

Introducing the 7-Year Limited Warranty

For years we've had an open and shut case for quality in irrigation system valves. Now we're putting a promise behind our words.

The 8000BCR Series of contamination-resistant, 1" to 3" bronze valves is so tough and dependable that Weather-matic is backing them up with a new 7-year limited warranty!

But there's even more. Our direct burial, remote control valves are available in other models, too. The new 7000E Series offers competitively priced bronze valves in 3/4" to 2" sizes. The 11000 Series features 1" to 2" sizes of high-strength, glass-filled plastic construction. Both carry 1-year limited warranties.

All Weather-matic valves are the normally-



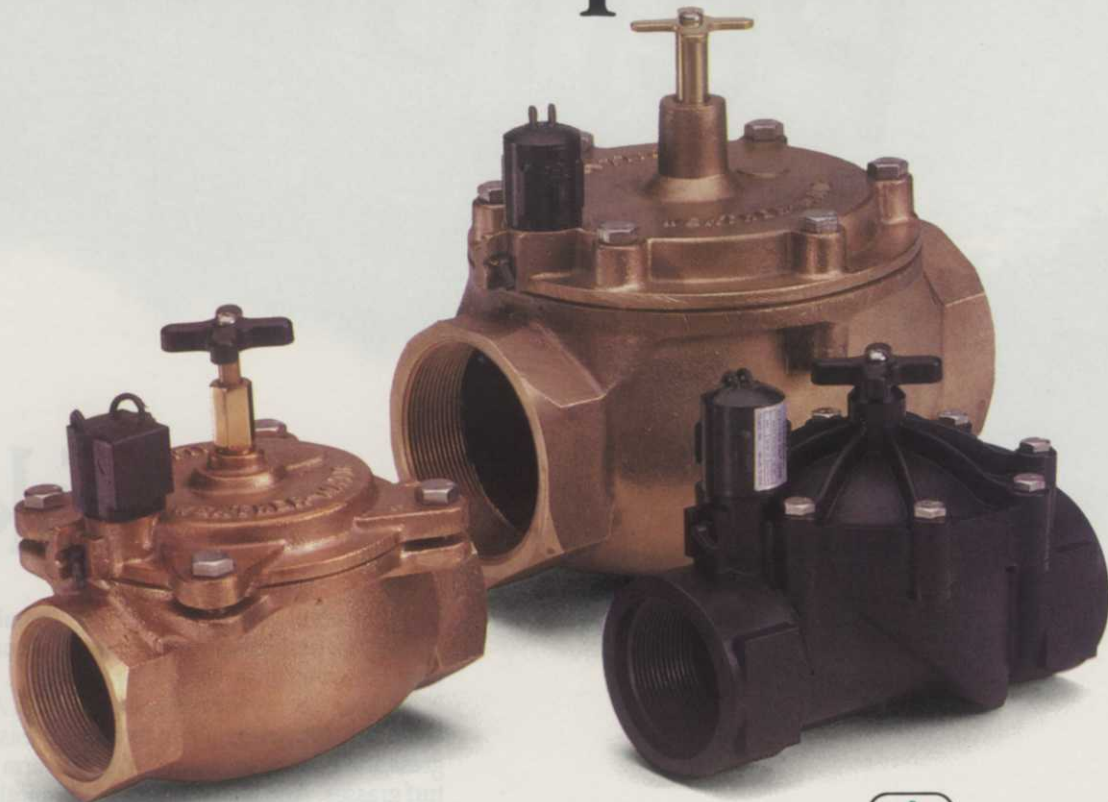
closed type. Design features include a unique dual ported flexing diaphragm that minimizes clogging and malfunctions without traditional bleed tubes or channels. An easy-to-use manual bleed lever bleeds valves to downstream. And every valve is water pressure-tested before leaving the factory.

Weather-matic valves have been providing top performance around the country for years. Teamed up with our controllers, sprinkler heads and Rain-Stat[®], they work and work and work.

That's why more and more irrigation professionals say you can't beat the system — when the one you choose is Weather-matic.

For complete information, write or call today.

What an opener!



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Weather
LAWN AND TURF



matic.
IRRIGATION

Circle No. 180 on Reader Inquiry Card

The most effective crabgrass

closed type. Design features include a unique dual ported fitting diameter that minimizes clogging and malfunctions without additional bleed tubes or channels. An easy-to-use manual bleed level bleeds valves to downstream. And every valve is water pressure tested before leaving the factory.

Weathermatic valves have been providing top performance around the country for years. Teamed up with our controller, sprinkler and air-sets, they work

for years we've had an open and shut case for quality in irrigation system valves. Now we're putting a promise behind our words.

The 800BCK Series of constant-resistance, 1/2" to 3" pipe valves is so tough and dependable that Weathermatic has teamed them up with a new

ACTIVE INGREDIENT

Pendimethalin

Take out

Labels of your best pre-emergent crabgrass and goosegrass herbicides have one thing in common. And it can be summed up in a word: *pendimethalin*.

That's because pendimethalin from American Cyanamid is the only active ingredient that offers season-long crabgrass and goosegrass control in both warm and cool season turf grasses. And it does it very economically.

But pendimethalin controls more than just crabgrass and goosegrass. One low rate also prevents other tough grassy weeds including foxtail, fall panicum, barnyardgrass and *Poa*



and goosegrass control.

INGREDIENTS:
pendimethalin (N-(1-eth

word for it.

annua. Hard-to-control broadleaf species like oxalis and spurge are also eliminated with the same rate.

What's more, pendimethalin breaks down into the environment. And it doesn't move laterally through the soil. Which means it won't seep into bodies of water or stop vegetation you don't want it to stop. Plus, pendimethalin-based herbicides don't have an offensive odor like some products.

So remember, when you select a herbicide with pendimethalin on the label, you have crabgrass and goosegrass control in the bag. And our word. Always read and follow label directions carefully.

 **CYANAMID**
Agricultural Division
Wayne, NJ 07470

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Part of the effort to restore the Statue of Liberty included a new landscaping design to focus attention on the Statue.

grease it, maintain it and refuel it, so the equipment is all ready to go right to work in the morning. Most of the crew is seasonal because visitation drops off between October and April.

During the mowing season, it's a seven-day-a-week operation, with weekends the busiest days because of largest crowds. (About a month after the reopening ceremony, crowds were peaking at more than 20,000 people each day.)

And when Ellis Island reopens to the public in 1992, the Park Service estimates there will be even bigger crowds with more than 30,000 people each day visiting the two islands.

The Park Service plans to restore and open to the public 25 of the 30 buildings on Ellis Island. The Immigration Center will be turned into a museum tracing the history of immigration to this country.

The Festival Lawn will open as early as 1987 and the Great Hall will open in 1988. The remaining buildings will open in succeeding years, culminating in a centennial celebration in 1992, coinciding with the 500th anniversary of Columbus' discovery of America.

Chain saws and all the other lawn care and landscaping equipment were provided by John Deere, which has signed an agreement to be the official supplier to Liberty and Ellis Islands for the next 10 years. The equipment list includes compact utility tractors, lawn and garden tractors, walk-behind mowers, weed trimmers, tillers, chain saws, portable generators, welders, back pack blowers and high-pressure washers. Also provided is a variety of attachments: loader, backhoe, snow blower, dumpcart and grass collection systems.

WT&T



Larry Cooper, a maintenance mechanic's assistant at the Statue of Liberty, uses a lawn tractor to cut the 5½ acres of new sod on Liberty Island.

Capital Gain.

Time and again, you've heard it said, "To make money, you have to have money."

The truth is, you have to know how to save money before you can think about making more.

That's why more and more people are joining the Payroll Savings Plan to buy U.S. Savings Bonds. That way, a little is taken out of each paycheck automatically.

In no time, you'll have enough Bonds for a new car, your child's education, even a dream vacation.

Whatever you save for, Bonds are the safest, surest way to gain capital.

Take stock in America.



When you put part of your savings into U.S. Savings Bonds you're helping to build a brighter future for your country and for yourself.



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What inconsistent sizing adds to your turf program may be more than you bargained for.

Fertilizer got your equipment in a jam?

When a company makes a low-cost fertilizer, they can't spend time making sure the granules are all the same size. But your machinery can tell. And it clogs. Causing excessive downtime and a margin that's not quite as high as you'd like.

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Lebanon homogenous and SCU fertilizers are made from high quality raw materials to give you uniformly sized products. They've been formulated to work with drop-type or rotary spreaders—evenly and quickly, without clogging.

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Choose from our wide range of products. Or let us make a product just for you.

We feature over three dozen standard homogenous fertilizers, sulphur-coated urea blends and fertilizer/chemical control products. But we'll be happy to formulate an exclusive mix for your own unique soil needs.

Order early and save!

Lebanon has convenient early order and early pay discounts to meet any need. If you'd like to learn more about Lebanon programs, or simply have a question about our products, call **The Greenline** toll-free at 1-800-233-0628; in Pennsylvania call 1-717-273-1687.



Send for your free product sample and take a closer look at Lebanon quality.

Simply clip this ad, return it to **Lebanon Total Turf Care** along with your name and address, and indicate your preference of a homogenous or SCU blend fertilizer sample. It's our way of proving to you that with **Lebanon Turf Care Products**, you always get what you pay for.

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TOTAL TURF CARE



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Shooting par for maintenance equipment

As in golf, attention to detail means success in the maintenance game.

Today's golf courses are constantly placing greater demands on the superintendent trying to maintain top playing quality. To meet these demands, proper administration, programming, sufficient budgets, manpower and responsibility are necessary in addition to modern equipment.

A PGA report appearing in the newsletter of the Golf Course Superintendents of New England suggests a certain variety and quantity of equipment is necessary to provide adequate care to the majority of 18-hole courses, depending on the degree of maintenance (see table).

The report broke the equipment into three sections: greens and tees; fairways and roughs; and general equipment. Under each category, a list of equipment and quantity was provided. Lists for the three categories included mowers, aerators, thatchers, fertilizer spreaders and more.

Other recommendations

The report also addressed a number of other equipment categories. For miscellaneous hand equipment, the report recommended getting axes, burners, crow bars, a duster, cup cutter, wheelbarrow, ladder, sod edgers, sod lifters, shovels, rakes, funnels, a spade, picks, forks, jacks, pruners, tree saws, animal traps, pumps, gas cans, scales, pullers, hoses, bamboo poles, soil testers and a soil probe.

The report suggests various repair tools should be handy for work on all power equipment, plumbing drains, electrical equipment, sewers, roadways, cement and concrete, water systems, painting and wood working repairs, etc.

The shop should also be equipped with tools, the report stressed. Such tools as a lapping machine, air



No, it's not an army maneuver, it's a sampling of the maintenance equipment and staff required for daily upkeep of five golf courses at The Resort Hotels, World of Palm-Aire, in Pompano Beach, Florida. Some 14 tractors, 8 trucks and 50 mowers of various types are required to keep the resort's 600-700 acres playable. Palm-Aire's superintendent of golf courses, Harvey Linderman (in center of photo) surveys his \$500,000 inventory.

GREENS AND TEES

6 to 8 putting green mowers	1 power spiker
2 power aerators	1 power sprayer (fungicides)
1 vertical mower	1 proportioner
1 power drag mat	2 rotary fertilizer spreaders
1 power top dresser	2 triplex mowers
1 power thatcher	

FAIRWAYS AND ROUGHS

2 seven-gang hydraulic tractors and mowers	1 power sprayer (herbicides)
1 fairway aerator	1 rotary fertilizer spreader
1 fairway thatcher	1 five-gang mower (roughs)
1 fairway sweeper	1 three-gang roller

GENERAL EQUIPMENT

1 or 2 dump body golf tractors	1 power stump cutter
2 general construction PTO tractors	1 power soil shredder
1 jeep, pickup truck, etc.	1 power hand sweeper
1 dump truck (5 ton min.)	2 power leaf blowers
1 snow plow	1 water ballast roller
1 front-end loader and backhoe	6 rotary trimmer mowers
1 power sod cutter	3 hand trimmer mowers
1 power saw	2 general purpose power and reel mowers
	2 or 3 gas powered runabouts

compressor, steam cleaner, table saw, grinders, vises and work benches are recommended.

Irrigation equipment is of course necessary, with each course determining the pumping station and number of heads necessary.

The newsletter also touched on a few necessities for a maintenance building. The building should have a superintendent's office, storage rooms for herbicides, fungicides and fertilizer, and sufficient storage space for all equipment. An additional storage building, the report states, is essential for storing and mixing top-dressing material, which should be kept dry. The report recommends storing at least a two-year supply at all times.

Maintenance staffing

For an average 18-hole course in the Northeast, the report recommends a year-round superintendent and assistant superintendent, a year-round mechanic and two year-round laborers.

Three laborers should be hired at the outset of the outside maintenance program, the report suggests, and should be carried through the end of the fall maintenance program. In addition, three laborers should be hired as summer help.

Proper training of all employees is necessary for proper equipment operation and maintenance program implementation.

WT&T

You make it a work of art. Surflan® keeps it a picture suitable for framing.

Surflan stops more than 50 different weeds and grasses before they emerge. Yet it's labeled for use on more than 175 different ornamentals. No other ornamental herbicide can top these numbers.

Surflan preemergence herbicide is so gentle on your established shrubs and ornamentals you can spray it directly over the top, even over sensitive ornamentals like petunias.

At recommended rates of 3 oz. per 1,000 square feet, Surflan keeps tough weeds out all season long. That makes your work a real work of art.

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**Over-the-top
picture-perfect
weed control.**

PROBLEM SOLVERS

by Balakrishna Rao, Ph.D.

Controlling weeds along a fence

Problem: Can you recommend some chemicals to control grassy weeds along a fence? We have a mowing service and these areas present a serious problem. In some areas, we do not have any greens at some time, but they may germinate at other times of the year. (New York)

Solution: Several products on the market can be used along fences to manage vegetation. For the problem you are describing, use of dichlobenil should provide adequate control of grass plants. Be careful while applying this material around shallow-rooted trees or shrubs. This is a nonselective herbicide which is root-absorbed and can be applied to soil or grass to achieve immediate kill and long-lasting effects.

Dichlobenil forms a barrier in the soil that affects germinating seeds, shallow-rooted plants and emerging growth of perennial weeds. It can move in the soil 1/2 to 3 in. deep depending upon the soil type. Read and follow label specifications.

Ridding maples of conks

Problem: What can be done to get rid of conks on maple trees at the base? (Chicago)

Solution: The conks you are referring to are the fruiting bodies of *Ganoderma lucidum*, the causal agent of Ganoderma rot. These decay-causing fungi establish on weakened and stressed plants. They cause rapid decline and death of affected trees.

Not much can be done when the conks begin to appear. These fungi establish on wounded sites and cause decay and eventually produce these sporulating fruiting bodies.

Bark trace and remove the fungal structures. Let the area air-dry. Then, if the decay area is small, apply fungicide to avert fungal growth and use some latex base paint to cover the exposed area. Large cavities can be filled with proper cavity-filling compounds. Fertilize and water as needed to help improve plant vitality.

Equipment cleaning procedure

Problem: What is the proper procedure for cleaning spray equipment after using non-selective herbicides such as Roundup? (Pennsylvania)

Solution: The herbicide handbook of the Weed Science of America (Third Edition, 1974) suggests a thorough flushing with several changes of clean water. This should be done soon after herbicide use. It is important to clean the tank, pump and hoses.

If this cleaning is not sufficient, for further cleaning fill the spray tank with 1/2 cup of household ammonia per gallon of water and spray the area through the delivery system including the gun, hose and nozzle. Let the solution stand in the tank overnight

and then empty the tank. Rinse the tank twice, allowing the clean solution to circulate through the entire spray system.

Falling skeletonizer larvae

Problem: We are seeing a large number of oak leaf skeletonizer larvae falling down from trees. Clients are upset. We have used Sevin in the past around June and again in August every year. Can we spray in late September-October, and will there be any benefit? (Ohio)

Solution: The product and timing should have controlled this problem. It is possible that your treatment took care of those pests actively feeding at the time of spraying. The properties might have been reinfested by the oak leaf skeletonizer from nearby untreated properties or adjacent wooded areas.

Although difficult, to be effective it is important to practice a community-wide management program for oak leaf skeletonizer problems.

As far as spraying in late September, this would not be much help in management because soon they will be pupating and there is not enough time for another generation. If anything, spray may affect some larvae which may be still feeding. Since the damage is seen on mature leaves later in the season and these leaves will be falling off in a few weeks, there is no need for any treatment now. However, make a note of these properties and sign them up for next year's management program.

Protecting from erosion

Problem: How do you establish a temporary (six months to one year) ground cover under a shaded and sloped wooded lot? What can we use? We want to protect the ground from soil erosion. In the future we would like to use this area for landscaping. (Virginia)

Solution: For a quick and temporary ground cover establishment, use either tall fescue or annual ryegrass. Tall fescue will be more shade tolerant. Non-certified seeds of tall fescue can also be used. Prior to landscaping, use Roundup to kill these and then go ahead with landscaping.



Balakrishna Rao is Director of Lawn Care Technical Resources for The Davey Tree Co., Kent, Ohio.

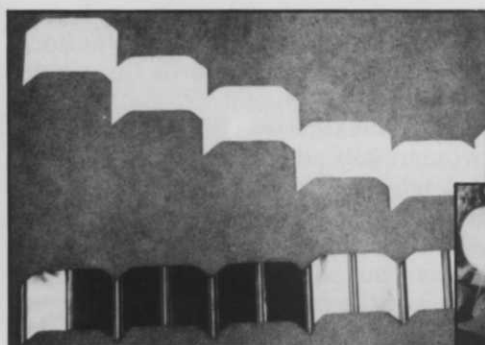
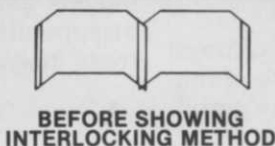
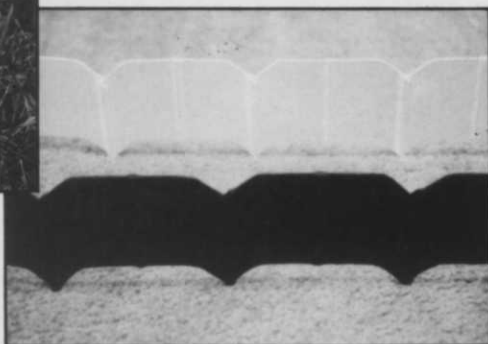
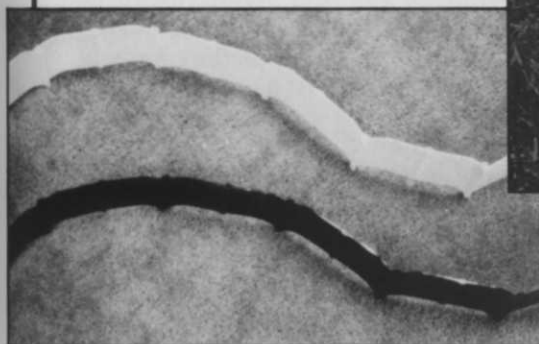
Questions should be mailed to Problem Solvers, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, OH 44130. Please allow 2-3 months for an answer to appear in the magazine.

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The new "Edge Lock™" interlocking lawn edging system, is unlike any lawn edging you've ever used before. We've eliminated the problems associated with installing those "other" edgings. For example, no more long strips to fumble with. Each "Edge Lock™" section is only 6½" wide x 4¾" tall, and, each one locks inside the other, giving you the freedom to create any length you desire. And once it's locked in, it won't pull apart. Not to mention that any number of feet, or any configuration, can be easily installed by one person! There are no clumsy stakes to struggle with, and no time consuming trenches to dig, Edge Lock™ is self trenching and self supporting too! And since landscaping isn't just

"straight lines", Edge Lock™ edging goes around corners without a fight. You can form a complete 18" circle without bending or forcing because each Edge Lock™ section swivels inside the other so it won't hamper your creativity. A 20' section of interlocking pieces comes in a small box 10½" x 7" x 5¼" that weighs 6 lbs., making it possible to transport thousands of feet in a small pickup truck! Edge Lock™ doesn't look like

those "other" edgings either, it has a distinctive new beveled appearance, in fact it's so attractive when installed, you'll want to incorporate it as an integral part of your overall design! Want more? How about competitive pricing, colors like black, ivory and green, taller pieces for softer soil, & high impact plastic construction. But then we could go on and on about the benefits of our new edging. If you would like to know more about Edge Lock™ the revolutionary new interlocking lawn edging system, call or write us for more information, and look for more innovations from the company that has been engineering quality products for over 35 years. (Patent pending).

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Distributors Wanted

Circle No. 120 on Reader Inquiry Card

LETTERS

Women in turf

To the editors:

Thank you so much for your article about Virgie Ross. She has been my hero since I met her at the Iowa State Turf Conference two years ago. I am responsible for 60 acres of turf and ornamentals at an Iowa technical college. After two years of sexist jokes, unintentional snubs and smashed fingers, I was ready to go back to being a cocktail waitress. Virgie, right in the middle of the conference, convinced me I would be accepted, and I was.

The rewards of a turf career far outweigh the "barrier breaking" I have had to do. Now, entering my fifth season should qualify me for your "turf lady list." I would not trade my big Jake or my 72-inch Toro for any other job I have considered.

Jane Ferch

*Hawkeye Institute of Technology
Waterloo, Iowa*

To the editors:

I found the "It's No Joke" article by Heide Aungst all too close to home. I see many of the same problems faced by women superintendents only amplified in the lawn care industry.

We have a very hard time holding on to female specialists. I know that the hours are long and hard, but I feel the poor attitude of most customers has a more dramatic effect.

The female employees that I have been associated with in both the lawn and ornamental fields have usually been far superior technically than most of the male employees, but usually there is little respect for them by homeowners.

You constantly get asked, "Why would a woman want to do that job?" Obviously, these narrow-minded individuals have never experienced the true enjoyment and rewards of the green industry.

Gary Curtis

*Chemlawn
Chesterfield, Mo.*

To the editors:

I just wanted to write and tell you how much I enjoyed your feature on women in the December issue of WEEDS TREES & TURF. Being a woman personally involved in the turfgrass field, I was delighted to see this feature. I grew up on a golf course where my father was the superintendent and spent every summer I can remember working on a golf course crew. I received my B.S. in turf management from Mississippi State University and am currently finishing work on my M.S., in turf, at MSU. I plan to begin work on my Ph.D. at another university in the fall.

I know how frustrating it can be to be a woman in this field, but I also know it's very rewarding. I'm so glad that you made the effort to spotlight women in the turfgrass industry. I've often been apprehensive

about my own career goals, but your feature, and particularly your final note in the "Outlook" section, has given me new incentive and made me even more determined to achieve those goals. Thank you so much for supporting all the women in our industry.

Melodie L. Kemp

*Mississippi State University
Mississippi State, Miss.*

To the editors:

I was excited to see a feature article on women involved in grounds care professionally in the December issue. I enjoyed reading about the three women as golf course superintendents. I have experienced many of the same frustrations they have in my career development. But I must express one concern: why was it necessary to use a model for the cover photo? Why weren't the three women discussed in the article used on the cover? Are male models usually used on the cover? I was a little disappointed in this dichotomy from a professional trade magazine.

Patricia Linton

*Servicemaster Industries Inc.
Santa Clara, Calif.*

To the editors:

I am not normally a writer of letters to the editor, but your magazine has irritated me to the point where I can't restrain pen from paper.

The most recent annoyance was your handling of the article on women golf course superintendents. Great article, but why did you choose a model to represent a super rather than put a "real" one on the cover? This seems to be the height of hypocrisy—you state that women can do the work, yet none was worthy of appearing on the cover? With all respect to Ms. Aungst, it appears that your publication is still written by men for men, and until the attitude that women are merely decorations for magazine covers and advertisements (this has improved) changes, I'm afraid that equity in the work place will be far in the future.

Another irritation to me has been what I consider a long-standing anti-environmental slant in your publication. One small example was a recent article on a public garden area in the South (I forget which one) in which the article states that a "useless swamp" was turned into a beautiful garden area. This is a loaded statement which is typical of a narrow-minded attitude that sees nature as being valuable after it has been tamed, manipulated or otherwise become subservient to human control. How about more articles in which natural conditions are accepted and utilized rather than destroyed?

A related concern is the constant reinforcement of the chemical industry's philosophy that they are the sole authority on what is harmful or good for the environment. Perhaps the chemical industries overall record is good, but when errors are made, the