

# THE IMPORTANCE OF PROPER FIELD MANAGEMENT

IAN FERGUSON, 2007 STA ROBERT W. SHEARD SCHOLARSHIP RECIPIENT

**P**roper field management today goes beyond the traditional “mow and blow” concept of the past. The increased study of turf grass has led to many new concepts on plant physiology and the advancement of technology has created a fleet of equipment which is greatly superior in terms of accuracy, consistency and quality.

With these advancements in turf management, we are now able to provide fields of unsurpassed quality which has led to the progression of athlete’s skills and the sports played on our fields. This has led to greater demands and expectations for our fields, which means that we, as educated turf managers, need to implement the skills and knowledge that we have acquired in order to meet the needs of the games.

These skills go beyond merely implementing an irrigation schedule, which is without a doubt a vital asset to turf managers, but rather to the more mechanical side of proper field management, such as fertility regimes, aerification, over-seeding and topdressing, spraying, and field renovations. Without the proper use and timing of these skills, turf managers may struggle to keep their fields performing at the same level as the sports being played on them, resulting in weakened and diseased fields, which are uneven and unsafe for play.

## **Fertilization**

Perhaps the most utilized skill by turf managers today is the use of fertilizers. Whether they be organic or synthetic, fast or slow release, granular or liquid, the addition of essential nutrients into the soil profile is critical to turf health. Implementing a regime that best suits the needs of your turf will be crucial in maintaining a healthy stand of grass. There are several factors to consider when planning a fertility program: climate, turf type, irrigation scheduling, budget, and field use are five of the more common ones. By taking all factors into consideration, a program

can be built to best supply the turf with nutrients. The most recent concept is called “spoon-feeding” and in southern Ontario typically consists of a late fall nitrogen slow release and a late spring all-purpose slow release fertilizer to provide a base level of fertility throughout the year. Once base fertility is established, the “spoon-feeding” method is applied by using fast release liquid fertilizers bi-weekly to control growth rates, colour and disease pressures. This concept has thus far proven to be an effective fertility tool, and should be considered by all turf managers to implement on their fields.

## **Aerification**

Aerification of fields may be the most important management practice for sports fields in terms of type and timing. The frequency of aeration is entirely dependant on the type of field and the amount of play it receives (thus the intensity of compaction). By using this theory of the relation between wear and aeration, a sports turf manager can decide when to aerate their fields. Clearly a football pitch would receive more wear and compaction than a baseball diamond, and the frequency of aeration practices should reflect that. A general recommendation for the aeration of high wear fields in the southwestern Ontario region is once per month, which works out to roughly six times per season. Some of this aeration should be solid tine, and some should be cored. When a turf manager chooses to do one or the other it is usually based on timing, budget and labour restrictions. Coring usually requires more time and money, as the cores need to be crumbled or collected afterwards. Without aeration practices, fields become compacted, which affects the turf by preventing gas exchange, reducing drainage and inhibiting root growth. This creates weak turf with high probabilities of contracting disease, such as several types of fungal species. In addition, compaction also creates a hazardous playing surface by making the surface

soft and squishy, which is difficult to play on and increases risk of injury.

## **Topdressing & Overseeding**

In conjunction with core aerating is a practice known as topdressing and overseeding. Typically, prior to core aerating, a sand-seed mixture is spread over the playing surface approximately 1/8" to 1/4" thick. The sand is used as a soil amendment to increase the drainage capacity of the field and the seed is mixed in to speed up recovery time from the damage of coring, to avoid weeds and disease from interrupting turf growth. The entire process will cause some stress to the field, but with proper practices, a turf manager will end up with a thicker, lusher field, which drains better and performs well even with high wear. This is typically done in the spring while fields are kept moist with frequent rainfall and as the temperature is increasing to aid with seed germination. Fields in southwestern Ontario are typically a blend of Kentucky bluegrass and perennial ryegrass, and so a seed blend which matches the content of the field is suggested. It should be noted that perennial ryegrass germinates faster than Kentucky bluegrass, but also that Kentucky bluegrass is more resilient to wear than perennial ryegrass.

## **Pesticides, Fungicides & IPM**

On high end fields, having consistent uniform turf is an absolute necessity. To achieve such perfection usually requires the use of herbicides and fungicides to keep pests from growing in the fields where they are not wanted. Many municipalities are currently banning the use of most pesticides, but there is a need for them in certain circumstances which should be brought to the council’s attention to appeal the bylaws to exempt high quality turf, such as sports fields, lawn bowling clubs and golf courses. Spraying sports turf with preventative herbicides, fungicides and pesticides is not entirely necessary. Post emergent treatments for

most pests are usually effective at alleviating the problem. A turf manager should be able to argue their point to a council by making the argument that only post-emergent spraying will be done, and it will be done by an IPM licensed professional in areas only where the disease, insects or weeds are seen. The application of chemicals to ensure uniformity in the playing fields is a cost effective way to maintain field quality and is vital to the maintenance of a field.

### General Maintenance

There are other practices which also affect the quality of the game which are not directly related to the turf itself. Field repairs, such as back-stop patching, fence capping, goal net repairs and bleacher re-finishing are other maintenance practices which affect the game and reflect the quality of the fields. Back-stops and fences and nets with holes in them allow balls to pass through, which is an issue both for safety and for consistency in the rules of the game. Fence capping and re-finished

bleachers are also crucial in keeping both players and spectators safe. It would be very unfortunate for a player to injure themselves on the top of a chain link fence or for a spectator to be seated on an unsafe bleacher stand and have an accident. Other repairs that occur directly on the field, such as the removal of lips, edging warning tracks and sodding goal creases are also vital in ensuring a safe playing surface. Fields need to be as smooth and consistent as possible, and all transition areas (such as clay to grass) need to be clean, smooth and level to avoid injuries from occurring. This type of maintenance practice is usually forgotten about on slightly lower quality fields, which at some times may be acceptable by the standards of the games being played on them, but for high quality fields with professional level sports being played on them, ignoring these repairs is intolerable.

Going beyond the management practices of the past is vital in providing fields for the future of sports. With the large increase in player skill comes a large de-

mand for an increase in field quality. Today's new technology and knowledge of turf now allows us to meet and raise the standards for sports fields and sports facilities. By using these new resources, turf managers are now able to provide thicker, smoother, tougher fields to stand up to the increased level of play. These new practices don't come without their costs, but the benefits of properly implementing them on fields doesn't compare to the fields which don't receive them. It is becoming a struggle for turf managers today to keep up with player and game expectations; many facilities have already chosen to change their fields to synthetic turf to be rid of the complications of compaction, drainage and fertility, but the value and experience of having natural turf fields is an immeasurable quality which turf managers should strive to preserve. ♦

Information gathered from: 1. Personal Knowledge 2. The Ohio State University: <http://ohioline.osu.edu/srt-fact/0002.html> (Oct. 25th, 2006).

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