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Soluble nitrogen fertilizers can produce a fast greening response, but have potential to burn the turf if not watered in adequately.

TRENDING SLOWLY – SLOW RELEASE VERSUS READILY AVAILABLE NITROGEN

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There is a growing trend of using slow-release nitrogen fertilizers on greens, tees, fairways, and roughs. Slow-release – i.e., controlled release fertilizers - provide nitrogen for plant uptake over several weeks or months. This article discusses a few pros and cons associated with slow-release fertilizer products.

Pros:

Slow-release fertilizers have a much lower salt index compared to soluble nitrogen sources. For courses irrigating with saline water, high amounts of soluble nitrogen can exacerbate salt problems. Slow-release sources such as ureaform and methylene urea have a salt index of 10 and 24.6, respectively, while urea is 75.4 and ammonium sulfate is 69.

With the lower salt index, slow-release products do not require irrigation to avoid burn. This is especially beneficial during cold weather where irrigation may be unnecessary.

Slow-release products offer labor savings. Given the extended nitrogen release, these products can be applied less frequently than soluble nitrogen sources. In roughs, some courses only apply a slow-release source once annually.

The turf may perform better with a constant nitrogen source, rather than experience intermittent growth when using soluble sources.

Slowly available nitrogen reduces undesirable growth. In areas where bermudagrass grows aggressively in the summer, slow-release products can help reduce mowing frequency when compared to soluble sources.

Cons

Cost is the biggest hurdle when considering slow-release fertilizers. However, consider the bigger picture and include the savings in post-application irrigation, labor, and potential impact on the playing experience when using soluble sources.

Inexpensive sulfur coated urea products have been known to burn on occasion. There have been recent cases where an inexpensive sulfur coated urea was applied, and the inconsistent nitrogen release resulted in fertilizer burn.

An unanticipated release can occur. If temperatures spike and microbial activity increases, methylene urea products will break down at a faster pace. Additionally, mowers or aeration equipment can break open coated fertilizer products and expedite nitrogen release.

A once annual slow-release program may yield acceptable results for roughs, but greens must be treated frequently, even with slow-release products. Some prefer applying soluble products weekly or biweekly to carefully manage clipping yield and green speed.

While the cost per bag is often considerably higher with the slow-release products, the pros explain why this type of fertility regime is a growing trend. Is this program right for your course? Contact the USGA agronomists in the West Region for more information on this strategy or any other agronomic practices.

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Information on the USGA's Course Consulting Service

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