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STA OFFICE HOURS

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The President's Desk

ANDREW GAYDON



Well 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 non-members 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! ♦



OTS 2004 Makes a Big Splash at the Falls

ALREADY LOOKING FORWARD TO NEXT YEAR'S EVENT!

The 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

The 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



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,

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.

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:

- 1) 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.

- 4) 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. ♦

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 composition (% of each component) on the two study fields.

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 Averill Park 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.

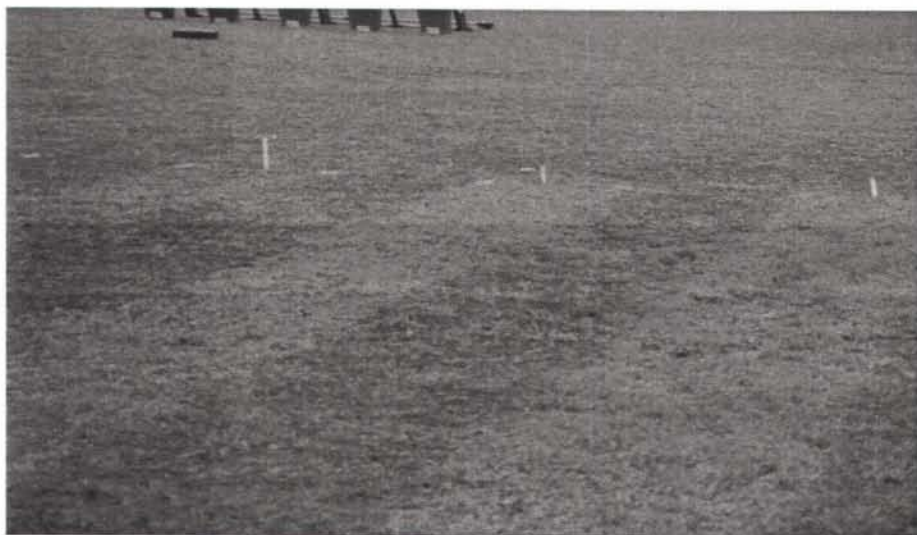
This same phenomenon is also partly responsible for the increase in density of the overseeded plots as well, except for the three treatments that started with no turfgrass, in which case the increase in density can be attributed to overseeding alone.

“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



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.

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 cost-feasible 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.

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 high-phosphorous fertilizer with overseeding should be studied, since such starter-fertilizers 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

This 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



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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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NATHAN ODGARD HIGHLIGHTS NEW FEATURES OF THE CHICAGO BEAR'S HOME FIELD

Despite 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 Soldier 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..."

→ page 12