

funded project, "Evaluation of Cytokinin Plant Extract Bio-stimulants: Iron and Nitrogen Products for their Effectiveness on Summer Creeping Bentgrass Summer Quality." The research was conducted by Drs. Derek Settle and Peter H. Dernoeden and can be accessed through the USGA's Turfgrass and Environmental Research On-Line at <http://usgatero.msu.edu/vo8/no1.pdf>.

This field study examined the impact of six products that contained cytokinins, and other plant extracts nitrogen or iron, or various combinations thereof on their impact on creeping bentgrass putting green color and summer quality. These products were compared to urea (N) and evaluated in

Lemont, IL, and College Park, MD, in 2007 and 2008.

In the report summary, a key point that caught my attention was: When data were averaged over the season in both IL and MD, urea alone and treatments containing urea generally provided best summer quality. There were, however, no significant differences among urea alone, Iron Roots plus urea, Roots Concentrate plus urea, or Panacea Plus and urea at either site." Product application costs were also included in the report and ranged from \$7.50 per acre for urea to \$29.00 to \$170.00 per acre for the other products used in the study. This information reiterates the point that significant cost savings can be achieved without

compromising quality by using basic materials.

Even in the Information Age, keeping up with the most current research can be challenging. Also, every course has unique characteristics, and thus on-site evaluation of products should be performed.

This does not have to be a large and time-consuming process; but in order to fairly evaluate a product, an untreated control — or check — plot is needed. This can easily be accomplished by using a sheet of plywood to cover temporarily the same area of turf each time before application of a new product. Having a side-by-side comparison makes it easy to decide if real benefits are being provided.

Organic Fertilizers and Pesticides

By Joel Jackson

In an age, where the term 'Going Green' takes on many aspects, organic-based products are making their way into golf course fertilizer and pest-control maintenance programs.

Some of the more recent products like Ecumen are a direct result of the loss of Nematicur as the predominant nematicide used on golf courses.

As Nematicur was being phased out, several superintendents like Steve Wright at Boca West, Alan Puckett at Eaglerooke and Steve Ciardullo when he was at Mountain Lake tried the product NeoTec to suppress nematode activity and reported various levels of success. Recently Bill Kistler at Tampa Palms told me they had applied DiTerra this past June and reported significant reductions in sting nematode counts in follow-up samples.

On the nutrient side, who among us hasn't applied Milorganite sometime in our careers? And we have seen additional organic fertilizer blends emerge like Nature Safe and Bovamura among several others. These just happen to be some of the brands I have heard about or seen advertised. And these are just the granular products, there

are also numerous liquid blends used in foliar feeding programs.

The timing of this topic during the current recessionary trend is perhaps unfortunate since budgets have been scaled down at most clubs, so discretionary spending on all products and programs in general is under closer scrutiny. So getting the biggest bang for your buck is critical.

At the USGA Green Section program out in San Diego this past February, one of the presentations concerned ways to economize and yet still provide good playing conditions, and the take-home message was, stick to fulfilling basic agronomy needs for the health and performance of the turf."

One example was that if soil and tissue samples showed you needed to apply nitrogen, then apply urea and not a full blend with other macro and minor nutrients if the test doesn't call for it; and the same goes for potash, phosphorous, etc.

I know we can't generalize too much because each course is different with its soil profiles, water quality, micro-environments, etc. There are situations like the loss of Nematicur that call for trying other products and other than Curfew, some of the organic products might deserve a look as a useful tool for your particular course.

In a companion article in this section, John Foy, director of the Florida Region of the USGA Green Section talks about doing your due diligence in selecting and using organic based products. They may have a place in your programs. Just make sure they're the real McCoy and a good fit for your course and your budget.