

210' x 360' x .25" x .0031 = 58.59 cubic yards of material ◆

Feed the Soil or Feed the Turf?

**Don Savard*

Is your soil testing laboratory telling you to feed the soil, or feed the turf? If you don't know, you could be buying products that you don't really need. Now before you accuse me of suggesting that reputable soil testing laboratories don't know what they are talking about, let me explain that I learned something recently, and that is there are differences in the approach or philosophy that soil testing labs use when making recommendations. Whether the laboratory is part of a Land Grant University, a commercial lab or a Government agency, it will follow a philosophy that guides their interpretation of what they will recommend that you do. Let's look at three of the most common philosophical concepts.

The **Sustainable Level of Available Nutrient** (SLAN) concept refers to the approach of testing the soil for certain nutrients needed to sustain growth, and if a nutrient is lacking, you just add the nutrient. SLAN works pretty well for specific crops (yes, turfgrass is a crop) because the recommendations come from years of research of what worked best in the field for that crop on different soils in varying weather conditions. Most Land Grant University soil testing labs follow the SLAN concept because of their agricultural research mission.

Another approach is the **Basic Cation Saturation** (BCS) concept which suggests that the "balance" of exchangeable Calcium, Magnesium, Potassium, Sodium, and Hydrogen cations in the soil, within a specific percentage range, or, in specific ratios to each other, will promote maximum crop response. By adding additional amounts of the aforementioned basic cations, the balance can be manipulated. BCS is frequently used by commercial laboratories that do not have an extensive database for a specific crop response on a broad range of soils.

The third approach is the **Maintenance Fertility** (MF) concept of replacing the nutrients that have been removed or lost. MF might be helpful in instances when grass clipping are always collected, or nutrients are leached out of the soil. Sometimes the MF concept is combined with the other two.

As you can see, these different philosophies are based on different assumptions about what the turf needs. The confusion can begin when you receive conflicting soil test reports for the same field from different soil testing laboratories (assuming, of course, that both labs received identical samples). Soil testing labs use different test extractants and methodology on different soils in different parts of the country because the extractants and methodologies are most effective within certain pH ranges and soil types. Another reason is that laboratories compare test results to research data from years of field trials of the crop in different soil conditions to help make recommendations. So, a laboratory in another part of the country (or the world) could make a different recommendation to you than a local laboratory based on their own research data. Commercial testing laboratories and Land Grant University laboratories often differ based on their research data base, or soil testing philosophy.

Which approach is best? Research done by the University of Kentucky beginning in 1977 on corn, and later on corn, soybeans and wheat indicated that crop yields were excellent for all philosophy concepts (including combinations of two) tested when the weather conditions were favorable, however, there were large differences in the amounts and kinds of fertilizers. This resulted in large differences in the costs, with high fertilizer costs giving no advantage in higher yields. Soil tests taken a few years later following the use of the various recommendations indicated that surplus fertilizer was being stored in the soil. Fertilizer rates based on SLAN cost the least and produced equivalent yields compared to the more costly recommendations based on the other philosophy concepts tested (Murdock, 1997).

Fertilizer supply companies frequently recommend soil testing laboratories whose testing philosophy and recommendations help to sell their products. There is nothing wrong with that, but beware of claims that certain soil amendments and nutrients will

perform miracles. Often these claims are anecdotal. Ask to see who did the research, when and where. The growth of any plant is limited most by the essential plant nutrient present in the least relative amount (Liebig's "Law of the Minimum").

Should you "fertilize the turf" or fertilize the soil"? In today's economic and environmental climate, turf managers need to verify the philosophy behind the fertilizer recommendations given by the testing laboratories, and then develop an economically feasible and defendable fertility management program.

**Don Savard is the Athletic Facilities & Grounds Manager for Salesianum School, Wilmington, DE and Vice President of SFMANJ. donsavard@msn.com*

Reference:

- Plank, C. Owen, Soil Testing-Turf, Univ of Georgia Cooperative Exten Service Pub
- Murdock, Lloyd, Evaluating Fertilizer Recommendations, 1997, Univ of Kentucky Coop Exten. Pub
- Focus on Soil Testing and Nutrient Recommendations, 1994, Maryland Coop Exten, vol. 1, issue 2
- Oldham, Larry, Nutrient and Soil Management, Mississippi State Univ Exten Service, Nov. 8, 2000
- Gardiner, Duane T., Raymond W. Miller, Soils In Our Environment, 10th Ed, Pearson Prentice Hall. ◆

Continued from page 9

only mandatory measurements. All other measurements are "recommended" distances

9. Be graded so as not to allow standing water to accumulate either on the infield or in adjacent turf areas be it fair or foul territory

a. Sand slit drainage should be utilized in turf areas adjacent to skinned areas to eliminate the potential for standing water where existing slope is ineffective

10. Include dugout areas as a criteria for evaluating safety and playability

11. Include backstops and fencing as a criteria for evaluating safety and playability

12. Employ a proactive management plan designed to maintain safety and playability ◆

Field Tip

Certification Practice Test Questions To Go On Line

Do you know the answer to the following question?

Perennial ryegrass plants do not produce:

a) roots
b) stillers
c) stolons
d) shoots

By the end of December, you will be able to "practice" taking the certification exam to help you prepare for the actual exam. Look for the announcement on the home page to access the questions and the answer key. To be eligible to take the test, you must have at a minimum, a high school diploma or equivalent, and achieve a minimum of 40 points earned through a combination of education and experience. To receive a full packet outlining the application process, contact lcraig@sportsturfmanager.com or call 800-323-3875. *(The answer is C = stolons)* ◆

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