

# SPORTS TURF MANAGER

... for safe, natural sports turf

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CITY OF GUELPH

## Managing for Healthy Root Systems

DR. ERIC LYONS, UNIVERSITY OF GUELPH, FIELD DAY COVERAGE

**R**oots provide many important functions for plants. They acquire water and nutrients from the soil. In fact, everything plants need to grow, with the exception of light and carbon dioxide, are absorbed through the roots. One of the most important functions of plant roots to athletic field managers is that roots provide anchorage for the plant. In the case of turfgrasses, the dense fibrous root system provides the soil stability needed for a high quality playing surface.

In order to manage for a healthy root system, it is important to look at what defines a healthy root-zone. An ecologist may define a healthy root-zone as a heterogeneous soil environment that provides for the maximum amount of biodiversity. At the same time, an agronomist may define a healthy root-zone as a sustainable soil environment that provides the maximum crop yield, year

in and year out, with limited inputs. The determination of health in the case of a root-zone is dependent on what it must provide the plants to maintain the desired outcome. A healthy root-zone in turfgrass systems is one that provides a dense, consistent turf canopy with the associated dense, fibrous root system. The goal of turf managers is to create this system within the confines of their monetary and temporal limitations. The following is a prioritized list of management considerations that affect the ability of turfgrass to form the dense fibrous root system that is desired.

### Mowing

Hey, I thought this was an article about root-zones? Well, it is, but we still cannot get too far removed from the basics of turf management and plant biology. There are two things to consider: mowing height and mowing frequency. Decreasing mowing height often increases tiller... → page 7



### 2005 TURFGRASS SYMPOSIUM

**February 21-22, 2005.** Mark your calendar now! This year's premier turfgrass educational event will be held at the University of Guelph. It will feature a wide range of seminars on topics such as irrigation, IPM, sod production and best practices for turf management. See page 4 for details.





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## The President's Desk

ANDREW GAYDON



**A**fter a rather cold and wet depressing spring and damp summer, we are now experiencing and enjoying a beautiful September and October and the fall colours are expected to be exceptional this year. This is a good time to enjoy the outdoors and sports turf, especially the golf course, sports or hiking.

### 17<sup>th</sup> Annual Field Day

This year we experienced a spectacular day which I hope was enjoyed by all who were present. We had another record attendance representing more than 120 industry professionals and 20 supplier companies exhibiting their products. Without the support of our generous sponsors, the day would not be possible. Our thanks to all of you. I'd also like to take this opportunity to thank Murray Glassford and his staff at Parks and Recreation, City of Mississauga, for ensuring the event ran smoothly and for making all of us feel welcome.

Keynote speaker Dan Ferrone had the audience relaxed and smiling in no time to start the day off right. Thanks Dan. Our second speaker was Dr. Eric Lyons from the University of Guelph who discussed *Managing Athletic Fields for Healthy Root*

*Systems*. The information that he shared provided great food for thought.

Up next was a group of experts from the City of Mississauga speaking about their decision tactics in deciding on how, why and where to install a synthetic field. This was presented by Stefan Szczepanski, Susan Mentis and Murray Glassford.

Our final morning speaker was Terry Murphy who has become, over recent years, *the* specialist in horticultural safety – a subject to which we must all pay close attention.

The afternoon consisted of the outdoor trade show and an excellent field marking demonstration. I would like to thank the Field Day Committee and of course Lee Huether for doing an outstanding job with the planning and organizing of this successful event.

### Association News

Please join me in welcoming Paul Gillen of AerWay to our Board of Directors. We look forward to him sharing his experience and providing active board participation.

We would also like to congratulate Randy McCord who was the recipient of the STA scholarship as the 2004 Ontario Diploma in Horticulture graduating student in the turf option with highest overall mark.

### Ontario Turfgrass Symposium

In an effort to improve and enhance industry appeal, OTS 2005 will primarily be an educational forum held at the University of Guelph February 21-22 next year. The traditional trade show we have enjoyed in the past will also change in form; however, this new direction will allow the symposium to return to its educational roots.

We encourage all members to check our website to stay current with dates and functions as well as industry news. Finally, the STA Board would like to wish all our members and readers a good winter ahead, but as typical Canadians, we will first maximize our time spent enjoying the fall!



# Ontario Turfgrass Symposium: Back to Our Roots

FEBRUARY 21-22, 2005, UNIVERSITY OF GUELPH CAMPUS



Building on long-standing expertise in turf science and management, the Ontario Turfgrass Executive Committee is

pleased to announce the return of OTS to the University of Guelph campus for 2005.

Seminars focusing on irrigation and water conservation, best practices for turf management, new tools for integrated pest management, and organic solutions for turf management will enhance the existing golf, lawn care, sod production and sports turf management sessions. Seminars will feature the latest in scientific research, practical turf management, legislation, technology and human resources management. An opportunity to write the Voluntary IPM Accreditation Exam further enhances the professional development opportunities available at OTS.

In celebration of our return to home turf, a *Turf Managers' Short Course* Alumni Banquet is certain to be a highlight for past participants and faculty – a great time to reconnect with old friends and colleagues.

Proud sponsors of the symposium are the Sports Turf Association, Guelph Turfgrass Institute, Nursery Sod Growers Association, Ontario Recreation Facilities Association, Professional Lawn Care Association of Ontario, Ontario Ministry of Agriculture and Food, and the Office of Open Learning at the University of Guelph.

The two-day program is scheduled for February 21-22, 2005. To receive a 2005 OTS program guide, please contact the Office of Open Learning at the University of Guelph at 519-767-5000 or [info@open.uoguelph.ca](mailto:info@open.uoguelph.ca). See page 5 for an overview of the Guelph Turfgrass Institute.

## 2005 Turf Manager's Short Course

Canada's most successful and valued Turf Managers' Short Course (TMSC), held at the Guelph Turfgrass Institute, will be offered from January 31 – February 25, 2005. Benefit from the expertise and

experience of industry professionals and U of G faculty while enhancing your knowledge of all aspects of turf management and culture. For more detailed information visit the TMSC website at [www.open.uoguelph.ca/turfmanager](http://www.open.uoguelph.ca/turfmanager) or contact our office at 519-767-5000.

## Welcome to Returning Board Member Paul Gillen

Paul Gillen has been a member of the Sports Turf Association since 1991, with a previous term on the Board of Directors in 1994/1995. He is also a member of the Sports Turf Managers Association in the USA, where he has served as a committee member. Paul is the Marketing Manager, Turf Products, for AerWay, a position he has held since 1983. In any spare time, Paul enjoys golfing and boating out of Port Dover with his wife Suse and four-legged "kids" Mercedes and Bentley.



## Odds and Ends

### STA Scholarship Recipient

STA Director Bob Sheard (left, picture below) congratulates Randy McCord, recipient of the STA scholarship, at the Ontario Agricultural College Awards Luncheon in June. Randy was the 2004 Ontario Diploma in Horticulture graduating student in the turf option with the highest overall mark. Randy was also the recipient of the Nursery Sod Growers' Association Award and the OMAF Award of Excellence in Leadership.



### Quotable Quotes

Winter is an etching, spring a watercolour, summer an oil painting and autumn a mosaic of them all. – Stanley Horowitz

### 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.

### Winter 2004 Submissions

If you have something you'd like to submit for the next issue, please forward it to the STA office by October 29, 2004.

### 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.



# A Key Player in the Turfgrass Industry

SPOTLIGHT ON THE GUELPH TURFGRASS INSTITUTE

**T**he Guelph Turfgrass Institute was established in 1987 to conduct research and extension and provide information on turfgrass production and management to members of the Ontario turfgrass industry. Located at the University of Guelph, the institute is supported by the University, the Ontario Ministry of Agriculture and Food, and the turfgrass industry. The first of its kind in Canada, the institute is recognized as a centre for research, extension and professional development.

Research faculty and staff at the GTI are drawn mostly from departments at the University of Guelph with an interest in turfgrass, such as plant agriculture (crops, horticulture and biotechnology), land resource science (soils), and environmental biology (pathology, entomology, weed science).

Building on the University of Guelph's long-standing expertise in turfgrass science, the Institute continues to focus its activities in areas such as the environmental aspects of pesticide use (fate and persistence), evaluation of grass species, varieties and seeding methods, sports field construction, fertility and management programs, pesticide use and the biological and cultural control of diseases and weeds.

The Guelph Turfgrass Institute's mandate is

- to expand and enhance turfgrass research for Canada's \$1 billion turf industry



JOHN BLADON, NU-GRO

→ page 6



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- to expand extension and information services
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- to develop a world-class turfgrass facility

### The GTI's G.M. Frost Research and Information Centre

The Research and Information Centre, opened in January 1993, serves all sectors of the industry and the public. The building is strategically located on the Ontario Ministry of Agriculture and Food's Guelph Research Station, one of several research stations owned by the province and operated by the University of Guelph. The building provides a focal point for the continued development of turfgrass science and the turfgrass industry.

### Research Infrastructure

The Guelph Research Station covers about 200 acres bounded by the Eramosa River on the north and east, and by Victoria and Stone Roads on the west and south. The GTI currently occupies about 53 acres of this, and there is a long term site master plan for the whole area.

The research plots on site were developed specifically to service research into turfgrass and related landscape problems, with appropriate state-of-the-art management (equipment, irrigation, evaluation tools). Field plots include research on turfgrass soils and fertility; sod production and management; evaluation and selection of varieties; control of weeds, insect pests and turfgrass diseases. The field plots and field laboratory facilities on the 53-acre site provide researchers with the tools to

generate new approaches to turfgrass production and management.

The first phase of development included the large research ranges, 16 ranges, each 25 x 100 m and separated by grass roadways. This area was land formed and topsoil replaced to provide uniform conditions for research plots. Five of the 16 ranges currently have in ground automatic irrigation; quick-connect valves provide manual irrigation to the rest. The first phase also included three putting green research areas. Two are USGA greens, each with one half constructed with low pH (siliceous) sand and one half with higher pH (calcareous) sand. The third is a push-up green constructed with sand which was found onsite during development. A fourth green was constructed in 1999 using the California-style design. A large (10,700,000 litres) irrigation reservoir provides water for the irrigation system which irrigates the research ranges, greens and landscaped areas around the buildings and pond.

Other research infrastructure includes a set of lysimeters, the Canadian Centre for Toxicology's mesocosms for studying toxicology in aquatic systems, and a filtered irrigation loop for drip irrigation (originally installed for a high density orchard, but now put to other uses).

The GTI shares the Research Station with other users, such as the Centre for Toxicology, woody nursery plant re-search, and the Agroforestry program at the university. Recently there has been an undertaking to integrate turf with other ornamental and woody plants in an urban ecology program, both on campus academically and at the GTI. The trial gardens on display are part of this effort. ♦

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# Managing for Healthy Turfgrass Root Systems • *Cover Story Continued...*

REMEMBER THAT JUST LIKE TURF MANAGERS, TURF PLANTS ARE UNDERGOING THE SAME BALANCING ACT...

... density and creates a finer textured turf, both of which are desirable on playing surfaces. In conjunction, decreasing mowing height reduces the amount of photosynthates (energy from photosynthesis) that the plant can allocate to roots for the creation of our desired root system. Fortunately for the stability of the playing surface, the roots are usually fairly dense in the top 4 cm, even under the lower mowing heights. The plants will be less able to attain water and nutrient from deeper in the soil profile. Turf managers must consider their ability to provide the other requirements such as irrigation and nutrients then weigh what mowing height is appropriate.

Another consideration in deciding on mowing height is the frequency that the turf can be mowed. When mowing, only one third of the height of the plant should be removed. For example to mow turf at 6 cm it should not grow higher than 9 cm between mowing cycles, 3 cm of growth. In the case of turf mowed at 3 cm, it should not grow higher than 4.5 cm, 1.5 cm of growth. As mowing height decreases, frequency of mowing increases. If more than one third of the height of the turf is removed, it can adversely affect root growth. The plant will not have enough leaf area to create enough photosynthates to support its root system, causing root die-back and a general decline in turf health. Also, mowing too infrequently can cause increased thatch build up which will be addressed in a later section.

## **Irrigation**

While many fields do not have the option, luxury or availability of irrigation, the control of water is a great way to control root growth. The most important thing to remember when considering how roots interact with soil water is that roots grow to where the water is located. If light, frequent irrigation is implemented then root growth will be relatively shallow and not very dense. Deep, infrequent irrigation is much more desirable. It is also

important to remember what type of soil is present. Sandy soils drain more quickly than clay soils and hold less water. Clay soils hold more water than a sandy soil but a lower percentage of the water is available to the plant. While not enough water is a concern in root management, too much water and insufficient drainage are also typical problems. Most of the time the soil cannot be modified without great expense although proper thatch management can help.

## **Fertility**

It has been said that you cannot have too much of a good thing. In the case of fertility on athletic fields, this statement could not be more false. With excessive fertility, specifically nitrogen, the root mass of most plants, including turfgrass, decreases. One of the primary functions of roots is to absorb nutrients. When excessive nutrients are present, the plant has evolved mechanisms to limit root growth. Increased nitrogen fertility also increases shoot growth making it much more difficult to maintain the desired canopy height and mowing intervals. In contrast, if inadequate nutrients are present all growth is limited and the root system generally will be larger in proportion to the whole plant. However, the overall root system will be smaller and the turf will not be able to maintain an acceptable playing surface.

The importance of soil testing can never be stressed enough. Typically, turf managers apply excess nutrients or apply combinations of nutrients in such a way that excessive phosphorus is applied to reach the desired nitrogen level. Soil tests will also provide insights to the pH of the soil and the need for liming. Rarely are micronutrients limiting and should only be applied if soil or tissue testing recommends.

## **Thatch Control and Aeration**

Thatch is a part of any actively growing turf system. In the case of athletic fields,

it can actually provide a small buffer protecting the soil from excessive wear. While thatch has good aeration and compaction resistance, it is accompanied by poor water and nutrient retention. If an excessive thatch layer forms it will prevent rooting into the soil and will result in a mat-like turf that is susceptible to drought and divoting. Thatch can be controlled with topdressing, de-thatching machines, vertical mowers and most commonly, aeration.

Topdressing with a material with a bulk density higher than the thatch (such as sand or soil) creates an environment more conducive to the breakdown and decomposition of the thatch. While aeration is primarily implemented to relieve compaction, it acts as a way of mixing the thatch layer with the soil from the cores thus controlling thatch. One thing to remember about core aeration is that repeated aeration at the same depth can create a compaction layer at the depth of the cores. If 5 cm cores are pulled consistently over time a severe compaction layer can form at 5 cm that can inhibit drainage and rooting deeper into the soil profile. The solution is to vary the depth of aeration and, if possible, occasionally implement a deep tine aeration scheme.

## **Balancing Act**

As with everything we do these days, managing healthy root systems in turf is a balancing act. We can provide too much of a good thing. If a lower height of cut is desired then most likely increased mowing frequency and irrigation will be needed. The thing to remember is that plants are also undergoing the same balancing act. Turf plants optimize allocation of photosynthates to acquiring water and nutrients (roots) or to photosynthate production (shoots). The job of the turf manager is to understand this balancing act and manipulate it to result in optimal growth of both roots and shoots in order to provide the best possible playing surface. ♦



# Winterization of Turf on Sports Fields: Perspective from an Ontario Private School

CAM BENETEAU, MANAGER, GROUNDS/ARENA DEPARTMENT, RIDLEY COLLEGE

**A**s I write this article, we in the Niagara Peninsula are finally experiencing a true mini-summer. With the new school year upon us, it is time to begin putting into practice the necessary steps for preparing our turf for the winter months. The following article will provide insight as to how Ridley College (a private high school) prepares its turf for winterization.

## Soil Tests are Crucial

Soil fertility is crucial in readying the turf for the winter months. The process of determining a fertility program is begun one year in advance. I have been working with a turfgrass consultant for five years to fine tune our fertility program. We take into consideration the fact that we have both irrigated and non-irrigated fields, which determines our approach to fertility. Irrigated fields receive 11b.N/1000' per month from May to November and our non-irrigated fields receive 11b.N/1000' in June, September, October and November.

Our phosphorous, potassium and micro-nutrient needs have all been pre-determined by soil test results. We now concentrate on applying 75% of our nutrients to the non-irrigated fields in the fall. This, I find, helps to strengthen the turf and prepare it for the winter months. We have been applying a dormant fall application of 11b.N/1000' of ammonium sulfate for nearly 10 years. I saw an immediate response from the turf on our initial application. Not only did I see a more consistent turf colour throughout the winter months, the turf did not experience that initial growth surge in the spring.

What was extremely inviting with applying a dormant fall application was the fact that we could delay our first spring application until May on irrigated fields and until June on non-irrigated fields. Ridley requires that sports fields be available for use when students return from March Break. With that in mind, the

ability to delay spring fertilizing made sense due to our hectic spring schedule.

## Minimizing Soil Compaction

Aeration is another key component in winterizing our turf. I like to aerate in late fall, after all our sports have been completed. This obviously helps alleviate compaction created by usage. The opening of the soil provides an avenue for moisture and nutrients to enter. This improves root uptake, which in turn strengthens the turf for the winter months. I also depend on Mother Nature to help out with the freeze/thaw cycles throughout the winter. This provides the most natural way of aerating the soil.



DR. TOM HSANG, UNIV. GUELPH

## Fighting Winter Diseases

Other aspects to consider for winterizing turf are mowing, irrigation and fall cleanup. Our mowing practices continue right up until the time the turf has stopped growing. This helps control the potential for snow compaction, which could lead to moulds. If irrigation is needed in late fall, I will do so only as long as needed and immediately following aeration and fertilization. At least on the irrigated fields, I can help minimize the evapo-transpiration that could occur

over the winter months. As many of you are already aware, leaf collection is crucial in helping turf survive the cold months. Some of our field perimeters are tree lined and removal of leaf matter is paramount to stopping rot.

The promotion of winter diseases may be of concern to most. Arguments have been made that promoting succulent growth in the fall months will promote grey and pink snow mould and possibly fusarium patch. I have found that a consistent mowing program (late into the fall if necessary) and a timely fall dormant fertilizer application will minimize these winter diseases. Our dormant application is carried out about mid-November.

During the first week of November, I begin monitoring turf growth and soil temperatures. When top growth has ceased and soil temperatures are at about 50°F, I commence aeration, followed closely with fertilizer application and if needed, I will irrigate heavily.

In my 16 years at Ridley, only twice have we seen grey snow mould develop. The mould occurred during milder temperatures followed by heavy, wet snowfall. The snow mould developed where we needed to stockpile snow along



perimeters of roadways. Never have I experienced mould over an entire sports field. Once mowing began in the spring, the mould was gone after a couple of weeks. Another concern of mine is foot traffic on the fields during winter months. For a number of years, we have prohibited students from walking on the sports fields from mid-November to April. Students wanting to take shortcuts to class were compacting the soil to the point that they would wear a path. This, of course, would not be seen until the spring when the turf had been killed. Since our ban, no turf has sustained injury.

Through my years of experience, I have found that taking the time to winterize turf properly during the fall months outweighs the hardships of trying to repair and gain back turf loss in the spring. I have been impressed with the way our turf has responded over the years from its winter hibernation. This can only be attributed to our deliberate care leading up to the winter months. ♦



## STA NEW MEMBERS • WELCOME ABOARD!

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# 17<sup>th</sup> SPORTS TURF ASSOCIATION Annual Field Day

Despite the tangle of traffic, the caffeine kaffuffle, and the threat of rain, a record number of delegates enjoyed the hospitality of the City of Mississauga at our 17<sup>th</sup> Annual Field Day, our 17<sup>th</sup> Annual Success. From healthy root systems to artificial turf, safety to field marking, the program was informative and varied. For those of you who were unable to attend, our speakers have provided articles which will be featured in this and the next issue of the *Sports Turf Manager*. Registrants were also provided the opportunity to meet with industry suppliers to view their displays and equipment demonstrations. And speaking of our industry suppliers, their support, as evidenced by their generosity and participation, continues to be awesome! We thank you!

**D**an Ferrone was the opening key note speaker. Dan has spent a total of 23 years in the Canadian Football League (CFL) as a player, coach and President of the CFL Players Association. He was also Vice President of Operations for the Toronto Argonauts.

Dan was invited because he is not only a very warm and charismatic speaker, but he has had great experience with playing football on synthetic turf (ST) as well as natural sports turf (NST). He came to share his experiences, and that he certainly did with humour and conviction.

Dan, as with most footballers, would always prefer to play on NST over ST. Injuries are far fewer with NST. With ST, concussions are more likely, and Dan was no exception having had 11 over his career, most (not all) on ST. Damage to ligaments and burns are also more numerous on ST.

The anecdotes continued... During very hot weather, and Dan gave an example when once he played in Las Vegas, the field temperature was 147°F and the players were all given special shoes to play in these exceptional temperatures on ST.

In some stadiums where they have to make very quick changes between sporting events, the ST is often adapted so quickly that the final surface is not perfect for playing. Occasionally in the Toronto Dome, the pitchers mound was not fully removed and therefore the ST for an Argos game was not completely flat.

Sometimes the fields were mixed, as in the Memphis Stadium which has natural turf on the actual playing field, but synthetic on the end zones and sidelines.

Players like natural turf as long as it isn't too muddy or wet. Edmonton's Commonwealth Stadium is Dan's favourite.



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**Dan Ferrone with STA Director Jane Arnett-Rivers.**

Dan shared some interesting figures on why the organizers and media prefer synthetic turf. Maintenance by the stadium staff is lower and of course predictable with ST. When there is a game or function change, the cost is around \$25,000 to convert the field from ST to NST. Installing new grass to a stadium is around \$800,000 versus synthetic turf which is approximately \$1.2 million.

The media, especially TV, like ST for many reasons. The game is cleaner, clearer and faster for the cameras to follow and transmit. Advertisements on the turf main-

tain their "new" condition and are worth in excess of \$30,000 for the end zone and \$50,000 for the centre play area. The clarity of the colours in logos is important with that type of price tag and on ST, rain and play will not have a negative effect.

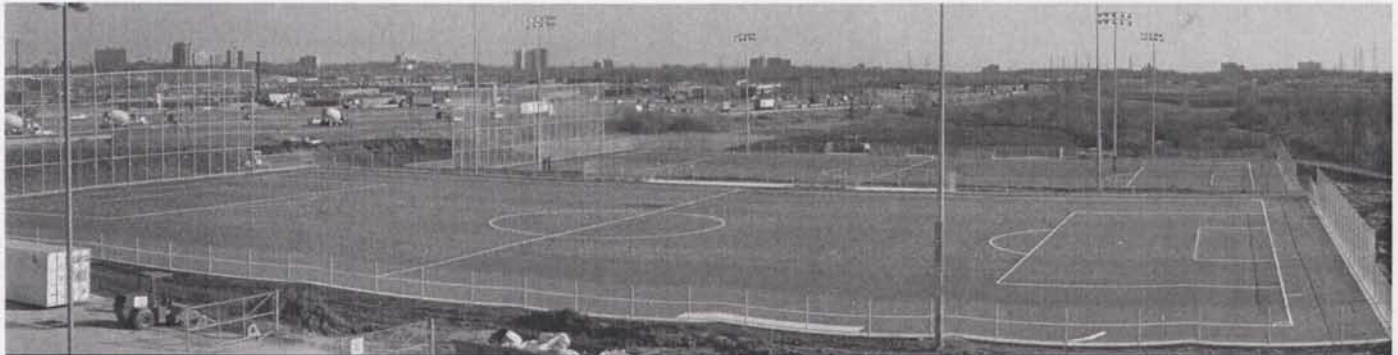
Dan ended his very humorous talk with a tribute to John Candy, the movie star comedian who, Dan said, with his charisma, warmth and gentlemanly approach to the Canadian Football League and its players, brought a new dimension to the pleasures of playing and watching football in Canada. ♦ — Andrew Gaydon



FIELD DAY  
PICTURES  
CONTINUED







View overlooking the installation of the Iceland Artificial Turf Facilities. Photo Credit: Stefan Szczepanski, City of Mississauga

## Artificial Turf: An Alternative to Natural Sports Turf? You Decide!

STEFAN SZCZEPANSKI AND SUSAN MENTIS, CITY OF MISSISSAUGA • ANNUAL FIELD DAY COVERAGE CONTINUED

**T**he science of sports turf, whether sand-based or natural grass, continues to be a topic for study and innovation. When it comes to meeting the needs of sports programs, whether it be professional, institutional or municipal based, sports fields require the services and involvement of both designers and sports turf managers to provide the appropriate facility for the intended uses. What does it all come down to? What's the bottom line? That depends on who and what your interests are.

Those involved in the development and delivery of sports turf programs may have varying opinions and contrasting preferences on what is important to the success of a sports turf field:

1. The financial planners want a field that pays for itself.
2. The buyers want a field that is fiscally accountable.

3. The programmers want a field that they can permit to its limit.
4. The user groups want a field that performs at all times as if it were new.
5. The sports turf managers want a field that can perform and respond under maximum use.

The goals of a sports turf program can be both numerous and contrasting based on personal interests but, the bottom line is performance and with the "sports turf" moniker, expectations are always "high."

The new generation of in-fill artificial turf products are giving providers of sports turf facilities new options in high performance. Does this mean sports turf will eventually be replaced by artificial turf? Probably not. Most of us have heard the saying, "use the right tool for the job."

In planning a sports turf facility, whether artificial or natural, the objectives are the same. The questions arise in the

assessment of the business case and the costs benefit analysis.


Do the benefits outweigh the costs after assessing? You decide!

The City of Mississauga Community Services Department has recently invested both time and resources to research and investigate the process of implementing and constructing artificial turf facilities. The first season of operations for two soccer fields is underway at Iceland, Park 357. Some of the factors and key values that were integral to the business case investigation for this project included such notable items as:

### Capital Costs

- A natural sand-based turf soccer field can cost up to \$500,000.
- An artificial turf installation can amount to two times the cost of a natural turf field.

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## Press Release

### EVERGREEN™ Turf Blanket Ideal for Quick Repairs As Well

Widely used as a winter turf blanket to protect grass against winter kill and desiccation, EVERGREEN™ by Covermaster is equally effective to make turf repairs on sports fields.

Heavy wear areas such as goal mouths on soccer fields, between hash marks on football fields or around players' benches can be quickly repaired with EVERGREEN™.

It works by creating a greenhouse effect, allowing grass to breathe and retaining the right amount of heat and moisture. It actually enhances and accelerates the process of seed germination or it will rapidly establish newly sodded areas. Deeper, healthier root development is a key factor when you use EVERGREEN™.

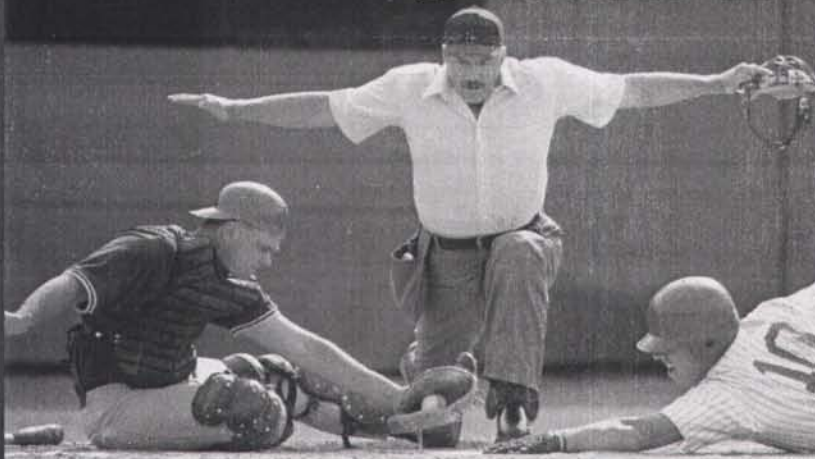
The cover is also used to secure early spring green-up on baseball fields and the like. And because EVERGREEN™ is super light in weight, even large size covers are easily handled.

For samples and complete information, call Covermaster Inc. at 800-387-5808, fax 416-742-6837 or visit [covermaster.com](http://covermaster.com). ♦

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## Usage

- A continuing debate surrounds the number of allowable events before a natural turf field will show signs of wear. Defining season length by geographic climates, event numbers can vary between 224 in Mississauga, Ontario to 360 in British Columbia. Some proponents of sports turf fields say the number should be as low as 100.
- A properly constructed artificial turf field will have no restrictions on numbers of allowable events. Even tournaments, which are typically allocated over many fields to lessen the impact, can be played on one field.

## Seasonal Implications

- The natural turf season is governed by the turf growing period. The prime season in Mississauga is sixteen weeks, essentially June to September.
- The artificial turf season includes the same prime season, however, the seasonal advantages lie in the ability to also operate during the shoulder seasons in early spring and prior to the first snowfall. This extends the season for the field to 28 weeks of unlimited use.
- It is also possible to use the artificial turf field during the winter months as the field will not freeze solid and the snow can be removed from the surface for play.

## Operating Costs

- Operating costs for natural turf fields will vary from operator to operator as will the degree of maintenance, materials and the required equipment. Annual maintenance costs for a natural sand-based sports turf can vary between \$11,000 and \$30,000.
- Annual maintenance costs on an artificial turf field can run around \$3,000.
- Annual irrigation costs associated with natural turf can also vary from \$5,000 to \$7,000 depending on the climate and scheduling.
- Artificial turf irrigation costs are eliminated.
- Natural turf life cycle repairs are unknown and can occur through innocent mis-use or mis-management.

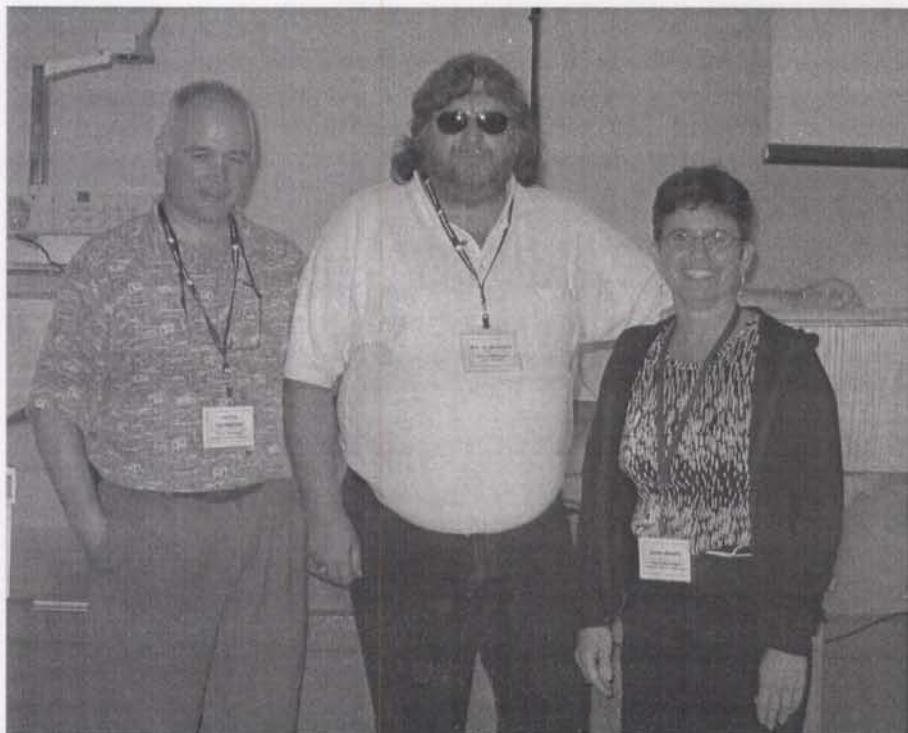
- Artificial turf products are designed and manufactured to consistently perform.

## Performance

- Durability of natural turf fields rely greatly on the results of proper management, maintenance procedures and weather. Field closures and program cancellations can occur.

turf event numbers translates to a moderate use ratio of three to one fields.

- Comparing the maximum number of events of a natural turf field to the "maximum capacity" of an artificial turf, translates to a use ratio of five to one fields.
- Assuming a 12 year lifespan before a major reconstruction of a natural or



From left to right: Stefan Szczepanski, Murray Glassford and Susan Mentis.

- Artificial turf fields remove any inconsistencies with field performance. There is a reduced focus on management and maintenance. Fields provide a consistent quality playing surface even under extreme impacts of heavy use and poor weather.

## Efficiencies

- The City of Mississauga has determined a natural turf sports field can sustain 224 events per year based on City practice of program allocation, sports turf management and maintenance practices.
- Adopting a "conservative" approach to permitting an artificial turf field, the City of Mississauga has set a benchmark of 616 events per year. Comparing the maximum number of events of a natural turf field to the "conservative" artificial

artificial turf and the capital and operating cost requirements for each field, the costs per event comparison can be calculated as \$427 per event on natural turf versus \$246 per event on artificial turf.

Infill artificial turf products in the sports turf industry are still a relatively new technology. Research has shown that the oldest field in North America to use this technology is no more than seven years. Manufacturers continue to promote research and development and improve the technology with performance being imperative. The principle is right and exactly what the sports turf industry strives to achieve. Will artificial turf replace natural sports turf? The jury is out – you decide! ♦



## STA Member Profile

Murray Glassford • Manager, NE Parks Maintenance • Community Services Department • City of Mississauga

Murray Glassford and the City of Mississauga were the hosts of the Sports Turf Association's 17<sup>th</sup> Annual Field Day on Thursday, September 16, 2004. We were among the first to visit the newly renovated Mississauga Valley Community Centre, one of four facilities improved and renewed under the City's Redevelopment Project. We are pleased to profile both Murray and the Mississauga Valley Community Park in this issue of our newsletter.

### What is your role with the City of Mississauga?

As manager, I am responsible for the day-to-day maintenance activities of the outdoor parkland setting and monitoring current and capital budgets, addressing resident and internal concerns, and that catch-all "all other duties as assigned."

### What kind of team do you work with?

I have three supervisors as direct reports, with 32 full time staff and up to 70 temporary and student labourers and volunteers. I also am included on the NE Management Team – Community Centres/Arenas, Community Development and Parks; internal Department Teams – Park Planning & Development for NE Projects, IT Development, Health & Safety; external Department Teams – LitterNot, Graffiti, CPTED (Crime Prevention Through Environmental Design).

### What are you and your team responsible for?

We are responsible for providing safe and clean parkland facilities for the residents of Mississauga including horticulture

displays; sports field turf and facilities; maintaining playgrounds, play areas, pathway systems, park furnishings; litter and graffiti removal; general turf and natural areas; and winter maintenance programs.

### What is the biggest challenge in your job?

At times I feel like a juggler. It's a challenge to empower staff, provide resources, co-ordinate, set schedules, meet deadlines, follow policy and procedures, add in the occasional special request, educate the public and control spending, all at the same time.

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

Everything is made worthwhile when I go to a hort display or a sports field and see the quality of care and personal attention, knowing that the staff has made every effort in making the area safe and clean.

### What is the biggest misconception about your job?

The biggest misconception is that we can provide additional services, re-direct funds, and improve standards while cutting our own budget funding, as if money was no problem!!!!

### What is your educational/employment background?

I started working summers in my grandfather's potato patch and on my uncle's farm. Graduated from Humber College in the hort program and started working with the City of Mississauga in the Forestry Section. I have spent the last 19 years in a management position. Looking to retirement in 2008.

### Tell us about your family.

I live in Mississauga with my wife Cheryl. Besides our 4 adult children we have two dogs, Emma (Retriever) and Harley (German Shepard), and four very tolerant cats, Bear, Buster, Baxter and Miss Allie.

### What do you enjoy doing outside of the workplace?

I enjoy motor cycling, golf, playing with model trains, collecting sports cards and watching TV with my favourite beverage, not all the time but as time allows. I would say my claim to fame would be that I have been involved in minor hockey (Mississauga North Stars AA) for the past 18 years.

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

I think that it is important that the "landscape" industry continue to promote itself as a key component or a resource in the protection of our environment and improvement in the quality of life. Without landscapes, natural or man made, we would be living in who knows what!

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

Being a part of STA allows me to keep in touch with a number of venues (educational, business contacts, equipment and products and personal ideas) necessary to do my job and plan for the future. The sharing of information, research and development of programs or facilities is the key to more successes than failures. We can all learn something from each other; it's all in how we use these tools. STA provides the contacts to the tools. ♦



## Facility Profile: Mississauga Valley Community Park

### Name, location of facility.

Mississauga Valley Community Park, 1275 Mississauga Valley Boulevard, Mississauga, Ontario.

### General information regarding the facility.

The park is located in the centre of the city; it is 57.5 acres in size and serves one of the most densely populated neighbourhoods in Mississauga. Facilities within the park include the Community Centre with one ice surface, a swimming/wave pool, fitness facilities with gym, public meeting/party rooms, a public library, and a Region of Peel Daycare facility. The Mississauga Gymnastics facility is also located on this site. Outdoor facilities include a four court bocce facility, a picnic shelter with picnic areas capable of seating up to 1000 users, a water play area, two children's play grounds and a series of woodlot/valley pathway systems linking the area to schools, businesses and parks.

### What types of sports fields are on site?

The sport fields include one senior lit and irrigated natural turf soccer field; one lit and irrigated sand-based football field; one lit and irrigated sand-based baseball diamond; one lit and irrigated sand-based soft ball diamond; and one natural multi-purpose ball diamond.

### How many employees are involved with turf care at this facility?

The parkland area is maintained by two full time staff, one seasonal (30 hours/week) worker, three student (17 hours/week) labourers and one fall (7 hours/week) labourer, with some assistance from the inside staff.

### General Field Information

**Permitting.** Fields are permitted through our Athletics Section based on 16 games per week (2 per week day/evening and 4 per weekend day) to the groups. They set game schedules. This is an agreed to standard.

**Maintenance Season.** Maintenance starts mid-May to early June and ends at the end of September.

**Types of Use.** Permitted for games only, no practices, exceptions being soft-shoe football practices.

**Rest Periods.** No play scheduled for Fridays, but not always followed by the groups.

**Field Conditions.** Groups are requested to be responsible for canceling games on "rain-out" fields.

### Maintenance

The following is a sample of the required yearly maintenance standards using IPM principals for turf growth required for the lit and irrigated fields.

**Lining.** One time every two weeks with paint mixture, additional lining requests are charged back to the groups.

**Grass Cutting.** The turf is cut twice per week at a height of 3".

**Aerating.** Up to five times per year, core and/or slit operations are used to decrease down time

**Fertilizing.** Up to five times per year.

**Topdressing.** At least one time per year with appropriate sand/soil mixtures.

**Overseeding.** A minimum of one time per year with 85% perennial rye. High wear areas are sodded in the fall with #1 nursery sod.

**Dethatching.** Done as required.

**Litter.** Groups are required to clean-up after games and lock the facility.

**Irrigation.** Fields are not watered on *Water-less Wednesday*, a water conservation program by the Region of Peel.

### Has your municipality banned the use of pesticides?

The City of Mississauga adopted a "selective" spray policy about 10 years ago. The "cosmetic" spraying of fields is not acceptable. Staff are able to use spot spraying to control any weed infestations. Only when the safety of the players and/or the possible loss of the field are questioned would a full spraying of the field turf be allowed.

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

The Athletics Section meets annually with sport groups to review and update users on past and future needs and concerns. A manager or supervisor may be required to attend, however in most cases, any concerns are brought back to management to address. Our Planning Section is responsible for developing the standards, design and construction of new fields. Input is sought from staff and the sports groups. Any "special" improvements above our standards requested by the group are placed back on the group to pay for or be responsible for the additional maintenance. Clay pitcher mounds are one example. ♦

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## Coming Events

### November 14-16

The Irrigation Association 25<sup>th</sup> Annual International Irrigation Show, Tampa, FL, Info: (703) 536-7080, [www.irrigation.org](http://www.irrigation.org)

### November 16-18

New York State Turfgrass Association/New York Golf Course Owners Association Turf & Grounds Exposition Rochester, NY, Info: (518) 783-1229, [www.nysta.org](http://www.nysta.org)

### January 6-11, 2005

56<sup>th</sup> Annual Canadian International Turfgrass Conference & Trade Show, Toronto, ON, Info: (905) 602-8873, [www.golfsupers.com](http://www.golfsupers.com)

### January 11-13, 2005

Landscape Ontario Congress 2005 featuring Fencecraft 2005, Toronto, ON, Info: 1-800-265-5656, [www.hort-trades.com](http://www.hort-trades.com)

### January 19-23, 2005

Sports Turf Managers Association (USA) Annual Conference & Exhibition, Phoenix, AZ, Info: (712) 322-7862, [www.sportsturfmanager.com](http://www.sportsturfmanager.com)

### January 31 - February 25, 2005

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

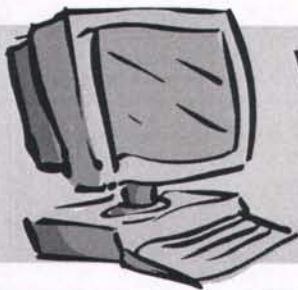
### February 21-22, 2005

Ontario Turfgrass Symposium, University of Guelph, Guelph, ON, Info: (519) 767-5000, [www.open.uoguelph.ca/ots](http://www.open.uoguelph.ca/ots)



### February 27-28, March 1-2, 2005

Western Canada Turfgrass Association 42<sup>nd</sup> Annual Conference & Show, Penticton, BC, Info: (604) 467-2564, [www.wctaturf.com](http://www.wctaturf.com)



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