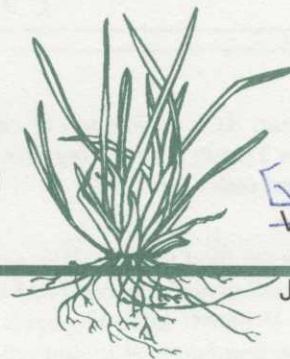


Turf Grass TRENDS



[Vol 4]

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New uses for compost are being found

by Christopher Sann

Uses for the composted final products of the microscopic break down of animal manures, agricultural plant residues, and other organic wastes are as many and as varied as astute minds have been able to devise in the several thousands of years that man has been stockpiling these materials. To the long list that includes soil amendments, growing mediums, plant protection materials and insect and disease protection, please add another: bioremediation.

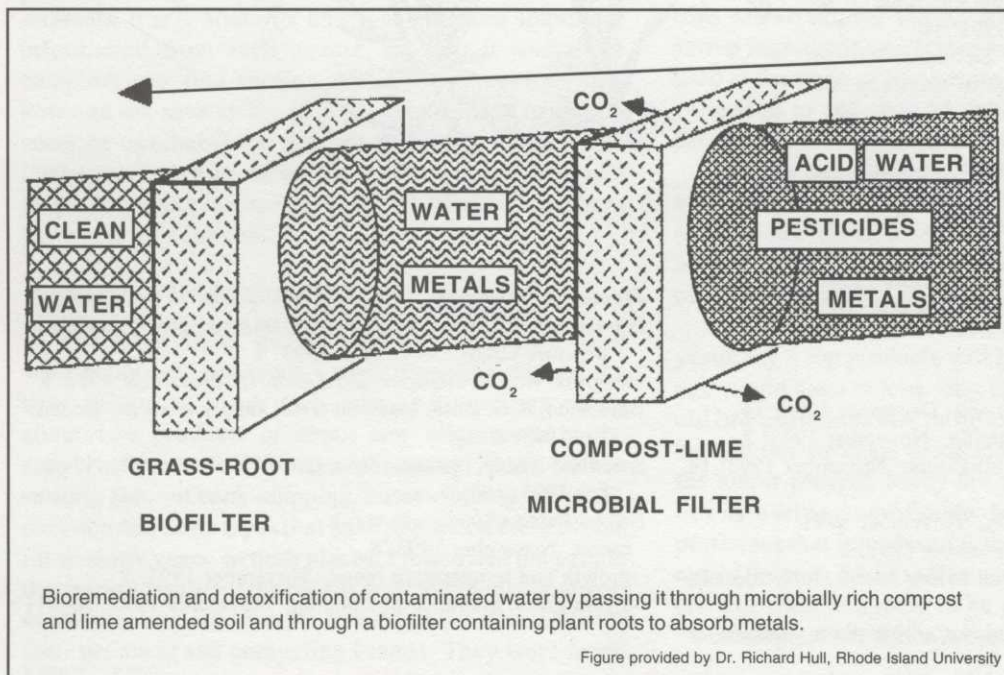
The use of compost materials in bioremediation involves the detoxification of contaminated soils or waters using the structural as well as the biologically active portions of compost to eliminate carbon based petroleum, pesticide, or mine wastes from the environment.

Old coal mine waste waters are cleaned with the help of compost

Hundreds perhaps thousands of old coal mines dot the Appalachian mountain regions of the East, spewing thousands of gallons of contaminated acid waste waters into the local streams and rivers that feed the Chesapeake Bay. Biologically active composts are layered with limestone to form the bed of remediation marshes to detoxify the mine runoff and leachings from these abandoned mines.

The limestone layer neutralizes the acid of the wastes while the microbes in the compost detoxify the carbon based toxins within the waste stream. Once this has been

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The message is loud and clear

The revolution is on

by Christopher Sann

Call me a "lawn care nerd." I had forgotten how much I enjoy attending larger regional turfgrass trade shows. I had forgotten how invigorating it is to spend two days away from the routine day-to-day activities of normal life and to immerse oneself in gathering, exchanging and developing information about an industry that is always changing.



Last week, I went to the New Jersey Turfgrass Expo for the first time in three years. I live about 60 miles from Atlantic City and, up until 1992, I had been a regular attendee. So my return this year was full of quite a few surprises.

Better seminar subjects

First, I was pleasantly surprised and pleased with the increase in the number of conference talks that have real content about interesting subjects important to turfgrass managers. Over the years, some of the talks that I have attended, which were pictorial walk throughs showing some golf course superintendent's face in eight out of ten slides, have given way to much more serious and timely talks about topics meaningful to turfgrass managers. I can say that I did not fall asleep in any of the seminars that I attended and that I gained important information from each lecture, whether it was about computerized fine turning of irrigation systems and how one can save 20% - 40% per year on total irrigation costs, or whether it was the first full-fledged discussion I have ever heard about the nuts and bolts of the how and why of avoiding the development of fungicide-resistant pathogen populations.

Interesting trade shows

The trade show was interesting, too. First, there were many new products. I spent three-quarters of my time talking to many tech reps and suppliers either about new products or about new alignments in the supply portion of the turfgrass industry. Gone are the smiling faces of back-slapping, know-nothing, grizzled, over-the-hill sales types that have populated these events for so many years. In their places, I found that the people that manned many of the booths were decidedly younger, more attentive, and well informed about the details of their products and competing brands. They were much

more interested in talking about both the present and the future direction that this industry is headed than their predecessors of three years ago.

At many of the booths regional and corporate headquarters types could be found fielding questions in a concerted effort by manufacturers and suppliers to add a sense of continuity from corporate management down to the end-user level. Being out in the field provides corporations with a better opportunity to gather information directly about the needs of turfgrass managers.

Low rate pesticides are coming on strong

The real nature and depth of the big change that is taking or has taken place in the turfgrass management industry did not really hit me until I had a chance to glance through some of the data sheets that I collected at the many booths that I stopped at. Two things came roaring out at me. The first was the change that was occurring in new low-rate pesticide chemistries and the second was the tremendous push for biological or bio-rational products.

When I looked at one of the sample labels and MSDS catalogues that most major product producers provide to end-users, I did not recognize half of the names of the products listed. I had only seen or heard the other half mentioned in passing over the last few years. There has been a major overhaul of many turfgrass management products. New reduced-rate products with new chemistries are swamping the marketplace. These newer low-active ingredient pesticides are more effective than and used at fractions of ounces per thousand square feet when compared to the four to six ounces that many former products frequently required to cover the same areas.

Product manufacturers have invested many millions of dollars in the research and development of these new reduced-rate chemistries. The major players are betting a bundle that reduced-rate chemistries are at least one part of the puzzle that is the future of turfgrass management.

It seems that the remaining life span of many of yesterday's top products will be very, very short. As it is, one would have to look long and hard to find many of the old line pesticides that turfgrass managers have used over the last twenty years being manufactured or marketed by the major players. Many are now environmental liabilities as well as unprofitable. In my opinion, many of the pesticides that introduced since the early eighties will fall out of favor in the next five years as the pesticide producers will want to appear to be green.

Biologicals and bio-rationals are gaining strength

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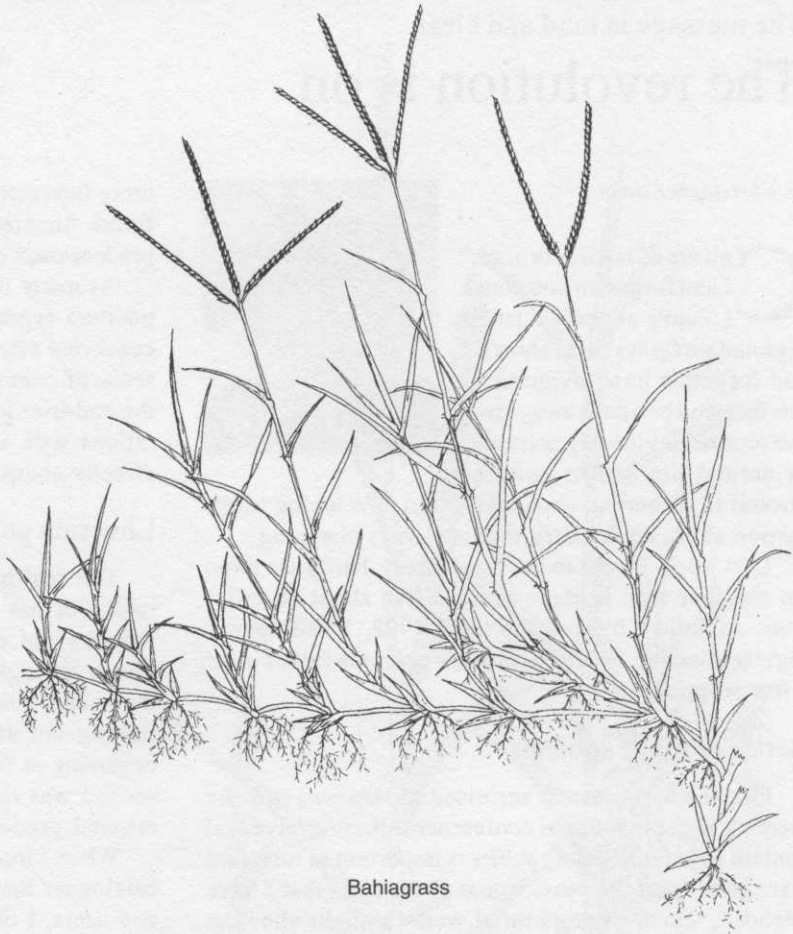
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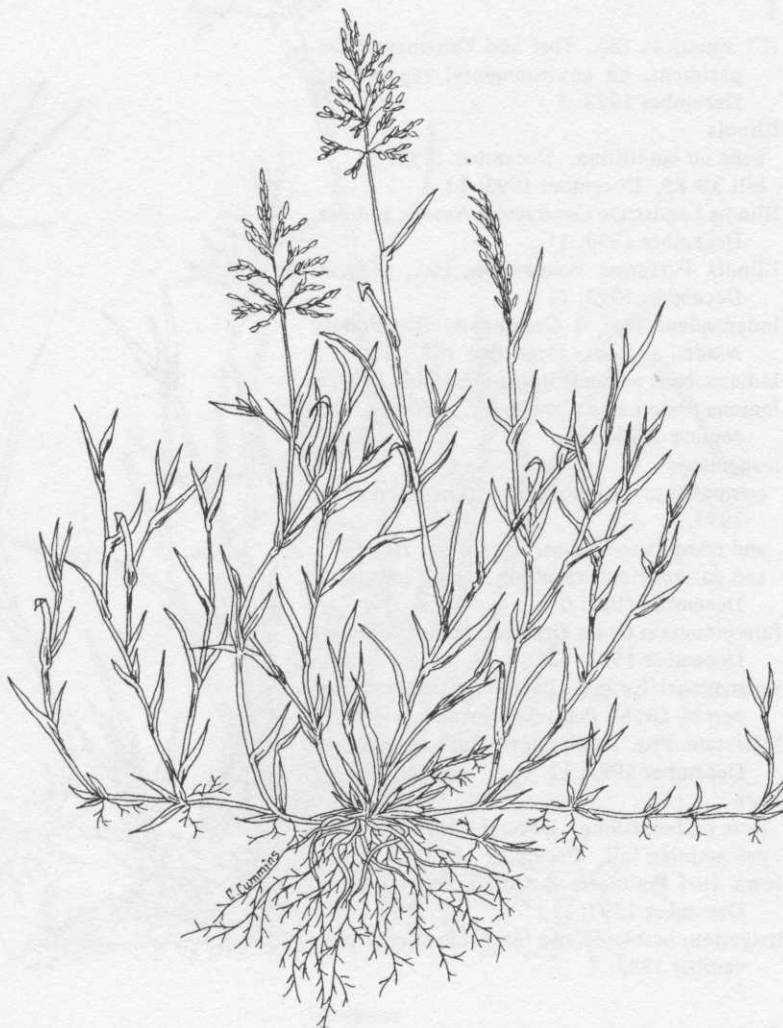
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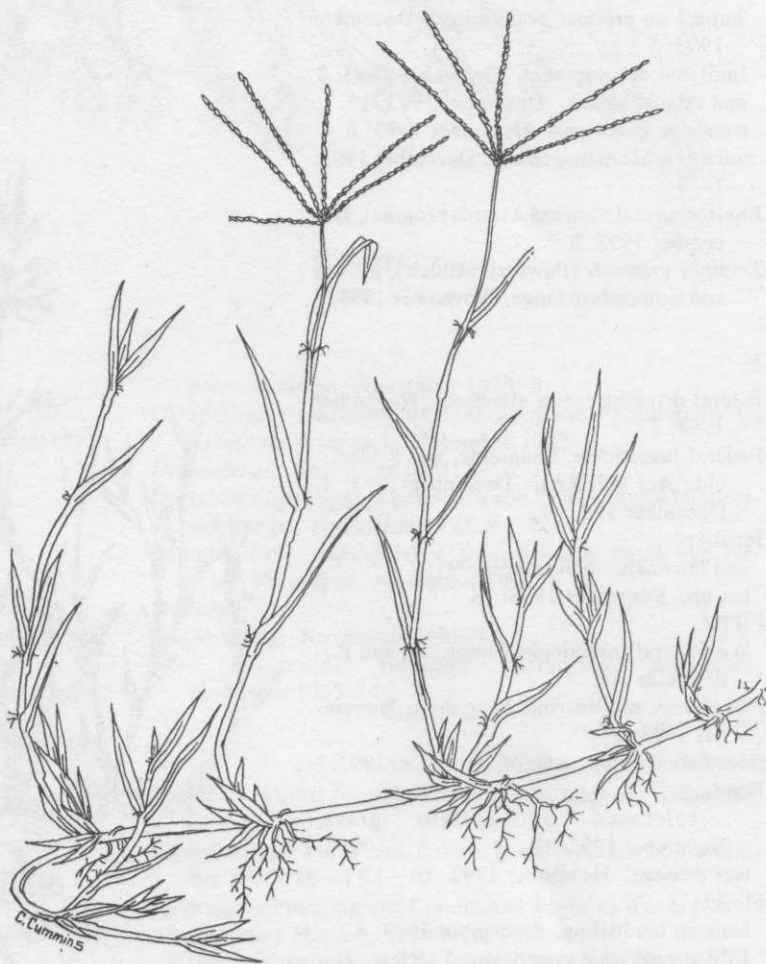
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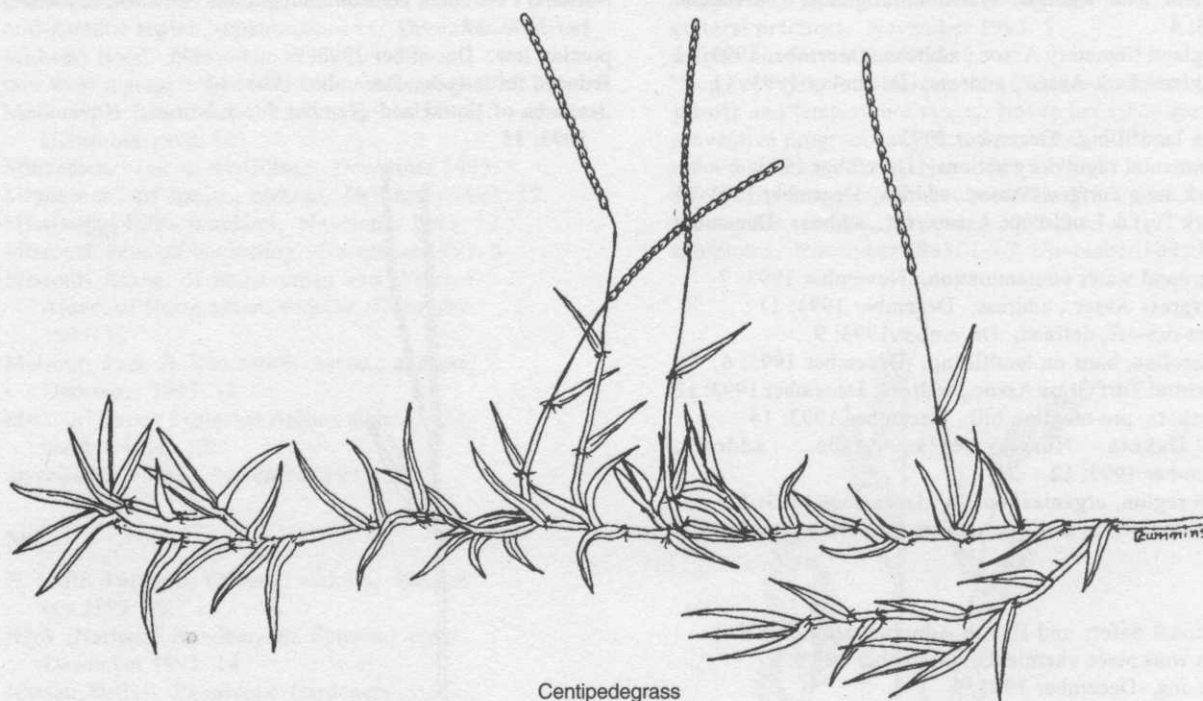
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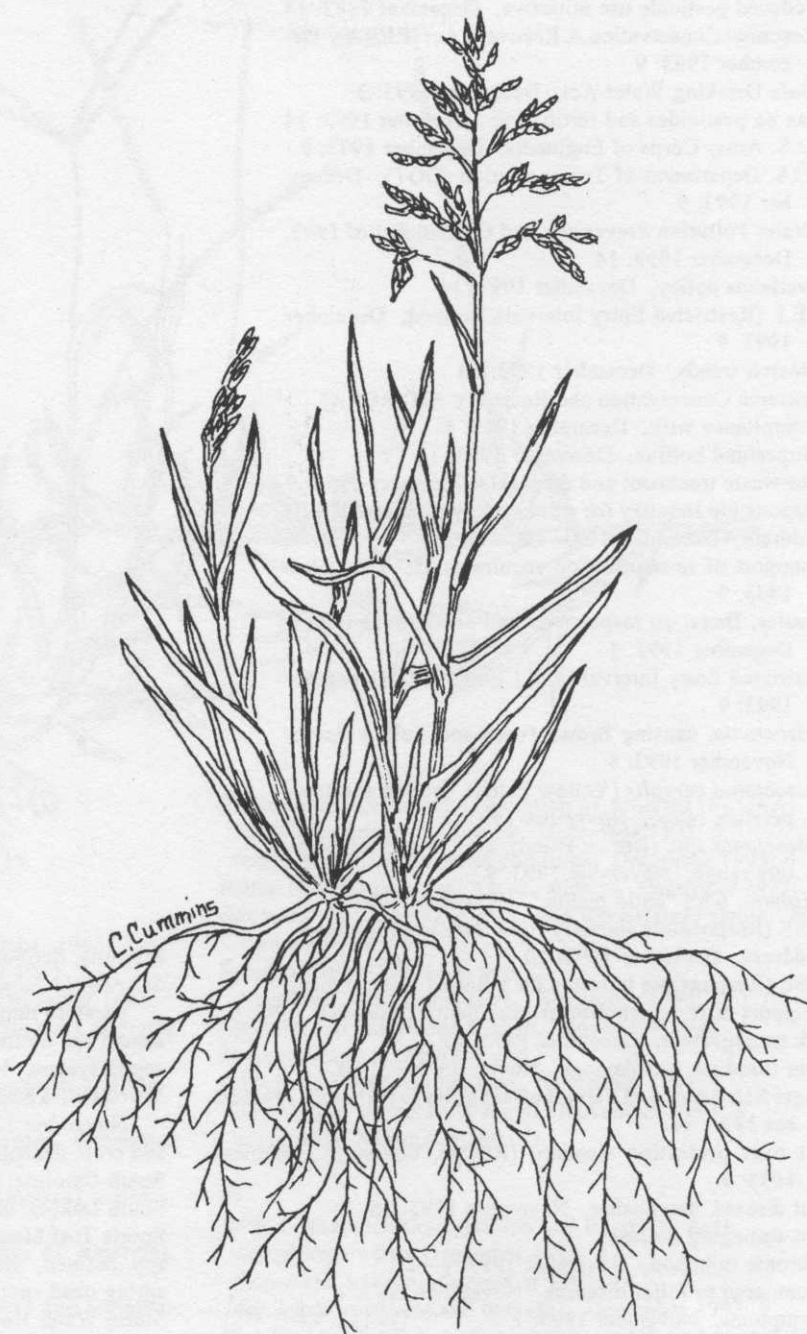
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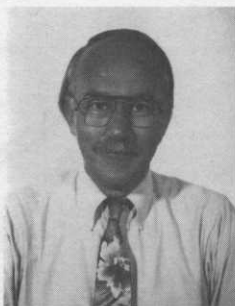
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The indexes

Tools of the trade

by Juergen Haber

As the future rolls toward us, we find that information is a tool that can supplant real tools. If we have the right information, we may not find it necessary to go out and take that shovel to dig that hole.



Naturally, we at *Turf Grass Trends* tend to be a little biased about information since we're in the information business. We've been in the information business since 1992 and we've accumulated quite a bit of useful information up until now. At the 1994 Green Industry Expo, held in St. Louis in November, we met a number of subscribers and the refrain seemed to be that many used *Turf Grass Trends* as a

Compost continued from page 1

accomplished the plants that make up the vegetative portion of the marshes can remove many of the heavy metal and mineral contaminants prior to the water being released, ultimately to end up in the Chesapeake Bay.

Contaminated soil is cleaned with compost

In a demonstration project for the government, contaminated soils that were excavated from the areas around leaking underground petroleum tanks are mixed with uncontaminated soils from the same site and the mixture is then built into compost piles using spent compost. The spent compost is used as a bulking agent as well as a reservoir of carbon eating microbial populations. Once the soils have been properly composted the remaining product in an excellent uncontaminated soil mixture.

Up until recently, the contaminated soil from leaking

Revolution continued from page 3

Three years ago, one would have been lucky if one could find more than one producer or supplier pushing biological or bio-rational pesticides. Today it seems like just about every major player or supplier is either working on or is marketing at least one new bio-based product or product line.

Many of the front-line producers of bio-based materials of three years ago have larger displays with many more people gathered around. These same producers are introducing second and third generation bio-based materials

reference tool. We ask our printer to punch it for a three-ring binder and the back issues order chart on the opposite page offers an attractive binder that will hold more than a year's worth of issues of *Turf Grass Trends*. The readers we met at the Expo verified our ideas: they do use it as a reference tool.

Organizing information in print in a traditional way means presenting it as an index. We decided that a cumulative articles index was one way to do that. It appeared in the October issue.

We've also presented the 1992 subject index in the December issue.

In this issue we're presenting the complete 1993 subject index.

Since 1994 was the first year in which we published every month, the 1994 index is necessarily much longer. We hope to be able to give our readers the 1994 subject index in the February and March issues. ■

underground tanks was either trucked to a hazardous waste landfill or if it was too contaminated it was allowed to sit on-site, while the majority of the petroleum compounds volatilize into the atmosphere with the remainder hopefully subject to decomposition by native microbes. But because the contaminated soils are predominantly very dense subsoils with few native microbial flora or fauna, this technique has been hit or miss at best.

This new procedure takes advantage of the extensive knowledge on composting that these providers have developed over the years of supplying a precise compost to agriculture. The spent agricultural compost is consistent in quality and biological activity, predictable in its response to varying levels of contamination, and available in sufficient supplies that the process hold out an excellent chance of providing an inexpensive cure for the hundreds of thousands of leaking underground tanks that are a ticking time bomb for our groundwater and surface drinking water supplies. ■

that offer increased efficacy over their previous products or are headed into new and promising directions.

The message is loud and clear

The message is loud and clear for those of us that may not have been paying attention these last three years. The revolution is on. The new products are here. This new direction is just the first of many steps in a journey that will take the turfgrass management industry through a generational change. Twenty years from now the industry will have changed so much that we won't even recognize it. ■

Resources

How to profit from the past

Turf Grass Trends Back Issues

Did you join the Turf Grass Trends team recently?

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In the October issue is an index of the articles and their authors of all the back issues of *Turf Grass Trends* that have been published. The back issues are available. Just write the number of copies you want on the form below (photocopy this page so your issue remains intact), return the entire page with your check and we'll rush your issues to you. Don't forget to order one or more handy *Turf Grass Trends* binders for an extra \$5.00 each. Now is also a convenient opportunity to extend your subscription for an extra year for \$120.00.

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