

# SPORTS TURF MANAGER

... for better, safe Sports Turf

SEPTEMBER 2001

VOLUME 14 ♦ ISSUE 3

## Drainage Techniques

CHUCK WOLSBORN, GOLF COURSE SUPERINTENDENT, GRESHAM GOLF LINKS

20  
page issue

*"Common sense is the most important characteristic of a good golf course superintendent and if you're not sure you have that, then put in more drainage (a.k.a. the 'Hawtree Law')," stated British golf architect Fred W. Hawtree. "Drainage, drainage and more drainage is the key to better turf in Britain."*

**T**hough these statements obviously understate our jobs, they point out how important a dry playing surface is to playing the game of golf and growing healthy turf. Old Tom Morris, Donald Ross and Dr. Alister McKinzey all emphasized the importance of locating golf courses on well drained sites. I remember reading of Old Tom designing a golf course in the morning and playing the course's first tournament that afternoon – what marvelous pieces of land he must have had to work with. More often than not our golf courses are located on marginal pieces of property with soils and/or soil structure that would be considered unacceptable by our predecessors. Even though we might not have the naturally well drained sites of our forbears, the tools we have to 'de-water' a site would have made them envious.

As my crew is working on a rather large drainage project, I look back over the years



More often than not, our golf courses are located on marginal pieces of property with soils and/or soil structure that would previously be considered unacceptable.

at a number of mistakes and learning experiences I have had in the installation of drainage. If a mistake could be made in putting a piece of drainpipe in the ground, then a member of my crew or myself has probably made it. From using the wrong grade, wrong pipe, wrong rock or wrong fabric (any fabric is the wrong fabric) we probably tried to make it work. I have also read most of the turfgrass books with regard to drainage and understand the prin-

ciples but few authors really get into the mechanics of installing drainage in established turf. What follows are some of the lessons my crew and I have learned over the years while installing subsurface drainage.

### French Drains

I never use the term 'French Drain' to describe any subsurface drains. My understanding of French Drains is using large flat stones to create underground voids for water to move through. I have heard the term used to describe any hole filled with rock to sophisticated subsurface systems as used in putting greens and sand-based athletic fields. It has been my experience when people refer to 'French Drains' they do not know what they are talking about but like to sound like they do.

### Locates

The area to be drained needs to be laid out and marked in white paint (and/or flags) with concern being given to locating all existing public and private pipes and wires. A single call to the Oregon Utility Notification Center will notify electric, gas, communications, water and sewer. Check if such a centre exists for your area. Ignoring this step exposes your crew and yourself to unnecessary risks. Generally all locates are completed in three working days. ... *con't on page 4*

In this issue of Sports Turf Manager, you'll find ...

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# What Are You Doing About Water?

COMMENTS FROM EDITOR MICHAEL BLADON

**W**e need to begin immediately to educate people as to better use of our water resources. As populations multiply and the demand for more sports fields increases, the situation becomes more critical.

Researchers James Beard and R.L. Green wrote: "The main cause for excessive landscape water use in most situations is the human factor. The waste of water results from improper irrigation practices and poor landscape designs, rather than any one major group of landscape plants."

We need then to start looking to the future and asking some questions about water as it relates to our sports fields. What is your municipality, university or school doing about water and water bans where your fields are concerned? These are outdoor classrooms. Shouldn't they be budgeted for in the same manner as building maintenance and repair?

What is your water source for irrigation purposes? Are you using recycled water? It is estimated less than 5% of water used for domestic, turf, agricultural, industrial and environmental purposes in the United States is recycled water. If there were statistics available, would Canada be any different? How much are you willing to pay for water for your fields? What about the safety of the players? Are your

turf facilities sand based? How will they survive with water shortages?

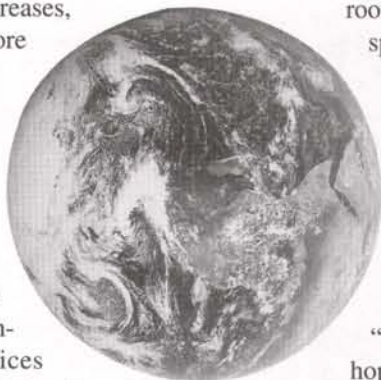
The time is now to plan ahead for water. There is a need to develop deeper

rooted, more drought tolerant species of grasses. In a letter to the editor of *Irrigation Business and Technology* magazine (July/August 2001) Dr. Lyman S. Willardson, Professor Emeritus, Utah State University, writes:

"Don't be confused by the hope that increasing irrigation efficiency is going to generate vast quantities of water for new uses. The only water available that we are not currently consuming is water running into the oceans on the coastlines of the world. We can change the way we use the water and the distribution of the water between users, but we cannot create more water by being more efficient. I think this situation is referred to as a zero sum game. What one water user gains must be given up by another."

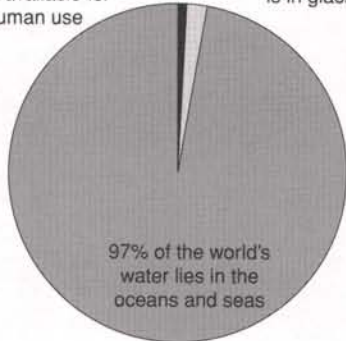
In *Water Everywhere*, Dr. Marc Cathey states, "Water is the earth's primary chemical under its greatest challenge." What are you doing about water? ♦

— *Water Everywhere* is the preface in *Water Right: Conserving Our Water, Preserving Our Environment* published by the International Turf Producers Foundation, telephone 847-705-9898, email Turf-Grass@msn.com.



1% of all water is available for human use

2% of all water is in glacial ice



97% of the world's water lies in the oceans and seas

## World Water Facts ...

Human demand for water has risen at remarkable rates as a result of both increasing population and water use. Exacerbating the situation is the fact that the 1 percent of available water is being spoiled by various forms of pollution, thus reducing its use for our consumption. It's time to begin examining *all* of our various water uses.

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Please include the vital information of name, telephone number with area code, and time of calling. The office may be reached at any time by faxing (519) 766-1704 or via e-mail.

# Member News

## OPA ELECTS DON SADLER PRESIDENT

**D**on Sadler is celebrating 50 in a big way this year. Personally, he is marking the half-century and professionally he is heading the Ontario Parks Association as it celebrates 50 years of professional work in the province.

On Thursday, July 19, Don Sadler, Director of Parks for the City of Windsor, was elected President of OPA during the 49th Annual General Meeting and Summer Conference in Timmins.

A member of Ontario Parks Association for more than 20 years, Don has been responsible for expanding and upgrading Windsor parks during the last eleven years. Don arrived from the City of Etobicoke in 1990 to oversee 165 parks – now expanded to over 180 with 2,400 acres of parkland. He is also responsible for major upgrades to community pools and sports fields. Last year, Don worked closely with the federal government to construct the temporary tent city for the Organization of American States General Assembly in Windsor.

A graduate of Humber College, Don began his career in the National Capitol Commission before moving to the City of Ottawa and then the City of Etobicoke. He is a member of Rotary Club 1918, an avid golfer and hockey player.

The Ontario Parks Association provides training and education for its 800 members throughout Ontario. The Association's motto, *Protecting Tomorrow Today*, reflects its dedication to expanding and protecting the environment.

For more information, call: John Howard, Executive Director, Ontario Parks Association, 627 Main Street East, Hamilton, Ontario L8M 1J5. ♦

— OPA News Release, August 17, 2001

*Congratulations, Don, from the STA!*

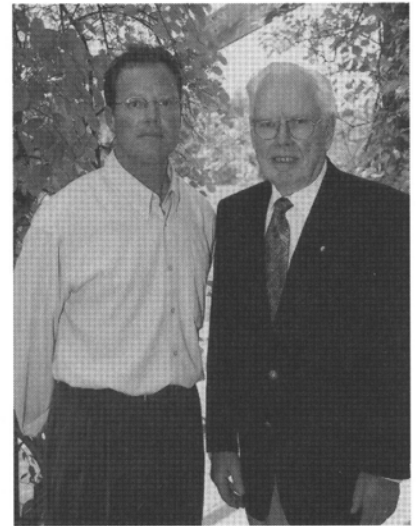
### STA NEWS CLIPS

All the lawns in the United States cover an area roughly equal to the state of Pennsylvania (approximately 45,333 square miles/117,412 square km).

— The Globe and Mail, August 27, 2001

**DEADLINE: OCTOBER 14**  
**Content for December issue**

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



## Scholarship Winners

### Gerald Rees

Saskatoon, SK

STA Scholarship Recipient  
2001 Ontario Diploma in  
Horticulture – Turf Option

### John D'Ovidio

City of Mississauga

STA Scholarship Recipient  
2001 Turf Managers' Short  
Course

*We congratulate both our scholarship winners! Pictured above is Gerald Rees (left) with Dr. Bob Sheard, STA Director. Unfortunately, we were unable to obtain a photograph of John D'Ovidio by press time.*

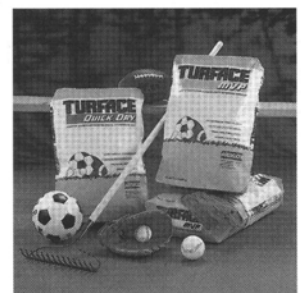
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# Drainage Techniques: Continued from Cover

CHUCK WOLSBORN, GOLF COURSE SUPERINTENDENT, GRESHAM GOLF LINKS

## Finding the Proper Grade

It did not take me long to learn running pipe at the proper grade was probably the most important part of the job. The use of a theodolite (transit) or builder's level can insure that your drainage will work when the job is complete. Placing the theodolite at the beginning of the line while trenching the ditch and checking grades can save a lot of handwork later.

The theodolite can be dialed to the exact grade you wish your pipe to run. I like to run main drain lines at a minimum 2% grade and laterals at a minimum of 1/2 of 1%. The main lines should be placed along the line of maximum slope terminating at the discharge area. Laterals can be laid at a maximum fall by using a herringbone pattern. Of course the site will probably dictate the use of herringbone, grid or random patterns. Running at flatter grades makes the use of the theodolite even more important. Spacing between laterals can be as little as 15-20 feet on sites with fine textured soils. Remember you will need to work between the trenches.

## Trench Basics

I like the ditch to be twice the width of the inside diameter of the pipe being used. In the case of 4-inch pipe, we trench an 8-inch ditch. This will allow the pipe to be completely encircled with rock. The depth of the trench should be based on the fall and that the pipe should have a minimum of 12-18 inches of cover. Generally 24 inches is the range we dig but deeper generally is better.

## Efficient Clean-up

A labour saving technique that I credit to my crew is handling of the spoils. After the location of the line is marked, plywood is laid next to the ditch on the side that the trencher will deposit the major part of the spoils. This accomplishes two things: first, it protects the underlying turf and second, an operator on a loader can pick up a high percentage of the material thus reducing handwork.

Often the remaining material in the bottom of the ditch will turn to mud before it can be removed. If and when this

happens, it is practically impossible to remove with a conventional shovel. For these cases we use a tool we designed in house called 'Can on a Stick.' This tool is composed of a 3 lb. coffee can generally attached to a discarded golf cart handle at about a 45 degree angle. This does an excellent job of getting the slop out of the ditch. We have no patent pending on this thingamajig!

## Rock Bed Installation

Now that the ditch is clean, there is one final step prior to laying of the pipe. We use the theodolite to help as we lay a minimum one-inch rock bed in the bottom of the ditch to our final grade. This will be the second and final check of the grade.

## Catch Basins

We like to locate catch basins in all low areas and/or at least every 100 ft. as cleanouts and inspection portals. Catch basins work great as clean outs in that they are generally easier to locate than a 4-inch piece of pipe, easy to see down, and easy to stick a hose down if flushing is in order.

My pipe of choice is ADS N-12. Although this pipe looks quite similar to the conventional corrugated slotted drainpipe we have used in the past, I think it is a substantially superior product. N-12 is a corrugated double wall pipe with a smooth inner wall. This pipe has significantly greater strength than conventional corrugated drainpipe and is less likely to be crushed through a shallow run. With the smooth inner wall, it is less likely to silt up as with corrugated pipe. In fact, I have seen engineers' drawings showing this pipe laid at as little as 1/3 of 1%. If silting does become a problem, the smooth inner wall is much easier to run a hose down during the flushing process. Since it is semi-rigid, it lays in the open ditch better and is easier to work with during the rocking stage. On the down side, N-12 costs twice as much as comparable single wall corrugated pipe. Depending on the depth of the trench and other variables, my drains cost me between \$4 and \$8 a lineal foot. Compare conventional slotted 4"

corrugated drain pipe at 35¢ a foot to comparable N-12 at 70¢, I think the pipe cost is nominal when compared to the benefits of this product, namely the superior strength and flow characteristics.

## Backfilling

The rock we use as backfill is 1/4 to 3/8 inch round pea gravel. The shape is as important as the size in that if a rock that is too angular is used there will be insufficient voids between the individual stones to move water. We backfill to the surface of the trench with pea gravel and avoid using sand or fine soils on top which might contaminate the gravel or create a perched water table.

## Rocking the Trench

For years, rocking the trench was a time consuming and labour intensive job. It often involved load after load of drain rock shoveled into the ditch by hand. This would often times result in a rock missing the ditch and require additional handwork. We have simplified this job with the use of a tractor-mounted back fill piece of equipment adapted from an old fertilizer spreader. The device is simple and can be assembled by merely removing a tractor mounted rotary spreaders' metering head, rotor and PTO. What remains is simply a rather large one-yard funnel mounted on the back of the tractor. To the bottom of hopper, attach a three-foot section of hose made from an automotive inner tube with a large hose clamp. With the hose (inner tube), one can control the flow of the back fill material into the trench while an operator drives the tractor over the trench. During filling and transport, the hose (inner tube) is wrapped around the frame and secured to prevent rock from leaking out.

I hope some of these techniques can be incorporated into your drainage projects. I would like to thank my predecessors, golf course architects, civil engineers and golf course superintendents who shared many of their ideas with me. ♦

—Turfgrass Management in the Pacific Northwest, Volume 4, Issue 2, Spring 2001



## Coming Events

### Mark Your Calendar!

**October 16-17**

Landscape Ontario  
Garden Expo, Toronto, ON  
Information: 905-875-1805

**October 28-30**

National Institute on Park and  
Grounds Management  
31<sup>st</sup> Educational Conference  
Milwaukee, WI  
Information: 920-733-2301

**November 4-6**

The Irrigation Association  
22<sup>nd</sup> Annual International Irrigation  
Show and Technical Conference  
San Antonio, TX  
Information: 703-536-7080

**November 13-15**

New York State Turfgrass Associa-  
tion 26<sup>th</sup> Annual Turf and Grounds  
Exposition, Syracuse, NY  
Information: 518-783-1229

**January 8-10, 2002**

Landscape Ontario  
Congress 2002, Toronto, ON  
Information: 905-875-1805

**January 22-24, 2002**

Ontario Turfgrass Symposium  
Toronto, ON  
Information: 519-767-5000

**February 2002; February 2003**

University of Guelph, *Turf Manag-  
ers Short Course*, Guelph, ON  
Info: 519-767-5000

**February 24-27, 2002**

Western Canada Turfgrass  
Association 39<sup>th</sup> Annual Confer-  
ence & Show, Penticton, BC  
Information: 604-467-2564

**March 2-5, 2002**

CGSA and the Quebec Golf  
Superintendents Association  
53<sup>rd</sup> Canadian International  
Turfgrass Conference & Trade  
Show, Quebec City, QC  
Information: 905-602-8873 x 225

## Note New Dates for 2002!!



## Ontario Turfgrass Symposium

Education & Trade Show

**January 22-24, 2002, Toronto, ON**

Support your association and save money too!

Early bird registration date: December 3!

When registering for the OTS, be sure to indicate you are a member of the Sports Turf Association, a sponsoring association of the symposium. On your registration form please  Sports Turf Association to ensure your membership credit is directed to us!

**Save more money** on the registration fees of others from your facility/organization who are not members of the STA. Non-members registered **at the same time** as a member qualify for the same lower association rates. Send the registration in the same envelope, fax it at the same time, or make just one phone call to register.

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September already! In Oakville we have survived quite a burn-off with irrigation systems proving to be essential once again. However, even that safety net was removed in Halton for two weeks as a water restriction was declared and systems had to be shut down. Luckily, exception was given to our two sand fields. We are having problems with *Poa annua* in one of them, so I was tempted to follow the ban to the letter, which would force us to strip and re-seed that field but decided budgets could be spent better elsewhere.

## STA Field Day

I hope you had the chance to attend and enjoy our Field Day. Many thanks to the City of Waterloo for providing a tremendous venue and Mark Hillis and Karen Richter for assisting with the events. The venue was, for both morning and afternoon sessions, very well suited. The morning started out with Henry Waszczuk, host of *Fins and Skins Classic Adventures*, followed by the IAPA's Bob Deline with 'New Worker Orientation.' The afternoon was packed with equipment demos and supplier discussions. It is important to know that the day was made possible by the following sponsors who allowed us to present a cutting edge Field Day, lunch, refreshments and grab bags for under \$50 a person: AerWay, Bannerman, Dol Turf Restoration Ltd., G.C. Duke Equipment Ltd., Nu-Gro Corporation, Plant Products Co. Ltd., Turf Care Products Canada Limited, United Horticultural Supply and Vanden Bussche Irrigation & Equipment Ltd. The quality of information on hand was truly representative of their support. I wish to sincerely thank you, as always, for your support of the Sports Turf Association.

## Turfgrass Conference

In July, Dr. Sheard, Lee Huether, Dwayne McAllister and I attended the International Turfgrass Research Conference. Thank you to Rob Witherspoon of the Guelph Turfgrass Institute for the invitation to participate. It was quite a day,

listening to research papers on related topics from around the world. In speaking with delegates the event was reported to be a wonderful conference – full of information and sight seeing in southern Ontario. Congratulations to all involved. What a lot of work goes into turf before we start cutting it!

## OTS Time Again

Hard to believe it is time again to publicize the Ontario Turfgrass Symposium. The dates have been changed to later in January allowing everyone to squeeze in those final days of the New Year's celebrations.

The Sports Turf Association has set up a preliminary program encompassing numerous areas of turf. Included will be a session on organics, defining them, discussing what is out there and a panel will be set up to answer questions. Certainly as pesticides have become a very hot topic, fertilizers will also.

Turf Jeopardy will take place for the 3rd year with 2001 defending champions, the southwestern Ontario team of Mark Hagen, Jeff Cunningham and Ross Tucker, ready to defend their title. Anyone wishing to contribute questions, or better yet participate in the challenge, please contact me at 905-845-6601 (x3352) or [jrivers@town.oakville.on.ca](mailto:jrivers@town.oakville.on.ca). All are welcome and it really is a lot of fun for both spectators and participants.

On the second day of the conference a session has been set up discussing 'The New Sports Field.' Determining a site, funding, best construction, new products to incorporate into construction and ear marking funds for staffing and maintenance will be discussed. Any questions about OTS, please contact Lee Huether at



Henry Waszczuk, Keynote Speaker at the 14th Annual Field Day, with STA President Jane Arnett-Rivers.

the STA office, 519-763-9431 or email [sta@gti.uoguelph.ca](mailto:sta@gti.uoguelph.ca). Looking forward to seeing you there.

## Book Success

Dr. Sheard's book, *Understanding Turf Management*, is now being used in the University of Guelph's Turf Managers Short Course, ORFA's Professional Development Program and at Lambton College. I strongly recommend this book as a 'desk top' or 'truck text.' Whether to retrieve a fast fact or look deeper into a turf issue, it is essential for the turf manager.

That's what's new with your Association. I hope you all survived the summer of students, drought, overuse, pesticide bans and whatever else came your way. If you have anything to share or questions about a new technique, a new machine, a new product, please contact Lee or myself. We would love to hear about it and of course share it with others. The spreading of information is how we all learn to manage better, safer sports turf.

Wishing you all the best. If not before, see you at OTS 2002! ♦



**New Dates for 2002! Check out the info on page 5.**

Register early and support the Sports Turf Association.



# Goal Post Safety Vital

## RECENT DEATH DRAWS SPOTLIGHT

**M**ontreal parks crews were busy securing soccer goals across the city this week as a teenager killed by a fallen soccer net was laid to rest.

An unanchored soccer goal weighing about 100 kilograms claimed the life of Shane Diabo, 14, Friday morning when it unexpectedly toppled.

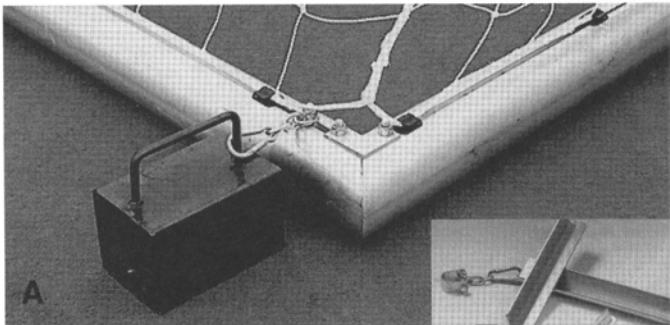
Claudette Lalonde of the Montreal department of parks and green spaces said each of the more than 100 goals in Montreal parks would be fitted with extra anchors.

In nearby Kahnawake, about 50 classmates joined hundreds of mourners at the funeral service for Diabo. The students went to the service on the Mohawk reserve from the private school in Montreal that Diabo attended.

Diabo was at a Montreal park last Friday for a soccer game as part of his gym class. He was swinging on the crossbar of the soccer net when it tipped over, causing severe head injuries. The goal posts weren't anchored to the ground. A private Mohawk ceremony was held later for the teen. ♦

— *Canadian Press, The Record, September 12, 2001*

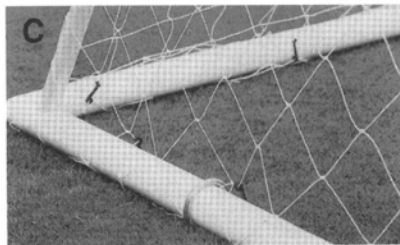
## GOAL POST SAFETY MAJOR ISSUE FOR GROUNDSTAFF



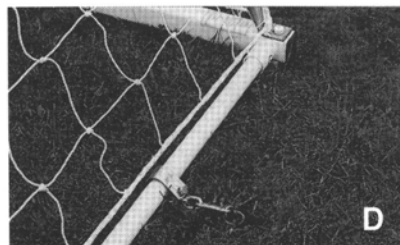
A



B



C



D

A) Proper goal anchors are vital.

B) These pegs will secure most light goals.

C) An example of good goal anchorage.

D) Safety is paramount in good frame fixings.

— *The Groundsman, Vol. 55, Number 5, May 2001*

For more info, see Vol. 12 (2), June 1999, *Sports Turf Manager*.

## Welcome STA New Members

### Mike VanAarsen

Supervisor, Environmental Services,  
Operations, City of London, ON

### Murray Cameron

Manager of Parks, Town of Oakville, ON

### Brian Adriaans

Horticulture Technician, City of Burlington, ON

### Bill Soule

Facility Maintenance Supervisor  
Molson Park, Barrie, ON

### Glenn Guest

Podolinsky Equipment Ltd., Petrolia, ON

### Larry Fortier

Acting Foreman, Town of Grimsby

### Peter Coon

Western Wholesale Division Manager  
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### Steve Marshall

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# International Turf Researchers Meet in Toronto

PAM CHARBONNEAU, OMAFRA TURFGRASS SPECIALIST

**D**uring the week of July 15-20, 2001, roughly 450 international turfgrass scientists convened in Toronto for the IXth International Turfgrass Research Conference. There were over 200 scientific presentations made over the four days. Your Association President, Jane Arnett-Rivers, and some of her staff volunteered their time and were able to take in some of the sessions.

## Supina Bluegrass

There was some interesting technical information presented at the conference that has some relevance to Ontario sports turf managers. John Sorochan of Michigan State University presented his findings on the suitability of supina bluegrass (*Poa supina*) for irrigated sports fields. He looked at different seeding ratios of supina bluegrass and Kentucky bluegrass (0, 5, 10, 25, 50 and 100% *Poa supina*). He also imposed two fertility regimes on the species mixtures as well as plots that received wear and plots that did not receive wear treatments. The bottom line for all of this is that the supina bluegrass does very well under wear treatments and it increases in a species mix when wear is imposed. The results of the two different fertility regimes were inconclusive. In one year the supina bluegrass content decreased more significantly with the high fertility vs. the low fertility and in the following year the results were the opposite. His results indicate that on irrigated highly trafficked sports fields that a seeding mixture of 5-

10% *Poa supina* with *Poa pratensis* is ideal. Considering the fact that the *Poa supina* seed is very expensive, a 5-10% mixture is affordable for this purpose.

## Increasing Internet Use

Of particular note at this scientific conference were the dozen papers presented in an Education and Information Technology Symposium. Most of these papers talked about using the internet as an education tool for turf managers. The topics included in this symposium included:

- a web-based turfgrass species selection tool
- a turfgrass soils laboratory designed for web delivery
- specialty instructional modules for turfgrass students and professionals
- Turf-Doctor: A web-based expert system for turfgrass problem solving
- an electronic journal for turfgrass science

The latter, an electronic journal for turfgrass science promises to be very interesting. The idea behind it is a journal that would take various subjects (such as soil fertility, soil compaction, stress physiology) and do an extensive, in-depth scientific literature review. It would also interpret the scientific literature. This is what I refer to as the bottom line of the research – what does it mean to me? This would include a practicum to relate scientific results to field practice, again, relate the sci-

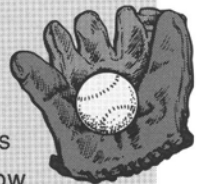
entific results to the real world that you as turf managers have to deal with. This journal would be a web-based electronic format journal. This idea sounds very promising and would be very good for sports turf managers, sports turf consultants and people like me who need to be able to transfer research results to the end users.

I think that the abundance of information on web-based delivery of turfgrass courses, whether they be university courses or continuing education courses, shows how important the internet is becoming to us as turf managers. It is greatly increasing the possibilities for formal learning, information gathering and trouble-shooting. The beauty of it all, is that we can educate ourselves without leaving our office or home. ♦



## STA NEWS CLIPS

**Young Pitchers:** In a survey, a group of 28 US orthopedic surgeons and coaches recommended that 12-year-old baseball pitchers be limited to 68 pitches per game, two games per week. They also advised that youngsters not be taught to throw curve balls until they are 15.



— The Globe and Mail, August 27, 2001

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# 14th Annual STA Field Day Resounding Success

HELD WEDNESDAY, AUGUST 15 IN WATERLOO, ONTARIO

The 100 participants in the 14th Annual Sports Turf Association Field Day were blessed not only with good weather but also with excellent speakers. Suppliers and distributors displayed and demonstrated new equipment now available to sports turf managers. Our co-hosts did an admirable job of dispensing information on and off the buses as well as looking after our set up needs and audio visual requirements, and again, we extend our thanks. The Waterloo Rec-



recreation Complex is an excellent facility to hold this type of meeting. Field Day Chair Paul Turner welcomed everyone, outlined the proceedings and agenda for the day and then introduced President Jane Arnett Rivers. Following is a summary of speaker sessions.

## Henry Waszczuk

Keynote speaker this year was Henry Waszczuk. Henry is a CFL Hall of Fame inductee who spent 10 years with the Hamilton Tiger Cats starting in 1975. Henry also taught high school in Hamilton for seven years during his football career. After football he decided to stop teaching and started a new job as an outdoor enthusiast and fishing educator on television. He now has a new show on TSN entitled *Fins and Skins Classic Adventures* which can be seen on Saturdays.

Henry's talk was highly entertaining and included anecdotes about football as well as fishing. He played in the days when artificial turf was in its infancy and the fields were very hard which in turn was incredibly tough on the body. Players were still sore from playing on artificial turf the week after their previous game. Burns were common from sliding or from tackling – especially on the painted logos.

Sometimes the artificial turf fields were so firm that it was not unusual to either

turn an ankle or to seriously injure a knee – especially for fullbacks. 'Turf Toe' was another frequent problem on artificial turf where players would stub their toe and have a very painful injury. Fields such as Lansdowne Park in Ottawa had extremely high centre crowns that were difficult to play on – especially for running backs.

Henry then spoke of his fishing adventures. He has fished with both Johnny Bower and Bobby Orr. According to statistics, 30% of the population play golf and 20% fish for entertainment. This was the impetus for his new *Fins and Skins* show. Points are earned for size of fish caught which are used for handicapping in the golf or skins part of the competition.

Henry has travelled all over the world to places like South Africa, Zimbabwe, Bermuda and has fished and played golf with Nick Price, Nick Faldo and Mike Bullard of TV fame. Henry finished his talk with a highly amusing video of he and Mike Bullard fishing for cod in the Maritimes.

## New Worker Orientation

Bob Deline, Safety Consultant, Industrial Accident Prevention Association

Bob began his session by stating two vital points: 1) all new employees should

receive orientation and 2) always ensure you are doing what you say you are doing. He then asked who in the audience were 'supervisors' as the Health and Safety Act defines this as anyone who has charge of a workplace or authority over a worker in the workplace. If you have to tell an employee what to do, where to do it and how to do it and something goes wrong, you could be charged as a supervisor. Even though your title may not be supervisor, if you are

part of a group of people who are responsible for a work crew, you can be judged as a supervisor. And when there is an accident, the supervisor is always the first person charged.

## Examining the Legislation

Under provincial law, in order to be a supervisor you have to be a competent person. Sixty-five percent of supervisors in this province do not meet basic competency requirements as outlined in the Health and Safety Act. Competency is a three part process: 1) to be qualified because of your knowledge, experience and training; 2) to be familiar with actual or potential hazards; and 3) to be familiar with the Health and Safety Act and the regulations. You do not have to memorize it, just be acquainted with it. Many supervisors are not considered competent because they are not familiar with Section 27 of the Act which outlines their responsibilities. Remember that when a worker is promoted to a supervisory position, he/she needs a new orientation.

## Orientation Benefits

When you think of administering an orientation program, think of all the different areas other than work where this type of program would be beneficial. A benefit of a good orientation program is that it shows legitimate concern for the





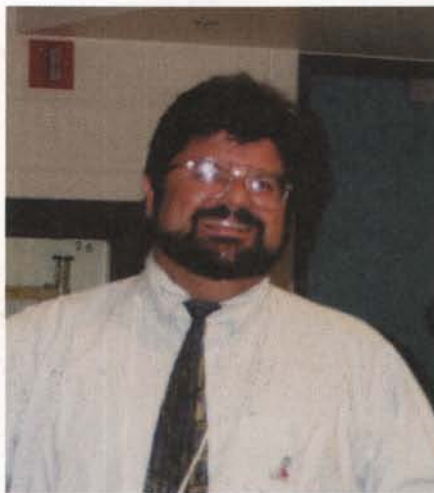
worker instead of promoting the belief that your company is only interested in the bottom line financially. It also shows a very positive attitude toward health and safety. More concrete benefits include reductions in sick days and on the job accidents. Orientation is a part of a multifaceted process to help the employee.

One of the challenges is to differentiate between what is orientation and what is on the job training. Orientation must be distinguished from normal job training as an extremely important area of information that protects both the employer and the employee. Legislation for supervisors states that from an employer perspective you are obligated to provide information, instruction and supervision to protect the health and safety of your workers. You must take every reasonable precaution. Should something go wrong and you are brought into a court of law, the only defense you have is a 'due diligence' one. That is to be able to prove beyond a shadow of a doubt that as an employer you took every precaution deemed reasonable.

#### *A Need to Comply*

The legislation under the Occupational Health and Safety Act is like no other, in that you are guilty until proven innocent. You are to ensure that workers work in a safe manner and use the protective devices required under the act or regulation. Ensure workers wear personal protective equipment. No matter what the standards you set as to work boots, gloves, etc., make sure the workers comply. It is not up to the Safety Committee, it is the supervisor's responsibility to advise workers about hazards. It is most difficult to build awareness of potential hazards – those that could happen. Because of this, repetitive strain injuries are the number one injury in the province. Why, because by the time you see the swelling, the damage is already done.

The legislation for workers is under Section 28 of the Act. Many orientation programs do not reveal that workers have legal responsibilities – but they should. If safety equipment is part of the job, it is a condition of employment that you have to let that individual know when they come in. It is the worker's responsibility to report any hazards or defective equipment. They do not know that unless you tell them it is their responsibility. They can not op-



### **WHO SHOULD GET ORIENTATION?**

- new/transferred employees
- returns from long-term disability
  - contractors • supervisors
  - visitors • temporary workers

erate any equipment they have not been properly trained to use. Review of Section 28 is a must for any orientation program.

#### *Designing a Program*

An effective orientation program is much like selling safety or positive behaviour at home. For example, realize that you have been teaching your children to drive since they have been sitting in a car seat behind you. Watch your mannerisms, your attitude, the way you do it. You are setting the example. Most workers in the province are not aware of their responsibilities. The most difficult to sell is a positive attitude toward the Health and Safety Act. Some of the special challenges are orienting young workers. Defined as 14-25, these are the highest rate group in the province. One in five will be involved in a lost time accident before they reach age 25. You cannot make assumptions with young people where workplace safety is concerned because they think they are invincible!

In the development cycle of an orientation program you have to assess both the needs of the worker and the corporation. What do you want the program to accomplish? It is vital to set objectives. Then determine topics and organize materials. As dry as the topic may be, you need to

talk about legislation and the workers' need to understand what their responsibilities are under the law. When setting your objectives, use the SMART acronym, make sure objectives are Specific, Measurable, Achievable, Relevant and Time related. Remember that the legal rights of workers are 1) the right to refuse; 2) the right to participate; and 3) the right to know. Talk about WHMIS. This training came into law in 1988 and even now the province is only 50% compliant.

Review lockout procedures or confined space entry depending on the group. Discuss chemical hazards – every workplace has them, some worse than others. Go over the general rules and the reasons for them. Make sure employees understand your company's Personal Protection Equipment (PPE) standards. An emergency plan should be included whether it is a fire or chemical evacuation or out in the field with a critical injury. When creating your orientation program checklist use the internet, it is a great source of information. There is a Department of Labour website, [www.gov.on.ca/lab/ohs/ohse.htm](http://www.gov.on.ca/lab/ohs/ohse.htm) and an IAPA website, [www.iapa.on.ca](http://www.iapa.on.ca), where you can pull down samples of orientation programs, checklists and accident investigation procedures.

Once you have determined your objectives, outline your methods of delivery. How much information are you going to cover orally versus providing detailed hand-outs? When someone is sitting in an orientation meeting, you have to keep in mind that participants are going to absorb less than 20% of the spoken word so it is important to use a combination of visual aids, written material and thorough explanations of critical areas.

Then you must evaluate your program. An orientation follow-up is necessary to see if employees understand the process. Compare your objectives with your results – are you meeting pre-determined goals? Keep in mind that some objectives are results-based. To be able to see a reasonable drop in lost time, accidents, and therefore a drop in lost time claims, you need a fairly lengthy review process. Bob cited an example of a grocery chain with 600 employees. The year before he worked there, there were 85 lost time claims where employees were hurt and had to stay off work. On analysis, it was found that 50 were people who had been with the com-



pany less than a month. This told the company they were not doing a good job of orienting new people. Why some may ask – it's only a grocery store ...

Finally, each company sets the standards which employees must comply with. The orientation process is not an optional program – optional programs do not work and they protect neither the worker nor the company. You cannot prove you have taken every reasonable precaution with an optional program. You have to show you are enforcing it. Bob's final emphasis was on hazard reporting – documentation is a must. This is where many companies fail. An employee discovers a problem, repairs it and moves on without documentation. This is a key item. Remember that orientation is an opportunity to get the necessary information to the required personnel as well as getting their careers off to a safe start.

*Editors note: Bob's talk was most entertaining in the process of making an important but dry subject interesting.*

### Seed Selection

John Rector, National Sales Representative/Turfgrass Consultant, Turf-Seed, Inc. of Oregon

John spoke to the group on seed selection and talked about the different specialty grasses that can be used in your seed mixes to give you one more tool to work with in high traffic sports turf areas where one needs wear tolerance, aggressive growth and winter hardiness.

### Shade Star

Shade tolerant grass coming from northern Europe commonly referred to as crested dogtail or comb grass (*Cynosurus cristatus*), variety Shade Star is rated higher than the fescues for shade tolerance. Used in grass parking areas and around goal mouths, its biggest attribute is that it is winter active and its high turf density makes it ideal in sports turf blends. In a fall 1998 traffic study to simulate six weeks of soccer games, Shade Star outperformed the top perennial ryegrasses for wear tolerance and turf quality. Another

trial containing 60% perennial rye, 30% Shade Star, and 10% Kentucky blue is being conducted at a soccer facility near Portland, Oregon, to determine its capabilities in both goal areas and sidelines – both extremely tough areas to keep turfed. Its primary weakness, as with most cool season grasses, is that it will struggle in periods of prolonged heat even with irrigation. This is why it is recommended to use with the bluegrasses, ryegrasses and tall fescues. It is most useful in high traffic areas that are shady. For example, turf managers have many areas that are shady with traffic problems on football stadia and there are not many grasses out there to solve the problem.

### Shade Champ

John also talked about *Deschampsia caespitosa*, variety Shade Champ. Referred to as tufted hairgrass, *Deschampsia* is a versatile genus comprised of some 40 species. A 'circumpolar genus,' the *Deschampsia* range from the Arctic to throughout the northern hemisphere. Shade Champ originated in Sweden and

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was developed for outstanding shade tolerance and excellent turf quality. Its sports turf use is primarily a function of its quick establishment, rapid tillering, and good traffic tolerance. It tolerates mowing heights of 1/2 inch and mixes well with Kentucky bluegrass, perennial ryegrass, fine fescue, tall fescue and Shade Star crested dogtail. Irrigation is necessary through the warm summer months.

#### Bluegrass Seed Mixes

Turf-Seed has 125 acres in the northwest and another 40 acres in North Carolina involved in research with all the post season species. The company has a complete research program that addresses the sports turf industry through to the homeowner and everything in between. Their research tries to show how different seed mixes perform.

Turf-Seed has tried mowing bluegrasses as low as 1-1/2 cm to check wear tolerance. In contrast, ryegrasses, with their high lignin content, are extremely wear tolerant. In areas where bluegrasses get beaten up, you need

grasses with strong rhizomes that are aggressive and have early spring green-up. Some mixes are great going in to the winter but very slow coming out in spring. Sometimes variety green-up can vary up to a month between getting colour, mowing and playing on it, versus the grass just sitting there. The NTEP program for bluegrasses is good – look at the data and use it as a guideline (see Vol. 14 (1), March 2001, *Sports Turf Manager*, "Guidelines for Using NTEP Data").

There are two research sites in Ontario, one at the Guelph Turfgrass Institute. Results from these sites are not an authority on what to use on your particular fields, so use the information as a guideline only.



Excellent safety standards displayed at RIM Park in Waterloo include a 6 foot fence in front of the players' bench and an overhang and high screen that protects spectators.

Pick and choose, remember that when you're using bluegrasses, you want to blend for strengths and weaknesses. When dealing with sports turf mixes ideally you want grasses that will take a lower cutting height. Blend aggressiveness with heat tolerance and spring green-up. Blue tags on seed bags guarantee that whatever is on the bag is in the bag (see Volume 12, Issue 2, June 1999, *Sports Turf Manager*,



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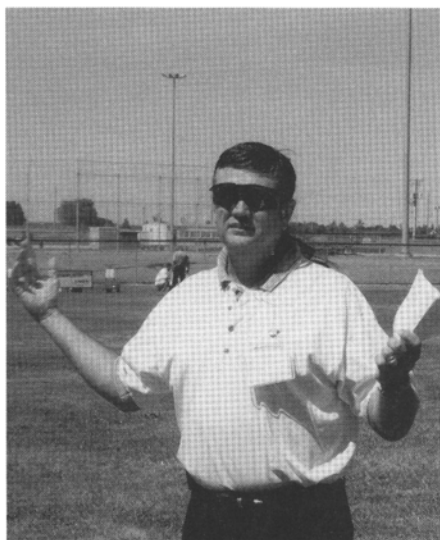
“Seed Label”). Remember all certified seed that comes out of the production field is tested via random samples. The cleaner selects a pound at random and it is sent to a state laboratory.

### **Sports Turf Irrigation**

Dean Cormack, Service Manager, Vanden Bussche Irrigation & Equipment Limited

#### *Design*

Design looks at the greatest amount of irrigation coverage keeping in mind budget restraints. Dean advises going to more than one person with your design and compare. Every design, whether a golf course or a sports field, is site specific. The design is also dependent on where the water is coming from. VBI does not design so that sprinklers are at their maximum. Many companies will do a design at no cost but make sure it meets your specific irrigation needs.



#### *Installation*

It is extremely important to use qualified contractors for installation. Landscape Ontario has a good program for training installers. There is no certification required in Ontario to put equipment in the ground although it is required in other parts of the world. You will sleep better at night with a qualified installer. Ask around to check on systems irrigation companies have installed in the past. Whether you are a village, town or region, you need an on-site supervisor who will ensure quality workmanship, no short cuttings and that the specifications are being followed.

#### *Equipment*

As a customer, you want after-care support. Have a competent person come out and train you on the system – nine times out of 10 the contractor will say here are the keys to the pumphouse and leave. Make sure the company you select for your equipment has people to train you and your staff to ensure you get the most for your money. There are many cases where the contractor left the keys to the irrigation system and the superintendent did not even know how to turn on the computer, repair a sprinkler, valve or controller! It is up to the distributor who has the responsibility to see that this happens. If you are not getting support, get in touch with the distributor and say I need some training on this system.

#### *Irrigation Goals*

As turf managers, you are all working toward the same end – consistency of turf, consistency of the playing surface regardless of the equipment used so people are not breaking legs or turning ankles, consistency of bounce off the infield and ball roll or bounce on the soccer field. Points to consider include:

- Spacing is important. With a wind of 5 mph, in 65 feet you are losing 12% of your performance.
- Correct soils and proper turf – we don't want water on the warning track.
- How much water is at the source?
- Set the system properly so that you only get water where and when you need it.
- Scheduling for events and drying out for the big event.
- Replace only the amount of water lost through evapotranspiration – evaporation lost through the sun and transpiration lost through the plant.
- Set the controller for seasonal use – less water needed in the spring and the fall. In summer, more water may be needed. Re-calculate the controller for the time of the year and weather conditions.

Employees should be trained to check sprinklers to make sure they are not plugged, that they are turning, are installed at the right height and are working perfectly. It's easy to put a gauge on the controller. For around \$35, you can check if your system is losing pressure and if you have a leak somewhere. No matter how well you have prepared your system for winter in fall, when you start up in spring

don't turn on a single sprinkler until you can turn on as many quick couplers as you can and flush the system for at least a day, because in the winter all the corrosion and algae inside the pipe dries out and falls down. As soon as you turn on the first sprinkler, all that material will head to the first sprinkler or valve. There's a chance you will have trouble with them all season unless you take them apart and clean them.



#### **Fertilizer**

Julie Glendinning, Marketing Co-Ordinator, Nu-Gro Corporation, Professional Turf Product Division

Julie stated that what fertilizer you buy will depend on the kind of analysis you get for your crop. Proper fertilization enables turfgrass to maintain good colour, density and vigour, and allows it to resist diseases, weeds and insects more successfully. There are 16 different mineral elements essential to the growth of turfgrass – nitrogen is by far the most important. It has a dramatic impact on turfgrass colour, growth, density, tolerance to stress and recuperative power. Yet nitrogen is the mineral that is most often in short supply. If turfgrass doesn't have enough nitrogen, it will stop growing and turn pale and yellowish. That's why turfgrass benefits from a fertilizer with a reliable nitrogen source.

In general, synthetic nitrogen falls into one of three categories: 1) quick-release, water-soluble sources; 2) slower-release, coated surfaces; and 3) controlled-release reacted sources. Distribution of the fertilizer product is dependent on granule size,



which also affects the nutrient dispersion.

Quick-release nitrogen sources are soluble in water; can be used immediately by the plant (thus plants show a rapid initial response); have high potential for foliar burn; require applications at low rates and frequent intervals to sustain growth; and leach readily. Urea is an example of one of today's most widely used nitrogen products which is water soluble. Overall, quick-release nitrogen fertilizers are not highly efficient.

Coated slow-release sources of nitrogen are slowly soluble in water; can be applied less frequently; reduce fertilizer losses from leaching; produce a more uniform growth response; are economically sound for general turf applications but are susceptible to breaking/damage with handling. Two common types of slow-release fertilizers are sulfur-coated urea and polymer/resin-coated urea. The granules have pinhole sections that wear down the coating which means nitrogen is released in the form of ammonia and hydrolyzed. Different coatings vary the length of time to release the nitrogen.

Reacted, controlled-release nitrogen sources have controlled solubility in water; supply nitrogen gradually; result in little fertilizer loss through leaching; have a low salt index and produce little burning and their performance is not affected by a coating. No matter the size of granule, these fertilizers will still release over a longer period of time. The release pattern on Nitroform (produced by Nu-Gro) can be from 12-16 months. Control release

products are pricier but more consistent, particularly for fine turf areas.

Nitrogen sources can be used alone or in mixed fertilizers, or even in combinations of quick- and slower-release sources. By understanding each source and its benefits and drawbacks, turf managers can adjust their fertilizer application programs to get the most benefit out of each turfgrass treatment.

### Topdressing

Dr. R.W. (Bob) Sheard, STA

Bob was the last to speak and the program was running late so he decided to be brief in his remarks on topdressing. Some of the reasons for topdressing are to help control thatch, to modify soils, to level a sports field, and for covering seed during overseeding practices. He explained that the most important rule is to always topdress with the same material as was used in the original construction of the field or green. Experiments in the past have shown that by taking a profile of a golf green, it could be observed through the different soil layers what materials each superintendent used and how many years he stayed at the course. Particle size is also very important to retain the same type and size of sands. Otherwise it is impossible to predict water transmission and retention values that may develop with the addition of different soil/sand mix builds. ♦

— summarized by Michael Bladon

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### Words of Wisdom

The great things you intend to do some time must have a beginning if they are ever to be done, so begin to do something worthwhile today. — Grenville Kleiser



# From the GTI Advisor

## ROB WITHERSPOON SPEAKS OUT ON PESTICIDE BANS

Further to my columns on pesticide bans, I would like to touch briefly on pesticide bans and their potential impact on sports fields. As the majority of fields in Canada are managed by public agencies like municipalities and school boards, sports turf managers are probably at the leading edge of managing turf with minimal inputs. Many cities and school boards have cut back or eliminated pesticide use, in many cases for budgetary reasons as opposed to environmental concerns. I feel for the sports turf managers who have the knowledge and expertise to manage their fields but lack the budgetary support to do the job.

As a result, the state of many publicly operated sports fields is less than ideal. Goal mouth areas are mud holes and prostrate knotweed is the predominant plant species on the field. Although I have not seen the results of any studies in this area, I would speculate that the safety risk to children of poorly maintained sports fields is exponentially greater than any potential health risk associated with pesticide

use. In the absence of pesticide use, many of these fields do not even receive a minimum of good cultural practices such as fertilization, aeration and overseeding.

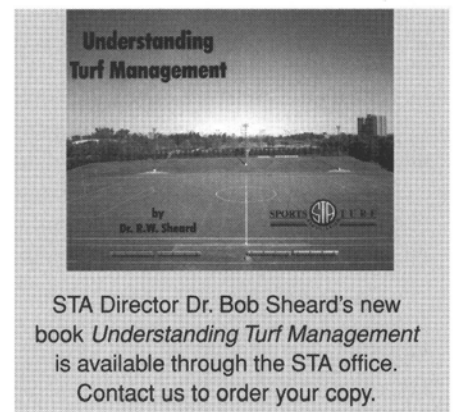
Hopefully the current drive to improve the safety of playground equipment will extend to the playing fields. Investment in good construction and maintenance of sports fields can only provide positive impacts such as improved recreational opportunities for youth and improved fitness which I suspect would also lead to better performance in the classroom and a healthier society placing less demands on our health care system.

The challenge is finding resources at a time when the need for classroom materials and municipal infrastructure upgrades are competing for the same resources. Perhaps alternative sources for support can be found in the private sector. Many companies already provide land and recreational facilities for their employees that are shared with the community. A number of large sports complex developments are already being built utilizing a public-private

sector shared funding model. We certainly have the knowledge and expertise to provide safe and healthy sports turf with a minimum of pesticide use. Hopefully pesticide bans will not become another excuse for poorly constructed and maintained sports fields. ♦

— The GTI Advisor, Vol. 6 (13), Aug. 27

GTI Director Rob Witherspoon can be reached at 519-824-4120 ext. 6886 or via e-mail: robwith@uoguelph.ca.



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# Striping and Lining

MIKE ANDRESEN, CERTIFIED SPORTS FIELD MANAGER, IOWA STATE UNIVERSITY

**S**triping, lining and logos are the finishing touches on your playing field. Safety and playability must come before aesthetics, but aesthetics are a very important aspect of a sports turf manager's job.

## Accuracy

In striping and lining, accuracy is essential. Games are won or lost by inches, and many of those inches are marked by what you've painted, and how precisely you've painted it.

If you're getting a new logo stencil, put the extra time and money into getting one that's detailed. Invest in quality paint and quality painting equipment, it will pay for itself in the long run. Don't be afraid to try out new paints and to work with your paint supplier to get the paint you want.

Logos are more than a pretty design. They project the image of your organization and your team. They're also a marketing tool. A great logo sells those shirts, hats and other paraphernalia that help fund the program.

## Speed

After accuracy, your second priority is speed, because crew time is precious. The biggest factor in fast and accurate field painting is in-ground markers. Placed at strategic points, these markers eliminate the need to establish base measuring points each time you paint. They may be purchased or made, and the type required will vary with the game.

For football, all of our in-ground markers are located off the playing area of the field. We cut 1-1/2-inch PVC pipe into sections six to eight inches long. We sink these into the ground with the top of the PVC pipe approximately 1/4-inch below the grass line.

For soccer, the in-ground markers are located within the playing area. We use a store-bought, ground-socket marker that has a cap on top. When sunk into the ground, the top of this marker is right at the soil line.

The covered top eliminates the chance of a player sinking a shoe spike into the open center of the marker. The cap comes

off so we can slip in a purchased peg that has string on it to run the lines. The sleeve is also used to hold the flags that mark the field corners.

## Football

When painting the lines on our football field, we set our string lines and run the painter right down the center of the string. We paint two inches on each side of the string. Others paint a four-inch band at the edge of the string. Overall, their lines will each be two inches 'off' of our lines, but it's the consistency within the field that's important.

We paint the white lines on the field with a Jiffy model 8,000 self-propelled, walk-behind line painter with a 12-gallon tank. We mix our paint with water to a 1:1 ratio, and it takes approximately 50 gallons of mix to paint the lines.

When temperatures drop in late fall, we add a little alcohol to the paint. The ratio differs depending on weather conditions. The alcohol sucks the moisture out of the paint and allows it to dry before it freezes. Alcohol is hard on the grass, but our turfgrasses are dormant before we need to use it, and the rates are very small.

We paint all of the five-yard lines first, and then paint the sidelines so the painter won't run over fresh paint. An in-ground marker is located at each five-yard line on both sides of the field. They are placed just outside the three-foot border that the NCAA requires around the field. The string line is stretched across the field from marker to marker.

The NCAA requires a four-inch gap between the yard lines and the sidelines, so the sideline string lines need to be stretched out when the yard lines are painted. We place a four-inch piece of aluminum beneath the "X" made by the sideline string and the yard-line string to set the space.

The sideline markers are located outside the three-foot border. They are placed at the end of the field to set the horizontal line, and at the end of the endzone to create the vertical line.



Once line painting is complete, we break into two crews: a logo crew and a field crew. Our field crew goes straight to work on the inside hashmarks. We have an in-ground marker on the back side of each endzone, and we run a string from endzone to endzone to prepare the line for the hashmarks. We use an aluminum stencil and paint with an airless sprayer placed on the back of a small golf cart. 100 feet of hose allows the cart to run off the field, along the sideline. The angle of the slack in the hose keeps it from dragging through the paint.

Once the hashmarks are painted, we move the two string lines to the top point of the newly painted lines to position the numbers. An in-ground marker nine yards off the sidelines verifies the placement. We use NFL style number stencils made of heavy vinyl. They're mounted on an aluminum frame to keep them stretched out and in good condition. The crew starts at one end of the field and works to the opposite endzone.

Once the numbers are painted, the field-painting crew brings the hashmark stencil back out and paints the sideline hashmarks. They proceed to paint the kickoff "X" on the 35-yard line and on the three-yard Prescription Athletic Turf (PAT) hashmark line. This completes the white paint on the field.

The sideline strings remain down until the paint is dry. They are then moved out to paint the white three-foot border on each side of the field. There are in-ground markers at each end of the field on both sides to set these strings three feet out from the sideline.

While those two strings are down, we take the shorter sideline string and measure to make the coaches boxes and team areas. We don't have in-ground markers in those areas, because wear is extensive and we don't want any exposed PVC pipe.

Now the field-painting crew switches to an airless sprayer with an 18-inch-wide nozzle. They fill in the white paint in the three-foot border, and in the six-foot-wide team area and coaches box.

Our logo crew's motto is: "measure twice and spray once." Rules require a



four-foot space between the sidelines and painted areas. Because the endzone is 30 feet deep, we've designed all of our logos 22 feet high. The center endzone logo is 71 feet long.

We draw a tape measure across the back of the endzone from sideline to sideline and run a string line. We measure and put a string line on the center of the endzone lengthwise. To get the exact center of the logo's dimensions, we measure and run a string line perpendicular to these lines, from the front of the endzone to the back of the endzone. This method is more accurate than measuring from the goal post.

Our logo stencils are made of vinyl and have small holes punched in them. The appropriate color paint is sprayed through the hole to create a dot of paint on the field. With the vinyl removed, outlining the logo becomes a connect the dots exercise.

We start at the center of the logo and work out. In the heat, the vinyl will stretch. We don't want the stencil to be on the field any longer than necessary to avoid building up excessive heat beneath it and yellowing of the turf. We work on one logo at a time, and finish it completely before starting the next one. Logos are complex;

most are copyrighted, and all must be accurate. We keep a copy of the logo on the field as we paint.

We start by using aerosols of each of our colors to paint any unique features or small details prior to coding out our logos. Then we paint with the airless sprayer equipped with a 4-inch wide tip.

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When temperatures drop in late fall, we add a little alcohol to the paint. The ratio differs depending on weather conditions.

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We select one color first and paint all of that color before moving on. We always finish with white, so we can repair any mistakes. We only cover the tip of the grass plant with paint. Up close on the field, you can see green under the paint. That's what we want to maintain for the health of the turfgrass.

Lowering sprayer pressure won't keep the paint from pushing the grass down and working down into the turf. It's better to raise the pressure. You will get finer drop-

lets that dry quicker and stay in place.

We paint all the endzone logos first, and then move to the field logos. For each one, we establish a center point using the crossed string line method to ensure accurate placement.

When we installed a natural grass field, we changed from a center logo to two side logos to reduce additional stress on the high-traffic zone. It has been effective.

Rules state that you can paint over the line markings – if the referees can see the lines clearly. The 25-, 30- and 35- yard lines bisect our on-field logos. We don't paint over the lines. Instead, we paint our logos around them. It's our subtle way of emphasizing that the field exists for the game.

Our field-painting crew finishes by stringing and painting the yellow restraining line for the press. It runs six feet outside of the three-foot border on the sides, and nine feet beyond the endzone. It extends all the way around the field. It's there for the safety of the players and the working crews – the chain gang and the referees.

We try to paint on Wednesday and Thursday, and touch up on Friday for Sat-

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**J. Robert Dippel**

**SEEDS**

urday games. The team has a 2-1/2-hour Thursday afternoon practice, so any paint must be dry by noon. If weather conditions look poor for drying, the painting schedule is moved forward.

### Soccer

On a soccer field, one in-ground socket is placed at the very center point of the field. We remove the cap, drop in the string peg, and run the string out to the correct distance. We walk around this string 'circle,' dotting the line with an aerosol can of paint. Then we go back and connect the dots.

Other in-ground sockets are placed at the corners of the field, at the lengthwise sideline center points, and at the outer point of the penalty area on the sidelines. We don't put in-ground markers around the goal because it's a high-traffic area, so we must measure and line for the goal arcs and square out from the goal mouth.

### Keep the Perspective

If the press and the public see that your field looks great, they'll think it is great. That's one bonus of aesthetics. You can consciously use this to your advantage to draw the eye to the logo instead of the hashmarks and other wear areas. Damage isn't quite as noticeable.

We do tend to think of field presentation as primarily a "fan thing" or a "media thing," but don't discount the effect it has on the team. They do notice that presentation, and they do appreciate it. ♦

— *Sports Turf Topics 1998-1999, A Compendium of STMA Articles*

Mike Andresen is athletic turf manager at Iowa State University, Ames, Iowa. He is a board member for the Iowa Sports Turf Managers Association and is chapter relations chair of the national STMA.

"Inside-Out" means to start with yourself. If you want to be trusted, be trustworthy. If you want to have a friend, be a friend. If you want more latitude in your job, be a more responsible employee.

# Cricket's Fields of Dreams

## EXTENSIVE WINTER DAMAGE FIXED FOR BIG TOURNEY

Imagine the shock Ron Aldridge and the other International Cricket Council Trophy organizers felt when the snow melted last April and uncovered pitches in horrible shape.

The Toronto winter was harsh. Damage to the grass was extensive and with only three months before some 400 cricketers from more than 20 countries were to descend on the Toronto area to play in the tournament – the world's biggest gathering of national teams – it would take a miracle to get the fields ready in time.

"It was a monumental task," said Aldridge, chairman of the organizing committee. "We had a winter where it froze and thawed and it froze again. When we eventually got a view of the wickets, they were in disastrous condition."

Many doubted the fields would be ready in time. Countries scheduled to compete in the tournament would send spies to scout the grounds and they would return with negative reports.

Even the ICC, the world governing body of cricket, was worried. "It would

be fair to say that there was a bit of concern earlier in the year because of the weather they had," said Clive Hitchcock, the ICC's manager of cricket operations.

So Aldridge and his crew called in experts from England to rebuild the lawns. They sought out an extra venue to decrease wear and tear on the existing fields and they got some help from Mother Nature in the form of warm, wet weather. The 10 fields were green, groomed and ready for the matches, which started June 22.

"Those people that came here to do reconnaissance in March and April are now just shaking their heads because they really didn't believe it could come back the way it has," Aldridge said. "The wickets are exquisite and the grounds look beautiful." ♦

— *excerpts from Tim Cook, The Globe and Mail, June 23, 2001*

Editor's note: What a shame that the governing bodies of cricket in Canada could find no one qualified and experienced enough in turf management that they had to bring in people from England.

## Industry News

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