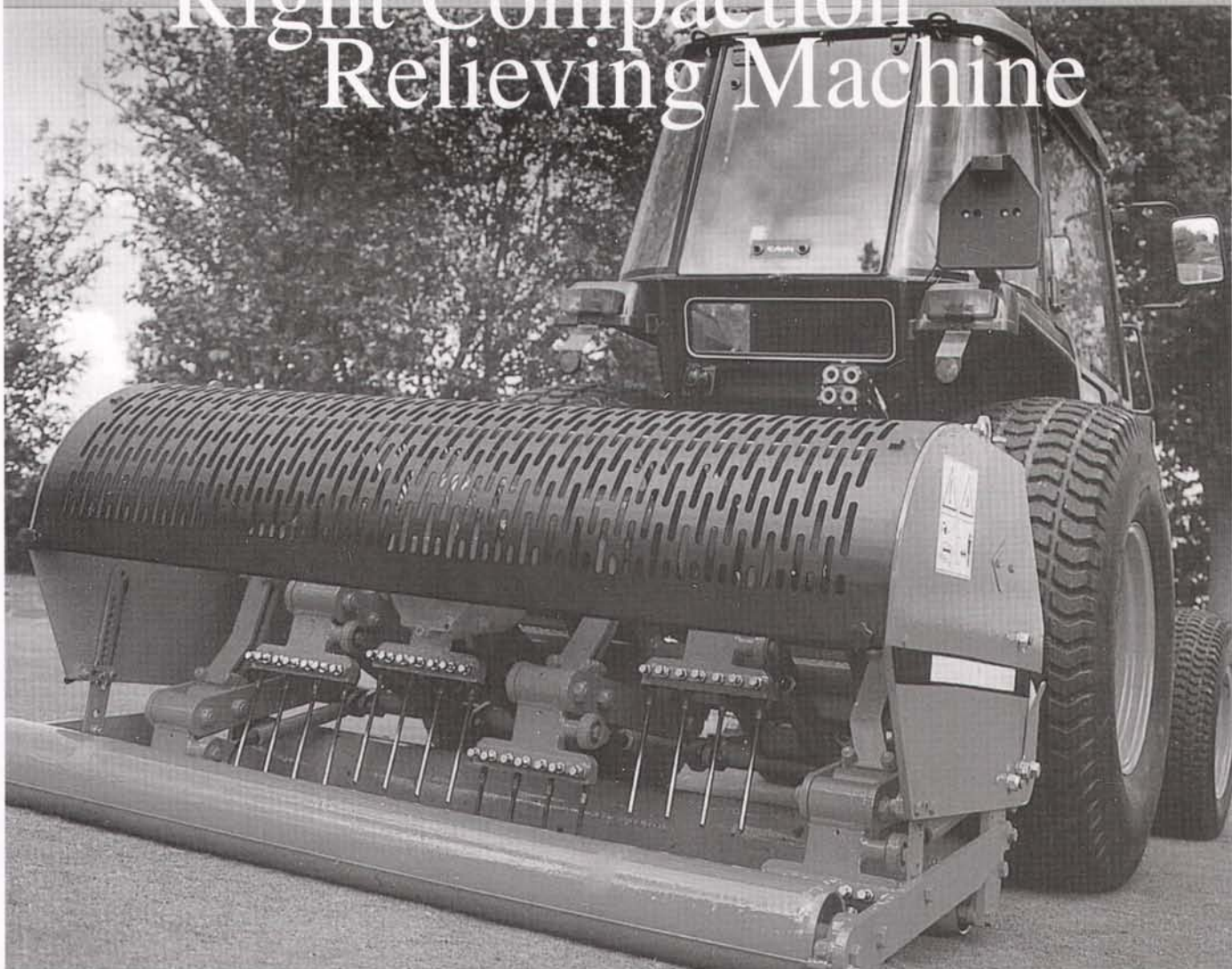




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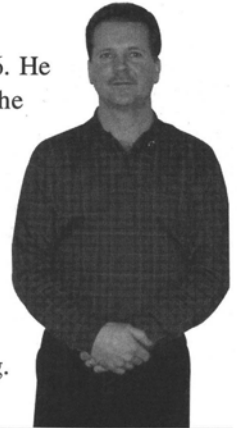
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# Meet Our New Board Member

## STEPHEN TOLLEY JOINS THE STA TEAM

**S**tephen has 20 years of experience in the landscape maintenance and construction industry, 11 of them with the Town of Markham Parks Department, and most recently as the Grounds Supervisor at the University of Toronto at Mississauga. A graduate of the Ontario Diploma in Horticulture Program at the University of Guelph, Stephen was the recipient of the Award of Excellence from

OMAFRA in 1996. He is a member of the Ontario Parks Association, Landscape Ontario (Horticulture) and enjoys downhill skiing, golf, and, of course, backyard gardening.



### GET INVOLVED WITH YOUR ASSOCIATION!

We invite you, our members, to participate on a variety of Association committees and experience the many rewards of volunteering. For details, please contact Lee Huether at the STA office prior to April 30<sup>th</sup>.



## ASTM Standards Available

### VALUABLE GUIDES FOR SPORTS TURF MANAGERS

**T**he following standards are available from the American Society for Testing and Materials .

- *Standard Guide for Construction and Maintenance of Skinned Areas on Sports Fields*, Guide F2107-01, \$30 US, and

- *Standard Guide for Fences for Ballfields and Other Sports Facilities*, Guide F2000-00a \$25 US.

For further information or to order, visit the ASTM website at [www.astm.org](http://www.astm.org) or telephone (610) 832-9585.

## STA Membership Fees

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Thank you to all members renewing in 2002! Invoices for membership fees will be mailed at the end of March and are due and payable on or before May 1. Please take a moment to verify your contact information as it appears on the memo accompanying your Membership Invoice. The Membership Roster is compiled from this information entered in our database. For any questions, please contact Lee Huether at the STA office.

**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.

### Words of Wisdom ...

Anyone who stops learning is old, whether at twenty or eighty. Anyone who keeps learning stays young. The greatest thing in life is to keep your mind young.

— Henry Ford



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# The President's Desk

PAUL TURNER



I wish all our members a belated Happy New Year for 2002 and let's hope it brings us continued health and many successes in our endeavors. As your

new President for the next two years, I would like to take this time to say how honoured I am to be following in the footsteps of some very talented people, Jane Arnett-Rivers and Chris Mark. I look forward to guiding our Association to continued heights of excellence.

As all of you are aware, the events of September 11th have changed forever the way we value life and also the way business is conducted. I, for one, now value each minute of each day more than ever before. Our thoughts and prayers go out to all those touched by that fateful day.

It is with great pleasure that I welcome Stephen Tolley to the Board of Directors for a two-year term and thank all those Board Members who have committed to another term. A sincere thank you is extended to Andrew Gaydon who has accepted the position of Vice-President. I must however share some sad news with the membership. Harold Van Gool, our Treasurer for many years, has decided to leave us (a great deal of arm twisting didn't help!). Harold is diverting his energy to

obtaining his Masters in Business Administration from the Richard Ivey School of Business at the University of Western Ontario. We wish him all the very best on his new project. The duties of Treasurer will now be assumed by Rick Lane. Thanks Rick!

Recently at the Annual General Meeting, a membership fee increase was approved for 2002. These fee increases were necessitated due to rising administrative costs, including increases in office insurance and the publishing and mailing of the newsletter. The new rates are \$130 for initial members and \$32 for each additional member. The student rate remains unchanged at \$25. The 2002 advertising rates are now available to prospective advertisers and I think you would agree that our rates are very attractive for suppliers to show people what's NEW in the marketplace.

For those who were not in attendance, the Ontario Turfgrass Symposium was, once again, a great success. The list of quality speakers was astounding and from a personal standpoint, the change of date to later in January was refreshing. A big congratulations goes out to the Sports Turf Challenge winners, Marjie Fraser, Reid Patterson and Tino Petrunti from the City of Vaughan.

The Field Day Committee is busy at work putting the finishing touches on the 2002 event. Exact dates and location will

be announced in the June issue of the *Sports Turf Manager*. The committee did agree with membership input to move the field day to September from August, a more convenient time since most summer vacations are over. I think you would all agree that the Sports Turf Field Day continues to be one of the best values in our industry and I look forward to seeing those in attendance. Let's make 2002 the best one yet!

STM

The annual STA Field Day will be moved from August to September this year.

In closing, the Association is in great shape and we look forward to fine tuning a few things in the upcoming year to make things run even smoother.

Some projects that we are embarking on in 2002 include revamping the current web site to make it more attractive and user friendly and implementing payment by credit card to allow you to register for the Field Day and pay for your membership and other services more conveniently.

I welcome any comments or thoughts from you, our members. You can email me directly at paul.turner2@sympatico.ca or through the Sports Turf Association office at sta@gti.uoguelph.ca. ■

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by Dr. R.W. Sheard



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# Life Styles and Life Cycles

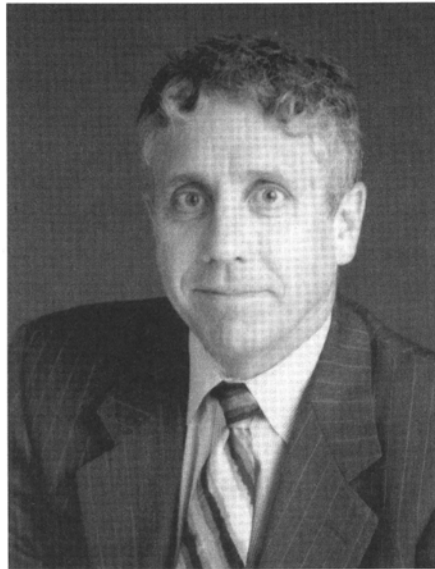
OTS HIGHLIGHT • FRONT COVER ARTICLE CONTINUED

who are hiring others to do the work. So we are eventually going to see less of the consumer trade and more business going to companies that provide horticultural services. In the residential sector, it will be more of a service industry than a product industry.

- In the last ten years, there has been a drop in the domestic product, the level of housing starts and population growth. We are slowly coming to grips with the economic realities of an aging population. Over the next decade, we will reach a state where more people are retiring than entering the work force. There are increasing employment opportunities for young people, but there is also a tremendous challenge for employers looking for skilled labourers/tradespeople. In many sectors, there will be more jobs than people. The future will bring an increasing reliance on immigration to fill a variety of positions in the Canadian workforce. The US will continue to raid our workforce.

- Lifestyles since September 11 have changed. There are more demands on what is available in North America. International travel has slowed, especially by air. More tourist dollars are being spent at home. Internet services have reached the level of sophistication where we don't even need to leave our house – everything can be obtained online.

- Golf, tennis and bingo are *niche or lifestyle* markets, they are not lifecycle markets. On the surface, statistics appear to show that as you age, you start playing bingo. Average household spending on bingo in the under 25 age group is \$119 per year. In the 55 and older age group, annual bingo expenditures are much higher. Yet digging deeper into the data shows that only 10% of the population in each age group, more or less, play bingo; therefore, those that play in the older age groups, play a great deal and spend more – on average \$1,000 a year! Increased spending on bingo is not age related but lifestyle related.



Keynote Speaker David Baxter

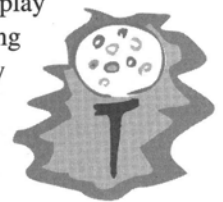
- Economic conditions in 1990 resulted in a very high demand for sod – demand dropped in 1991. In 1998, Ontario was supplying 57% of Canada's sod needs. By 1999, the percentage dropped to 49% as sod prices dropped in value and in acreage sown to 10,820 acres.

- The number of people attending live sporting events peaks in the 35-44 range and drops off after that, as does the spending at these same events. These events will decline in the future. We will see many national and city sporting teams disappear. There will be more community leagues, which are still popular, and renewed interest in neighbourhood sports and industrial leagues is anticipated.

- In the golf industry, there are two main population segments, the most significant is the under 35 age group, the young group with no children, followed by mature adults, many of whom are in the avid golfer category. The latter are the people to focus on to play more rounds and to maintain their avid golfer status to a greater age.

- The US population will grow by two 'Canada's' in the next 25 years providing a major market, tremendous export industry and continental tourism potential.

Remember, people do not play golf because they like playing with a little white ball, they play golf because they get stories, experiences that tie into their lifestyles.



Pay attention to the customer. Study your market, look at what your market is doing. You cannot sell cheaply and provide a high level of service as well. Investigate value-added customer services. Boomers are willing to pay for quality experiences and products.

When Tina Turner appeared on the advertising scene, ladies' hosiery sales went up 400% in one month. People buy tiny perfect containers of goat cheese with basil and other expensive specialty items. What causes such swings in consumer behaviour? Don't assume your market, go out and find your market! Good luck – the times, they are changing ... ■

— Summarized by Michael Bladon

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# Something New in Sports Field Restoration

IAN MILNE • COMMUNITY SERVICES • CITY OF GUELPH

**B**ack in April of 2001, the Guelph Youth Soccer Club asked me if I could have the four mini soccer fields at Bristol Street Park regraded. The fields were getting to be in pretty rough shape – they were starting to take on the look of a mogul run. To add a little bit of history, this park is located over a 1960 era landfill site and continues to settle.

With soccer registration at an all time high, a common problem with scheduling repairs to soccer fields is deciding when to do the work and how to keep the fields in operation. We put together a plan – topdress the two better fields and keep them in play and regrade and reseed the two others as soon as the soccer season was over.

The topdressing was accomplished early in the season with no disruption to

remembered hearing Chris Morrison of Organic Express talk about Terraseeding. Chris had been looking for a site to conduct further testing of their product in a sports field situation. These two small soccer fields fit in very well for him and the timing was just right.

After some discussion with Chris, a plan was put in place. First we had the high spots scraped off and a layer of much needed good quality screened topsoil was added. This would give the turfgrass roots ample depth of soil to grow down into. With the existing topsoil and the 330 cubic yards of screened material hauled in, we had about 4-6" of topsoil, not ideal, but a great improvement over existing soil conditions. The second week of September we had the fields ready for fine grad-

ing; the soil was dry and the surface worked up very nicely. We were now ready for Chris to come in and complete the job.

On Sept. 13, Organic Express rolled in with their blower truck and started work; the job was completed the same day.

The Terraseeding material consists of a layer of compost material approxi-

mately 2 cm deep with a particle size no larger than 1 cm. The seed and the initial fertilizer are blown on with the compost and are evenly distributed throughout the 2 cm depth of compost. The compost is a weed seed free organic matter; thus, any emerging weeds would have to come from the screened topsoil or the existing soil. The seed mixture used was 50% turf type perennial rye grass and 50% turf type tall fescue. This mixture provides optimal germination, fast growth and will stand up to drought conditions.

We had five days of very dry conditions after the compost and seed was put down.

This made me a little concerned, so I applied for a watering permit. This accomplished, a nearby community ice rink 1" water outlet was activated with 500' of water hose and a rain train sprinkler. One day of irrigation was all that was needed as the skies opened up and we settled into some very nice moist conditions that had the seed germinated nicely within a week.

Composted material retains significantly greater moisture than topsoil, so once the moisture is in the ground, the need for irrigation is greatly reduced. Although there was good seed germination overall, one small section at the west end of the field was a little sparse and a bit slow to germinate.

Chris was reasonably pleased with the early results but found that germination could have been more even. His company conducted some additional testing of the compost material used and found the carbon concentration to be a little high. They believed this affected seed germination and early seedling growth stage. As a result of this new information, Organic Express has corrected the carbon problem in the compost.

By early October, we had a nice seedling coverage, 5/20/20 fertilizer was applied and the weather throughout the fall was ideal for seedling growth and turf development. In fact, the turf must have looked pretty good to a group of Saturday afternoon football players who found the field and had themselves an impromptu game – needless to say, this did nothing to improve the new turf.

Snow cover has been less than ideal this winter, although the low temperatures have not been too unkind. So, it is with a great deal of anticipation that I look forward to the result of this experiment in sports field restoration in the early spring of 2002.

Due to the positive early results of this experiment, I will give consideration in the future to the Terraseeding method of topdressing sports fields during the season to keep overused fields in play. ■



play. Now came the hard part, how to get the other two fields regraded with a good stand of turf ready for play by May 1, 2002.

I had considered reseeding, though this has worked in the past with less than ideal results. You must get the seed down early and be fortunate enough to get some moisture into the ground in the form of rain. Considering the time factor, this was a bit risky. Re-sodding the fields was a better option but with the cost of sod, the labour to put it down and Guelph's water shortage, I felt that option was out too.

I went searching for alternatives and



# Improving Your Turf in Fall

DR. ZAC REICHER • SUMMARIZED BY MICHAEL BLADON

**D**r. Reicher gave a very interesting talk and in the time frame allotted, answered many questions which he invited from the audience. The following is a synopsis of his session.

## Fertilization Recommendations

Fertilizer treatments applied in August and September help improve turf density and lateral growth of bluegrasses and bentgrasses which spread by rhizomes and stolons. There is very little vertical growth during fall months and fertilizing then improves density. Slow release forms of nitrogen (N) are preferred for early fall applications, but if your budget doesn't allow it, fast release forms are better than no fertilizer.

Final fertilizer applications should be applied close to the last mowing when the grass is still green. There is a fair amount

of time between when the turf stops growing and when it turns brown. Late fall fertilizing increases the amount of carbohydrates built up for winter survival and early spring greenup. Don't apply fertilizer to dormant areas; turf must be active and photosynthesizing to reap fertilization benefits.

For late fall applications, it's important to use fast release forms of N so it is taken up by the plant immediately. Fast release forms like urea or ammonium nitrate are fine, plus they're cheap! Rates of 1.0 to 1.5 lbs N/1,000 sq. ft. should be used at this time. An immediate green colour will be seen and it lasts.

What you do in September, October and November translates into how well your grass will survive next summer. The effects of good fall management practices will also be seen next spring with faster



greenup and good root growth. Do not apply fertilizer in spring until after the spring growth flush, because you will get all kinds of top growth at the expense of root growth. If you must go out, employ a very light application of nitrogen at 0.5 lbs N/1,000 sq. ft.

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Don't forget the obvious in that spreader patterns are also important when applying fertilizer. Be sure to calibrate the spreader and your overlap – with a rotary spreader is 50% where the edge of your pattern should touch the spreader tracks from the previous pattern. Be careful with potassium as it is overrated – only apply if a soil test indicates you need it.

Soccer fields with considerable wear can handle three fall applications: after the heat in August, and 1 lb. in September and October. The risk with this fertilizing strategy is that it will increase snow mold, but this risk is normally justified on areas under severe wear pressure. Slow release should be used for the first two applications and fast release for the last one.

Reduce your fertilization rates and you have to reduce your expectations. Your best bet is to let the grass plants dictate fertilization. If you see clover, dollar spot, red thread or rust in your fields, you have too little nitrogen. If you have perennial brown patch, pythium, snow mold and/or *Poa annua* problems, your fertility might be too high. You can't make up for missed fall applications in spring. Furthermore, leaching is not as much of a problem in fall because plants take up the fertilizer immediately – but that doesn't give us license to over-apply or apply carelessly.

### Fall Seeding

Though Kentucky bluegrass is the preferred grass in lawns and athletic fields, it's not very competitive as a seedling. Perennial ryegrass is easier to overseed because of its tremendous competitiveness as a seedling, but it is more sensitive to diseases and does not spread like Kentucky bluegrass. When overseeding thinned out grasses, Kentucky bluegrass will work fine if it is a very thin turf and the area will not be trafficked for six growing weeks or more. But if the turf is "in play" and is needed constantly, use perennial ryegrass. Though many people use sod for a quick fix during a playing season, newly laid sod doesn't handle traffic well and overseeding may be a better choice.

The best time to seed is August, but don't seed any later than mid-September. If time restraints are a problem, then do it

in September. A rule of thumb is if the field is seeded the first of September under normal conditions, it will be available for play by the first week of June. Dormant seeding works very well combined with aggressive aerification at the end of the year.

Seeding at the wrong time of year is always a problem with weed control. Most herbicides have some kind of restriction when it comes to seedlings. Whether you spray over the top or prior to seeding, make sure you read the label carefully because every herbicide differs in its restrictions with use around seedlings. The best way to control weeds in seedlings is through mowing and most people don't mow a new stand soon enough. In order to maximize establishment, good seed to soil contact is required. The application of high phosphorous fertilizers prior to

seeding will also help establishment.

Finally, Dr. Reicher does not recommend perennial rye when establishing new fields. He recommends 100% Kentucky bluegrass blends instead. He maintains recommended seeding rates are too high. Regardless of the seeding rate, a turf stand can only support a given number of seedlings.

In terms of fall broadleaf weed control, Dr. Reicher referred to a Michigan State University study showing you can still get great weed control in the late fall as long as the target weeds are green and photosynthesizing. They will take up the herbicide but will show little effect only to die during the winter. Where aerification is concerned, you cannot kill turf or over aerify provided you are not doing it at 90F. Lastly, he recommended keeping mowing heights the same year round. ■

## Industry News • STA New Members

### Executive Director Appointed

Ken Cousineau, CAE, has been selected to succeed Vince Gillis, CAE, as Executive Director of the Canadian Golf Superintendents Association. Mr. Cousineau, who assumed his new duties February 11th, brings to the CGSA strong association management experience, both in managing internal administrative functions and external relationships with government and stakeholders.

### Breeding and Evaluation of Turfgrasses Technical Conference

May 1-2, 2002. Organized by the Sports Turf Research



Institute, the conference, being held in West Yorkshire, will interest all turfgrass breeders and evaluators, turf scientists and other turf professionals.

A panel of 8 speakers will present 10 conference sessions. Further details can be obtained from Anne Wilson, Head of External Affairs, STRI,

telephone 01274 565131, email info@stri.co.uk.

### TPI Confirms England for 2003 Winter Conference

For the first time in its 35-year history, the Mid-Winter Conference and Exhibition of Turfgrass Producers International will be held outside of North America. The 2003 meeting will occur from February 26-28 in Birmingham, England. Open to everyone in the green industry, anyone interested in receiving information about exhibiting or attending should contact TPI at 800-405-8873 or 847-705-9898, email can be sent to info@TurfGrassSod.org.

### Welcome New STA Members

- Jim Nelson, City of Kitchener, ON
- Tim Ernst, City of Kitchener, ON
- Jorg Hermanns, Hermanns Contracting Ltd., Schomberg, ON
- Laurie Weatherall, City of Ottawa, ON
- Bruce Warren, Parc Downsview Park, Toronto, ON



# Organic Amendments – Soil Elixir or More Snake Oil?

DR. BRIAN HOLL • PROFESSOR EMERITUS, UNIVERSITY OF BC • LAMORNA ENTERPRISES LTD.

The maintenance of high quality sports turf under intensive use and management is an on-going challenge. The exploitation of various designs of sand or amended sand root zones was initiated primarily to address issues related to drainage and compaction, particularly in regions with high rainfall and periods of significant winter play. Nevertheless, the sand-based root zone brings its own challenges – effective water and nutrient management is essential for any turf, but can be particularly critical on the sand base. It is not an uncommon experience to see the investment of significant capital resources in new field construction provide inadequate performance and poor returns on investment as a consequence of insufficient provision for subsequent maintenance resources.

In addition to their more conventional uses, modern recreational sports turf is often subjected to a diversity of other activities, including festivals and concerts.

The impact of stage construction, vehicle traffic, 25,000 rambunctious fans and ancillary requirements for concessions and portable toilets can result in excessive wear. Communication of the consequences of severe traffic and wear to user groups is often a significant challenge. We have found the following conversion of wear from conventional soccer play into a per metre expression of foot traffic to be an effective means of communicating the potential for damage to the turf.

On a soccer field, 70% of the play occurs on 30% of the field. Each player travels approximately 10 km/game – that produces 250,000 foot imprints per game (excluding the referee and goalies). At 42 foot imprints per square metre per game, a 100 game season results in 4,200 foot imprints per square metre! Given the additional impact of the referee, linesmen, goal tending pressures and other sideline activity, the real surprise is the ability to maintain any turf under this kind of traffic.

## Holistic Management

In assessing management options to improve the performance of sports turf, there has been considerable interest in organic amendment and supplementation of sand-based turf in particular. In addition to the range of materials that are available for new construction, there are many additional products available for fertilization, topdressing and supplementation. Organic amendment use should be part of a more holistic approach to turfgrass management reflected in the concept of Integrated Cultural Management (ICM) – “the process of managing sports turf by considering and analyzing all environmental factors, pests, maintenance processes and player-applied stresses which affect the health of the turfgrass culture” (Puhalla, Krans and Goatley. *Sports Fields; A Manual for Design, Construction and Maintenance*. Sleeping Bear Press 1999).

In this article, I will review briefly some of the underlying principles of organic



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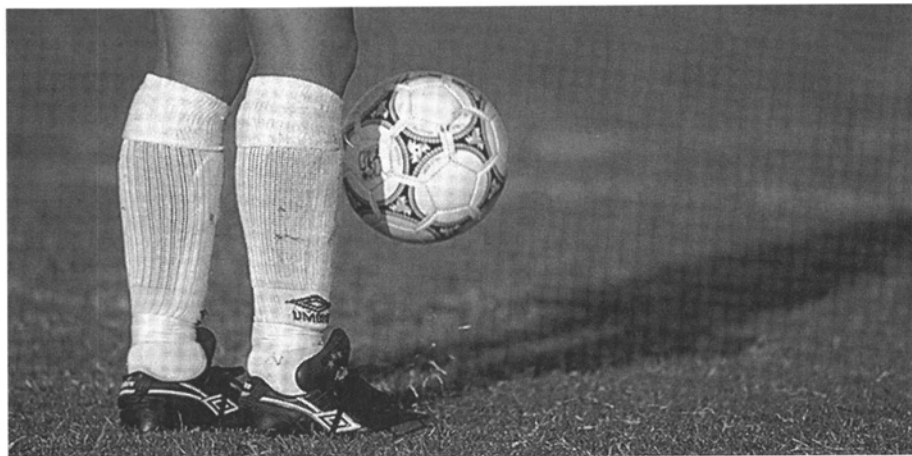


amendment use and factors to consider in assessing the selection and application of a particular amendment type.

Much of the interest in organic amendments is derived from:

- Increased construction and use of sand-based turf systems and increased use (and degradation) of soil-based fields.
- Greater societal emphasis on “organic” approaches to turfgrass management in the context of “going green.”
- The production of organic materials through a variety of recycling pathways and waste streams and regulatory and commercial pressure that perceives turfgrass as a desirable route for the re-introduction of these materials into the ecosystem.
- Increased understanding of the role and natural benefits of soil organic matter.
- Literature that attributes multiple benefits to organic amendments in the turf ecosystem, including provision of nutrients, improved soil structure, enhanced plant growth, higher stress tolerance, improved ability to recover from disease or insect damage, enhanced beneficial soil microbial populations and disease suppression.

The key to any good sports turf begins with a suitable growing medium and good turf management. A “typical” native soil includes solid components (mineral and organic matter) and pore space (air and water). Levels of approximately 3% are commonly quoted for the organic matter (OM) content of such “typical” soils. The physical properties of a good root zone include total porosity of 35-55% distributed between air-filled and capillary porosity, with a saturated hydraulic conductivity of 15-30 cm/hr and moisture retention of  $\geq 2.5$  cm/30 cm depth (Sheard, R.W. *Understanding Turf Management*, Sports Turf Association of Ontario 2000). These basic characteristics reflect the importance of physical composition and performance characteristics of the soil profile. Based on the figures above, it might be presumed that organic matter (OM) is a relatively insignificant component of the root zone mix. In fact, organic matter makes a disproportionate contribution to the soil-plant relationship. The significance of naturally occurring OM in water



On a soccer field, 70% of the play occurs on 30% of the field. Each player travels approximately 10 km/game – that produces 250,000 foot imprints per game (excluding the referee and goalies). At 42 foot imprints per square metre per game, a 100 game season results in 4,200 foot imprints per square metre!

relations and in stabilizing soil aggregates and nutrient cycling has led to considerable interest in the use of organic soil amendments, especially for sand-based turf.

### Assessing Organics

What are some of the issues that need to be considered in relation to an assessment of organic materials and their appropriate use in turfgrass management?

The keys to this assessment include evaluation of:

- C/N ratios of the starting material
- Soil O<sub>2</sub> levels and gas exchange
- Soil microbial populations
- Physical and chemical nature of the material, including formulation
- Continuity and quality control of supply
- Independent substantiation of product claims

Organic amendments include peat, soil, peanut shells, sawdust, composted urban waste, composted sewage sludge (biosolids), organic fertilizers derived from a variety of sources (including composts), humates and biostimulants of various types. These diverse materials are composed of various amounts of sugars and starches, amino acids and proteins, cellulose, hemicellulose, lignins, fats and waxes. It is not surprising, therefore, that organic sources differ markedly in physical and chemical composition, rates of

decomposition and contribution to the plant-soil ecosystem.

Organic matter decomposition involves reaction with microbes in an aerobic environment to produce humus, carbon dioxide and microbial biomass. Decomposition rates are influenced by C/N ratios, the physical and chemical formulation of the material and the soil conditions – particularly water and oxygen (good gas exchange is an essential feature of effective organic matter turnover). For material with the same surface area (particle size), the higher the C/N ratio of the organic material, the slower the decomposition process will occur. High C/N materials may also result in temporary immobilization of soil N, making it unavailable for plant growth in the absence of adjustments to the fertility program. Compacted or waterlogged soils will also have significantly poorer OM decomposition, and are more prone to developing microbial communities that include deleterious bacterial species.

### Composition

Major interest in organic amendments has been focused on the increasing availability of compost and compost-based fertilizer products in the market place. In a native soil, good quality compost should increase particle aggregation, improve permeability, reduce surface compaction