PLANNING FOR RENOVATION OF YOUR SPORTS FIELD

Introduction

The winter sports season is fast coming to an end, which will offer a welcome break to those looking after the playing surfaces. However, before putting the feet up it is critical to address any damage done during the season and/or any potential issues that may affect future performance. The spring renovation is one of the most important parts of a turf maintenance program.

Why renovate?

Club members might question why it is necessary to do work on what may appear a suitably good surface. However, without renovation the long term performance of the ground will suffer. Just like the performance of a car will suffer if we don't do repairs, maintenance and oil changes.
Renovation may be done for a number of reasons, and each reason requires a different approach. *As such it is critical to carry out a professional analysis of the field before planning the renovation program.* For example, if looking to control thatch or mat the renovation will involve verticutting or shaving off the top layer, whereas if looking to improve drainage then focus on deep soil cultivation.
Reasons for undertaking renovation include:

- Repair of lost turf cover
- Correction of surface levels
- Replacement of poor quality turf (e.g. weedy turf) with more desirable material
- Removal of excessive mat or thatch
- Improvement of soil drainage and aeration
- Amendment of the root zone with more desirable soil material

Repair of turf cover

Several options are available to re-establish turf cover, including: laying new turf, stolonising, plugging or seeding. For larger areas (more than 0.5 m^2) using sod is generally the preferred approach. New sod laid in Sept/October will take a minimum of 6 weeks to establish a strong root system that can withstand traffic. When laying new sod it is critical to get the old surface both loosened to depth (e.g. hand forking for small areas) and perfectly level. A temporary watering system is likely to be needed for the initial 3 or 4 weeks after laying.

Reinstatement of levels

Renovation offers the ideal opportunity to improve surface levels, particularly any worn spots that may have hollowed out (such as football goal boxes, penalty spots and linesmen tracks). How best to level will depend on the extent of cut or fill required. Be careful not to bury the turf when topdressing, otherwise the turf may not recover. Where major undulations are to be levelled it may be best to strip the turf, loosen the topsoil, bring in new topsoil then re-grass.

Thatch control

Excess thatch or mat is a major problem in sports fields, particularly in areas that receive little traffic. Excessive mat will make it difficult to close mow without scalping, and will make for a slow, spongy surface. For sports such as cricket and softball the outfield will inevitably be slow. Depths of thatch/mat in excess of 10-15mm warrant treatment to reduce mat thickness.

Thatch can be controlled progressively through periodic verticutting or dethatching, or via a one-hit operation to blade off the mat layer (using a device such as a Topmaker). Which option is best will depend on factors such as depth of thatch, time available before re-use and budget. With couch turf a one-hit blading is often the best solution, working on getting turf to recover from the underlying rhizomes.

Use of field topmaker to blade off the turf surface.

Removal of soil layering and improvement in soil root zone condition

Many sports fields have some form of layering or compaction that inhibits both water and root development. The only effective way to remedy root zone compaction and layering is through physical treatment (cultivation). Most fields ideally need to be deep cultivated several times over the year, preferably at a time of root growth. Loosening the compacted zone will stimulate root growth, which in turn will improve soil structure.

The benefits of deep cultivation are:

- Compaction relief
- Aeration of the profile (beneficial for the soil and plant)
- Improved drainage
- Improved rooting depth where the turf grass roots move down the cracks and holes

A Verti-drain deep tine unit.

Deep cultivation should ideally be done when the soil is in a moist, but not sticky, condition. If the soil is too dry the depth of penetration will be limited. Ideally aim to tine as deep as possible. Depth will be limited by the condition of the soil and often by the depth of structures, such as irrigation pipe. Ensure all sprinkler heads are clearly marked (spray paint or flags) before commencing.

Sand Topdressing

Sand topdressing is a common practice on playing fields. Sand topdressing will not only help to firm up a surface and maintain good infiltration rate, but will help improve levels.

Typically up to 100 m^3 per ha of sand is applied. This topdressing is often done in conjunction with the soil cultivation work.

Correct selection of topdressing material is essential to avoid long term problems. Key points to note when selecting topdressing material are:

- The sand topdressing material should be similar to the current sand as problems can arise if different sands are used.
- Material used should offer good drainage, even when compacted. This is likely to mean using a sandy material, either a straight sand or a sandy loam/loamy sand.
- Topdressing material should be free of any large material (more than 2mm)
- Ensure the topdressing material is free of grass weed seeds

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