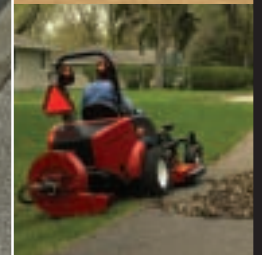
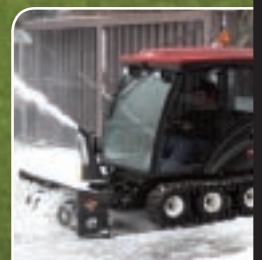


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Committed to enhancing the professionalism of athletic field managers by improving the safety, playability and appearance of athletic fields at all levels through seminars, field days, publications and networking with those in the sports turf industry.

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Inside This Issue

Welcome New & Renewed Members	3
Membership Form	3
SFMANJ Board of Directors	3
New Jersey Turf & Landscape Conference and Expo 2007:	
Sports Field Managers Program	4
What Manual?	6
Sports Field Irrigation Audits - Part II	8
Calendar of Events	14
Use the Easiest Non-Verbal Communication	
Strategy to Enhance Your Professionalism	15
2007 Proud Sponsors Directory	17

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 or Brad Park at (732) 932-9711, x127

Editor: Brad Park, Rutgers University
 Email: park@aesop.rutgers.edu

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

New Jersey Turf & Landscape Conference and Expo 2007: Sports Field Managers Program

December 4-6, 2007

Trump Taj Mahal Casino-Resort, Atlantic City, NJ

WEDNESDAY, DECEMBER 5, 2007

THURSDAY, DECEMBER 6, 2007
THURSDAY AM

THURSDAY PM


1:00-1:30	SFMANJ Business Meeting	7:00-8:00	Early bird Sports Field Managers <i>Networking roundtable</i>	12:00-12:30	Bermudagrass use for Sports Fields in the Mid-Atlantic <i>Mike Kelley, Poly Tech High School, Delaware</i>
1:30-2:15	Management strategies for high traffic fields <i>Dr. Dr. Mike Goatley, Virginia Tech</i>	8:00-8:30	Elements of Sports Field Construction <i>Dr. Mike Goatley, Virginia Tech</i>	12:30-1:00	Selecting a synthetic infill system <i>Ken Mathis, Brick Township Parks</i>
2:15-2:45	A cost-based approach to asses task management <i>Don Savard, CSFM, CGM, Salesianum School</i>	8:30-9:00	Renovation of a little league infield <i>Jim Hermann, CSFM, Total Control, Inc.</i>	1:00-1:30	IPM at a NJ high school: Myth vs. reality <i>Rich Watson, Pine Hill School District</i>
2:45-3:30	Environmental turfcraft for Sports Fields <i>Kevin Trotta, North Rockland School District</i>	9:00-9:30	Grant writing: What you need to know <i>Beth Richmond, Bedford Recreation</i>	1:30-2:00	Management of synthetic infill systems <i>Kevin Malone, CSFM, Columbia University</i>
		9:30-10:00	Low-impact pesticides for turf <i>Brad Park, Rutgers University</i>		



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What Manual?

By Fred Castenschiold

I have been selling quality turf care equipment for over thirty years. I am still amazed how so few customers refer to their owners/operator manuals until it is too late or not at all. These manuals are a great source of information for the supervisor, operator and mechanic.

When taking in a trade on equipment, I try to always recover the original manuals from the account to pass on to the new owner. Often the condition of these manuals condition indicates that they have not been referred-to much! It is a good idea to always record the model and serial number of the equipment on the cover of the manual for quick reference when discussing the need for service or parts. It also a good idea to make sure you read and understand the operators' manual for your machine before operating or servicing it. Become familiar with all safety signs (decals) on the machine. Some manufacturers provide operator training videos which help demonstrate procedures for safe operation and daily maintenance.

Preventative maintenance of your equipment will help you to get the most out of your investment. If you do not have a preventative maintenance program it would be good to start one soon. Sometimes we go long stretches between those rainy day opportunities. Doing scheduled maintenance and adjustments will prolong the life of your equipment, help prevent expensive downtime and give the best possible quality of cut and performance. Experience has shown that a high percentage of problems have developed over a period of time and could have been prevented by adjustment, lubrication, or other required maintenance.

When referring to the manual, take into consideration how harsh your conditions are and remember that manufacturer recommendations for service are the minimum requirements. If we have a long dry spell and your equipment is working daily in a particularly dusty environment you may

wish to consider oil and air filter changes more often.

Some of my customers have come-up with great maintenance schedules which they live by. Keeping records for each machine insures that maintenance procedures are being performed at the proper time. These records could also help you predict parts to have on hand. By keeping blades, belts, filters, etc. on-hand, you will not be caught in a situation where important maintenance was not performed on-schedule because of a lack of parts.

Know what is contained in your manufacturer's warranty. Most warranties are two years in the commercial field. When talking to a service manager regarding a possible warranty issue you will need to refer to those model and serial numbers. Remember? ... The model and serial numbers you wrote down on the front cover of your manual!

*Fred Castenschiold is Sales Representative,
Storr Tractor Company and
SFMANJ Vice President.*

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SPORTS FIELD IRRIGATION AUDITS - PART II

Don Savard, CSFM, CGM

Editor's Note:

This article is a continuation of an article Sports Field Irrigation Audits – Part 1, which can be found on Page 6 of the July/August 2007 edition of *SFMANJ Update*

Don Savard, CSFM, CGM

At this time it is necessary to gather information from outside sources. I used information gathered from the internet that was published by the Delaware Cooperative Extension Service and from the book "Sports Fields-A Manual for Design, Construction and Maintenance" by Puhalla, J; Krans, J; Goatly, M; John Wiley & Sons Inc.

Next I had to determine the **average water holding capacity of my soil**. Different soil textures have different water holding capacities depending on soil pore space. Sandy soils have large pore spaces between the soil particles, silt loams and clays have minute pore spaces. While sandy soils with their large pore spaces can absorb volumes of water quickly, the water also drains quickly. The soils such as silt loam and clays hold their water much longer. My soil type was silt loam which has an average water holding capacity of 0.17 to 0.23 inches of water stored per inch of soil; multiply by 12 to get inches of water per foot of soil (Delaware Cooperative Extension).

Following that, the next step was to find out how much water the turf needed and was using and figure out the irrigation volume and frequency. A turfgrass plant is more than 90% water and requires a different amount of water than a shade tree. Evapotranspiration, the process where available water in the soil evaporates into the atmosphere and transpiration the process where a plant gives off water vapor and oxygen as a byproduct of photosynthesis, is higher during the warmer parts of the year than other times. So, transpiration rates vary every month.

Monthly Potential Evapotranspiration (PET) values can vary slightly from year to year and PET values vary

by month. The PET value for Delaware in May is 3.72 inches; for daily PET values divide the monthly PET value by 30 (Delaware Cooperative Extension). If you can measure the ET at your site, you can become very precise.

The water requirement Crop Coefficient (K_c) is a scale used as a multiplier in irrigation audit equations. The water requirement crop coefficient for cool season turfgrass is 0.6 to 0.8; the water requirement crop coefficient for warm season turfgrass is 0.5 to 0.70 (Puhalla et al., 2001).

Using the information found from my data collection as well as the information in the preceding tables, I was able to find the **irrigation frequency** using the following formula:

$$\text{Irrigation frequency} = \frac{\text{average water holding capacity} \times \text{root depth} \times \text{management allowable depletion}}{\text{potential evapotranspiration} \times \text{crop coefficient}}$$

I found the **run time frequency** using the following formula:

$$\text{Run Time} = \frac{60 \times \text{irrigation frequency} \times \text{potential evapotranspiration} \times \text{crop coefficient}}{\text{net precipitation rate} \times \text{irrigation application efficiency}}$$

So what did I find out after all that work? Irrigation frequency is all about evapotranspiration which varies each month. Assuming average temperatures and humidity and no rain, I would only need to irrigate once every 7 days in May. Because there is less evapotranspiration in April, I would need to irrigate once in 14 days. In July there is more evapotranspiration so I would need to irrigate every 4 days.

I found that the run times would vary from about 108 minutes in April, to 113 minutes in July to 117 minutes in May. For convenience, I rounded up to 120 minutes for the audit in May. My Kifco water reels were calibrated to travel 60 feet per minute, applied ½ inch of water during the first run time. So, by pulling back out a second time immediately following the first run, I could supply the field with a full inch of water.

(continued on page 12)



**Dr. Henry W. Indyk
Graduate Fellowship in
Turfgrass Science**

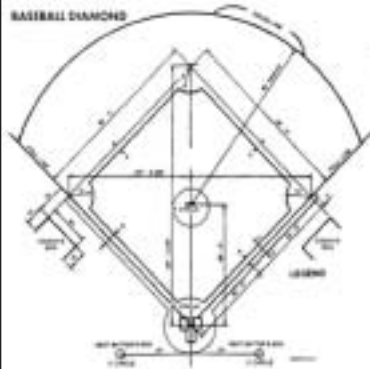
As many of you know, the turfgrass industry lost a dear friend and colleague in September 2005. We will all miss Henry very much and would like to insure that his legacy lives on. The Indyk family would like to establish a memorial fellowship to support graduate students interested in applied turfgrass science. This fellowship is being created to help assure that tomorrow's graduate students have the financial resources to get an advanced degree in turfgrass science at Rutgers University. To fund a full graduate assistantship each year in Henry's name, we will need to raise a total of \$400,000. Your generous support at this time will bring us closer to reaching this goal.

To make a tax-deductible contribution today, please send a check payable to the Rutgers University Foundation, 7 College Avenue, New Brunswick, NJ 08901. Be sure to indicate "Indyk Fellowship, Turfgrass" in the memo portion of your check. If you desire, you may provide a donation in the form of a pledge payable over several years.

For information on other ways to support this fellowship, please contact Dr. Bruce B. Clarke, Director - Rutgers Center for Turfgrass Science (732-932-9400, ext. 331; or clarke@aesop.rutgers.edu) or John Pearson, Director of Leadership Gifts at the Foundation, by calling (732) 932-7899 or email: pearsonj@wlrants.rutgers.edu

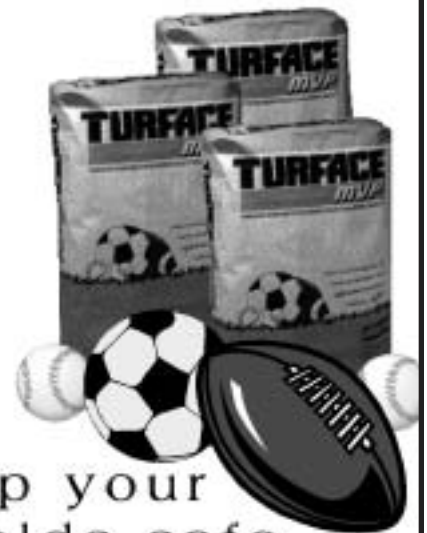


George Bannerman, Bannerman Ltd., talks to attendees on August 1 at Adelpphia.



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