

Second Biennial Atlantic Sports Turf Field Day - June 18 Dartmouth, Nova Scotia



Tailgate Tradeshow Exhibitors

Eastern Turf Equipment
Halifax Seed Company
Mar-Co Clay Products
Maritime Turf Supplies
Nova Turf Care Products

Nutri-Lawn Halifax
Reddin Golf & Turf
Shaw Resources
Turf Masters Landscaping Ltd.
Vesey's Equipment

Written by R.W. Daniels, Dalhousie Agricultural Campus, Department of Environmental Sciences

As the Sports Turf Association continues to expand its role in supporting turf managers throughout Canada, it, in cooperation with Halifax Regional Municipality, held a very successful SportsTurf Field Day on June 18, in Dartmouth, Nova Scotia. The first such event in Atlantic Canada was held in Moncton in 2011. This year's event consisted of a morning educational program, held at the Dartmouth Sportsplex, addressing specific topics on turfgrass by Dr. Eric Lyons, University of Guelph; and Dr Tim Vanini, New Dimensions Turfgrass. This was followed by a noon "Tailgate" Tradeshow, practical equipment and product demonstrations conducted by Mar-Co Clay Products, and the remaining educational session by George Bannerman of Gordon Bannerman Limited. These later events were held on the Dartmouth Commons.

The event attracted some 60 recreational field practitioners from three Atlantic provinces. The educational sessions were recognized by Plant Health Atlantic which enabled qualified individuals to accumulate Continuing Education Credits recognized by this organization.

Dr. Eric Lyons made two presentations to those in attendance. The first dealt with "Maximizing Benefits of New Technologies in Turf Management: Fertilizer and Novel Grass Species." Eric spoke on how new fertilizers are being continually introduced and available to athletic field managers. As the frequency of these introductions increase, along with the technologies used to develop

the products, a thorough understanding of the benefits derived when using them as part of a seasonal maintenance program is necessary.

As Dr. Lyons referred to new technologies in turfgrass, he challenged the participants to understand how their management practices affect turfgrass. Doing things correctly results in significant improvements while doing things poorly generally results in a significant setback. With regard to turfgrass nutrition, he emphasized the importance of delivery and how to apply products properly, with special reference to fertilizer application frequency and usage of the right equipment.

In dealing with the newer, long-lasting fertilizers, he emphasized both the potential benefits and problems. These potential problems are in application errors, the fact that mistakes take a long time period to correct, application equipment must be calibrated properly and operational errors avoided. In determining a fertility program, one needs to understand that nutrients are best applied during the time period in which the plant is actively growing.

As overseeding has become a regular practice in sports field management, individual managers must continue to evaluate all new products and turf varieties available. Additionally, those responsible for establishing seasonal maintenance schedules must determine how any new product can be successfully integrated into their program to provide for a better playing surface throughout the year.

The second presentation by Dr. Lyons dealt with "Maximizing Benefits of New Technologies" with specific reference to weed management. At this time, he gave a review

of previously used "chemical" products such as "Killex," which contains 2,4-D, Dicamba and Mecoprop. Multiple new methods are now becoming available although most only contain one active ingredient. These products are mainly biological and may contain heavy metals. Additionally, these products are very expensive and to date do not give the weed control results as obtained from the previous (chemical) products.

The importance of weeds in established turf should not be underestimated as the higher the weed population the lower the actual turf cover, which can result in increased injury to those playing on the field surface. This is due to the fact that established turfgrass roots provide for increased stability in the turfgrass soil.

The remainder of the morning consisted of a presentation by Dr. Tim Vanini of New Dimensions Turfgrass. His topic was "Research and Real World Applications Using Crumb Rubber to Improve Natural Sports Fields." Although crumb rubber has been available and used for natural sport fields since the 1990's, many questions relating to its proper usage are being asked. In many instances, its improper usage has resulted in conflicting results with respect to the ability of this product to successfully improve the playability of a sports field.

Crumb rubber used in sports turf consists of used car tires that have been very finely ground. Only the rubber component is used as all other material in the original tire is removed.

Dr. Vanini indicated that up to 15% of athletic field injuries are related to the condition of the field. He emphasized that



Special thanks to our sponsors



playing quality is a function of both safety and playability as it is the player-surface interaction that contributes to sports turf injuries. Sports turf hardness is measured by means of a Clegg Hammer.

The most significant benefit of crumb rubber is that it provides resiliency to the playing surface through its ability to reduce surface compaction. An application of crumb rubber softens and stabilizes the media in the field as it aids in providing for a more consistent and uniform playing surface.

Dr. Vanini emphasized that it is important for the field manager to know what portion of the growing media is being managed. He indicated that the top 2 inches (5 cm) which contains the plant and its crown (growing point) are the most critical. He stressed the importance of always protecting the crown as it is from this region of the plant that all continuous growth arises. It was in fact the recognition of the vital role of the crown that initiated the concept of using this product on natural turfgrass playing surfaces.

Early research consisted of evaluating various sizes of crumb rubber particles. While originally large size particles were used, it was soon discovered that finer sized particles were preferred. The latest research indicates that individual particles 0.75 inches (1.9 cm) in diameter are most commonly used. Research was conducted to evaluate surface hardness by simulating "game traffic," as he tried to make practical assessments of the effect of "real traffic" as experienced during various situations.

While at Michigan State University from 2001-2005, Dr. Vanini began to study the role of crumb rubber as a component of field

management as it related to other cultural practices such as fertilization, watering, aeration and overseeding. Individual trials were established which contained no crumb rubber, and received only seasonal rainfall and normal seasonal maintenance of fertilizer. Those plots were evaluated against similar plots consisting of added crumb rubber and additional amounts of both water and fertilizer. Results showed that, regardless of the presence of crumb rubber, those plots receiving the largest amount of water were consistently softer. From this he determined, by adding crumb rubber in the upper layers of the soil profile over a time period, he could increase the stabilization of the playing surface. This stabilization could be achieved successfully versus using cultural practices such as irrigation and aerification.

The initial method of incorporating crumb rubber into the playing media was by tilling the product into the existing media. This technique proved unsuccessful as it was both too time consuming and difficult to get the crumb rubber evenly placed and distributed within the growing media. The next step was to core aerate and use crumb rubber as a topdressing. It is recommended that you apply infrequent and heavy topdressing applications of crumb rubber to sports turf. A minimum application would consist of 0.25 to 0.50 inches (0.64 to 1.27 cm) in depth with the specific amount dependent on the present mowing height of the established turfgrass. The goal is to improve field drainage, resulting in better turfgrass growth, which makes for an improved, consistent playing surface. For maximum effect, it is desirable to have 100% turf cover on a field as the

addition of crumb rubber does not increase new plant growth but protects the existing turf. In addition, it decreases surface hardness, increases surface consistency, increases turf wear tolerance, and extends the green cover on a field thus reducing the requirement to overseed. Speculation is that within the next five to ten years additional research will be available to provide for more accurate usage of this product.

The afternoon started with an outdoor barbeque which provided an opportunity for all to mix and share ideas relating to their sports field maintenance practices. During this time period, delegates were able to participate in the "Tailgate Tradeshow." Industry suppliers contributed to the success of this event as they answered questions relating to the products and services they are able to provide.

A practical and hands-on demonstration by Mar-Co Clay products and the final educational session by George Bannerman of Gordon Bannerman Limited concluded the day. The topic discussed by George was "Infield Grooming."

Based on the comments of the course participants, all felt that the event was most worthwhile, and the information and experience gained warranted the continuation of such an event. It is hoped that the organizers and sponsors of this day will continue to offer additional educational opportunities to sports turf managers in the future. The support of all speakers, industry supporters, Halifax Regional Municipality and the Sports Turf Association in making this a successful day was recognized by all in attendance. •