

Sports Turf Manager

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Fertilizer Technology: Understanding Slow Release Nitrogen

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The introduction of synthetic fertilizers such as urea revolutionized turfgrass management. Finally there was an efficient, inexpensive nitrogen source to increase fertility and therefore growth and vigour of turfgrass stands. The issue with readily available fertilizers is that they need to be applied every three weeks to have a steady growth pattern. This is usually not feasible considering the labour costs involved in application. The solution is to use a slow release fertilizer that provides a steady release of nitrogen available to the plant throughout the season. In order to most effectively use slow release fertilizers, turfgrass managers must understand the factors that affect the release of nitrogen from the product.

Slow release fertilizers can be categorized in many ways. In this article they are categorized by the factor that predominantly affects the release, either water or temperature. In order for release to occur with any of these fertilizers, both factors have an effect, but one is always more important than the other. Fertilizers that release based on water availability will release more with increased moisture. If you have a wet

summer, release will be faster and you will get more growth and most likely have to reapply sooner than during a dry summer. Conversely, temperature-based release products need some moisture but adding more moisture does not speed the release. Rather, a cooler summer will have slower release than a hot summer. This means that a cool summer may lack in fertility while a hot summer may have increased growth and the need to reapply sooner.



STA FIELD DAY HIGHLIGHT

Lyons (far left) presented in
both Moncton & Oakville.

Generally, temperatures are more predictable than rainfall, so fertilizers with temperature-based release can be more predictable and often more expensive. That being said, understanding the release and incorporating some flexibility into your management strategy can allow a sports field manager to maximize the efficient delivery of nitrogen to create the optimum growth for his or her operation.

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Yes, we hosted two this year, the first on July 21 in Moncton, New Brunswick, and our annual Ontario event was held September 22 in Oakville. Coverage begins on page 9 with lots of photos. Many thanks to all participants!

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