Winterization of Turf on Sports Fields: Perspective from an Ontario Private School

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s I write this article, we in the Niagara Peninsula are finally experiencing a true minisummer. With the new school year upon us, it is time to begin putting into practice the necessary steps for preparing our turf for the winter months. The following article will provide insight as to how Ridley College (a private high school) prepares its turf for winterization.

Soil Tests are Crucial

Soil fertility is crucial in readying the turf for the winter months. The process of determining a fertility program is begun one year in advance. I have been working with a turfgrass consultant for five years to fine tune our fertility program. We take into consideration the fact that we have both irrigated and non-irrigated fields, which determines our approach to fertility. Irrigated fields receive 11b.N/1000' per month from May to November and our non-irrigated fields receive 11b.N/1000' in June, September, October and November.

Our phosphorous, potassium and micro-nutrient needs have all been predetermined by soil test results. We now concentrate on applying 75% of our nutrients to the non-irrigated fields in the fall. This, I find, helps to strengthen the turf and prepare it for the winter months. We have been applying a dormant fall application of 11b.N/1000' of ammonium sulfate for nearly 10 years. I saw an immediate response from the turf on our initial application. Not only did I see a more consistent turf colour throughout the winter months, the turf did not experience that initial growth surge in the spring.

What was extremely inviting with applying a dormant fall application was the fact that we could delay our first spring application until May on irrigated fields and until June on non-irrigated fields. Ridley requires that sports fields be available for use when students return from March Break. With that in mind, the ability to delay spring fertilizing made sense due to our hectic spring schedule.

Minimizing Soil Compaction

Aeration is another key component in winterizing our turf. I like to aerate in late fall, after all our sports have been completed. This obviously helps alleviate compaction created by usage. The opening of the soil provides an avenue for moisture and nutrients to enter. This improves root uptake, which in turn strengthens the turf for the winter months. I also depend on Mother Nature to help out with the freeze/ thaw cycles throughout the winter. This provides the most natural way of aerating the soil. over the winter months. As many of you are already aware, leaf collection is crucial in helping turf survive the cold months. Some of our field perimeters are tree lined and removal of leaf matter is paramount to stopping rot.

The promotion of winter diseases may be of concern to most. Arguments have been made that promoting succulent growth in the fall months will promote grey and pink snow mould and possibly fusarium patch. I have found that a consistent mowing program (late into the fall if necessary) and a timely fall dormant fertilizer application will minimize these winter diseases. Our dormant application is carried out about mid-November.



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Fighting Winter Diseases

Other aspects to consider for winterizing turf are mowing, irrigation and fall cleanup. Our mowing practices continue right up until the time the turf has stopped growing. This helps control the potential for snow compaction, which could lead to moulds. If irrigation is needed in late fall, I will do so only as long as needed and immediately following aerification and fertilization. At least on the irrigated fields, I can help minimize the evapo-transpiration that could occur During the first week of November, I begin monitoring turf growth and soil temperatures. When top growth has ceased and soil temperatures are at about 50°F, I commence aerification, followed closely with fertilizer application and if needed, I will irrigate heavily.

In my 16 years at Ridley, only twice have we seen grey snow mould develop. The mould occurred during milder temperatures followed by heavy, wet snowfall. The snow mould developed where we needed to stockpile snow along perimeters of roadways. Never have I experienced mould over an entire sports field. Once mowing began in the spring, the mould was gone after a couple of weeks. Another concern of mine is foot traffic on the fields during winter months. For a number of years, we have prohibited students from walking on the sports fields from mid-November to April. Students wanting to take shortcuts to class were compacting the soil to the point that they would wear a path. This, of course, would not be seen until the spring when the turf had been killed. Since our ban, no turf has sustained injury.

Through my years of experience, I have found that taking the time to winterize turf properly during the fall months outweighs the hardships of trying to repair and gain back turf loss in the spring. I have been impressed with the way our turf has responded over the years from its winter hibernation. This can only be attributed to our deliberate care leading up to the winter months. ◆



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