

Your Daily Nitrogen?

Turfgrass fertility is the cornerstone of efficient and effective turfgrass management programs. While there is reasonable debate regarding the amount of macro and micronutrients needed for healthy turf, there is little question regarding the importance of nitrogen (N).

The questions regarding nitrogen use typically involve growth response, source of nitrogen and environmental issues. Clearly, the use of slow release nitrogen has aided the turf manager's ability to regulate growth as compared to high rate applications of water soluble N that produced growth surges. But what if we could supply very low amounts of N on a daily basis, as might be possible with fertigation; would there be any benefit to the plant?

Professor Dan Bowman from North Carolina State University, an expert in the area of N fertility, conducted a study with perennial ryegrass to determine the short and long term effects of daily versus periodic N applications. Potassium nitrate was supplied daily or every 8, 16 or 32 days.

As expected, the daily N applications resulted in a more stable growth habit, as measured by clippings and tissue N level, whereas

the intermittent applications produced surges of growth. Interestingly, the ryegrass turf demonstrated exceptional ability to capture all but the highest N level supplied daily (0.25 lb per 1000 square feet). The intermittent N applications were equally well captured, demonstrating an ability to absorb almost 1 lb of N per 1000 square feet over a 5 day period.

This study found no difference in shoot to root ratio between plants fertilized at high rates intermittently and daily N applications. Furthermore, Bowman suggests that there is likely a lag period when N is applied in high rates and the time it takes to make it to leaf tissue. This would be further affected by frequent mowing that removes tissue and potentially lessens the influence of higher N rates.

With increased concern for nutrients and water quality, having a defensible N management strategy not based on quality, but based on efficiency, is critical. This research contributes to a growing body of physiological projects to more fully understand turf N management and how distinctly different it is from production agriculture.

From: Bowman, D.C. 2003. Daily vs. periodic nitrogen addition affects growth and tissue nitrogen content in perennial ryegrass turf. Crop Science 43:631-638.

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Joann has always had an interest in promoting careers in the turfgrass industry. According to friend and Cornell University associate, Nina Bassuk, Professor in the Urban Horticulture Institute, "It's over 23 years now that Joann and I have been friends and colleagues at Cornell. I'm so pleased she is being recognized for her tireless efforts on behalf of the turfgrass industry. It is so well deserved."

Through the words of her friends and colleagues, it is clear that Joann has made a positive impact on their lives and she has been effective at educating young people and promoting the industry through her instruction, outreach and research.

After reviewing the list of Joann's good deeds and professional accomplishments, it's fair to say that Joann herself leads with her heart and good sense. Her passion for what she does, desire to inform and educate, and expectation of excellence has made her an integral mem-

ber of our association. She has definitely garnered the admiration and respect of her peers and colleagues.

Carl F. Gortzig, who served on the Cornell Faculty for 30 years and worked as a Cooperative Extension field staff member for nearly ten years wrote, "I don't know many people who are as committed and conscientious in pursuit of their work in behalf of an organization!"

Finally, Greg Chorvas really sums up what many of her friends and colleagues feel about her and her selection for this award: "I got to know Joann six or seven years ago when she invited me to participate as an instructor at her week-long Cornell Short Course. I feel I am a better person and fortunate in knowing and being associated with Joann over the years. A caring and positive attitude, exceptional work ethic, knowledgeable commitment, and profes-

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Scanning the Journals

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