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**Turf and Ornamental Communicators Association,** 8500 Normandale Lake Blvd., Suite 1200, Bloomington, MN 55437; (612) 831-8515.

# AS WE SEE IT

JERRY ROCHE, EDITOR-IN-CHIEF

# A new look, the start of a new age

The staff of LANDSCAPE MANAGEMENT presents this issue with a great deal of pride. It's the flagship of a new-look magazine with new directions.

You've noticed by now that the changes begin with the cover. But they don't end there. If you flip through the pages of this month's LANDSCAPE MANAGEMENT, you'll get a much, much different "feel" from the magazine than you have in the past. These changes are the culmination of 10 months of intensive research and internal staff policy and design conferences.

They come as a direct response to reader preferences, voiced in a massive study conducted earlier this year. More than 300 of you were involved in telling us what you most like about your favorite trade magazines.

What did you tell us?

You said you want shorter articles. So we're giving you 16 shorter features this month, and at least as many each coming month.

You said you'd rather look at charts and graphs than take more time to wade through long prose. So we're including 15 charts, tables and graphs this month—with more in months to come.

You said you like more hands-on material that you can use in your everyday jobs. So we've changed the whole focus of the magazine away from massive technical articles and company profiles to comply with your wishes.

What you'll be reading from now on will be a combination *USA Today*, *Business Week* and the "old" LANDSCAPE MANAGEMENT. In short, we've changed what you wanted us to change—but we've kept the good parts.

Thanks to your input, the bulk of our articles will address the problems of landscape contractors, golf course superintendents, lawn care operators and recreational facility managers. But even if you don't fall into one of those four target job classifications, we believe that the information contained on these pages will still help your organization operate more efficiently.

Beginning this month, we'll feature four pages devoted strictly to the lawn care segment of the green industry with a four-page "Lawn Care Industry" section. And we're also proud to announce that Ron Hall, an old friend who is former editor of *Lawn Care Industry* magazine, is rejoining our staff as senior editor. Ron has been involved in green industry matters for four years, so his experience is a welcome addition.

Another change that may not be quite as evident to the average reader is a change in type size. We're down-sizing from 10- to 9-point type, so that we'll be giving you a minimum of 11 percent *more* information with each issue.

We've undertaken these changes as a re-investment in the industry. We've been around for more than 30 years now—more than almost any other magazine you might receive. Our goal is to give you, the loyal reader, the best possible product. We want to make LM the most oft-quoted, most talked-about and most reliable information vehicle in the industry.

We're proud of our changes, yet we realize that nothing's perfect.

We'll continue to rely on your opinions and preferences as we formulate upcoming issues. So next time you see us at one of the trade shows, stop and tell us how you like (or, heaven forbid, don't like) our new format. Better yet, drop us a line.

Jerry Roche

Jerry Roche
Editor-in-Chief


JOHN DEERE
162
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# LANDSCAPE MANAGEMENT

INCORPORATING LAWN CARE INDUSTRY

OCTOBER 1991 VOL. 30, NO. 10

## DEPARTMENTS



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# ASK THE EXPERT

DR. BALAKRISHNA RAO

## Wood chips and termites

**Problem: Could hardwood chips placed around shrubs near the foundation of a house become a source of termite infestation? *(New Jersey)***

**Solution:** We are aware of one report that termites infested large bark nuggets. The report did not mention whether these were subterranean or drywood termites. It is highly unlikely, however, that the subterranean termites found in your area would infest the wood chips generated by a chipper. Subterranean termites need warm air and moist conditions to survive.

If the shrubs are infested, there is a remote possibility that termites could be moved through the chips. However, if only worker termites are present and no queen, the population will not increase.

Reports indicate that there is a potential injury from the use of fresh wood chips. Fungi and bacteria use nitrogen from fresh wood chips. This affects the nitrogen-to-carbon ratio, resulting in nitrogen depletion. Fresh wood chips release several phenolic compounds and acids as they decompose which can be detrimental to root systems.

If you are intending to use fresh wood chips, use a very thin layer, no more than two to three inches thick. Composted products are better in the long run.

## Removing herbicide stains

**Problem: We have a problem in which cars, aluminum siding and driveways are stained due to drift from pendimethalin (Scott's Weedgrass Control 60 WP or Lesco's Pre-M 60D9). We have also had incidents of stained furniture, linoleum and carpeting from product tracked in by the kids or the dog. How is the stain removed? *(Michigan)***

**Solution:** Pre-M pre-emergence herbicide contains pendamethalin, which is a dinitroanaline. This is a group known to stain. The staining from Pre-M is difficult to remove. If non-target areas are sprayed or contaminated, rinse the surface immediately with water to prevent the stain from setting.

According to product development personnel from Lesco O.M. Scotts, and the basic manufacturer, American Cyanamid, there is no easy way to remove the stain. The following information should help:

*STAINS ON POROUS SURFACES* (unwaxed linoleum, fabric, carpets)

- If exposed to sunlight the color will fade in two to six weeks.
- For quicker results, consider using soap and water or an ammonia-based household cleaner within two hours.

*STAINS ON NON-POROUS SURFACES*

- If the stain has set, you could try a rubbing compound (the kind that is used on car paint touch-ups).
- If the stain has set, it is difficult to remove.
- Ammoniated household cleaner within two hours.
- Tanning lamp may eventually "bleach" the stain away.
- Magnum stain remover *may* work.
- Midco FL-85 (3 parts water/1part FL-85); two to three applications may be necessary.

*STAIN REMOVERS*

**Magnum** (Spectrum Technologies): A citrus-based solution which probably won't damage the treated surface.

**Midco FL-85** cleaner/degreaser: This is a heavy-duty engine solvent. Midco's FL-85 can be diluted from 10 parts water and 1 part FL-85 to 3 parts water and 1 part FL-85, depending on the surface to be cleaned and the severity of the stain.

**FL-85 dilution rates for cleaning different materials**

| Material | Dilution Rate (Water: FL-85) |
|---|---|
| concrete | 7:1 |
| fiberglass tanks | 4.1 |
| aluminum | 3.1 |
| cloth * | 3:1 |

* Two to three applications are necessary

*Please note: FL-85 at higher concentrations has the ability to remove finishes from surfaces.* A 3:1 dilution will remove the finish from linoleum. Our tests also indicated that FL-85 at higher concentrations may dissolve certain types of plastic materials. You may want to test the product on a small area of the surface to be cleaned before it's applied to larger areas.

The best results were obtained when diluted FL-85 was applied using a hand sprayer. Allow about five minutes for the cleaner to penetrate the stain, scrub with a soft bristle brush and then give the surface a clean water rinse. Stubborn stains take two or more applications.

FL-85 is a solvent-type cleaner. Using gloves and cleaning in a well-ventilated area is recommended. Likewise, FL-85 may injure plant material. If FL-85 will potentially come in contact with plant material, thoroughly dilute (rinse) the solution after cleaning.

## Treating for spittlebugs

**Problem: We see frothy looking things on a number of pines. Are they spittlebugs? *(Michigan)***

**Solution:** Based on the description of the problem, it appears to be related to spittlebug insect activity.

To manage this pest, treat the pines when bugs appear and spittle mass is evident, usually about May to July. Insecticides such as Orthene, Dursban, Sevin, Turcam or Tempo can be used. Read and follow label specifications for good results.

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*Balakrishna Rao is Manager of Technical Resources for the Davey Tree Co., Kent, Ohio.*

***Questions should be mailed to ASK THE EXPERT, LANDSCAPE MANAGEMENT, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.***

# It's only a matter of time

**You know that good turf deserves the best forms of nitrogen. That's why you need slow-release NITROFORM® and controlled-release NUTRALENE™, two superior formulations that cater to your specific nitrogen needs.**

**With NITROFORM,® nitrogen is released slowly** throughout the growing season and remains available to roots for one year or longer–when other nitrogen sources have been used up. Ideal for sandy soils where low micro-organism levels and leaching are often a problem. It also works well in clay soils since it stimulates micro-organisms that decompose thatch. Available in both dry and liquid formulations and applied at recommended rates with conventional equipment, NITROFORM won't burn top-growth or roots. So treated turf is subjected to less stress. As a result, it grows stronger and needs fewer pesticide applications.

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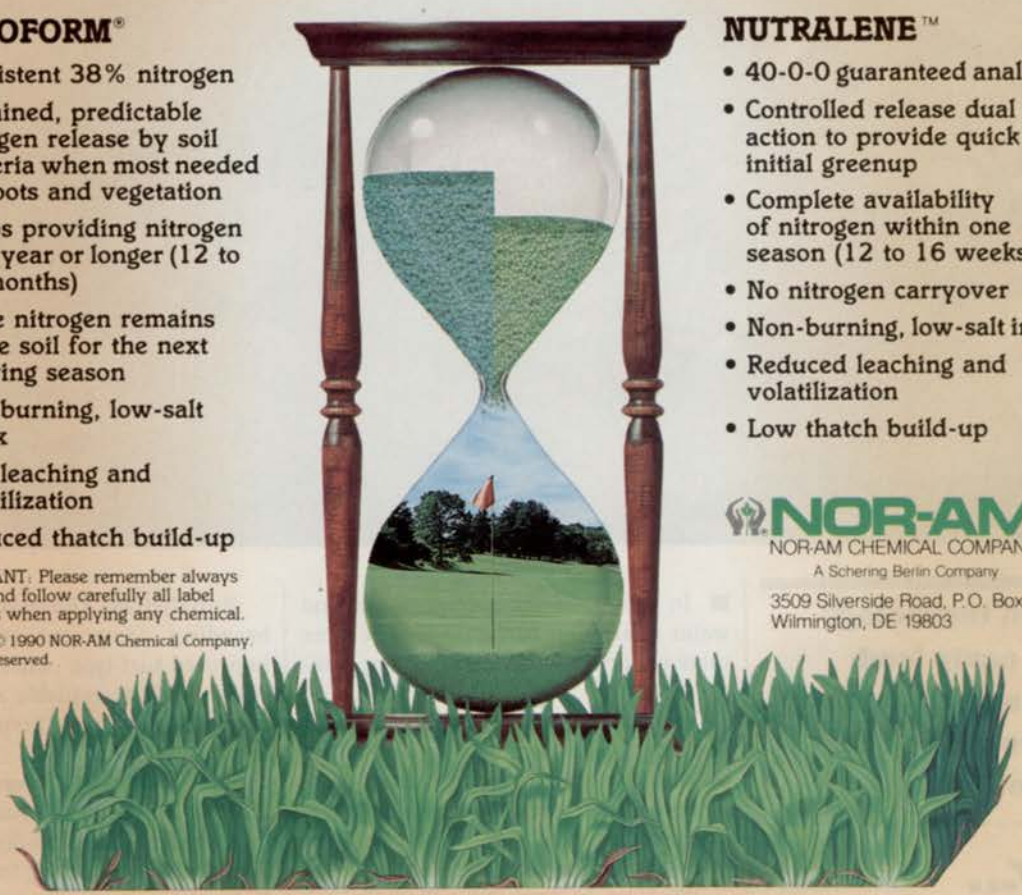
- Reduced thatch build-up



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- Complete availability of nitrogen within one season (12 to 16 weeks)
- No nitrogen carryover
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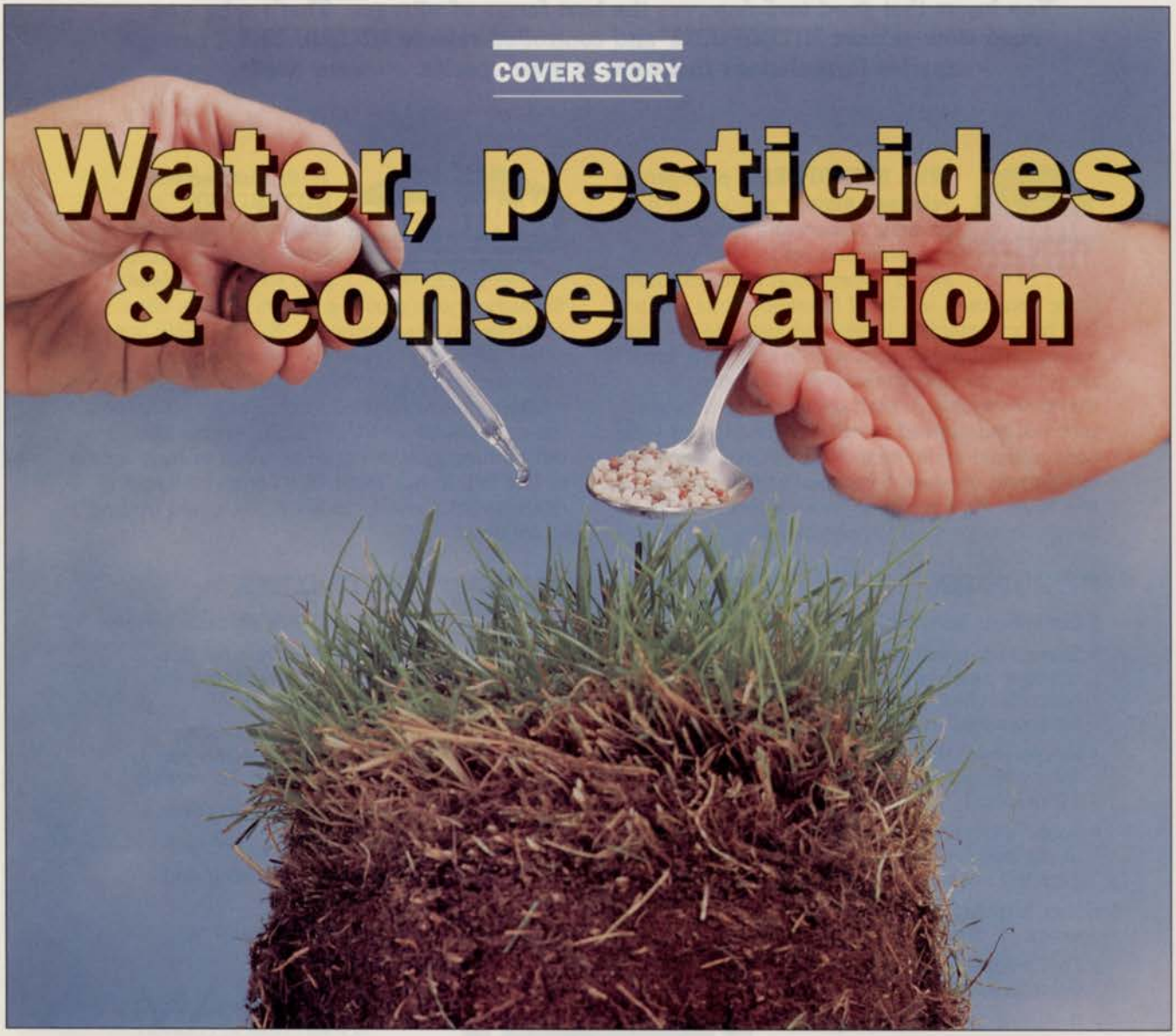
LANDSCAPE MANAGEMENT

COVER STORY

# Water, pesticides & conservation



**Advances in technology will better equip landscape managers to deal with the 'Decade of the Environment.'**

## Water...

by David Kopec, Ph.D., University of Arizona

■ In the 1990s, water conservation and water quality on turfgrass will become more important issues for landscape managers.

In some areas of the country like the Southwest, legislators have set limitations on water allocations for turf. With increased water rates, too, turfgrass irrigation becomes an extremely costly line item in a management budget.

What can be done about the high cost and "visibility" of maintaining turf?

**1. New/alternative grasses,** like buffalograss, are being developed.

Buffalograss *(Buchloe dactyliodes)* breeding programs are unleashing improved turf-type cultivars. The initial releases will be available as sod or plugs, much the way hybrid bermudagrasses are established.

Buffalograss has a lower water requirement than Kentucky bluegrass, and has thus survived in the low desert areas of the Southwest. It is starting to be used in the Midwest and South Central states in low-traffic areas.

Also, other native grasses may potentially be used as low maintenance, low

water-use turf species. These include some of the grama grasses (side oats, blackgrama and bluegrama), some of the lovegrasses, and curly mesquitegrass *(Hilaria belangeri)*. Turf-type selections of the latter are being evaluated to see if superior characteristics can be passed on to future generations through seed. This grass is adapted to Texas, New Mexico and Arizona.

**2. New irrigation systems** have been designed to irrigate turfs more precisely, with less waste. They also offer excellent record-keeping, thanks to micro-chip technology.

Compared to the mechanical clocks used in the past, solid state controllers offer greater versatility in start/stop features and irrigation scheduling options. Some even offer plug-in, plug-out storage chips, which record irrigation station run times for permanent water use records. Many of the new controllers can be hooked up to soil moisture sensors and rain or wind switches.

Weather station networks in many states can provide turfgrass growers with estimates of turfgrass water use based on local weather conditions. Weather stations can calculate a daily atmospheric demand for water, called a reference ET (Ref-ET).

Local researchers can mathematically adjust the Ref-ET value for turfgrass water use. That value can then be used to determine how much to irrigate.

Weather networks are available through the university system. Check with the Division of Cooperative Extension in your state to see if an "ET" program is available.

Irrigation companies now offer weather station and controller packages which calculate the Ref-ET from conditions on the golf course, and then apply irrigation based on the previous day's ET. Added features include flexibility in irrigation scheduling (days on/days off), irrigation amounts (relative to the Ref-ET), automatic data storage, and multiple start/stop cycles which can help prevent further runoff or puddling.

**3. Using secondary water** is becoming more popular because the use of potable water for landscape irrigation is becoming a sensitive issue—even in places where water supplies are plentiful. This makes a lot of sense since there are generally large amounts of effluent produced daily, and turf is an efficient filter of effluent.

Logistics of having large turf facilities next to water treatment stations need to be worked out to keep costs practical. Users need to be aware that the suitability of the irrigation water can be determined by a water quality test.

**4. Xeriscaping** involves five or six principles using landscape plants and groundcovers for water conservation, energy savings, or both. Water catchments, tree and shrub placements for shading and protection, and the selective use of plant materials are part of the program.

Xeriscaping is being developed even in areas which receive large amounts of rainfall.

Original concepts in xeriscape programs called for eliminating turfed areas. But research should be conducted to determine if actual water use of trees in mesophytic or xeriphytic settings have a lower requirement (on a ground basis area) than turfs.

My guess is, some will and others will not.

# Pesticides...

by Roch E. Gaussoin, Ph.D., University of Nebraska

■ Many successful landscape operations use pesticides as a necessary component of their programs.

With the 1990s being called "The Decade of the Environment," people in the industry are apprehensive about where pesticides will fit. Yet many indicators point toward a landscape industry which includes continued, though more conscientious, pesticide use.

One aspect of Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) amendments passed in 1988 is the re-registration of most pesticides. Manufacturers, in addition to new data acquisition, are required to pay a fee to the EPA for re-registration. So it is reasonable to expect that some of the "older" chemicals now available for turf and ornamentals might not survive the re-registration process. The end result will be fewer, but safer, pesticides.

Some future considerations and how they relate to pesticide use:

**1. Signs** cautioning consumers of a pesticide application are becoming a common sight all over the country. Posting treated lawns is law in eight states, with more possible in the not-too-distant future. It is here to stay; applicators may want to consider posting at their location *before* it becomes mandatory.

Although pre-notification of pesticide-sensitive individuals is law in only one state (Maryland), many states are considering such legislation. This legislation, if passed, would require the notification of individuals who claim to have had allergic reactions to pesticides.

**2. Applicator training** requirements will probably become more strict. Requirements to become a certified pesticide applicator may involve more frequent and rigorous testing and/or training. Individuals applying pesticides under the direct supervision of certified pesticide applicators may also be required to undergo documentable and verifiable training exercises.

**3. Ground and surface water contami-**

**Monsanto markets a closed application system called Expedite, a backpack sprayer with pre-mixed pesticide containers.**

**nation** and the environmental fate of pesticides will continue to be an important topic. Current research results indicate that application of pesticides to turf may not be detrimental, and—under certain circumstances—actually protect groundwater sources. The United States Golf Association (USGA) has committed over a million dollars for environmental fate research to be conducted in the early '90s.

**David Kopec (left), Roch Gaussoin (center) and John Doyle during the Nebraska Turfgrass Conference, at which they gave the speeches these articles are taken from.**

**4. New technology** has or is being developed to make pesticide applications safer for humans and the environment. Most chemical companies have divisions or sections solely to target the turf and ornamental market, resulting in products becoming available for use much faster.

Pesticide formulation and packaging has resulted in products which are safer to handle and apply. Many companies package pesticides in pre-measured water soluble packages which dissolve in the spray tank. Not only does this eliminate measurement errors and exposure to the undiluted pesticide, but it solves the problem of pesticide container disposal.

Dry flowable and water dispersible granule (WDG) formulations are also becoming more prevalent. Dry formulations do not contain organic solvents, which can reduce phytotoxicity and odor problems as well as eliminate a potential fire hazard.

Pesticides are also being developed which are less toxic and can be used at lower rates than their predecessors. The net benefit for both the applicator and the environment is obvious.

Other developments which should prove beneficial to the continued use of pesticides include closed delivery systems and returnable pesticide containers. Monsanto markets a closed application system called Expedite, a backpack sprayer with pre-mixed pesticide containers. Applicator exposure is minimized and calibration is simplified. DowElanco has small volume returnable containers (SVRs) which can be returned to the distributor to be refilled. This approach could help alleviate part of the solid waste disposal problem.

**5. Integrated Pest Management (IPM)** will become more refined in the future, with pesticides.

Though pesticides, either biological or chemical, will continue to be an integral component in most landscape systems, some changes in how business will be done is inevitable.

Steps landscape managers must consider taking to respond to the market are:

- Stay informed about pesticide risks and benefits and convey this information to clients and other appropriate audiences. Seriously consider joining community associations or non-extremist environmental groups, and become involved in the political process.
- Because product availability, due to the re-registration process, may be questionable, be well trained and informed about industry developments. This will require joining regional and national organizations and attendance at university conferences and field days and industry trade shows.

The outlook for continued pesticide availability is good. It becomes the responsibility of the landscape manager to adhere to federal and state regulations, apply pesticides correctly and judiciously, and be conscious of the environment.

## Fertilizers...

by John M. Doyle, Ringer Corp.

■ Glancing into the crystal ball at the future of turfgrass fertilizers is not easy. Who would have predicted 10 years ago that environmental issues would play a significant role in shaping management practices?

However, here are issues to consider:

**1. Public perception** concerning fertilizers and the environment is being shaped by information such as the EPA drinking water survey.

The results of the study revealed nitrate contamination in 52.1 percent of community water systems and 57 percent of rural domestic wells. Even though the EPA has not yet determined how much nitrate contamination can be traced to fertilizer use, this information still raises concern among the general public about turf fertilizers.

Issues concerning pesticides have spilled over as concern about exposure to fertilizers. Other issues gaining in public awareness are the closing of landfills or the restriction of materials that can be dumped.

Natural resources like water are no longer generally looked at as "renewable," so modifications in water use will have an effect on the nutritional management of turf.

**2. Changes in product technology and management systems** are imminent as understanding of plant growth systems increases. Turf managers will become more reliant on data concerning the turf growing environment. Turf management will become more of a science and less of an art.

For instance, in the last 20 years, fertilizer sources have changed from ammonium nitrate and urea to slow-release sources such as various coated ureas and urea formaldehyde reaction products.

**3. Synthetic organic fertilizers** engineered with turf management practices in mind will continually be developed. For example, recently-released materials provide a season's entire nutritional program in one spring application. Also, fertilizers will have release characteristics specifically based on the growth and development demands of turf. The release patterns of these materials will be more predictable.

With all the environmental pressures the industry is dealing with, public perception still holds that "organic" is safe. This will definitely have an impact on the market, especially the homeowner, as to what types of products are in demand.

Familiarity of materials listed as nutrient sources on packaging (bone meal, blood meal, etc.) also offers relief to consumers about the safe handling of materials.

As a nitrogen source, natural proteins provide slow-release, non-burning nutrition to turf. There exist numerous materi-