

19th Annual Field Day

SEPTEMBER 21, 2006 • RIDLEY COLLEGE • ST. CATHARINES



The historic grounds of Ridley College provided a fitting setting for an event which proved significant in the annals of the Sports Turf Association. The popularity of the Field Day increases every year and attendance soared for the Association's 19th Annual Field Day held September 21st, 2006. Our thanks to the College, Cam Beneteau, and his

crew for having us. It takes an incredible amount of preparation and organizing to do so and we appreciate the efforts of our host venue.

Close to 260 turf managers, students and industry suppliers travelled to St. Catharines for the occasion. Attendees journeyed to the Garden City from all compass points: Barrie, Welland, Belleville and London. Speakers Andrew McNitt and Evan Elford joined us from Pennsylvania State University and the University of Guelph to share their knowledge and expertise. We were also pleased to welcome first year students from the U of G's Associate Diploma in Turfgrass Management Program. They are the future! Our industry suppliers, as always, were magnanimous in their participation and support. It is through their generosity that we are able to present a first rate opportunity for professional development and networking at an affordable price.

Mother Nature must be a turf manager as she always pulls through for our Field Day! On the following pages, we feature articles by Dr. McNitt and an event photo gallery.

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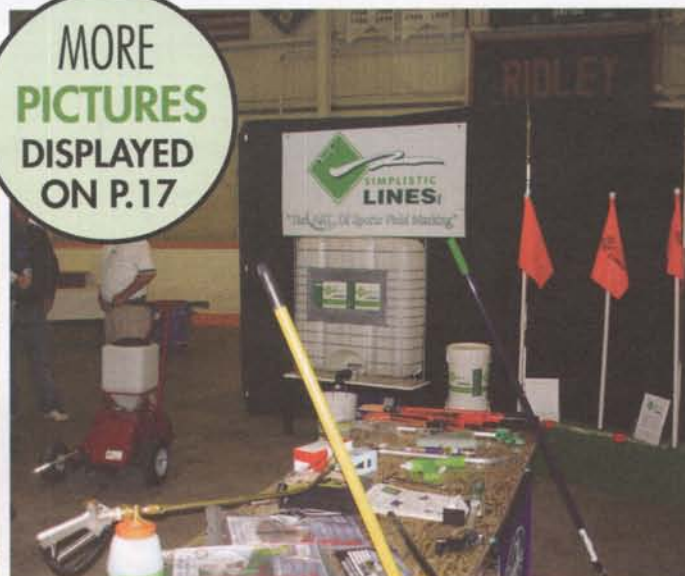
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PRIORITIZING YOUR SPORTS FIELD MAINTENANCE

CONTINUED FROM THE FRONT COVER • FIRST OF TWO ARTICLES BY STA FIELD DAY SPEAKER DR. ANDREW MCNITT



... the whole way to the field surface and are properly maintained (note that they are rarely properly maintained). But the real solution is to bite the bullet and regrade the field. Either strip the sod or have someone Blekovate it. While you're at it, add some high quality compost and till it in. I've listed some web references at the end of the article to help you choose a high quality compost. Put a good crown on the field. A 1.5% slope minimum is recommended. This size slope will not significantly interfere with soccer and will move water off the field surface. Your high wear areas should be the on the high points of the field. Don't 'lean' the field from one side to the other. Have the field crowned so the middle section between the hash marks is the highest point.

You will have to resod. That's right – it's not cheap but it is the correct way to

do it. If you can limit play in the spring, you can sod in December and 'may' be able to have some light traffic (track) on it in the spring. I would strongly recommend 'thick-cut' big-roll sod where the sod soil layer is 1.5 inches or so. This is an additional expense but will allow almost immediate play.

You Can't Mow Too Often

OK, let's say your drainage is adequate. What's next? The answer is mowing. Mow often with good equipment. What is often? Three times per week is not too much. That's right, three times per week during seasons of active turfgrass growth. This is one of the most effective ways to increase the quality of your turf. If you can't mow at least twice per week (preferably three) there isn't much use in instituting the next couple items on the list. People

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often ask me, "How do golf courses keep the fairways so nice? They must be adding a lot of chemicals!" Incorrect, other than high-end courses, most golf courses can't afford chemicals for their fairways. They maintain that tight grass by mowing with a high-quality mower every other day and by fertilizing and watering.

Since mowing is probably the most labour intensive turf activity, get an efficient mower. I've visited many schools that still use a belly mower mounted under a tractor. Very slow! An out front rotary mower is typically the best fit for high schools. Keep the blades sharp! A sharp blade makes a clean cut and actually helps the grass to grow faster and after all that's what we're after – fast growing turf that can recover from all the foot traffic. You may need additional personnel to be able to mow this often. I know that personnel issues are tough with all the politics in a school district but see if you can get a couple volunteers to do some seasonal mowing for you or out-source your mowing. It's important. Now, what about mowing height. Two inches is a good height for high school athletic fields. Maybe you can go to 2.5 inches but no higher. Also, don't raise the mowing height in the summer and lower it in the spring and fall. Just pick a mowing height and stick with it.

Get an efficient mower and keep the blade sharp. A sharp blade makes a clean cut and actually helps the grass to grow faster and after all, that's what we all want – fast growing turf that can recover nicely from all foot traffic.

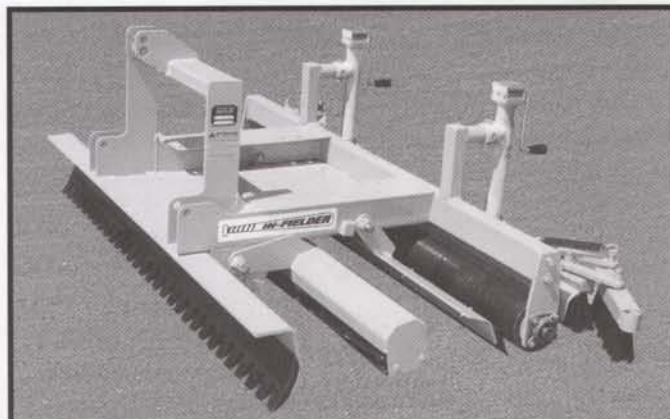
Nitrogen Fertilizer

After mowing, the most important item is fertilizing, especially with nitrogen. Very few school districts are applying enough nitrogen fertilizer. We recommend between 4 and 6 pounds of actual nitrogen per thousand square feet per year on heavily used athletic fields. That's a lot considering that if you follow the label on most turf fertilizers you are applying about one pound of nitrogen per application. I've found that most school districts average about two pounds of nitrogen on the high profile fields and less on lower profile fields. The reason? The field manager knows that if they apply more nitrogen, they will never be able to keep up with the mowing, that's why having the ability to mow often is critical. It's tough to get through a whole season of football when you're starving to death! For more information on fertilizer types and timing see the references below.

While we're at it, don't buy into all the silver bullet products being peddled to sports field managers. If it's too good to be true, it probably is. Spend your money on simple fertilizer and mowing.

Overseed Often

Next, seed – seed all the time! Should you overseed in February? Yes. Should you seed in April? Yes. Should you seed in May? Yes. Should you seed in August? Yes. Should you seed in



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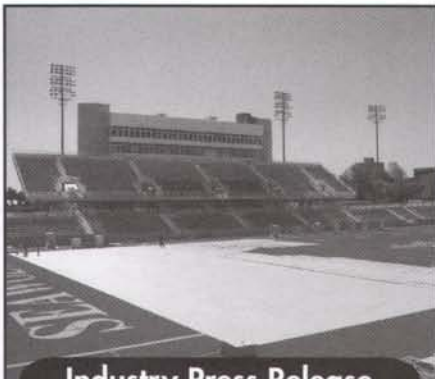
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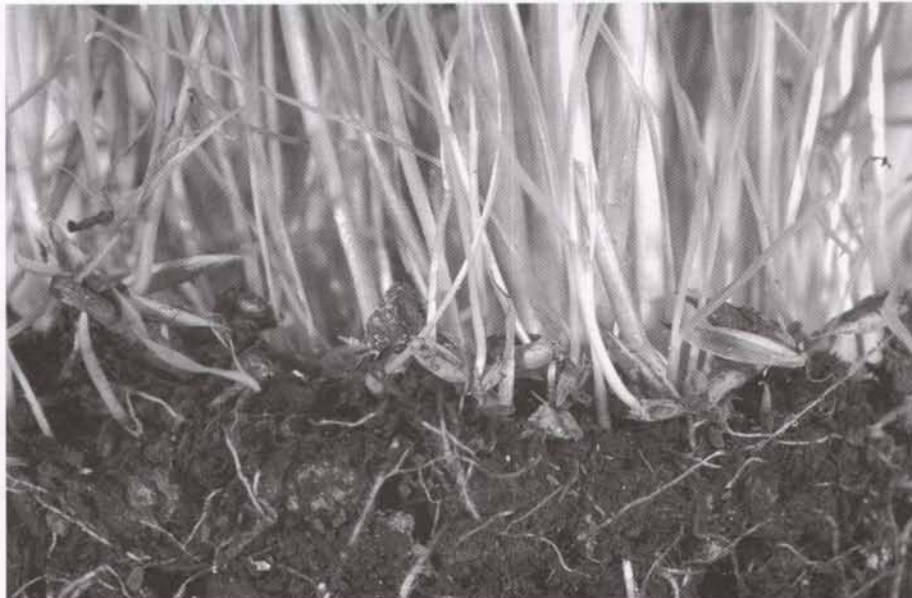
Industry Press Release

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between football games in the fall? Yes. Should you seed at Thanksgiving? Yes. Seed all the time! Use good quality 100% perennial ryegrass seed. Don't mix species. There is no reason to have any Kentucky bluegrass in a seed mix that is being applied to a field in use. It won't come up and it's expensive. Pick a top quality seed and buy a lot. Is 20 pounds of seed per thousand square feet per year too much? No. Seed.

Seed and fertilizer are not expensive, especially if you pick the right kind. Mowing is expensive, but there is no use fertilizing if you can't mow and there is no use seeding if there is no food present for the young seeds.

Irrigation & Aerification

Next, if you can afford it – install irrigation. Your fields are being beat in the spring and the fall. One of the only times you can get the grass to recover is during the summer (not an ideal time) if you have water. This will not solve all your problems and may create some new ones (insects and disease) if not done correctly but it can significantly increase your recovery and provide a dense strong turf heading into the fall season.

OK, we're finally on to aerification. Hollow-tine aeration (core aeration) is the best. Spikers are better than nothing but don't compare with removing a core. Use big tines (0.75 inch diameter). Go over the field until you have a hole on two inch centres. When should you do this? The text

books tell you to do it when the turf is actively growing (spring and fall) but that is when you have sporting events. You can't do it then. Many school districts have found that aerification after the last event in the fall works very well and that a 1/4 inch application of a high-quality compost just prior to aerification really helps. Again, check out the references below for proper compost selection and application.

There is no way I can cover everything you need to know when caring for a high school athletic field in this article. Hopefully, I've help you set some priorities and most importantly provide sources of information. Get educated! Finally, take some pride in creating safe and playable surfaces for your student athletes. ♦

References

(note that most are US-based)

- Keystone Athletic Field Managers Association: kafmo.org
- The Pennsylvania Turfgrass Council: paturf.org
- Penn State Cooperative Extension: <http://www.extension.psu.edu/extmap.html>
- Turfgrass Seed Varieties: ntp.org
- Information of compost applications, fertilizer and lime: <http://turfgrassmanagement.psu.edu/proturf.cfm>

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19th Annual Field Day

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Mission Statement

The Ontario Turfgrass Research Foundation is committed to providing the turfgrass industry with the latest research and information.

Research

The OTRF Research Program supports the following areas of research:

- Turfgrass Genetics
- Turfgrass Nutrition
- Turfgrass Pathology
- Turfgrass Physiology
- Turfgrass Quality
- Turfgrass Water Management

Objectives

To support the research and development of the turfgrass industry.

To establish a research center for the OTRF.

UNDERSTANDING FIELD DRAINAGE

YOU CAN ELIMINATE PUDDLES ON YOUR FIELD • DR. ANDREW MCNITT, PENNSYLVANIA STATE UNIVERSITY

Imagine you're one of the grounds managers out there with a water problem, puddles recurring on your field after a rain. What's the best way to fix the problem?

Some choose what seems a logical approach. Dig a trench across the field, lay in some drainage pipe, cover it with gravel, then backfill with the spoil and wait for the next rain to watch your water troubles drain away.

But all you may have done is succeed in draining your maintenance budget. If there's a puddle on the surface, a pipe 10 feet underground isn't going to make it go away. The water can't move through the first two inches of the soil. If it could, you probably wouldn't have the puddle. This type of 'fix' is too typical when trying to solve a drainage problem.

A better solution is to improve the surface drainage. Put a good crown on a natural soil field to move the water to the sidelines and then collect and get rid of it. I know this is an expensive solution, but it's the best solution. Fight hard for a 1.5% slope. Don't let the architect lean the field from one side to the other. You want to move the water the shortest distance possible off the field and you want the high wear areas to be the highest, and driest, areas of the fields. If you are draining a football-only field, you can 'turtle hump' the field. That means that you run the traditional crown on the field until you reach the 20-yard line. Then the shortest distance off the field is to run the water out through the end zone. This is not a good idea for any sport that uses a goal, i.e. soccer, field hockey, lacrosse. If a goal sport is to be

ation that calls for subsurface drainage, find an expert such as a hydro-geologist or civil engineer with experience in draining high water tables. One thing about draining a high water table: You want the pipes as close together and as deep as you can afford. Remember, draining a high water table will help in the spring or other times the water table is high, but will not necessarily take care of surface water problems caused by a passing thunder-shower. Good surface drainage is still needed.

Finding a Way Out

Of course, moving the surface water to the sidelines is only part of the answer. Once there, the water should be collected and drained away. If you just put three or four small grates along each sideline, the



The mistake some managers make is running pipe under a native soil field and capping the last six inches of the trench with the topsoil they removed. I found many of these systems seldom conduct water through the pipes for very long. Once that surface soil becomes compacted, the water can no longer make it to the drainage pipe.

played on the field, run the crown the entire length of the field. You don't want to run water toward the goalmouth. You want the goalmouths to be sitting on the highest part of the field.

Unless there's a high water table, most fields will not be helped by a subsurface drainage system. If you're in the rare situ-

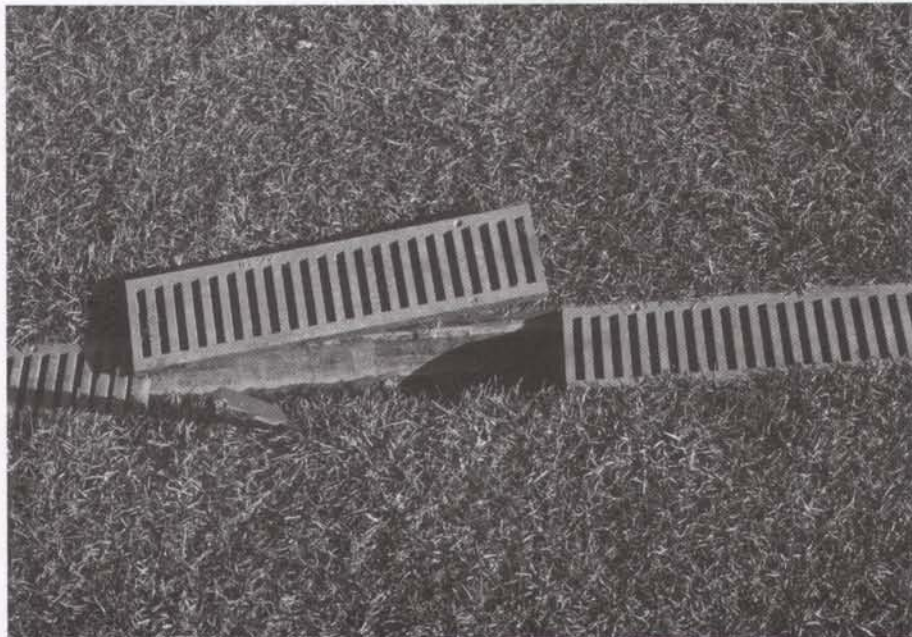
Above Left: Implementing the right measures will eliminate surface puddles on your field. **Above Right:** Drains behind the bench area at Beaver Stadium.

water sometimes has a tough time finding the inlets. The grates sometimes end up being 4 inches higher than the surround-

ing turf and the water can't get into it even if it can find the grates. Beaver Stadium on the Penn State campus has drains behind the benches that run the length of the field and work well. These Jiffy Drains are essentially PVC pipes that have been split in half and set only a couple inches into the ground forming a ground level rain gutter. The gutter is then covered with

Of course, moving the surface water to the sidelines is only part of the answer. Once there, the water should be collected and drained away.

a grate. The channel connects to an outlet, which leads the water to a storm sewer. Initially, the grounds crew was worried that frost would heave these gutters out of the ground each winter. That has not been the case. This system has been in place for 12 years and continues to function well. Each spring the crew pulls the grates to hose out debris in the channel.



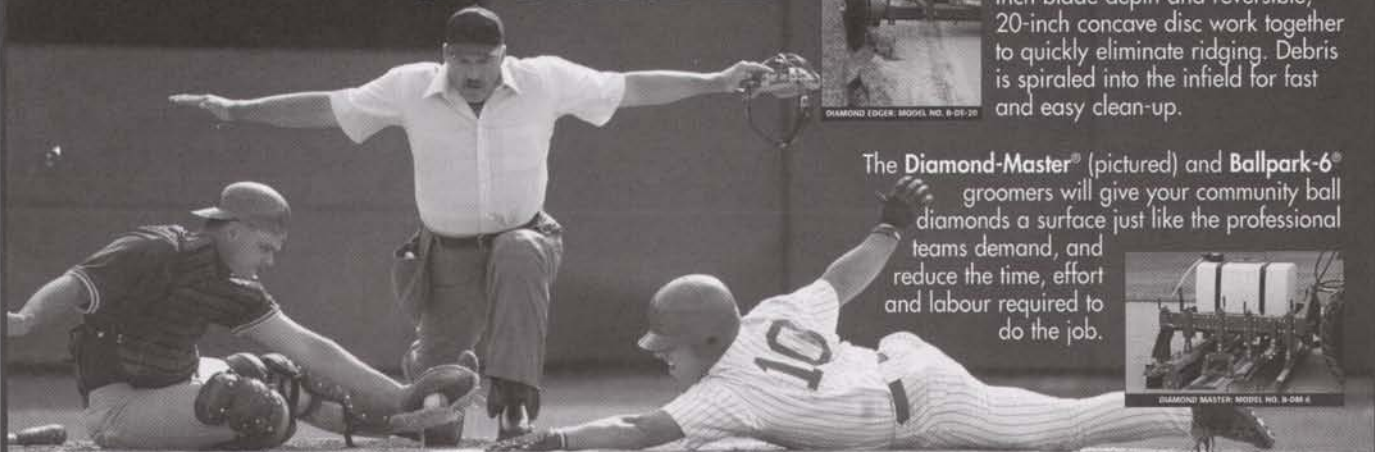
Slit Trenching

Another solution for improving drainage that is useful is installing drainage lines using one of the many slit trenching systems now available. Be sure the trenches are constructed so that the coarse

Above: Close-up of split PVC and grate system at Beaver Stadium. Note that both stadium pics are pre-expansion.

aggregate (sand) comes the whole way to the playing surface. The coarse aggregate

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