

What we don't know may hurt us

by Christopher Sann

In conversations that I had with Dr. Richard Hull, while planning and discussing his excellent article on nitrogen fate in turfgrass, I have once again been struck by the lack of precise information about basic turfgrass biology and the workings of the turf-soil ecosystem currently available to our industry. Indeed, there are a multitude of potential problems facing turfgrass managers in the very near future as a direct result of this knowledge gap.



Minimum turfgrass nitrogen requirements have yet to be established

Dr. Hull told me that his research is directed toward finally establishing the minimum annual amount of nitrogen that is required to maintain healthy turf. I was shocked when he told me this, as I have always thought that such basic information was readily available. According to Dr. Hull, however, the minimum amount of supplemental nitrogen needed to be applied to maintain healthy turf, while taking in to account the seasonal fluctuations in soil nitrate levels, has yet to be established.

Dr. Hull's work has the potential of offering turfgrass managers a set of protocols that could be used to precisely apply just the exact amount of fertilizer needed, and to make those applications at times when the turfgrass can best use the applied nitrogen. By following these protocols, once developed, it may be possible to reduce the total annual fertilizer inputs at turf sites by as much as 25% to 50%, depending on the desired level of fertility.

All very promising, but ...

This work has enormous potential, but it is still a work in progress and the industry may need this specific infor-

mation without delay to combat the developing pressures to restrict fertilizer use sooner than generally expected.

Recently two bills have been introduced in Congress to do just that. The first bill restricts fertilizer applications to no more than that recommended by a soil test, and the second bill would heavily tax the nutrient content of fertilizers to pay for the cleanup of nutrient-polluted waterways and ground water. Both of these bills offer politically popular solutions to questions that have yet to be fully understood and represent yet another attempt by Congress to create scientific "conclusions" by legislative process.

Dr. Hull's work bears directly on both of these pieces of legislation. The bill to restrict fertilizer applications to soil test recommendations assumes that the precise nitrogen requirements for turfgrasses are known, but they are not. Until Dr. Hull's research, as well as the work of other scientists, is completed, there will be no scientific basis for a nitrogen level standard. The second bill, which creates a fertilizer tax to pay for the problem of nutrient pollution, assumes that only applied fertilizers add to the environmental nitrate load. Dr. Hull's research already indicates that mineralization of naturally occurring organic matter is a major contributor to nutrient pollution and in many cases is the primary or sole contributor.

Unfortunately, both of these pieces of legislation, in one form or another, may well become law with substantial negative effects on the turfgrass management industry before the scientific questions that surround them are answered. In fact, the February warning by Mr. Victor Kimm, deputy director of the Environmental Protection Agency, about adverse legislation being promulgated without sound scientific foundation, has alarmingly come true.

As an industry, we are eager to participate with the EPA or anyone in authority in any changes that can help reduce the unintended environmental consequences of our actions. But the minimum requirement, for our wholehearted cooperation, ought to be that the new legislation or regulation be grounded in scientific fact, not political expediency. ■

Transgenic plants field tested

In a major international research move, the Bt Management Working Group (BtMWG), a group of 15 international companies involved in *Bacillus thuringiensis* (Bt) research and development, has funded several research projects to test transgenic

corn and cotton in the field. Two universities were awarded funds for studying Bt transgenic corn and a third was funded for studying Bt transgenic cotton. This marks the first movement of these genetically engineered plant species from the laboratory into the field.

Progress report

New editor takes the helm

by Juergen Haber

If you've read the box on the back page next to your mailing label — it's what in the publishing trade is called the masthead — you'll notice that *Turf Grass Trends* has a new editor.

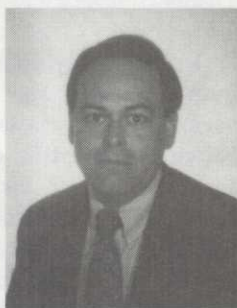
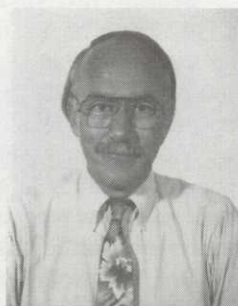
After an exhaustive search, we've finally succeeded in landing a man with many talents, Todd Natkin. Todd's qualifications are top-notch: he earned his blue pencil after more than seven years on the *TIME* Magazine copy desk in New York.

Not content with being at one of the top news magazines in the country, Todd went on to earn his law degree at Hofstra University. That would seem to have his feet planted firmly on the ground, but, no, instead he went on to earn several pilot's licenses: single and multi-engine and that for free balloons.

After his *TIME* Magazine work, Todd practiced law in both New York and Washington including work before the Supreme Court of the United States.

During the course of his law practice he's appeared on national television several times: on *The Oprah Winfrey Show*, on *Cable News Network*, and on *Black Entertainment Television*.

Todd has already been hard at work talking to new contributors for future issues.



Todd Natkin

Dr. Hull's ground-breaking research

As long as I'm on that subject, I'd like to introduce Dr. Richard Hull. Dr. Hull is professor of plant sciences at the University of Rhode Island. His ground-breaking research on nitrogen fate is part of a quarter-century career in applied plant physiology and much of his effort has been devoted to solving turfgrass problems.

Dr. Hull writes, "I have worked in the general areas of plant nutrition with emphasis on energy partitioning and nutrient use efficiency."

He also says, "In recent years, I have concentrated on nitrogen use by lawn turf featuring studies on the efficiency on nitrate absorption and the potential for nitrate leaching from turf."

This work is of the utmost importance, as Field Editor Chris Sann notes in his column in this issue, because two bills in Congress "may well become law with substantial negative effects on the turfgrass management industry before the scientific questions that surround them are answered."

Dr. Hull's current work is "investigating the impacts of various nitrogen fertilization strategies on nitrogen losses and pool sizes."

Speaking of strategies, we've always tried at *Turf Grass Trends* to provide ways for turfgrass managers to apply the theory we preach. One of the accompanying stories, Steps to reduce nitrogen leaching, on page 7, gives turfgrass managers strategies and tactics to combat the problem of nitrogen leaching.

Strategies for the future

Strategies are important in all phases of business including publishing. Here at *Turf Grass Trends* we've just finished the analysis of our first six months in business. With this issue, we'll be coming closer to the eve of a one-year anniversary.

We're still on a big march to growth. After a several months' hiatus, we'll be sending out more sales promotions. It is possible that our current subscribers may get one of these sales promotions. If you're already a subscriber, we hope that you'll pass the sales promotion along to a friend or colleague. Right now we're not equipped to eliminate current subscribers from the mailing lists for the sales promotions.

Other things we're doing soon will be to send out a survey for our readers to fill out. Although I talk to subscribers regularly, I just can't call everyone, so we hope we can find out what you expect, what you like — and dislike — every month in *Turf Grass Trends*.

See you at the Green Industry Expo

We're looking for feedback from our readers and we'll be sure to get it at the 1994 Green Industry Expo to be held Nov. 14-17 at the America's Center, St. Louis, MO. We'll be there with a booth just as we were last year at the 1993 Green Industry Expo in Baltimore, MD. We hope to see a great many of you there. If you're a member of the Associated Landscape Contractors of America, the Professional Grounds Management Society or the Professional Lawn Care Association of America you will no doubt have heard about their annual meetings and the Green Industry Expo.

If you haven't heard about it, you should plan to come. The Expo has its office at: 1000 Johnson Ferry Rd. NE, #C-135, Marietta, GA 30068-2112, phone: (404) 973-2019, fax: (404) 578-6071. We hope to see you there!

New products at *Turf Grass Trends*

We're also working on an index; actually, we're working on two kinds: a conventional index and an articles index. Many readers have written and called about ordering back issues of *Turf Grass Trends*.

But without an articles index, it's difficult for us — and them — to know which issues to send. The index of the 1992 issues will be ready shortly. The index of the 1993 issues and of the issues of the first half of 1994 will follow. Watch these pages for an announcement.

We've learned to take on one new project at a time here at *Turf Grass Trends*.

As soon as the index is ready for the printer, we'll consider taking on other new ideas. One of the first we'll take on is a binder to hold copies of *Turf Grass Trends*.

I'm confident that the binder will be out before the end of the year.

In the press there's been much discussion of multimedia and computers. We've been evaluating offerings in video format. We're not proposing to put *Turf Grass Trends* on video — though some might welcome the idea! We're looking at instructional videos. Training and education after one's formal schooling is finished is becoming more

important than ever (see News Brief on page 12 about pesticide recertification). Not all videos are equal, however. They can range from bad home productions to professional studio ones. We'll be gathering videos together, evaluating them and making recommendations to our readers.

Speaking of computers, the magazines are full of ads for computer hardware and software that claim to solve turfgrass managers' problems. Editor Todd Natkin is beginning to gather turfgrass-specific software together for evaluation as well. In addition to Todd's other talents and credentials, he knows a thing or two about computers. Our vertical-market software article will come some time this winter. Many of us are using computers to manage bits and pieces of our businesses. We should be able to get the most out of those machines and the software.

Those are some of the things we've been preparing. The last year has been an exciting one here. We've made a great many changes: increased the size of *Turf Grass Trends* from 12 to 16 pages; moved production from Wilmington, DE, to Washington, DC; doubled the circulation and brought new writers on board.

We appreciate our readers' loyalty

As we approach the one-year anniversary under the new publishing regime, we'd like to salute the readers that stuck with us through trying times and welcome the new readers aboard. Thank you all for your loyalty! ■

ASK THE EXPERT

Have a question on any aspect of turf management?

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Coming attractions

October Issue

Snow molds and other
cold-season diseases

by Christopher Sann