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 rve, 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



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



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.

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. 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,



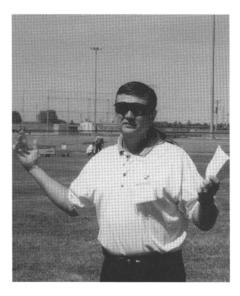
"Seed Label"). Remember all certified seed that comes out of the production field is tested via random samples. The cleaner selects a pound at random and it is sent to a state laboratory.

## **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 onsite supervisor who will ensure quality workmanship, no short cuttings and that the specifications are being followed.

# Equipment

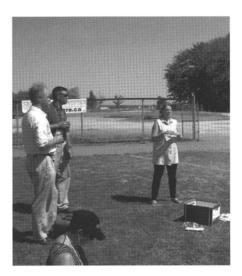
As a customer, you want after-care support. Have a competent person come out and train you on the system - nine times out of 10 the contractor will say here are the keys to the pumphouse and leave. Make sure the company you select for your equipment has people to train you and your staff to ensure you 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 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,