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 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 Landsdowne 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
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 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.

Designing a Program

An effective orientation program is much like selling safety or positive behavior 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. 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 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 operate any equipment they have not been properly trained to use. Review of Section 28 is a must for any orientation program.

WHO SHOULD GET ORIENTATION?
- new/transferred employees
- returns from long-term disability
- contractors • supervisors
- visitors • temporary workers

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 and an IAPA website, 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 stadiums 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
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 north-west 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.

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**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 the 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 Coordinator, 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 buildups. ♦

— summarized by Michael Bladon