SPORTS TURF MANAGER ... for safe, natural sports turf

SPRING 2004 • VOL. 17, NO. 1

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NEW HEATED SOLDIER FIELD HOME OF THE CHICAGO BEARS

Page 10. Modeled after Halas Hall, the Bear's practice facility in Lake Forest, Soldier Field's construction allows it to withstand the chilly Chicage climate and daily player traffic.



Heavy Repetitive Overseeding

SAPOSIUM

IMPROVING LOW-INPUT SPORTS FIELDS

Overseeding, or distributing seed over an existing turfgrass area to increase density, is a traditional practice followed by many turfgrass managers. Unfortunately, success in overseeding is not easily accomplished. Researchers in this study chose two low-input sports fields in New York State and applied three seeding rates for comparison. Results indicate that heavy, repetitive overseeding using perennial ryegrass can improve turfgrass density on lowinput sports fields.

o improve the chances that a high rate of seed germination and establishment will occur, it is often recommended that some sort of cultivation is done before seeding. Types of cultivation include removing cores of soil (core cultivation), spiking and vertical mowing.

An aggressive overseeding program for a sports field might be to overseed four or five times per year, hoping each time for some limited success. Home lawns and commercial properties, which are not usually overseeded, might be overseeded once or twice per year in a "best case" scenario.

With limitations on the use of pesticides increasing, overseeding might seem to be a better option than ever. However, turfgrass managers often report disappointing results with overseeding (1). This is especially true on low-input fields, or fields where fertilizer, irrigation, weed management and other cultural activities are limited or nonexistent. The cultivation requirement attached to overseeding can be disruptive to the use of the turf area in



question, as well as adding costs. Clearly, easier and more effective ways to overseed turfgrass areas are needed.

In August 2003, a research project examining heavy, repetitive overseeding was conducted on two sports fields in the Capital District. This study was designed to put into practice the ideas of Dr. Frank Rossi, Extension Turfgrass Specialist at Cornell University (2). Rossi has demonstrated that dramatic increases in turfgrass density were possible when high rates of perennial ryegrass (*Lolium perenne*) were overseeded *weekly* on a simulated sports field.

Study Objective

To demonstrate the	practice	of	heavy,
repetitive overseeding	on		page 7

"A Report To The New York State Turfgrass Association" Principle Investigator: David Chinery, Cornell Cooperative Extension of Rensselaer County. Cooperators: Dr. Frank Rossi, Cornell University, Dennis Weatherwax, The Averill Park School District & Jim Conroy, The City Of Troy.



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STA OFFICE HOURS

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The President's Desk



ell it's nearly spring! We have the three meanest winter months behind us and I have had the privilege of being in this new seat for all of those three months.

I have been a Director of the Sports Turf Association for a number of years and it has been a most fulfilling experience with a group of fellow directors who are not only highly professional, but believe passionately in the well being of the STA. I would like to sincerely thank outgoing President Paul Turner for being an outstanding President and taking the STA through a period of many successes.

As always, your feedback on the website and any of our services (Field Day, OTS, newsletter, etc.) is much appreciated.

Our membership continues to grow each year. The Field Day gets bigger and better annually and our website is of increasing benefit to members and nonmembers alike. The *Sports Turf Manager* continues to maintain a high professional reputation in the turf grass industry with its educational content, interesting articles and timely information, and of course provides a key forum for our advertisers, the support of whom we could not do without. As always, your feedback on the website and any of our services is much appreciated.

AGM Highlights & the OTS

We held a lively AGM at the Ontario Turfgrass Symposium (OTS) in Niagara Falls and are very pleased to welcome David Smith as a new board member. David brings a new dimension onto the board as a consultant in turf management.

Chris Mark, one of our original members, is moving on to share his expertise elsewhere. Chris was one of the true 'guides' in our industry and led the Sports Turf Association into opportunities and areas where we could most benefit our members. He served as President from 1994-1999. We will greatly miss his contribution, but we say many thanks and wish him health and happiness in his new position.

The OTS was well represented by many participants from across the industry. This annual conference and trade show is an educational forum for STA, the Guelph Turfgrass Institute, the Nursery Sod Growers Association of Ontario, the Ontario Ministry of Agriculture and Food, the Ontario Recreation Facilities Association, the Professional Lawn Care Association of Ontario and the University of Guelph. The venue (Niagara Falls) was new as was the format and we thank the entire team of professionals that helped to make OTS 2004 a success.

On my travels visiting different people and organizations in this diverse and "never a dull moment" industry, optimism is high for the coming season. We are all hoping for an early warm spring unlike last year where winter lasted until June and then summer arrived overnight! I wish all our readers a great spring season – remember, think sunshine! ◆

ANDREW GAYDON



ONTARIO Turfgross Shappende ALREADY LOOKING FORWARD TO NEXT YEAR'S EVENT!

he Ontario Turfgrass Symposium continues to be Ontario's premier educational turf symposium and trade show with over 770 in attendance at this year's event hosted at the Sheraton on the Falls Hotel and Conference Centre in Niagara Falls.

With over 50 exhibitors and 50 seminars, delegates were given the best opportunity to see and learn about the latest technology, products, equipment and services. True to this year's theme, *Leading through Learning*, the education

program offered over 50 professional development seminars focusing on the latest in scientific research, practical turf management, legislation, technology and human resource management within the sports turf management, golf, lawn care, sod production and recreation sectors.

A new venue, new exhibitors and new association members combined to exceed the expectation of delegates who have come to value OTS as an industry leader within Ontario.

Welcome to Returning Board Member David Smith

David first joined the STA in 1991 and served as a Director of the Association in 1994/1995 and as Vice President during the 1996/1997 term. Many of you will be familiar with him as a Turfgrass Consultant with DCS Agronomic Services. Glad to have you back, David!



Odds and Ends

Natural Turf Preferred

In the Sports Illustrated 2003 Major League Baseball Player Survey, only five of the 525 votes for best field (1%) were for parks with artificial turf; 35.5% of the votes for worst field were for parks with artificial surfaces. Sports Illust., Vol. 99 (1), July 7/03

Quote of the Month

Accept the peace of nature; her secret is patience. *The Furrow*, Vol. 109 (2), Feb. 2004

2004 STA Membership Fees

Thank-you to all members renewing in 2004! Invoices for membership fees will be mailed at the end of March and are due on or before May 1. Please take a moment to verify your contact information as it appears on the memo accompanying your invoice. The annual STA Membership Roster is compiled from this information.

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.

Summer 2004 Submissions

If you have something you'd like to submit for the next issue, please forward it to the STA office by April 23, 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.

Voice Your Opinion!

Say what's on your mind. Visit www.sportsturfassociation.com. Under the "newsletter" link, click on *Feedback* and fill out the form.

A Trouble Free Sports Field Irrigation Start-up is No Accident

ANDREW GAYDON GIVES POINTERS FOR THE DIFFERENT CHALLENGES ASSOCIATED WITH IRRIGATION SYSTEMS

he amount of work and preparation done the previous fall will obviously impact any potential troubles one might have starting up in the spring. We are so often wrapped up in spring hype that we are never fully prepared for the upcoming season. The pressure of getting fields ready for play is intense. During this busy time, turf managers often do not have the parts on hand they need to make even the most basic of repairs. Proper preparation both in the previous fall and early spring will make turf managers' jobs much easier and more efficient later in the season. Here are some suggestions to help managers be better prepared for the different challenges associated with irrigation systems.

Inventory Repair Parts

Ensure a sufficient stock of irrigation parts. Order parts early enough to avoid being ill prepared for possible pipe and fitting problems during initial start-up testing. Purchase a new supply of glue for PVC repairs and throw out the can that if possible, at the end of each zone. By turning on each zone individually and having it drain, this will get rid of all the



Every spring, the pressure of getting fields ready for play is intense. Proper preparation will make turf managers' jobs much easier and more efficient later in the season.

was used last year. Primer

tends to have a much longer shelf life. Budget about \$500 to get the 'repair inventory' started.

Start-up

Once the weather is cooperating and the risk of freezing has passed, it is time to get the water moving. There is a specific sequence to charging and testing the lines. Start by opening up a place to drain water, dirt and debris that has collected inside the pipe over the winter.

Throughout the winter, the inside of the empty piping network has been drying out. All the dirt and build-up tends to harden and fall to the bottom of the pipe. As water is put back into the pipe, the garbage inside starts to travel throughout the system.

If the heads are turned on before properly flushing, all the dirt will be forced into the heads and some sprinklers may block and give trouble.



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Be sure to adequately flush the entire system through drains and quick couplers before the sprinklers are tested. Some systems are under constant pressure throughout the season. If this is the case, charge the system to half the regular operating pressure and let it sit. Check the pressure after one hour and if there is a difference, leaks are possible. By isolating different sections of the system, the exact locations of the leaks can be detected. Remember, the number one cause of wasted water is small leaks in the system that we tend to leave and put up with over the course of the season.

Sprinklers

Once the system is holding pressure and flushed clean, it is time to check sprinkler performance. During the winter, frost will heave sprinklers and make it necessary to level all heads back to grade before mowers hit the turf. This exercise will save a great deal of money in sprinkler parts and mower bed knives. Each sprinkler in the system must be checked for rotation, a clean nozzle, debris and proper distribution. Monitoring sprinkler pressures is important to make sure that they are performing to the manufacturer's published specifications.

Controllers

The **program schedule** in the controller is the most important function

to ensure that the system is conserving water but at the same time is producing green turf. Watering application rates will vary with different types of plants, soils and climates. New turf must be kept moist and newly-transplanted shrubs must be watered every day or two. Established plants and turf will need deeper, less frequent watering. The following guidelines will assist:

- Do not operate more than one valve at a time.
- 2) Water early in the morning when it is least windy and the pressure is the greatest. Early morning watering will also reduce water evaporation. Watering in the early evening is not recommended. Turf is more likely to get diseases when wet for a long duration, especially overnight during the summer. Watering on a hot summer day may also burn the plants.
- 3) In most areas of Canada, turf requires 1-1/4 to 1-1/2" of water per week in the hottest months. Most controllers today have a feature called 'water budgeting' and this is a very useful and money saving feature. It allows the irrigation or park manager to increase or decrease the complete controller program by a simple percentage amount according to seasonal changes.

 Manually activate the complete system every week or so to make sure everything is operating correctly. Check and clean sprinklers to ensure proper functioning.

Assessment

Water is a very topical subject these days and it's time to keep accurate records of water events and water used. At some time, you will be asked the potentially embarrassing question "How much water is this field or park using?" A manager will need to know the answer or at least where to go to get the information. Meters, computers or manual calculations – the equipment used doesn't matter – just make sure data is recorded.

An electrical assessment should also be done. Checking controller boxes for mouse damage is an important spring task. Proper protection against rodents should be taken all season long, but especially in the fall. Check each station's voltage using a multi meter to ensure electrical integrity.

When the system is up and running at its maximum efficiency and records are up to date, one can expect a trouble free system with green turf and happy customers and athletes alike. \blacklozenge

For more information, see "Intelligent Irrigation" by Greg Snaith in the Spring 2003 Sports Turf Manager.

Heavy Repetitive Fall Overseeding • Cover Story Continued...

RESEARCH RESULTS ON LOW INPUT HIGH SCHOOL AND INNER CITY FIELDS IN NEW YORK STATE

two low-input Capital District sports fields using three seeding rates.

Procedures

Anyone who has visited practice soccer and football fields at high schools and parks would probably agree that many are examples of ugly, beat-up turf and weeds. Two fields were used in this study. The practice football field at Averill Park High School had compacted clay loam soil, a low pH (5.9), and was composed of bare spots, crabgrass, knotweed, plantain, dandelion, perennial ryegrass and Kentucky bluegrass.

The second field was a multi-purpose soccer/football field in an inner city park, Prospect Park, in Troy. The soil was a loam with pH 7.5. The predominate species here were purslane, Kentucky bluegrass, perennial ryegrass and goosegrass. See Table 1 for a description of the initial composition of each field.

Four treatments were made: no seed (check plots) and overseeding at rates of 2, 6 and 10 pounds of seed per 1,000 square feet (M), with three replications made of each treatment at each site.

Overseeding started on August 14 and continued weekly (except for the week of 9/18) until October 16, for a total of 10 applications in 11 weeks. Seed was distributed evenly across the plots using a Gandy drop spreader.

There was no cultivation done on the sites (other than that done by the football/ soccer players or other field users); the seed was simply spread on the plots. No irrigation was supplied as rainfall was abundant.

Traffic and wear on the Averill Park field was concentrated in the centre, and as a consequence, one set of plots received light traffic, one medium and one heavy. All of the plots at the Prospect Park field seemed to have received equal traffic.

Results

Results for Averill Park field are outlined in Table 2. Turfgrass density

Table 1. Initial composi	tion (% of each comp	ponent) on the two study tield	ds.
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Components	Averill Park High School	Prospect Park
Per. Ryegrass/Kentucky Bluegrass	4.4	17.5
Bare	1.3	38
Purslane	0	27.9
Goosegrass	0	15.2
Crabgrass	57.8	<1
Plantain	2.1	<1
Knotweed	32.3	<1
Dandelion	0.8	0

Table 2: Average percent turfgrass for 8 treatments over 10 seedings at AverillPark High School. Last column: Net increase in turfgrass density.

Treatment	Week 0	Week 5	Week 11	Net Increase
Check, light traffic	3.1	12.5	28.1	25.0
Check, heavy traffic	9.4	34.3	46.8	37.4
2 lbs./M, light traffic	12.5	71.9	96.9	84.4
2 lbs./M heavy traffic	0	28.1	59.3	59.3
6 lbs./M, light traffic	0	62.5	100.0	100.0
6 lbs./M heavy traffic	0	31.2	78.1	78.1
10 lbs./M, light traffic	15.6	81.3	96.9	81.3
10 lbs./M heavy traffic	3.1	53.1	75.0	71.9

increased for all treatments, even for the check plots that did not receive overseeding. Small amounts of turfgrass already existed in these plots and when competition from weeds was removed after they died from frost and cooler temperatures, the density of the grasses increased.

This same phenomenon is also partly responsible for the increase in density of the overseeded plots as well, except for the three treatments that started with no turfgrass, in which case the increase in density can be attributed to overseeding alone.

"Net increase in turfgrass density" was calculated as the density estimated at Week 11 minus the initial density. It is an attempt to measure the density increase caused by overseeding and to remove the influence of a plot having some turfgrass at the beginning of the study.

The largest net increase in turfgrass density was seen in the 6 lbs./M light traffic plot, where density increased from 0% turfgrass at Week 0 to 100% at Week 11. The largest increase in net density for heavy traffic plots was also seen in the 6lbs./M plots, where density increased from 0 to 78.1%. Plots overseeded with 10 lbs./M had higher net increases in density at Week 5, but the 6 lbs./M plots had greater net increase in density by Week 11 of the study. For a visual comparison, see the photo on page 8.

Very different results were obtained at Prospect Park (Table 3). In the first few weeks of the study, perennial ryegrass seedlings were observed to be germinating in many of the plots. After Week 5, all of



Table 3: Average percent turfgrass for 4 treatments over 10 seedings at Prospect Park. Last column: Net increase in turfgrass density.

Treatment	Week 0	Week 5	Week 11	Net Increase
Check	12.5	6.2	13.6	1.0
2 lbs./M	9.4	20.8	30.2	20.8
6 lbs./M	15.6	43.8	23.9	8.3
10 lbs./M	12.5	63.4	33.3	20.8

the plots, except the untreated checks, had a net increase in turfgrass density. The largest increase of 50.9% was seen in the 10 lbs./M plots.

After the week 5 observations, however, the 2 lbs./M plots continued to show an increase in turfgrass density, while the 6 lbs./M and 10 lbs./M showed decreases.

This was largely due to factors on the site. The middle of this field is very compacted and slightly depressed. Given the large amount of rainfall during the time period this study was conducted, this depressed area flooded repeatedly. Seed from treated plots was observed to have washed away and moved onto untreated strips between the plots. Seedlings may, have also been uprooted or died from flooding.

While a net increase in turfgrass density was still achieved for all seeded treatments, these confounding factors decreased the possible gains which could have been made. These results clearly indicate that the topography of the field will influence the success of overseeding.

Conclusions

These results indicate that heavy, repetitive overseeding using perennial ryegrass can improve turfgrass density on low-input sports fields. Greater increases were observed in plots receiving light traffic versus heavy traffic, yet even in plots with heavy traffic, significant increases were still seen.

The least successful situation seen in this study was on the Prospect Park field, where the uneven topography combined with heavy rainfall caused seed to wash out of treated plots and seedlings to die. An even (or at least not severely rutted) field surface is therefore important to overseeding success.

Overseeding at the 6 lbs./M rate gave the greatest increase in net density and is also a less expensive alternative to the 10 lbs./M rate.

Is heavy, repetitive overseeding a costfeasible proposition for sports fields? An internet search shows that perennial ryegrass seed prices (US\$) range from \$1.40 per pound to \$2.80/lb; wholesale prices and bulk quantities can push the low end price to less than \$1.00/lb. Adjacent photo. From left to right: 2 lbs./ M, 6 lbs./M and 10 lbs./M seeding rates in a heavily trafficked portion of the practice field at Averill Park High School.

Given a \$1.00 to \$2.80 price range, the cost for a 10 week overseeding program at a 6 lbs./M rate would be \$60 to \$168 for 1,000 square feet. If a school wanted to overseed the middle of a worn football field (approximately 18,000 square feet), the cost would be in the range of \$1,080 to \$3,024. While this may not be an insignificant cost to financially-troubled school districts, it seems far less expensive than most pesticide treatments or a lawsuit brought about from a student athlete's injuries suffered due to a poorly-maintained sports field.

Since cultivation is not necessary with heavy, repetitive overseeding, further expenses are avoided and fields can remain in play as the overseeding is taking place. The effect of providing highphosphorous fertilizer with overseeding should be studied, since such starterfertilizers can increase seeding success and are fairly affordable.

A project examining how this system performs in spring conditions on home lawns is planned for 2004. If you have any questions or experiences with overseeding to share, please call 518-272-4210 or email me at dhc3@cornell.edu. ◆

Resources Cited

1. "High School Sports Fields: The Last Frontier Of Turfgrass Management," Ed Leonard and David Chinery, New York State Turfgrass Association, 2003.

2. "Aggressive Sports Turf Overseeding," Dr. Frank Rossi, in "Cornell Field Day '03 Program Booklet," Cornell University, 2003.

Editor's note: If you are interested in obtaining a copy of High School Sports Fields: The Last Frontier of Turfgrass Management, contact David Chinery at dhc3@cornell.edu or Lee Huether at the STA office.

Thanks to The New York State Turfgrass Association for providing funding for this study, to Dr. Frank Rossi of Cornell University for technical support, and to Dennis Weatherwax of the Averill Park School District and Jim Conroy from the City of Troy for research sites.

Pesticide Use Continues to be at the Forefront of Concern in the Industry

his will no doubt be another challenging year for professional turf managers in the province of Ontario. The pesticide use issue continues to be at the forefront of concern within the industry. A number of municipalities across the province have introduced, or have plans to introduce, bylaws restricting pesticide use within their respective communities. Industry associations have been working hard to address this issue. Voluntary IPM Accreditation has been launched and is providing a reasonable alternative to municipalities seeking a middle ground in the debate. Responsible professionals should both support the accreditation process and promote it within their communities.

The GTI also offers a consulting service utilizing faculty and staff to examine specific turf management challenges.

The coming year promises to be one of significant growth in the turfgrass research program at the University of Guelph. We have interviewed five candidates for the proposed two new turfgrass faculty positions and hope to have the new faculty in place by spring or early summer.

The annual Turf Managers Short Course was fully subscribed again this year. Although the majority of course participants are from the golf industry, sports turf professionals are encouraged to participate in this exceptional one month program. If you are interested in attending the course, we strongly recommend that you register as early as possible. The course, which runs the month of February at the GTI, is usually full by early fall.

With the closure of the Turfgrass Diagnostic Clinic operated by the Laboratory Services Division of the university, the GTI will begin to offer a new Turf Diagnostics service in 2004. Turf Diagnostics will provide a responsive diagnostic service out of the GTI research lab. GTI Research Associate Erica Gunn will be managing the lab. Erica spent part of last summer training with Marilyn Dykstra, former manager of the Turfgrass Diagnostic Clinic. Visit the GTI website for more details.

The Guelph Turfgrass Institute also offers a consulting service utilizing GTI faculty and staff to examine specific turf management challenges. We have been engaged over the past fall and winter with several municipalities evaluating their sports fields and working with staff to develop realistic recommendations for improving playing conditions.

If you are not a subscriber, now is the perfect time to sign up for our free e-mail advisory bulletin *The GTI Advisor*. Published every two weeks through the growing season, *The GTI Advisor* provides up to the moment information on turf and



landscape management from OMAF and GTI sources, long range weather information, links to other on-line management resources as well as special features including reports from GTI research projects, featured new plants from the Annual Trial Garden and a list of coming events of interest to industry professionals. To sign up, simply send an e-mail to advisor@gti.uoguelph.ca. All issues of *The GTI Advisor* are posted on the GTI website. The website also allows you to search past issues for articles of specific interest. ◆

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New Soldier Field Turf Features Heating System NATHAN ODGARD HIGHLIGHTS NEW FEATURES OF THE CHICAGO BEAR'S HOME FIELD

espite the controversy over the architecture of the new Soldier Field, Chicago Bears players are only concerned with one thing – the turf.

When 79-year-old Soldier Field reopened September 29 with a Black & Blue Division showdown on Monday Night Football, spectators found improved views of the field, larger concourses and up-graded concessions. The players, meanwhile, have been treated to a new playing surface. The field's immaculate condition on opening night drew rave reviews on television from Bears legend Dick Butkus and commentator John Madden.

Bears head groundskeeper Ken Mrock wanted a field constructed that would provide a healthy, safe-playing surface for the Bears, their opponents and any other athletic teams that were to play on it.

"Players today are bigger, faster and stronger, so it's that much more important to provide them with as healthy and safe a turf as possible," Mrock said.

Mrock didn't have to look far to find a model for which to build Soldier Field after. Halas Hall, the Bears practice facility in Lake Forest, IL, thrives year in and year out throughout the season. The field's construction enables it to remain healthy and withstand the frigid Chicago climate and daily traffic of 300-plus pound football players, Mrock said.

"We've had great success over the years with our practice field at Halas Hall," he said. "Therefore, we mirrored everything at Solider Field after that."

Among the similarities between the two fields are two key features: a sand-based root zone mix and a heating system.

Root Zone Mix

Drainage and oxygen and nutrient retention are two of the most important aspects to maintaining a healthy sports turf field. A field's root zone make-up determines how efficient drainage and oxygen and nutrient retention are.

At Soldier Field, the custom designed root zone mix is made up of 85% USGA sand, 5% sphagnum peat moss and 10% Profile Porous Ceramic. The root zone depth is 8 inches over a 4-inch gravel blanket. The addition of Profile is meant to help enhance root growth, prevent compaction, provide permanent air porosity and improve drainage.

"Incorporating Profile into our root zone mix has shown me the benefits over and over," Mrock said. "This same root zone mix has produced a dense, deep root mass, ideal drainage and... \rightarrow page 12

Coming Events

March 24-25, 2004

Ontario Parks Association 48th Annual Educational Seminar & Explorations Trade Show Hamilton, ON, Info: (905) 524-3535, www.opassoc.on.ca

April 25-30, 2004 Ontario Recreation Facilities Association 49thAnnual Professional Development Program Guelph, ON, Info: (416) 426-7062, www.orfa.com

July 19-21

Ontario Parks Association Annual General Meeting & Summer Educational Institute Oakville, ON, Info: (905) 524-3535, www.opassoc.on.ca

Jan. 31 to Feb. 25, 2005 Guelph Turfgrass Institute Turf Managers' Short Course Guelph, ON, Info: (519) 767-5000

Get on the list! Call the STA office with your event information. Check the STA website at www.sportsturfassociation.com for updates.





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overall turf hardiness. It has helped prevent unstable playing conditions, wear spots and divoting."

Soldier Field groundskeeper John Nolan will topdress the field as needed throughout the year with an 85% sand and 15% Profile mix. With the sod installed in June 2003, John and his staff were able to thoroughly prepare the field before the Monday Night Football season-opener by topdressing, aerifying and fertilizing it several times.

Heating System

Plants depend on sun and heat for survival. Unfortunately, Solider Field doesn't receive much exposure from the sun once the NFL season rolls along into December and January.

To counter Chicago's cold temperatures, a heating system was installed underneath the field to provide a warm environment for the soil and turf.

"A heating system is going to help us out a lot," Mrock said. "It will help us keep a healthy turf longer. We'll see growth of grass into the winter months because the system will keep the soil at optimum growing temperatures."

By adding the heating system, Soldier Field is taking after several other NFL stadiums in cold-weather climates, including Lambeau Field in Green Bay.

The heating system was installed 9 inches deep underneath the root zone using more than 40 miles of 3/4-inch tubing. Radiant heat will warm a combination of water and glycol as it is pumped through the tubing.

"It does its job," Mrock said. "It melts some snow and keeps the field from freezing. As a result, it will make it softer and more forgiving for players, and will extend our growing season."

Soldier Field's sod was custom grown. Mrock chose a Kentucky Bluegrass blend of turf that closely resembles the sod at Halas Hall.

The heating system was installed 9" deep under the root zone using more than 40 miles of 3/4" tubing.

Soldier Field will serve as a multi-use facility. It will be the new home of the Chicago Fire of Major League Soccer and will be a venue for concerts and high school and youth league events. ◆

Nathan Odgaard is a writer with Swanson Russell Associates, Lincoln, NE. He can be reached at nathano@sramarketing.com. Article reprinted with permission from SPORTSTURF magazine, November, 2003.



KEN MROCK: STMA'S GROUNDSKEEPER OF THE YEAR

After speaking at the Ontario Turfgrass Symposium, Ken jetted off to the 15th Annual Conference & Exhibition of the Sports Turf Managers Association in San Diego, California where he was presented with the prestigious Harry C. Gill Memorial Award.

The Harry C. Gill Memorial Award is named for the STMA's second president who served in that capacity from 1982-1983. His commitment to the sports turf industry and his support of the goals and standards on which the STMA is based are legendary. The Gill Award denotes an individual's long-time service and commitment to STMA and those same goals and standards. Congratulations Ken from the Sports Turf Association!

Photo: STA Director Jane Arnett-Rivers with Ken Mrock at the 2004 Ontario Turfgrass Symposium in Niagara Falls.

This is Cricket, By Jove!

MICHAEL BLADON



Cricket is the English national game. And to many Englishmen, it is both a game and a standard of behaviour. Cricket does not have rules, it has laws. It is also the "national" game in New Zealand, Australia, India, Africa, Pakistan, the West Indies and Bangladesh. When Canada became a Dominion in 1867, the Prime Minister declared cricket a national sport.

he first written reference to cricket is in an excerpt of an account of the 28th year of Edward the First (1239-1307) which listed expenses as part of the game. King Edward III banned cricket as it interfered with archery. Still later, one could be fined and imprisoned for three years if found playing the game on personal property. Opinions obviously changed as there are many records of cricket being played by the British Army and Royal Navy in the 1700s.

Moving overseas, the first game played in Canada by civilians was on Ile-Ste Hélène near Montreal in 1785. The Toronto Cricketing Club formed in 1827 and is now called the Toronto Cricket, Skating and Curling Club. Toronto, Guelph, Kingston, Woodstock and Hamilton all had teams until the 1840s.

Cricket was played on the front campus of what is now the University of Guelph for over one hundred years. York University also has a cricket ground open to the public. A "crease" was laid at Rideau Hall, formerly the Vice-Regal Lodge, in Ottawa in 1865. This same land was set aside for cricket when Canada became a Dominion.

In British Columbia, the sport was

played from 1849 when a British army officer brought cricket equipment with him. Also recorded from 1864 was a cricket ground on part of the Nanaimo Indian Reserve. A league still exists in BC today consisting of teams from Nanaimo, Comox Valley, Arrowsmith and Campbell River.

Moving to Alberta, Edmonton was one of a few clubs to have its own private ground since 1882. Teams competed from Fort Saskatchewan and Strathcona and by 1912, there were sufficient adherents to the game that the Edmonton and District Cricket League was formed.

In 1892, the Canadian Cricket Association was founded and today, there are eight

provincial associations. A major influence on cricket in Canada is its geography. Since a large portion of the country is frozen

for 6-7 months of the year, this causes difficulties for grounds maintenance, practice, training and coaching. With the game played from coast to coast, the mere size of the country can also cause scheduling and transportation problems for those with a keen interest in the game.

Canada's cricket history has been impacted significantly by immigration, both from early armed force migrants to people from Britain, the Caribbean and Asia. And largely due to immigration, there are over 5,000 players on more than 100 teams in three official leagues in Toronto. This does not account for the many other players who do not belong to a league.

In August 2003, 16 non-affiliated teams played in a tapeball tournament on rented parking lots in Toronto. (A tapeball is a tennis ball wrapped with duct tape.) There are currently 200 teams in Toronto playing tapeball. Many rent baseball diamonds and play under the lights.

In Mississauga, because of demand, cricket has become entrenched as a school sport. British Columbia boasts more than 60 teams plus a premier league in five divisions; high school cricket is played on the lower mainland. The Manitoba Cricket Association has successfully introduced the game to 14 junior high and senior high schools. There is a Saturday league run for the schools and week-long summer camps for juniors aged 7-19 years.

Canada has qualified a team for the Under 19 World Cup in Bangladesh in 2004. Canada's national team, which played in the World Cup last spring (and rekindled interest in the game), is comprised of nine members whose birthplace is from nine different countries

Since a large portion of the country is frozen for 6-7 months of the year, this causes difficulties for grounds maintenance, practice and training.

of the old British Empire. Once again, immigration is playing a part in those selected (note: there are only 11 members on a team).

To end, we've delved into Canada's cricket history and reported that the game is alive and well across this vast country. As sports turf managers, some day you may be asked to provide space for the game. All that is required is a level grassed area between 500-550 feet.

Finally, if you hear it said "that isn't cricket," you'll know it refers to unfair or unsportsmanlike behaviour – and it may be wise to watch your back!

Research for this article was done on www.canadacricket.com. James Christie of The Globe and Mail wrote an interesting article called *Cricket Rules* published on September, 13, 2003.









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Press Releases

Important Notice: Sod by the Square Foot

The Nursery Sod Growers Association of Ontario is pleased to announce that there will be one standard unit of measure for sod sold in Ontario. As of January 1, 2004, all sod sales in Ontario will be by the square foot.

Over the years, changes in harvesting equipment has led to different sized rolls, resulting in sod being sold by rolls (0.8 sq. m.), square yards, metres and a host of various dimension big rolls. Therefore, a uniform unit of measure, the square foot, will be easier to comprehend for both clients and end users. The square foot is the current standard adopted

by the turfgrass sod industry across North America. It is also the standard unit of measure used throughout the building industry (tiles, concrete pavers, stonework, homes, industrial building spaces, etc.).

Implementing this change will make purchasing sod in Ontario an easier and more uniform process for all.

The Nursery Sod Growers Association of Ontario can be reached at 905-689-8845, www.nurserysodgrowers.com.



New AerWay® Distributor for Ontario G.C. Duke Equipment is pleased to announce our appointment as the new AerWay® distributor for the Province of Ontario. Together with AerWay® we are pleased to introduce the new line of Groundhog three-point hitch and hydraulic tag-along aerators with their various tine designs to suit a wide variety of applications.

For additional information on how AerWay® can fill your sports field aeration needs, visit www.gcduke.com or contact Dick Raycroft, G.C. Duke Equipment Ltd., 1184 Plains Rd. East, Burlington, ON L7S 1W6, 1-800-883-0761 ext. 116, email: draycroft@gcduke.com.

Shaping the Future 1929-2004 STRI Celebrates 75 Years

Sports Turf Research Institute celebrates 75 years in the turfgrass industry this year. To mark this milestone, we are planning a program of events which will run

throughout 2004.



All four issues of our International Turfgrass Bulletin magazine, along with the STRI's website www.stri.co.uk, will carry special features highlighting the key developments and major achievements in the industry from

1929 to present times, alongside regular editorial.

The October *Bulletin* will be increased in size to act as a commemorative record for the 75th anniversary. Over the years, STRI's unique position has enabled close ties to be formed with many eminent individuals and organizations throughout the turfgrass world. We will be inviting editorial from some of these key players for inclusion in this issue.

Congratulations from the Sports Turf Association!

Rittenhouse Introduces the New Lesco Ride-On Spreader Available with an Optional Sprayer

Reduce fatigue and increase production with the new hydrostatic drive Ride-On Spreader by Lesco. You can cover over 100,000 sq.ft. in production per hour. The Lesco Ride-On Spreader is user friendly – just squeeze handles for forward or reverse.

The unit comes with a 6 hp Kawasaki engine, fan cooled transmission, 125 lb. capacity hopper complete with cover. The deflector and third hole remote controls are incorporated and wide flotation tires prevent rutting. Application speed is a constant 3.5 mph.

This unit is very easy to operate and simple to maintain. The optional Rittenhouse sprayer includes a 9 US



gallon tank which will spray up to 30,000 sq.ft. It has a top quality 12-volt plunger pump with a fully adjustable regulator. The spray bar will provide a 60-inch spray width with large droplets to eliminate excess drift. The easy lift in/lift out design requires no tools. It comes complete with a rechargeable battery that provides 1.5 hours of continuous spray time. For more information, contact us at 1-800-461-1041 or visit www.rittenhouse.ca.

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Kevin Barry & Scott Sirr Town of Orangeville, ON



Agricultural Machinery Hazards – Be Aware of Inherent Risks

A THOROUGH SAFETY REPORT COURTESY OF TED WHITWORTH, FARM SAFETY ASSOCIATION

The very fact that agricultural machinery uses tremendous power to do work makes its operation a potential hazard for both the operator and bystanders. Even though manufacturers try to ensure that their machinery is as safe as possible, the nature of some work creates inherent hazards which cannot be removed. Most accidents involving agricultural machinery can be attributed to human error.

n many cases, the operator forgot something, took a shortcut or risk, ignored a warning, wasn't paying close attention or failed to follow safety rules. Accidents with agricultural machinery can be crippling or even fatal. It is important to recognize and be alert to possible hazards and to take precautions to avoid injury.

There are many different kinds of agricultural machinery - mowers, tractors, grinders, blowers, augers, etc. - but they all have similar characteristics and similar hazards. You can be cut, crushed, pulled in or struck by an object thrown by these machines.

They can have cutting edges, gears, chains, revolving shafts, rotating blades, levers and similar hazards. You can also be injured if you fall while working on or near any of these machines.

Some machine parts cannot be completely shielded in order to do their job. For instance, a cutting blade cannot be totally enclosed, or it could not cut. guards Operators remove for maintenance and often they don't get replaced. This creates a potentially dangerous situation.

Most agricultural machines have similar or common components to do their work. A basic understanding of these and the hazards which they pose will heighten your safety awareness and prevent injury.

Shear Points

Shear points are created when the edges of two objects are moved closely enough together to cut a soft material, as in the case of a pair of shears or an auger.

Cutting points are created when a single object moves forcefully or rapidly enough to cut, as in the case of a sickle blade.

Both shear and cutting points are created on machinery designed to cut and on those that are not designed to cut, as in an auger. They are hazards because of their cutting force, and because they often move so rapidly that they may not be visible. It can be easy to forget that they are operating.

Because some cutting and shearing points cannot be guarded, it is important to be aware of the hazard and to be especially alert when they are operating.



It is also important to warn others and to look out for their safety because of the danger of thrown objects while using cutting-type equipment.

Pinch Points

Pinch points are formed when two rotating objects move together and at least one of them moves in a circle. For example, the point at which a belt runs onto a pulley is a pinch point.

Belt drives, chain drives and gear drives are other sources of pinch points in power transmission devices.

Fingers, hands and feet can be caught directly in pinch points, or they may be



drawn into the pinch points by loose clothing that becomes entangled. Contact may be made by just brushing against unshielded parts or by falling against them.

You can become entangled in pinch points if you take chances and reach over or work near rotating parts. Machines move too fast to get out of a pinch point once you become caught in it.

To avoid injury from pinch points, be aware of the areas where pinch points occur and avoid them. Wear clothing that fits well and is not loose or floppy. Never reach over or work near rotating parts. Turn off machinery to work on it. Always replace shields if you must remove them for maintenance.

Wrap Points

Rotating shafts are the most common source of wrap point accidents, although any exposed machine part that rotates can be a wrap point. A cuff, sleeve, pant leg or just a thread can catch on a rotating part and result in serious injury. Entanglement with a wrap point can pull you into the machine, or clothing may become so tightly wrapped that you are crushed or suffocated. In other cases, you could be thrown off balance and fall into other machine parts.

Even a perfectly round shaft can be a hazard if there is enough pressure to hold clothing against the shaft. Shafts that are not round increase the hazard significantly. Clothing is more likely to catch if there is a little mud or a nick on the shaft. Ends of shafts which protrude beyond bearings are also dangerous. Universal joints, keys and fastening devices can also snag clothing.

Check all equipment for potential wrap points, and shield those that can be shielded. Place warnings on those that cannot be covered, or paint them a bright color, perhaps with wide stripes. Be aware of wrap points and be alert to their danger.

Crush Points

Crush points are created when two objects move toward each other or one object moves toward a stationary one. For example, hitching tractors to implements may create a potential crush point.

Failure to block up equipment safely can result in a fatal crushing injury. A jack may slip, a hose or overhead support may break, or the equipment may roll. Be sure to take extra precautions when working with machinery that is raised for any reason.

There are many different kinds of agricultural machinery, but they all have similar characteristics and similar hazards.

Crushing injuries most commonly occur to fingers that are crushed at the hitching point. Wait until the tractor has stopped before stepping into the hitching position.



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Safety Snapshot

SAFETY

It's a management responsibility. It's an individual's duty.

Tips for Spring

- Operators need to be thoroughly familiar with mowing equipment, its operating characteristics, capacity and safety features.
- Work sites need to be prepared in advance.
- Operators are responsible for their personal safety and that of others.

Year Round Advice

- Know your machine.
- Don't operate a machine with missing or damaged protective devices.
- Prepare the work area.
- · Protect yourself.
- · Watch out for others.
- Use safe mowing practices.
- Ensure good and safe footing around machinery.
- Keep all work areas tidy.

If possible, arrange the hitch point so that the tractor can be backed into position without anyone between. Always know what the other person is doing.

The head or chest of an operator may be crushed between the equipment and a low beam or other part of a building. Usually, these accidents occur when operating the machine in reverse. Tree limbs are also potential hazards when working with tractors and other machinery.

To prevent being crushed or pinned, first, recognize the potentially dangerous situations, then, avoid them whenever possible.

Block all machinery securely if you must work under it. If an implement can roll freely, block its wheels so it cannot roll.

Free-Wheeling Parts

Many machine parts continue to spin after the power is shut off. Examples of this are rotary mower blades, fans, flywheels, etc. Never touch these parts until they have stopped moving completely. This may take as long as several minutes.

Springs

Springs are commonly used to help lift equipment such as shock absorbers and to keep belts tight. They can harbour potentially dangerous stored energy. Springs under compression will expand with great force when released, and springs that are stretched will contract rapidly when released. Know what direction a spring will move and how it might affect other machine parts when released, and stay out of its path.

Hydraulic Systems

Hydraulic systems store considerable energy. They lift implements, change the position of implement components, such as a bulldozer blade, operate hydraulic motors and assist in steering and braking.

Careless servicing, adjustment or replacement of parts can result in serious injury. High-pressure blasts of hydraulic oil can injure eyes or other body parts by burning or penetrating the tissue due to the liquid being hot. Leaks are a serious hazard.

Never inspect hydraulic hoses with your hands because a fine jet of hydraulic fluid can pierce the skin. Jet streams from even pinhole leaks can penetrate flesh. Get medical attention quickly, or you could lose that part of the body that was injected.

Use a piece of cardboard to test the hose for leaks. Before attempting any service on hydraulic systems, shut off the engine which powers the hydraulic pump.

Lower the implement to the ground and relieve the pressure. Follow the instructions in your operator's manual, because the specific procedures for servicing the systems are very important to your safety.

Pull-In Points

Pull-in points usually occur when someone tries to remove plant material or other obstacles that have become stuck in machinery parts. Always shut off the power before attempting to clear plugged equipment. \blacklozenge



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Employment Bulletin Board ads run for 60 days with an additional 30 days available at 1/2 the price. Cost is \$75 for STA members and \$100 for non-members for the initial 60 day period. Payment by cheque (Canada only), MasterCard or Visa must accompany the job description. Jobs will be posted in a standard page format. Forward your submission, with all necessary details, to New Paradigm Communications: rob@npc-solutions.com, 519-371-6818, fax 519-371-5789.

For information on other advertising opportunities available through the Sports Turf Association, contact Lee Huether at info@sportsturfassociation.com, 519-763-9431, fax 519-766-1704.



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