Sports Turf Manager

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School Sports Field Trials: Year One

joint project involving Dol Turf Restoration, the Simcoe District School Board and Sports Turf International, together with supporting partners DCS Agronomics, Vanden Bussche Irrigation, FS Partners, and Sylvite took off in full flight during the 2011 growing season. There is a dearth of data which demonstrates the relative effectiveness of varying aeration methods now used by the industry.

The objectives of the trials were to analyze the effectiveness of aeration methods on two different sites, and evaluate the results of applying several slow release nitrogen materials at varying rates.

Site 1 was Bradford District High School, where a new field was constructed and completed in the spring of 2009. Site 2 was Banting Memorial in Alliston, an established field that was renovated in 2005. Both sites have similar

Ken Pavely, Sales Manager, Lawn Life

Category 3 soil root zones. The major difference was the presence of organic matter, where the existing Banting site had double the amount due to its longer time since establishment.

The challenges school sports fields face are well known. Often with no down time, these fields are used five days a week,

THE CHALLENGES SCHOOL SPORTS FIELDS FACE ARE WELL KNOWN.

as well as evenings and on weekends. Physical education classes usually take place outside as soon as weather allows, long before the time when a field should be opened to allow for adequate drainage from winter precipitation and frost.

To add insult to injury, summer permitting by sports groups compounds the damage and pressure.

The aeration equipment, supplied by Dol Turf Restoration, included a large and small Verti-Drain, Verti-Ouake, mechanical core aerator, shatter tine and sport tine units, aeravator, pull type core aerator, and a Waterject unit.

As a side demonstration on the new Bradford site, a Veemo dethatcher was run over a section of the newly sodded field with one to three passes.

OTS HIGHLIGHT Continued inside on pages 9-10.

The fields were sectioned off into plots 3000 ft² in size, running from goal post



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to goal post. Plots covered both the centre of the fields (where the bulk of play takes place), and the shoulders. Three replications were done to ensure an adequate cross section of data.

Aeration Methods and Year 1 Results

In June and August, each aeration unit was taken over the field in a single pass on three plots. Control plots were randomly placed to adequately measure the differences.

In addition to the aeration units, the Veemo did its best to remove thatch from the field.

The results were gathered by two different methods, Mechanical Penetrometer, and Triax GMAX tester.

For those unfamiliar with GMAX testing, this unit is used to measure surface compaction on synthetic turf fields.

Presented February, 2012 Guelph, Ontario.

OTS HIGHLIGHT



Triax GMAX tester

IN JUNE AND AUGUST, EACH AERATION UNIT WAS TAKEN OVER THE FIELD IN A SINGLE PASS ON THREE PLOTS.













Releasing a 20 lb missile from a 24" height, the force is measured electronically, and provides a precise number showing compaction.

While GMAX measured compaction at the surface, the mechanical penetrometer measured soil compaction at a 4" depth.

First Year Results

- The established field with the higher organic matter content (Banting) had less compaction
- Lower moisture levels in the August measurement showed higher levels of compaction as compared to October
- Two methods of aeration consistently outperformed the rest, those being the Verti-Drain and Verti-Quake
- Differences in the two fields point to a higher organic mass percentage in the older field. •



2012 WILL BE THE SECOND AND FINAL YEAR OF THE TRIAL.



Soil Profiles

These soil profiles taken after the dethatching provide graphic evidence of just how much thatch can be removed with such a unit. It is important to note that fertilizer should be applied immediately after to facilitate turf repair and restoration.



