

SPORTS TURF MANAGER

... for safe, natural sports turf

SUMMER 2005 • VOL. 18, NO. 2

- 3 President's Message
- 4 Putting a Price on Turfgrass
- 5 Latest on 2,4-D Use
- 6 Cover Story Continued
- 8 OTS Highlights & GTI News
- 9 Coming Events Calendar
- 10 Pesticide Alternatives
- 12 Integrated Plant Health Care
- 17 Water Management
- 19 STA Member Profile
- 21 Facility Profile
- 22 Industry Press Releases



Bowling Green Construction Basics

LLOYD WOODS, NATIONAL GREENS ADVISOR, BOWLS CANADA

18TH ANNUAL STA FIELD DAY

With each new year bringing record-breaking attendance, this is an event you don't want to miss. It is being held Wednesday, September 14th at the Milton Leisure Centre. Our 2005 theme is *Environmental Stewardship: Healthy Soil... Healthy Turf*. See the inside front cover for session information. A full brochure will be mailed to all STA members.



Bowls, better known in Canada as lawn bowling, is a game that can be played as a social game or a competitive sport. However, no matter how one chooses to play it, lawn bowling is more fun and can be played with greater skill and finesse on a green that has been built with care and of course, is well maintained.

For quite a number of years, bowling greens have been built on a sand rootzone somewhat similar to golf greens and playing fields. However, unlike golf greens, etc., which are usually built with a sand/peat mix, bowling greens must be constructed using a pure sand rootzone to provide the hard, firm, damage-free surface and the fast pace needed for good bowling.

In most of Canada, optimal time for seeding is about August 20, which means that the schedule of construction should

be arranged so that the green is ready to seed on that date. Construction delays that prevent seeding on schedule reduce the time for turf growth and development before the onset of cold weather, so a realistic, rigidly adhered to building schedule is most important.

Design of the Green

The playing surface of a bowling green is an area of bentgrass from 37 m to 40 m square, levelled to plus or minus 3 mm. It is surrounded by a wooden plinth which retains the playing surface. Outside the plinth is a shallow ditch (200 mm to 380 mm wide) and beyond that is a backboard that retains a surround, raised 229 mm above the playing surface. The system of boards around the green is called the backboard/plinth system. → page 6

Above: Installing the first lift of the rootzone.



STA 18TH ANNUAL FIELD DAY – WEDNESDAY, SEPTEMBER 14, 2005

MILTON LEISURE CENTRE, MILTON, ONTARIO – PROGRAM AT A GLANCE

Environmental Stewardship: Healthy Soil... Healthy Turf



Stewards of the Game: Athletic Fields and the Environment
Dr. Eric Lyons, University of Guelph

Smart Fertility

Managing Nutrients, John Bladon, Nu-Gro Professional Turf

Smart Watering

Irrigation for a Growing World, Fadi Gholam, Rain Bird

Sustainable Turfgrass Irrigation: Reduce, Reuse, Rethink. How to save up to 50% in water use!, Gregory Snaith, P.Eng., EnviroIrrigation Engineering, Inc.

Smart Purchasing

Purchasing With a Green Conscience

Cindy Toth, Director of Environmental Policy, Town of Oakville

Smart Tools

Tools & Techniques for the Sports Turf Manager

The GTI Turf Team, Pam Charbonneau, OMAF, Ken Carey & Erica Gunn, GTI

**EVERGREEN™ Turf Blankets...
...trusted around the world!**

**“Results Outstanding...
Could Not Believe...”**

wrote **Dann Daly**, Park Maintenance Supervisor,
Parks & Recr. Dept., North Smithfield, RI

- Earlier spring green-up
- Faster seed germination
- Deeper root development
- Delays dormancy in fall
- Ideal winter blanket
- 3 & 7 yr. warranty covers
- Best for quick turf repairs
- Available in any size

**Want to know more?
CALL TOLL FREE
1-800-387-5808**

**COVERMASTER™
COVERMASTER
COVERMASTER**

MASTERS IN THE ART OF SPORTS SURFACE COVERS



Covers for baseball fields are also readily available.



Covered...



Uncovered...

It works on the greenhouse principle, every time!

covermaster.com

E-MAIL: info@covermaster.com

COVERMASTER INC., 100 WESTMORE DR. 11-D, REXDALE, ON, M9V 5C3 TEL 416-745-1811 FAX 416-742-6837



SPORTS TURF MANAGER

Volume 18, Issue 2, ISSN 1201-3765

is the official publication of the
SPORTS TURF ASSOCIATION OF ONTARIO
328 Victoria Road South, Guelph, ON N1H 6H8
Tel: (519) 763-9431, Fax: (519) 766-1704
E-mail: info@sportsturfassociation.com
Web: www.sportsturfassociation.com

BOARD OF DIRECTORS

PRESIDENT Andrew Gaydon
VICE PRESIDENT Gord Dol
PAST PRESIDENT Paul Turner
TREASURER Rick Lane
SECRETARY Bob Sheard
EXECUTIVE MANAGER Lee Huether

DIRECTORS

Brian Adriaans, Jane Arnett-Rivers, Cam Beneteau, Roy Forfar, Paul Gillen & David Smith

SPORTS TURF MANAGER

is published quarterly by the STA for free distribution to its membership. An annual subscription may be obtained for \$40/year. Please direct advertising inquiries to Lee Huether at the STA office.

EDITORIAL COMMITTEE

Jane Arnett-Rivers, Andrew Gaydon, Lee Huether and Paul Turner

PUBLISHER

New Paradigm Communications
R.R. #8, Owen Sound, ON N4K 5W4
Tel. (519) 371-6818, Fax: (519) 371-5789
E-mail: joy@npc-solutions.com

CANADA POST PUBLICATIONS MAIL SALES AGREEMENT No. 1461370

Postmaster: Please return undeliverable copies to the STA at 328 Victoria Rd. South, Guelph, ON N1H 6H8.



STA OFFICE HOURS

Lee Huether is in the office from 9:00 a.m. to 2:00 p.m. Tuesday through Friday. The office phone number is (519) 763-9431. At other times, a message may be left on the voice mail system. Please include the vital information of name, telephone number with area code, and time of calling. The office may be reached at any time by faxing (519) 766-1704 or via e-mail.

The President's Desk

ANDREW GAYDON



safety shoes (or boots) on only one particular day and an accident occurs where safety shoes could have prevented the injury, it is the supervisor's fault.

Annual Field Day

We are organizing yet another interesting Field Day on September 14th at the Town of Milton. Our host municipality is centrally located, only 25 minutes west of the Toronto Airport and is a rapidly growing town with lots of new parks and sports fields. We have a great program planned with the theme *Environmental Stewardship: Healthy Soil... Healthy Turf*. See page 2 for the "Program at a Glance" and watch your mail and our website for complete details and registration information.

Workplace Safety...

Spring is here at last and we are all looking forward to a great Canadian summer. This year the various horticultural industries are all gearing up in anticipation of a long, hot season.

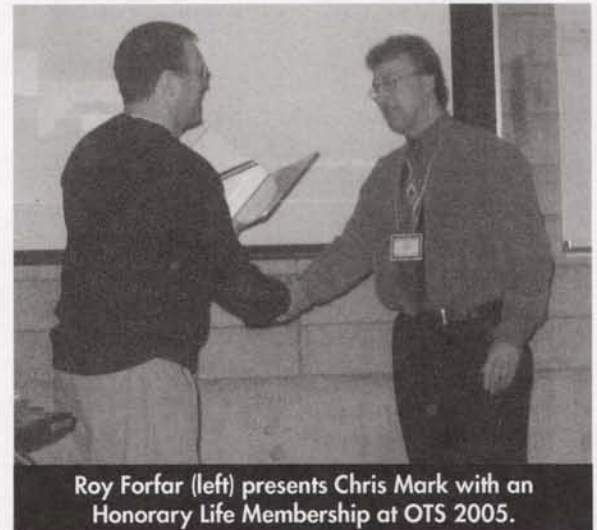
We had two wonderfully warm weeks in April and it's amazing how early beautiful weather motivates us all, in thought as well as in work. As our readers wade through spring work, I would like to remind everyone of the importance of safety.

The provincial government is prioritizing workplace safety and many new inspectors have been appointed to cover this task. It is every managers as well as workers responsibility to know "the rules of safety" and it is particularly important that manager's (and supervisor's) not only enforce the rules, but also ensure that all individuals under their supervision have read and understand the safety rules of their particular workplace.

In the case of an accident, no matter how major or minor it is, it is the manager or supervisor's responsibility to ensure that work is carried out safely at all times. For example, if an employee fails to wear

Recognizing Chris Mark

I would also like to take this opportunity on behalf of the members of the Sports Turf Association to sincerely congratulate Chris Mark for his outstanding service to the STA over many years. At this winter's Ontario Turfgrass Symposium, Chris received an Honorary Life Membership as a token of our thanks to



Roy Forfar (left) presents Chris Mark with an Honorary Life Membership at OTS 2005.

such a loyal trooper. Only five such awards have been presented previously. Recipients were James Boyce, Norman Rothwell, Clayton Switzer, Robert Sheard and Michael Bladon. ♦

Economic Impact of Turfgrass Industry Quantified

NEW YORK TURFGRASS SURVEY RELEASED: 80-PAGE IN DEPTH REPORT

The New York Turfgrass Survey, sponsored by the New York Turfgrass Association and the New York State Department of Agriculture and Markets in cooperation with the New York Agricultural Statistics Service (NASS), has been published on the NASS website, www.nass.usda.gov/ny.

The newly released survey, which has been in the planning and implementation stages for the past five years, is the first of its kind to evaluate the magnitude and economic importance of the turfgrass industry in New York State. The 80-page report, *Turfgrass Final Publication*, can be accessed by clicking "Special Surveys" on the NASS home page.

The New York Turfgrass Survey illustrates that the turf industry employed 43,000 people and contributed five billion dollars in turf maintenance expenses to the economy in 2003. Other interesting facts the survey reveals:

- Turfgrass covers 3.43 million acres in New York

- 93% of the 3.4 million acres are private lawns and golf courses

- Over 843,000 new turf acres were established in 2003 at a cost of nearly \$1.56 billion

- The value of turf equipment owned by all sectors surveyed totaled over \$6.3 billion

- The total payroll for turf employees was nearly \$467 million

This important data will position the turfgrass industry as a growing agricultural commodity in New York State and enable the public, industry and government to work together to ensure its continued growth.

The New York State Turfgrass Association is comprised of 1,800 green industry professionals who have joined together to share technology, promote environmental stewardship, support education, advance research and disseminate research findings. For more information, contact Denise Lewis, Public Relations Coordinator at 518-783-1229. ♦

Odds and Ends

Volunteers Needed

Volunteers are being sought to serve as members on various STA committees. Get involved with your association! No experience is necessary! This is a great networking and professional development opportunity. Contact Lee at the STA office for further information.

COMMITTEE
VOLUNTEERS
NEEDED

2005 STA Membership Fees

Thank-you to all members renewing in 2005! Membership fees are now due. If you haven't already done so, please take a moment to remit them in order to remain a member in good standing. The annual STA Membership Roster is now being compiled and will be distributed on completion.

Turf Agriphone

The Turf Agriphone is up and running. To access this information, call toll free 1-888-290-4441. For the email version, contact Pam Charbonneau at pamela.charbonneau@omaf.gov.on.ca to subscribe.

STA Membership Plaques

Display membership plaques are available in executive engraved walnut for \$50 plus S&H. To order, contact Lee at the STA office.

Autumn 2005 Submissions

If you have something you'd like to submit for the next issue, please forward it to the STA office by July 22, 2005.

Editorial Content

Opinions expressed in articles published in *Sports Turf Manager* are those of the author and not necessarily those of the STA, unless otherwise indicated.

WELCOME SPORTS TURF ASSOCIATION NEW MEMBERS

Evan Elford (student), University of Guelph
Department of Plant Agriculture (Hort), Guelph, ON

Bob Johnson
Town of Bradford West Gwillimbury, Bradford, ON

Jim Plasteras, City of Nanaimo, BC

Susan Hamilton
Mountainview Turf Agronomics, Quyon, QC

Ron Laturnas, City of Saskatoon, SK

Barry Portt, City of Ottawa, ON

Ken Hoard, City of Belleville, ON

Jim Gardhouse, Lindsay Peterson, City of Toronto, ON

Klaus Griese, St. Andrews College, Aurora, ON

Lorne deHaas, Town of Markham, ON



Industry Task Force II on 2,4-D Research Data

2,4-D ACCEPTABLE FOR CONTINUED USE ON LAWNS & TURF IN CANADA

OTTAWA, February 21 – Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that "the use of 2,4-D and its end-use products to treat lawns and turf does not entail an unacceptable risk of harm to human health or the environment." After examining the combined risk from exposure through food and residential uses, the PMRA also determined the potential exposure for children and adults contacting treated residential lawns and golf courses was within acceptable standards.

These are the findings in the draft health and environmental risk assessments for the herbicide 2,4-D released by the PMRA for public comment.

"The PMRA's assessment of the scientific database reinforces a growing number of regulatory decisions and expert reviews

that conclude the use of 2,4-D, while protecting food production and the environment, does not present a risk to human health," stated Larry Hammond, Technical Chair of the Industry Task Force II on 2,4-D Research Data. "The PMRA's findings bolster the earlier decisions of authorities such as the World Health Organization, European Commission and U.S. Environmental Protection Agency and recent studies by the U.S. National Cancer Institute."

The PMRA also released key elements of a report by an independent expert Science Advisory Panel. Comprised of five well-regarded experts, the Science Advisory Panel concurred with the general thrust of the PMRA evaluation. The publication of the Proposed Acceptability for Continuing Registration document begins



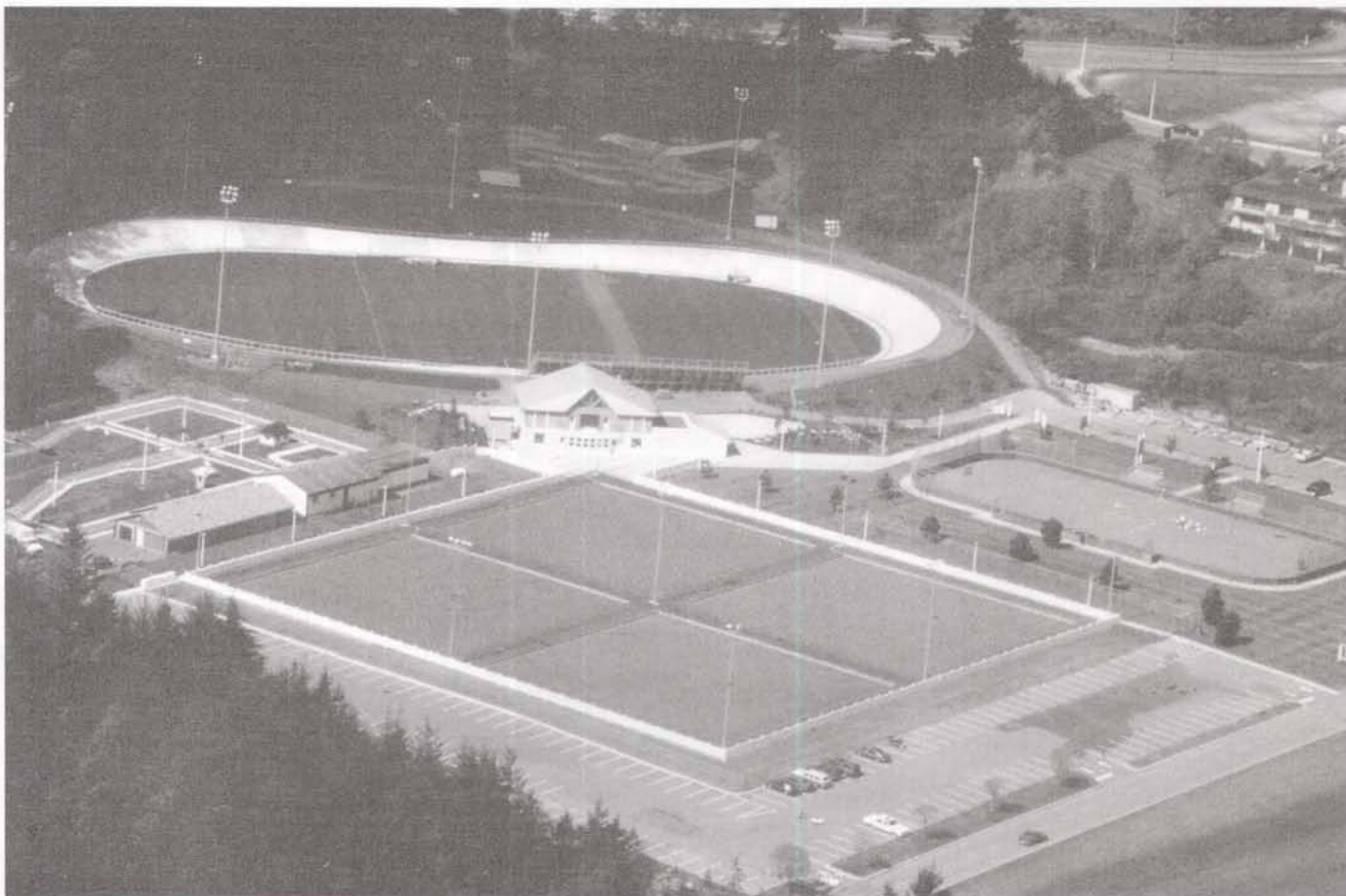
the public comment stage of the PMRA's re-evaluation program of 2,4-D. Copies of the re-evaluation document and notice of the public comment period may be obtained at: <http://www.pmra-arla.gc.ca/english/pubs/pacr-e.html>. Further information on 2,4-D can be obtained at 1-800-345-5109, www.24d.org, info@24d.org. ♦

"The ART of Sports Field Marking"

**SIMPLISTIC
LINES** INC.

FIELD MARKING PAINTS AND APPLICATORS

R.R.#5 Stratford On Canada N5A 6S6
Tel. 519.348.0653 • Fax: 519.348.0654
www.simplisticlines.com



Cover Story Continued: Lawn Bowling Green Construction Basics

LLOYD WOODS, NATIONAL GREENS ADVISOR, BOWLS CANADA, WWW.BOWLSCANADA.COM

Choice of Site

For best results, the green should be built on undisturbed native soil to avoid differential settling. Land that has been disturbed needs a great deal of preparation and can markedly increase construction costs. Former landfill sites particularly should be avoided because of their inherent instability which history has shown can make the green very difficult if not impossible to keep level.

If the site is fairly level without trees, the costs of proper filling and levelling will be kept to a minimum and good access to sewer, water services and power will reduce the often considerable expense of bringing them onto the site.

Basic Construction

Following the survey locating the green on the site, the first operation is to make a

shallow excavation of about 30 cm deep. The bottom of this depression, the sub-base, is levelled to plus or minus 2 cm. If low places exist, they must be filled with fully compacted sand and then the entire area is compacted with a vibratory roller.

Trenching on 1.5 m centres to accommodate 4" drain tile with headers, outfall, etc. is done. After the trenching is complete, a 6 mil polyethylene barrier is laid over the entire area following the contour of the trenches. In this way, the drain system will work evenly and the tiles will hold some water at all times. The barrier is particularly important if the sub-base is sandy or if filling some areas of the sub-base with sand or aggregate has been done.

The drain system is then laid and levelled to plus or minus 8 mm.

Next, the footings for the backboard/plinth system are poured and customized

metal spreader brackets attached. The plinth boards are then bolted to the brackets so that they are level with the final playing surface and the edge of the backboards are attached so their top is 229 mm above the top of the plinth.

After the backboard is complete, the irrigation system is then installed just behind them.

Adding and Levelling the Rootzone

The first 15 cm layer of pure sand, processed to USGA specifications, is then put in place, wet completely, and fully compacted with a vibratory roller. Similarly, the second layer is installed and compacted. This brings the sand slightly over the top of the plinth and the critical final levelling process begins.

Above: Commonwealth Greens, Victoria, BC

A 3.6 m custom-built screeder and rails set in the sand and levelled to within plus or minus 3 mm are used. The green is levelled in strips (each 3.6 m wide) and a number of passes are made with the screeder until a true, well compacted sur-

For best results, the green should be built on undisturbed native soil to avoid differential settling. Otherwise, the land may require a great deal of preparation and thus increase costs.

face is produced that is within the plus or minus 3 mm specification.

After the first two sections have been levelled, the rail between them is carefully removed and is re-laid to serve as a guide for the next section. This procedure continues until the entire green is level, a process that can take 24 hours or so.

The surface must be kept continuously wet after levelling to prevent changes of level due to wind erosion.

Seeding and Development

The surface is fertilized with a good

starter fertilizer and scarified lightly. It is then seeded with an appropriate bentgrass, Pencilgrass is often used, and kept wet until germination is achieved and a turf begins to develop. At this time, a light rolling takes place to settle the crowns of the plants into the rootzone.

The first mowing takes place when the grass has reached about 2 cm, usually between four and five weeks from seeding. Subsequent regular mowings at a decreasing cutting height helps the turf spread and knit together. With any luck, the green should be playable at the end of July the summer following construction.

Regular mowing at a setting of 3 or 4 mm and weekly dethatching are needed to keep the playing surface free of thatch and fast and keen.

More Help

This is a very general look at bowling green construction. Material is available that provides detailed information on building and maintaining a quality green. Check the Bowls Canada website at www.bowlsCanada.com or send an e-mail to office@bowlsCanada.com for additional information. ♦

The *Sports Turf Manager* isn't your only member resource. Why not visit



STA On-Line...

at www.sportsturfassociation.com

We offer a number of electronic member services including a listing of all *Sports Turf Manager* articles from 1987 to the present. Go to the "newsletter" link and click on "cumulative index."

Employment Listings...

Are you advertising a position or searching for a job? Target your audience or refine your search with *Turf Trades*, an online resource for all staffing levels and areas of the sports turf industry. Ads run for 60 days. For information on any STA advertising opportunities, contact Lee Huether at the STA office.



Red and grey clay products designed for baseball, cricket and tennis, along with groundskeeping tools and accessories.

MAR-CO CLAY PRODUCTS INC.

Tel. 519-684-7591 Fax: 519-684-7457
www.marcoclay.com



JOHN BLADON

Technical Sales Representative
Tel: 519.757.0077
Cell: 519.574.2013
E-mail: jbladon@nu-gro.ca

Nu-Gro Professional Turf

10 Craig Street
Brantford, Ontario N3R 7J1
Product Info Line: 1.800.461.6471



Box 171
Harriston, Ontario
N0G 1Z0
Phone (519) 338-3840
Fax (519) 338-2510

Edward J. Seifried
J. Robert Dippel

SEEDS



PLANTPRODUCTS

Turface MVP • Grass Seed
Turf & Tree Fertilizers
Pest Control Products

Plant Products Co. Ltd.

Brampton, Ontario
905-793-7000 or 1-800-387-2449
Fax 905-793-9632 • plantprod.com

Ontario Turfgrass Symposium & Guelph Turfgrass Institute News Items

OTS 2005 A RESOUNDING SUCCESS WITH CLOSE TO 600 PARTICIPANTS IN ATTENDANCE AT U OF GUELPH



OTS 2005: Back To Our Roots

The Ontario Turfgrass Symposium continues to be Ontario's premier educational turf symposium with over 570 participants in attendance at this year's show. Hosted at the University of Guelph, the 2005 symposium was for many like old home week – a chance for delegates to visit their alma mater or network with industry leaders, faculty, other turf managers and old friends.

Focusing on what OTS does best, the educational program offered delegates over 45 engaging professional development seminars highlighting the latest in scientific research, best management practices, tools for integrated pest management, irrigation and water conservation, organic solutions, regulatory issues and nutrient management within the sports turf management, golf, lawn care, sod production and recreation sectors.

Many seminars were filled to capacity reinforcing the value turf delegates place on the quality education experience found at the Ontario Turfgrass Symposium.

STA Board of Directors

The STA elected its 2005 officers and directors at the annual meeting held during the Ontario Turfgrass Symposium at the University of Guelph, February 21-22, 2005. Those elected include Gord Dol/Dol Turf Restoration Ltd., Vice-President; Bob Sheard/Guelph Turfgrass Institute, Secretary; Rick Lane/Haldimand County, Treas-

urer; and Directors Brian Adriaans/City of Burlington, Cam Beneteau/Ridley College, Roy Forfar/York Region District School Board, and Paul Gillen/Holland Equipment Ltd. Other members currently serving include Andrew Gaydon/Vanden Bussche Irrigation, President; Paul Turner/G.C. Duke Equipment Ltd., Past President; and Directors Jane Arnett-Rivers/Town of Oakville and Dave Smith/DCS Agronomic Services.

Katerina Jordan to Join Guelph Turfgrass Faculty

At the opening session of the Ontario Turfgrass Symposium, Ontario Agricultural College Dean Craig Pearson announced that Katerina Jordan would be joining the Department of Plant Agriculture at the University of Guelph. Katerina is in the process of completing her Ph.D. program at the University of Rhode Island.

Katerina has a diverse background with a B.S. in microbiology and an M.S. in agronomy, both from the University of Maryland. Her Ph.D. research involves the study of plant-parasitic nematodes and their antagonists in golf putting greens. She will bring a unique perspective to her

turf teaching and research duties at Guelph. Katerina and her husband Sean, a Penn State turf diploma grad and golf course superintendent, will arrive in Guelph later this summer.

— Rob Witherspoon

Remembering Mac Frost

We were saddened to learn of the death of G.M. 'Mac' Frost on March 30th. Mac was known throughout the golf industry as an innovative golf course owner and developer. He was a very modest man who openly shared his experience and success. One of his most notable contributions was when he and his wife Beth provided the founding donation that resulted in the construction of the G.M. Frost Research & Information Centre, home of the GTI as well as the Sports Turf Association, Ontario Golf Superintendents Association and the Professional Lawn Care Association of Ontario.

Mac's involvement with the GTI did not end there as he took an active role as a member of the GTI Advisory Board helping to steer the Institute through the many challenges of our early years of existence. His good humour, positive attitude and



2005 Sports Turf Association Board of Directors, Ontario Turfgrass Symposium.

wise advice will be missed. Mac was also a strong supporter of his community and many other worthy causes and helped to establish the Juvenile Diabetes Research Foundation. Our condolences are extended to his family, friends and many associates in the turf industry. Contributions in Mac Frost's memory may be made to the Ontario Turfgrass Research Foundation (c/o G.M. Frost Research & Information Centre, 328 Victoria Road South, Guelph, Ontario N1H 6H8) or the Juvenile Diabetes Research Foundation (www.jdrf.ca). — RW

Norman McCollum Announces Retirement

GTI Research Superintendent Norman McCollum has announced his plans to officially retire effective January 1, 2006. Norman's unique contributions to turfgrass research and teaching at Guelph go back 36 years and have touched the careers of students and scientists alike.

Among turf managers, he is probably best known for his long time involvement with the annual Turf Managers' Short Course providing instruction in turf and weed identification as well as helping to create a welcoming social environment for students in the course.

I suspect that in retirement Norm will remain active in his many University of Guelph alumni activities including the annual Associate Diploma Hockey Tournament. Next year, he plans to enjoy his first summer away from the research plots at his summer cottage on the Bruce Peninsula. Please join us in wishing Norman a long, happy and healthy retirement.— RW

Coming Events

July 19-22

Ontario Parks Association
Annual General Meeting
Brampton, ON
Info: (905) 874-2918
www.city.brampton.on.ca
www.opassoc.on.ca

September 8

Landscape Ontario Horticultural
Trades Association Landscape Trade
Expo in partnership with the MEOA
Fall Show
Kitchener, ON
Info: (800) 265-5656
www.hort-trades.com



September 14

Sports Turf Association
18th Annual Field Day
Milton Leisure Centre
Milton, ON
Info: (519) 763-9431
www.sportsturfassociation.com

September 21-24

Communities in Bloom National
Symposium on Parks & Grounds
Saskatoon, SK
Info: www.communitiesinbloom.ca

October 18-19

Landscape Ontario Horticultural
Trades Association Garden Expo
featuring Florist Expo
Toronto, ON
Info: (800) 265-5656
www.hort-trades.com

November 15-17

Empire State Green Industry Show
(Formerly the NYSTA Turf &
Grounds Exposition)
Rochester, NY
Info: (518) 783-1229

January 10-12, 2006

Landscape Ontario Horticultural
Trades Association Congress 2006
featuring Fencecraft 2006
Toronto, ON
Info: (800) 265-5656
www.hort-trades.com

January 30 – February 24, 2006

Guelph Turfgrass Institute
Turf Managers' Short Course
Guelph, ON
Info: (519) 767-5000

GET ON THE LIST!

Contact the STA if you have an event you'd like to advertise in the STM...

91 YEARS AND STILL CLICKING

www.rittenhouse.ca • 1-800-461-1041

TOP DRESSER

- SELF-PROPELLED
- 250LB HOPPER CAPACITY
- 3' TO 10' SPREAD WIDTH
- 34" WIDE, ABLE TO FIT THROUGH GATES



GRANULAR SPREADER

- SELF-PROPELLED
- JUMP ON AND GO!
- 125LB HOPPER CAPACITY
- OVER 100,000 SQ. FT. OF PRODUCTION PER HOUR



ENTER ONLINE TO WIN ONE OF THREE PRIZE PACKS!

Turf Disease Research Update: Sugar With Your Tea?

TOM HSIANG AND LYNN TIAN, DEPARTMENT OF ENVIRONMENTAL BIOLOGY, UNIVERSITY OF GUELPH

There are increasing societal pressures to limit the use of synthetic pesticides in urban environments. More municipalities are likely to ban the use of pesticides for cosmetic purposes, whether or not there is toxicological justification. In light of this trend, there is a need to seek alternatives. Although biological controls with microbial antagonists have shown promise for the control of pests, these products must also undergo very stringent reviews by the federal government and the costs of registration are prohibitive in Canada.

Opponents of synthetic pesticide use often list alternatives which they claim are as effective if not better than synthetic chemicals. There is a need for rigorous assessment of these claims with controlled testing of the efficacy of home or folk remedies. Substances which have recently been proposed for turfgrass disease control include:

- hydrogen peroxide (or hydrogen dioxide) used every few days to control foliar diseases
- molasses or sugars used weekly to stimulate microbial activity
- compost teas based on fermentation extracts from various composted materials

Summer 2004 Trials

In summer 2004, we conducted trials to look at the effects of some of these home remedies on turfgrass disease control. Two of the substances tested can be easily purchased at the local supermarket: hydrogen peroxide was used at 1% and 3%, and molasses was used at 1% and 5%. Both of these substances were applied at two different rates weekly from June through September 2004 to test their efficacy against dollar spot disease development in field plots at the Guelph Turfgrass Institute pathology green. This research green was constructed in 1994 to USGA specifications and sown with creeping bentgrass.

In addition to the peroxide and molasses, compost teas were generated and tested against dollar spot disease. There are many different recipes for making compost teas, but the one we tried was created by diluting the compost in two-fold water and aerating the solution using aquarium bubblers.

We tested various types of starter composts: cattle, sheep and turkey manure (each tested separately), mushroom compost, and turf topdressing made with compost. Teas were made from each of these composts, and the number of micro-organisms was assessed for each tea on a daily basis up to 10 days.

After looking at micro-organism counts, we decided to use compost teas fermented for seven days, and applied these in the field weekly from June through September 2004. The plots were inoculated with the dollar spot fungus monthly to promote disease and the plots were evaluated weekly.

Results

All treatments showed some level of suppression compared to our inoculated plots which were otherwise not treated. Molasses and peroxide showed the lowest levels of suppression (25% to 38% disease reduction), compared to the compost teas. For example, on August 30, 2004, there were an average of 71 spots in each of the four inoculated control plots (0.5 m by 0.5 m), compared to 48 spots per plot for the 1% molasses treatment, which gives a disease reduction rate of 32%.

The compost teas provided significantly higher levels of suppression: cattle

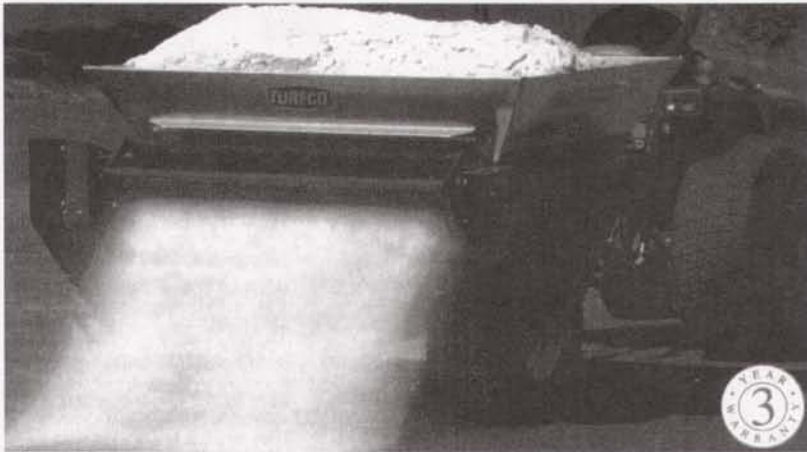
(63%), topdressing (66%), sheep (70%), turkey (72%) and mushroom (86%). The number of spots per plot for the mushroom compost tea plots averaged 10, as compared to 11 spots in neighbouring plots which had been treated with the fungicide



Daconil 2787 at 190 ml product / 100 m². Among these treatments, the mushroom compost tea showed the greatest promise and should be tested further.

Funding for this work was provided by the Ontario Turfgrass Research Foundation. A web version of the presentation on this topic made at the Ontario Turfgrass Symposium in February 2005 can be found at: www.uoguelph.ca/~thsiang/present/2005ots1.pdf. For further information or comments, please contact Dr. Tom Hsiang at thsiang@uoguelph.ca. ♦

Photo: Fresh brews of compost teas were prepared weekly by placing solid composts in these plastic containers and then adding twice the volume of water. To create an aerobic tea that encouraged the growth of micro-organisms, aquarium pumps with bubbling airstones were used for seven days at 25°C with daily stirring. The liquid was then strained out and applied to the turfgrass plots.



Mete-R-Matic® XL Tow Type Top Dresser

The ultimate in top dressing productivity

The Mete-R-Matic® XL's extra large hopper capacity at 60.75 cubic feet provides less re-loading and increased efficiency on large turf areas. The ground drive system means no tow vehicle calibration – just hook up and go! The unique patented designs such as the Chevron belts and ground drive systems allows even wet material to be distributed evenly and easily at a controlled rate. Precise application is provided by Turfco's easy on/off control. Top dress an area the size of a football field in just one hour using one operator and one man running the tractor/front-end loader!



◀ Easy on/off switch.

Patented continuous Chevron belt ensures uniform application. ▶



1184 PLAINS ROAD EAST
BURLINGTON, ONTARIO L7S 1W6

Burlington Area: 905-637-5216
Toronto Area: 905-338-2404
All Other Ontario Areas: 800-883-0761
Fax: 905-637-2009

VISIT OUR WEBSITE
www.gcduke.com

ALL I CARE ABOUT ARE LOOKS.



Pro stadium, city park, college campus, cemetery...Hunter is the brand grounds managers count on to make turf look its best. You want the kind of looks that make heads turn and eyes pop? Do what I do. Use Hunter.

Hunter®
www.HunterIndustries.com

Ask for your Free Hunter Products Catalog 1-800-733-2823



ALL PHOTOS BY DOUG SMITH

Crestwood / Brookbanks Park Soccer Field, April 2005



Crestwood Preparatory College / Brookbanks Park Soccer Field

A CASE STUDY IN INTEGRATED PLANT HEALTH CARE BY DOUG SMITH AND ARTHUR BEAUREGARD

The realization of the soccer playing field located at Crestwood Preparatory College began in 2001 as a mutual collaboration between the City of Toronto, Parks and Recreation Division, the Toronto District School Board and the local community. The soccer field and surrounding six-lane running track were designed to complement the adjacent Brookbanks Park and provide positive recreational benefits for the Crestwood College Athletic program, permitted user groups as well as people from the immediate neighbourhood.

In response to the concern of deteriorating turf quality, a site assessment was conducted in September 2004. Background information about the site was that the field had been installed with an automatic irrigation system and then sodded. The assessment indicated that the turf was suffering from drought stress and compacted soil conditions. The turf was weak and inactive with shallow and minimal root systems and had only been cut twice during the 2004 season. What was being

observed during the assessment were the results of a malfunctioning irrigation system as well as poor, biologically deficient and compacted soil lying underneath a thick layer of mat that had developed from the sod. The mat layer compounded by poor, compacted soil had effectively impeded root development.

Both the spirit of cooperation and the turf have been rejuvenated today under the auspices of an Integrated Plant Health Care (IPHC) program that was developed for turf management purposes by what is now the Parks, Forestry and Recreation Division of the City of Toronto.

The soccer field at Crestwood Preparatory College / Brookbanks Park provided an excellent opportunity to demonstrate the dynamics of an Integrated Plant Health Care program based upon the proper and timely application of key organic inputs. Best organic turf management practices included soil amendment / topdressing using quality compost, applications of organic fertilizers and applications of liquid compost / biostimulant (kelp) blends.

Integrated Plant Health Care (IPHC)

Toronto's urban greenscape is made up of the developed horticultural landscape as well as naturalized areas. In the urban setting, it is the greenscape that makes a city not only liveable but also a desirable place to locate business and to visit as a tourist.

In Toronto's urban greenscape, plants provide recreational, aesthetic, environmental and economic function and benefits contributing to the quality of life. The relationship between plant health and human wellness is recognized and incorporated into the ecological intent that defines IPHC. In nature, plants are left to manage themselves, however in the urban greenscape there are associated urban stresses whereby an IPHC approach is required to optimize plant health.

Integrated Plant Health Care is an active management strategy used by the City of Toronto, Parks, Forestry and Recreation Division that factors in human use as well as service level needs and community expectations. IPHC recognizes the unique set of demands and stresses that

these place upon plant health and provides a holistic understanding of how plants grow and function in urban settings.

An IPHC program provides the best opportunity to achieve a balance between human needs and plant health in relation to urban environmental stresses. IPHC also represents the best approach to develop plant management programs that are environmentally sound, responsive to community needs, healthy and sustainable. The IPHC strategy incorporates the best practices of Plant Health Care (PHC).

Plant Health Care (PHC)

Plant Health Care is a system that is used to establish and maintain optimum plant health. Healthy plants are a function of a number of complex interrelationships involving soil, air and water. Plant Health Care is the key operational system that is used to rejuvenate green-space that has gone into decline. Instead of accepting plant health decline as being inevitable due to continued stress pressures, the concept of PHC recognizes that such decline is an indication of underlying plant health problems and identifies the means for corrective action. A healthy plant becomes less susceptible to stress and is in a position to recover when stress conditions occur.

The operational components of a PHC system involve:

- Proper landscape design, site selection and plant selection for new projects including consideration of service level needs and related stresses from use, as well as urban environmental stresses on plant health.
- Soil health, with an emphasis on managing the physical, chemical and biological properties of the soil to optimize soil health. Management practices include aeration, proper watering and applications of compatible organic materials.
- Proper mowing height and frequency and overseeding for turf management.
- Proper timing for all management practices.

Plant ecology is an interconnected system of roots, soil particles, nutrients and microorganisms. For turf applications, PHC is predicated upon the principles of sustainability and biodiversity. Sustainability refers to the ability of the soil to become biologically dynamic, possess a high degree of natural fertility and thus become a self-perpetuating system of nutrient cycling in the soil and nutrient availability to the plant.

Biodiversity refers to the variety of living things and the ecosystems that they

inhabit. For turf plants, biodiversity is a function of utilizing different seed cultivars and promoting conditions that nurture a wide spectrum of beneficial macro and microorganisms in the soil. Having a biologically inactive soil is the key limiting factor to soil health and achieving biodiverse and sustainable plant management systems.

The City of Toronto, Parks, Forestry and Recreation Division has been active in utilizing an organic methodology that encompasses the key principles of sustainability and ecological biodiversity through the application of quality organic materials.

Organic Turf Management

A sustainable system of PHC recognizes the importance of best practices associated with soil biological health and involving applications of quality organic materials. The organic management component of PHC is designed to work with nature. By consistently employing a particular organic set of turf management practices, healthy growth is encouraged while having the least possible negative environmental impact. The naturally beneficial qualities of plants are maximized with a healthy plant becoming its own best defence against stress. Key organic inputs are utilized as a collective set of tools that



Rejuvenated Turf, April 2005



Turf establishment under protective tarp, April 2005

are involved in the consistent delivery of best PHC practices.

**Crestwood Soccer Field:
IPHC Program Components**

The value that is placed upon parkland underscores the need for the practical application of IPHC programs. The Crestwood / Brookbanks Park soccer field is very much tied into the multi-cultural dimension of the City of Toronto and provides for a multitude of desired community sport opportunities. It is highly valued as a recreational resource for Crestwood Preparatory College, teams and individuals and provides an economic benefit by generating permit revenue required to fund Parks, Forestry and Recreation programs. Integrated Plant Health Care recognizes

the soccer field as an asset and service levels are directed towards delivering a safe and playable surface facility.

The key components of the IPHC program that was initiated at Crestwood were as follows:

1. Irrigation

Once the irrigation system was made operational, the field was given a thorough and deep watering to facilitate aeration.

2. Aeration

The field was intensively aerated to relieve compaction, facilitate oxygen and water infiltration into the rootzone and provide an opportunity for soil amendment.

3. Overseeding

Overseeding was done in two directions with a perennial ryegrass mix developed for sports fields. A slit seeder was used to cut through the existing sod blanket and ensure good seed to soil contact.

4. Fertilization

An organic fertilizer was applied at the rate of 6.5 kg of organic matter per 100 square metres. At this stage of the rejuvenation process, the intent was to not over-stimulate the existing stressed turf nor the immature turf coming from the overseeding practice but to introduce a source of gradually available plant nutrients while at the same time feeding the soil with valuable organic matter.



Suppliers of
Top Quality
Turf Products

No. 1 Kentucky Bluegrass
Five Varieties of Bentgrass
Extreme Fescue



(877) 727-2100 (416) 364-5700
www.zandersod.com



**Make the Switch
to Quality**

Quality Seeds for Sod Growers,
Golf Courses, Sports Facilities,
Municipalities & Landscape Contractors

www.qualityseeds.ca

District Sales Managers

Peter Coon, Cell: 705-715-3760
John Konecny, Cell: 905-376-7044
Larry White, Cell: 519-636-8327

8400 Huntington Rd.
R.R. 1, Woodbridge, ON

1-877-856-7333
or 905-856-7333

Since 1956

5. Liquid Applications

Two applications of a liquid compost extract / biostimulant (kelp) solution were conducted over an eight week period. The City of Toronto Parks staff manufacture liquid compost on site using commercially sourced dry compost that is processed through specially designed extractor units. This process extracts the naturally occurring and beneficial microbes from the compost and puts them into a concentrated microbial solution. The solution is supplemented with a liquid kelp biostimulant and diluted with water prior to application. The liquid compost extract has intrinsic biological properties and is being used to improve soil health. The liquid kelp is technically referred to as a "biostimulant" because it supplements plant growth hormones that stimulate root development and which occur naturally in turfgrass. The application of the liquid compost / kelp mixture constitutes a best PHC practice that is intended to enhance the biological properties of the soil and for purposes of stress management.

6. Topdressing

The field was pneumatically topdressed with a mixture of good quality commercially sourced compost, seed and organic fertilizer about eight weeks after aeration and initial overseeding. Plant health can be improved significantly by enriching the soil with stabilized organic matter in the form of compost. Organic matter is like an engine that drives the soil to produce healthy turf. Compost is rich in beneficial microorganisms that are active in the soil and that are involved in the retention and cycling of nutrients as well as amending soil structure. The intent of the IPHC pro-

gram is to maintain compost topdressing on an annual basis for the next three years so that the compacted soil becomes more friable over time. The compost also provides an excellent germination medium for the seed that was broadcast along with the topdressing in order to fill in any void areas left on the field. The organic fertilizer was included at the 6.5 kg per 100 square metres rate in order to facilitate late season carbohydrate storage in the root systems so that the turfgrass plant would be primed for energy demands during the natural peak growing cycle the following spring. The pneumatic application method was chosen because it minimized the movement of equipment across the field. The impact of conventional topdressing to an already stressed field was considered within a PHC context and the relatively less intrusive pneumatic procedure was chosen on this basis as well as its ability to incorporate seeding and fertilizing during the same application.

7. Turf Covers

Protective tarps were installed along the mid-length of the field during the fall to accelerate turf establishment and protect against winter induced damage. The tarps remained over winter and were removed during the early spring to accommodate play.

8. Field Management

Goalmouths were closed and temporary goals and play were established across the width of the soccer field during school practice. Access to the field from the school is also being varied in order to minimize localized wear and stress that result from concentrated foot traffic.

Results

The results to date have been excellent in that a healthy and dense stand of turf was encouraged across the length of the field during the latter part of 2004. The implementation of the IPHC program has stopped the deterioration of a valuable asset within the community. While improving the playing surface for field users, the life of the soccer field has been prolonged and the need for costly renovations reduced. Improved turf density has produced a definite competitive advantage over weeds.

The challenge now is to maintain and improve on plant health. The field rejuvenation process that was initiated in 2004 has provided an excellent foundation from which to build during the 2005 season. Phil Santomero, Athletic Director at Crestwood Preparatory College, has stated that, "We have taken a newly built field that was looking more like a concrete slab and with the use of compost, tarps and hard work, we now see the benefits of the efforts with some new growth and a recognizable soccer field that will make a full recovery over the next year."

Despite the best PHC practices however, and with the constant demand for play throughout the season, it is anticipated that localized turf loss in areas such as goalmouths will continue to be an issue. This turf loss is not a function of poor soil but rather a result of the abrasive effects of play that are specific to soccer. The amount of abrasive stress that these areas are subject to will simply not sustain viable turf for any length of time. The use of protective tarps and proper drainage combined with field management provides a temporary solution. From the

PICKSEED®
good things growing ...

PICKSEED Canada Inc.
Box 304, Lindsay
Ontario K9V 4S3

1-800-661-4769

FAX (705) 878-9249

Doug MacMillan
Lindsay, ON
Cell: 705-878-6426

George Hall
Tillsonburg, ON
Cell: 519-281-3251

 **EQUIPMENT LTD.**
ISO 9002 REGISTERED

Paul Turner
Sales Representative

Cellular: (416) 566-0211

1184 PLAINS ROAD EAST, BURLINGTON, ON L7S 1W6
Burlington (905) 637-5216 Toronto (905) 338-2404
1-800-883-0761 • Fax: (905) 637-2009 • www.gcduke.com

players' perspective, it is good optics and an indicator of service delivery by having turf cover in goalmouth areas to start the season.

IPHC – A Formula For Success

The success at Crestwood soccer field has not only been predicated upon the technical merit of a customized IPHC program but moreover upon the human resource element that was necessary to deliver the program. All staff from the Parks, Forestry and Recreation Division and from the Crestwood Preparatory College who have been involved and committed to the planning, development and implementation of the program have been instrumental to its current success.

Integrated Plant Health Care is a fresh and unique concept that fosters commitment, communication and co-operation. For Vince Pagano, Chief Administrator at Crestwood Preparatory College, the commitment happened when he agreed to fund half the cost of materials once he understood the intent of the program and

could observe first-hand the improvements that were happening on the field. City of Toronto Parks Supervisor Andy Svanenberg commented, "We have collaboration within the division and an outside agency that will produce meaningful results and actually see a noticeable benefit for our user groups, the school itself and especially the tax paying residents of the area."


In the City of Toronto, IPHC has raised the bar with regards to parks management. Parks Supervisor Andy Svanenberg, Lead Foreperson Greg MacDonald and their staff were quick to embrace the challenge and demonstrate their professionalism and expertise. The program has provided the means for bottom-up input from staff and the potential for significant impact and change in how our urban greenscape resources such as the Crestwood soccer field are perceived and managed. Plant Health Care represents the best strategy in managing the greenscape to prevent substantial loss or damage that can result from weeds, insects and disease and as such

becomes the primary means of complying with the City of Toronto Pesticide Bylaw.


The liquid compost extract that is manufactured by Parks staff and applied to the soccer field is an excellent example of how innovation can empower employees and enhance staff motivation, morale and cooperation. The protective tarps were sourced through the municipal golf course sector and this is an example of intra-divisional support for the program. Through an ongoing training / education component, it is anticipated that staff will become more fully aware of the importance of their responsibility and their collective efforts to the overall success of the program and the realization of environmental objectives using IPHC. ♦

Doug Smith is the Program Standards and Development Officer, Integrated Plant Health Care Section, City of Toronto, Parks, Forestry and Recreation Division. Arthur Beauregard is the Manager of Natural Environment and Horticulture, City of Toronto, Parks, Forestry and Recreation Division.

For perfect diamonds Edge it & Groom it



With its adjustable guide shoe, the Bannerman **Diamond Edger** is surprisingly easy-to-use. Its three-inch blade depth and reversible, 20-inch concave disc work together to quickly eliminate ridging. Debris is spiraled into the infield for fast and easy clean-up.



The **Diamond-Master** (pictured) and **Ballpark-6** groomers will give your community ball diamonds a surface just like the professional teams demand, and reduce the time, effort and labour required to do the job.



41 Kelfield Street, Rexdale, Ontario, Canada M9W 5A3
CANADA 1-800-325-4871 USA 1-800-665-2696
Email info@sportsturfmagic.com www.sportsturfmagic.com

Bannerman

THE HOME OF SPORTSTURF MAGIC

Sports Fields: Water Assessment Management

UNDERSTANDING THE TRUE VALUE OF WATER BY GREGORY SNAITH, ENVIROIRRIGATION ENGINEERING INC.

Ever wonder how much water a sports field actually uses. Perhaps there is a better question. How much water does a sports field actually require to sustain a healthy playable turf surface?

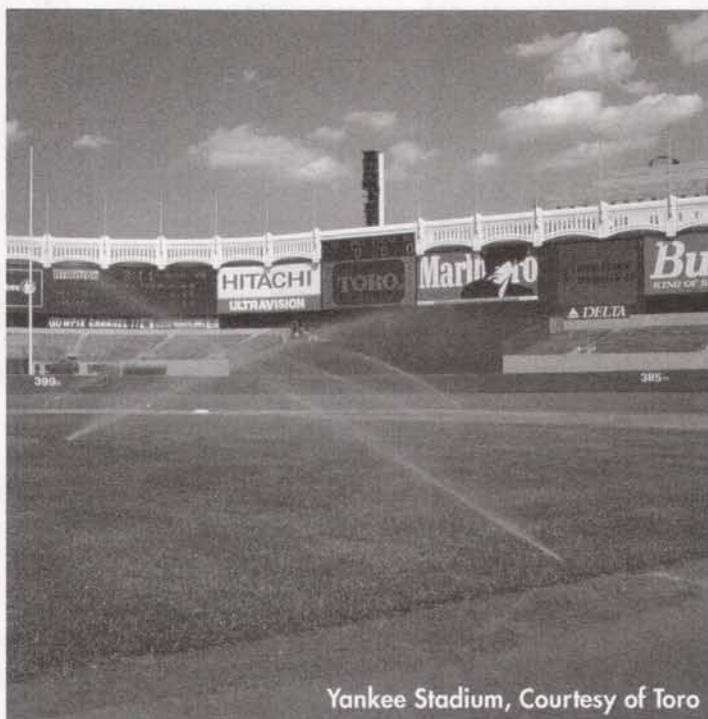
The summation of evaporation from the soil and transpiration from the turf is defined in the irrigation industry as the evapotranspiration rate (ET rate). This rate can be measured in mm per day, week, month or over the whole season.

The challenge for any sports field manager is relying on a traditional irrigation controller with a set daily schedule in minutes of run time. The reality is the ET rate fluctuates with the weather on a day-to-day basis, depending on wind, temperature, humidity and solar radiation.

The amount of water applied on a daily basis is a direct correlation to the run time of irrigation. The difficulty is allocating the labour to alter this run time as the weather changes. This is why the irrigation industry is heading toward state-of-the-art "ET based" irrigation controllers as endorsed by the Irrigation Association and irrigation professionals.

Experience in applying ET based irrigation scheduling has generally shown from 30-50% in water savings with some case studies even higher! This is a huge savings by any standard and certainly catches the eye of every municipality and region that is making efforts to reduce the necessary infrastructure for peak water demand during the summer months.

But the value of this savings is not just in the water and water infrastructure alone. It also provides benefits including increasing longevity in any irrigation system with moving parts, including rotors. If a booster



Yankee Stadium, Courtesy of Toro

pump is on site, there are also power and pump operation savings.

To calculate the estimated monthly water use of a sports field, simply multiply the area of the sports field in m² times the monthly ET value in mm. The answer will be equivalent to litres which can easily be converted to gallons, cubic feet or unit water charge of choice.

For example, a turf soccer field in Ottawa (see Table 1 on the following page) is capable of using 125 mm water for the month of June. If the field is 60m x 100m, then the total potential water used is 750,000 litres (calculated by 60m x 100m x 125 mm ET month). If 40% savings in water was applied to this case, a savings of 300,000 litres would be available. This is equivalent to 300 cubic metres and at a water cost of \$1.25 per cubic metre, the dollar value in water savings alone is approximately \$375 for the month of June for one soccer field!

So what is the next step for a sports field manager wanting to reduce the water use on sports fields? As an intelligent irrigation specialist once said, "you cannot

manage what you cannot measure" (W. Chinn, AAFRD). There are trained irrigation auditor professionals who can provide both an irrigation water audit and implement an irrigation management program.

The key is to first establish the baseline water use, set a realistic water savings goal, and then monitor to find the results. Striving towards sustainable management means making the most of a very precious resource we often take for granted – water. ♦

Gregory Snaith is a professional engineer and certified irrigation designer and irrigation

water auditor. Gregory will be a guest speaker at the Field Day on Sept. 14th in Milton and will be discussing some interesting case study results in sports field water savings. For a copy of his "Water Asset Management" presentation made at OTS 2005, email gsnaith@enviroirrigation.com.



Handy water unit conversions (note that the irrigation industry uses US gallons).

- 1 cubic foot = 7.48 gallons (US)
- 1 acre-inch = 27,154 gallons (US)
- 1 acre-foot = 325,848 gallons (US)
- m² x mm water applied = litres
- 1,000 litres = 1 m³
- 1 m³ = 264 gallons (US)

Table 1. Evapotranspiration rates (potential ET rate mm/month) for selected Canadian cities (source: LEED® Canada-NC 1.0)

| City | May | June | July | August | Sept. |
|-------------|-----|------|------|--------|-------|
| Victoria | 91 | 106 | 121 | 97 | 55 |
| Vancouver | 97 | 113 | 128 | 104 | 60 |
| Calgary | 122 | 133 | 135 | 109 | 69 |
| Edmonton | 122 | 131 | 131 | 98 | 63 |
| Saskatoon | 130 | 145 | 150 | 126 | 78 |
| Regina | 131 | 152 | 163 | 145 | 86 |
| Winnipeg | 134 | 147 | 150 | 126 | 79 |
| Toronto | 102 | 125 | 138 | 110 | 72 |
| Ottawa | 109 | 125 | 134 | 105 | 67 |
| Montreal | 103 | 122 | 132 | 101 | 63 |
| Quebec | 100 | 118 | 125 | 97 | 59 |
| St. John | 70 | 88 | 104 | 83 | 53 |
| Fredericton | 93 | 112 | 119 | 97 | 60 |
| Halifax | 84 | 102 | 109 | 93 | 59 |

INDUSTRY NEWS

ENVIORRIGATION LAUNCHED

ENVIORRIGATION ENGINEERING INC.

Following two successful years, Gregory Snaith, P.Eng., has resigned as a Principal from Creative Irrigation Solutions Inc. to specialize in water management by launching, Enviroirrigation Engineering Inc. Creative Irrigation Solutions Inc. will continue to provide the essential service of independent irrigation design and specification consulting.

Enviroirrigation Engineering Inc. provides a unique expertise within the landscape industry to evaluate and manage efficient water use for existing and new parks, sportsfields and commercial sites with irrigation systems. Professional services include alternative water sources and water demand management and creating natural park hydrologic regimes through environmental considerations:

- 1) irrigation system inventory & management
- 2) park & sportsfield daily irrigation scheduling
- 3) premium water efficiency program
- 4) reducing city peak water use

Gregory Snaith, P.Eng., is also a Certified Irrigation Designer (CID - Commercial, Golf, Residential), Certified Landscape Irrigation Auditor (CLIA) and a Certified Golf Irrigation Auditor (CGIA). Contact Enviroirrigation Engineering Inc. at 416-577-2610, gsnaith@enviroirrigation.com, 1750 The Queensway, Suite 1204, Toronto, Ontario, M9C 5H5.



DOL TURF RESTORATION LTD.

Turf Drainage Solutions • Aerification (All Types)
Top Dressing • Overseeding • Automated Laser
Fine Grading of Tee Decks & Sports Fields • Golf
Course Renovations • Sports Field Construction
& Reconstruction

and official distributors of
Permaline™ • SportGrass™

P.O. Box 240, 2785 County Road 27
Bond Head, Ontario L0G 1B0

Tel: 905-778-1222 • Toll Free: 1-800-794-9664

Mobile: 416-728-2371 • Fax: 905-778-1333

Email: gdol@dolturfrestoration.on.ca

MEMBER: STA, OGSA & ORFA

Your Sports Turf Specialists

STA Member Profile

Chris Mark • Director of Parks and Open Space • Town of Oakville

What is your role with the Town of Oakville?

Director of Parks and Open Space

What kind of team do you work with?

I am proud to work with a very dynamic, professional and dedicated group of people: 3 landscape architects, 3 managers and 1 administrative assistant.

What are you and your team responsible for?

Park planning and development as well as operations, including parks and open space, forestry, cemeteries and harbours.

What is your biggest challenge?

Ensuring operational requirements keep pace with development and managing continual growth.

What is the most satisfying part, what makes the job worthwhile for you?

Diversity – moving projects from planning and development through to completion.

What is the biggest misconception about your job?

There are two: 1) that municipal parks sections are soft services playing a secondary role within the municipal structure, and 2) that there is a slow (off) season and this is an 8:30 to 4:30 “government” job.

What is your educational/employment background?

BA in History, Associate Diploma in Agriculture, ODH. City of Brampton, York University Grounds and Fleet, Town of Oakville

Tell us about your family.

I have one amazing wife, Mary, and four



children ages 3 to 14 years old. We're very active in rep ball.

What do you enjoy doing outside of the workplace? Hobbies, favourite past times?

Four children ages 3 to 14 years old. Very active in rep ball... what else need I say?

What direction(s) would you like to see the industry, as a whole, move towards?

Environmental stewardship should be high on everyone's priority list. Recognizing that making the “green” decision is the best choice.

What do you consider to be the biggest benefit of being a member of

the Sports Turf Association?

Networking! Having the expertise of many professionals at my fingertips and the opportunity to assist others in maintaining and developing their sports fields. ♦

CONTRIBUTIONS WELCOME

Contact Lee Huether at the STA office if you are interested in contributing to the *Sports Turf Manager*. We appreciate feature-length articles, column ideas and newsworthy items. Updates on innovative research or equipment are also welcomed. This is a great way to both support your professional association and enhance your resume!



Sentinel™ Water Management System



Sentinel Computer System

The Toro Sentinel “smart” control system provides a range of modular options for outstanding flexibility. Whether it be maintenance equipment like PDAs and hand-held radios, or our vast communication mode offerings—such as radios, ethernet, phone and fiber optics—Sentinel has you covered.

Sentinel employs updated weather service reports and daily ET values so you can instantly respond to changing conditions—increasing or decreasing the moisture you apply as needed. Being able to adjust irrigation controllers so quickly and conveniently pays big dividends in water conservation and cost-savings.

- Computerized central control assembly programs your system and gathers data for reporting, but each site is managed by field satellites; the computer and software are not required for system operation
- True two-way communications between the controller and the central unit, as well as a hand-held radio, allows you to make programming changes or stop the program in the field
- Both field satellites and MapTo controllers have flow monitoring as a standard feature



Turf Care Products Canada
200 Pony Drive, Newmarket, Ontario L3Y 7B6
Tel-800-561-1432 Fax-800-559-1806
www.turfcare.ca



STA Facility Profile

Town of Oakville • Parks and Open Space

Name, location of facility.

Town of Oakville, Parks and Open Space.

General facility information.

- 121 sports fields (55 are irrigated)
- 130+ playground structures
- 126 kilometres of trails
- 1 greenhouse and conservatory
- 2 harbours
- 1 active cemetery

What types of sports fields are on site?

We have a variety from soccer (several sizes) to baseball, softball, field hockey and lawn bowling. Many of our fields have been ranked among the best in Ontario.

How many employees are involved with turf care?

- One Supervisor
- Grass: 5 lead hands, 5 staff cutting on 17-foot mowers, 3 additional staff cutting exclusively sports fields, 1 rough cut, 11 grass crews (41 grass students)
- Sports: 1 lead hand, 3 operators, 16 students, 1 irrigation tech and 1 IPM operator

How many acres of turf are maintained? How many acres of sports turf?

1,200 hectares are maintained with 450 hectares of sports turf.

What percentage of this acreage is irrigated?

10 to 15%.

What is the primary type of turfgrass? Name of varieties.

Kentucky blue and perennial rye.



Pineglen Sports Facility

Is yearly overseeding part of your sports turf maintenance program?

Absolutely – that and aerating are the keys to our success actually – 4 times on irrigated and up to 2 times on selected non-irrigated fields.

How many times do you fertilize?

Irrigated 5 times, non-irrigated 2 times (establishing new fields, 3 to 4 times).

Do you aerate? Topdress?

We have one dedicated staff member who exclusively aerates 40 hours per week.

Has your municipality banned the use of pesticides?

Yes, in a manner of speaking. We operate under a Council approved policy with

strict guidelines that dictate when pesticides can be used. Turf has not been sprayed since 2001.

Are community user groups involved or have they been involved in the construction/maintenance of facilities? In what manner?

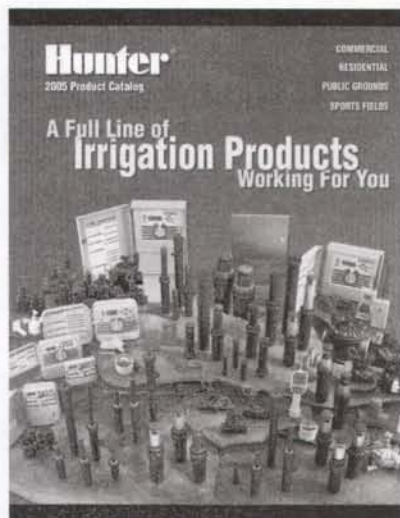
Yes, financially in development and facility upgrades. Operational through volunteer maintenance. ♦

QUOTABLE QUOTE

Summer afternoon – summer afternoon... the two most beautiful words in the English language.
~ Henry James (1843-1916)

Industry Press Releases

2005 HUNTER IRRIGATION CATALOGUE RELEASED • VBI INTRODUCES NEW ROTORS • ZANDER PROMOTES GOLPLA



Hunter Releases Expanded 2005 Irrigation Products Catalogue

Hunter Industries, one of the world's leading manufacturers of irrigation equipment for turf, landscape and golf, has released a new 2005 Irrigation Products Catalogue featuring the manufacturer's complete line of rotors, sprays, valves, controllers and central systems. The spiral-bound reference book is available free to industry professionals by visiting www.HunterIndustries.com or calling 1-800-733-2823.

The 2005 edition of the catalogue features several new Hunter products. These include: the ACC, Hunter's most powerful controller for command of large and sophisticated sites; the SRC Plus, the improved and enhanced version of Hunter's simple, convenient and economical controller designed for smaller sites; and the PCZ, ICZ and PACZ Drip Control Zone Kits, all-in-one valve, filter and pressure regulator kits that are pre-assembled to provide a convenient and reliable solution for automatic control of a drip zone.

The catalogue also includes a full page detailing Hunter's numerous reclaimed water products, and an entirely new 4-page look at the IMMS, Irrigation Management

and Monitoring System, Hunter's affordable central computerized control tool.

All Hunter irrigation equipment is shown in full-color with application photos and detailed information on water-saving benefits. The Hunter catalogue also features up-to-date product data with performance charts, operating specifications and installation tips. An expanded technical section can help irrigation professionals plan and install an efficient Hunter system with charts and graphs on precipitation rates, conversion factors, slope equivalents, height of spray, friction loss, wire sizing, pressure loss and more.

A copy of the catalogue may also be found at your local authorized Hunter distributor. For more information on Hunter products, call 800-733-2823.

Vanden Bussche Irrigation Introduces The New Rain Bird 5500 Series Rotor

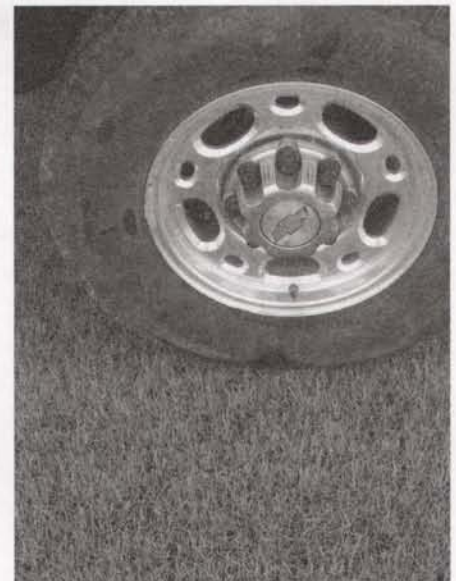
Vanden Bussche Irrigation is pleased to introduce the new RAIN BIRD 5500 Series Rotor to add to their product line. The Rain Bird® 5500 Series Rotors are

built to withstand the harsh conditions and vandalism present in commercial rotor applications. They have been designed and tested to ensure the high reliability demanded by the market today. The 5500 Series offers the durability and performance of Rain Bird's best commercial rotors in a package designed to excel in short to mid-range applications. For further details, contact Vanden

Bussche Irrigation, 7856 5th Line South, Milton, ON L9T 2X8, 905-875-4545, 1-800-263-4112, fax 905-878-4501, www.vandenbussche.com.

Vanden Bussche Irrigation is a Canadian owned and operated irrigation and lighting distribution company with loca-

tions in Milton, King City, Scarborough and Delhi. In 2004, Vanden Bussche Irrigation celebrated their 50th anniversary.



GOLPLA: Erosion Control And Grass Reinforcement System

Drive on it – Park on it! GOLPLA provides a lawn-quality finish that is as durable as asphalt. Made from 100% recycled plastics, GOLPLA trays can support vehicle traffic of over 10 tons per square foot while promoting the growth of the turf. GOLPLA paving trays are available either as fillable units or pre-grown with Zander Sod's top quality turf grass.

The GOLPLA Reinforcement System has many applications including golf cart path verges, parking areas and driveways, easily creating additional green space. GOLPLA installation is simple and trays can be easily cut to fit irregular shaped areas.

GOLPLA is also excellent for bank stabilization. The trays not only connect to each other, but can also be pegged into the ground for further reinforcement, creating more effective erosion control than sod alone.

For more information, call Zander Sod at 1-877-727-2100 or visit us online at www.zandersod.com. ♦

VANDEN BUSSCHE
IRRIGATION

RAIN BIRD.

Hunter®

Vanden Bussche Irrigation
Milton 1.800.263.4112 • King City 1.866.703.KING
Scarborough 416.289.3635 • Delhi 1.800.387.RAIN
www.vandenbussche.com

Turf Care Agronomics

- **South-Western Ontario/Niagara**
Duncan Brewer
905.536.0357
duncanb@turfcare.ca
- **Mid-Western Ontario**
Craig McCutcheon
519.421.6593
craigm@turfcare.ca
- **Greater Toronto Area**
Mark Scenna
416.458.2396
marks@turfcare.ca
- **Eastern and Northern Ontario**
Bill Martel
705.627.3590
billm@turfcare.ca








TURF CARE

Turf Care Products Canada
200 Pony Drive, Newmarket, Ontario L3Y 7B6
Tel: 905-836-0988 • Fax: 905-836-6442 • www.turfcare.ca



Supreme-Green™ TURF COVER

The multi-purpose turf cover ideal for natural turf environments such as baseball, soccer and football fields, etc.

BENEFITS

- accelerated seed germination • encourages root development • early spring green-up
- delays dormancy in fall • winter protection: reduces frost and ice damage • turf repairs
- available in any size



Buy Direct From the Manufacturer!

Call 1-800-837-8961

www.covertchfab.com • sales@covertchfab.com



TURF CARE



**We can't make the day any longer.
But we can make it more productive.**

Turf Care Products Canada
200 Pony Drive, Newmarket, Ontario L3Y 7B6
TEL: (905) 836-0988 FAX: (905) 836-6442
www.turfcare.ca

When you have match kick-off deadlines to meet, every second counts. At Toro®, we're always looking for ways to make each day as productive as possible. With a line-up of equipment engineered to help your staff work faster and more efficiently, we'll always keep you one step ahead. Contact your Turf Care sales representative today for a no-cost, no-obligation demo at your convenience..

5716 Coopers Ave., Unit 6
Mississauga, ON L4Z 2E8
Ph: 905-890-6290
Fax: 905-890-5598

140 Milner Ave., Unit 24
Scarborough, ON M1S 3R3
Ph: 416-298-2101
Fax: 416-298-8758

2575 Delzotto Ave., Unit D
Gloucester, ON K1T 3V6
Ph: 613-822-1881
Fax: 613-822-2099

1110 Dearness Drive, Unit 13
London, ON N6E 1N9
Ph: 519-668-7664
Fax: 519-668-3722

**Increase your productivity
with Toro.**



Groundsmaster® 3500-D rotary mower
Excellent quality of cut
and productivity.



Workman® 1100 and 2100 utility vehicles
More horsepower (12-16 hp) and
capacity to haul, tow and groom.



ProCore™ Series aerators
With tool-free depth control and
widest coring swath of any aerator.

TORO.

Count on it.