

# Sports Turf Manager

*for safe, natural sports turf*

1987-2007

CELEBRATING  
★ 20 YEARS ★

## Summer 2007

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## Turf & Water

See pages 13-26 for extensive coverage of STA's second full-day water workshop held March 29 in Halton. Sessions ranged from the overall watershed perspective right down to individual soil profiles of sports fields.



## Editorial – Be Prepared

THE REALITY OF CHEMICAL USE BY R.W. SHEARD, PH.D., P.A.G.

According to their 2006 annual report, environmental issues continue to be of major concern for the members of the Nursery-Landscape and Turfgrass Subcommittee of the Ontario Horticultural Crops Research and Services Committee of OMAFRA. Seventeen municipalities in Ontario have enacted "no pesticide by-laws" and more are pending. The report states that "the increasing number of municipal pesticide bans is proof that the activists are not accepting IPM accreditation." IPM is not being accepted as a reasonable measure to reduce the reliance on pesticides, in part because of information gaps in monitoring and for detection techniques and thresholds.

Even where such legislation is not in effect, the choice of control measures is decreasing. Many of the older formulations of pesticides are being withdrawn voluntarily or as a result of PMRA's re-evaluation which is leaving large gaps in the choices for pest management. Companies who produce biopesticides are reluctant to invest in the development of these products as their potential uses are too small to meet the requirements to register their

products in Canada. It is not clear whether the biopesticides will be accepted by municipalities who have enacted the no pesticide bylaw. This is in effect further reducing the industries incentive to finance their commercialization.

When will the activists call for a chemical-free environment in addition to a pesticide-free environment?

Following the Walkerton event, nutrient and water quality have become an... → page 6



## EDITORIAL CONTINUED...

### PHOSPHORUS & NITROGEN WILL BE THE KEY ISSUES SCRUTINIZED

...issue. Currently the provincial government is focusing its resources on large livestock operations and manure applications. The *Nutrient Management Act* regulations are being reinforced by the *Source Water Protection Act* which brings the water quality issue from the farm to the athletic field level.

From the water standpoint, phosphorus and nitrogen will be the key issues. Movement of these two nutrients from the point of application, either internally through the drainage system or externally through runoff, will be the point where opponents will focus their energies.

Such scrutiny of phosphorus and nitrogen use is already occurring in the U.S.A. where some areas are banning phosphorus use on turf and where only phosphorus-free fertilizers are allowed. Manitoba has restrictions on the use of phosphorus

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**Does runoff really occur from a sports turf surface, on what slopes, at what rainfall intensity, attached to particles or in solution? Can bioherbicides keep weeds at bay?**

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adjacent to water bodies and is considering a total ban of phosphorus use on all turf. While phosphorus is generally considered to be immobile in soil there are indications that at very high levels of phosphorus in the soil there is a potential for phosphorus to remain soluble and move into the drainage system in an organic phosphorus form.

Under agricultural conditions, the major system of phosphorus movement to water bodies is on soil particles eroding from the surface. The likelihood of such movement occurring with turf is highly improbable, although there are turf managers who will argue a field must be crowned to induce surface drainage which could result in soil particle transport.

Nitrogen may stimulate interest through two reactions in the soil. The first

reaction is the leaching of nitrate nitrogen to the ground water and the potential for "blue baby syndrome" where concentrations in the water of greater than 10 ppm are recorded. The second reaction is the conversion of nitrate nitrogen to nitrous oxide gases which are evolved to the atmosphere where they have a profound effect on global warming, being 300 times more effective than carbon dioxide. Fortunately this reaction only occurs under waterlogged conditions.

What can an individual turf manager do to counteract these issues? **Be Proactive.**

The fertilizer industry is already showing signs of being proactive. A major home fertilizer retailer is advertising an environmentally friendly, zero phosphorus lawn fertilizer.

The turf manager should lobby researchers to become active in investigating these problems. Entice them to generate information to fend off concerns. Entice them to make their information general public knowledge before the issue of fertilizer, another chemical, is raised. Does phosphorus truly move in the organic form and if so to what degree? Does runoff really occur from a sports turf surface, on what slopes, at what rainfall intensity, attached to particles or in solution? What is the level of nitrous oxide emission from a turf surface? Is irrigation water being used most efficiently? Can bioherbicides maintain a weed-free turf?

Keep a paper trail. Every sports field should have record of the particle size analysis, a once only measurement unless the field is rebuilt. A phosphorus and potassium soil test should be taken at least every third year and the application of these two nutrients be discontinued if the test so indicates. Records of the actual yearly amount of nutrients applied should be kept. When the nutrient auditor comes calling you will be in a better position to justify your operation and to prevent any restrictions or penalties.

Start today, for tomorrow will soon be yesterday, and a day too late. ♦

## We're Going 21st Century in Our 20th Year!

AS PART OF OUR 20<sup>th</sup> anniversary tune-up, the STA website is being revised and updated. You won't notice much of a change in our look however; the real improvement is in the approach, not the appearance. We're moving to a Content Management System which will provide for easier design and maintenance, more frequent updates, and greater functionality.

In our first phase we've introduced a 'Members Only' section. Until this year, the STA Membership Roster has been brought up-to-date by means of annual printed inserts. This will be replaced by a web-based version. The little green binder is now obsolete. The new adaptation will offer personal updating, instant retrieval and information that is always current. You'll also be able to search entries by name, affiliation and location. If electronic isn't your preference, the roster will still be made available in the form of a print document, upon request. Watch your inbox and mailbox for all the details!

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**Below:** The little green binder was first introduced to STA members in 1995.

