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**Estimating
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**Risk
Communication**

**Keeping a Lid
on Liability Costs**

**Chemical
Alternatives**

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are available individually or in the A-TEAM blend. Contact your NK Medalist Turf Distributor, or call 1-800-545-6093.



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Experts agree the best way to deal with the public at large and the media is to answer their questions head-on and truthfully, but not in a confrontational manner.

Cover Photo: Steve Pumphrey, Austin, Texas.



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50 Chemical Options: Unscrambling the Alternative Puzzle

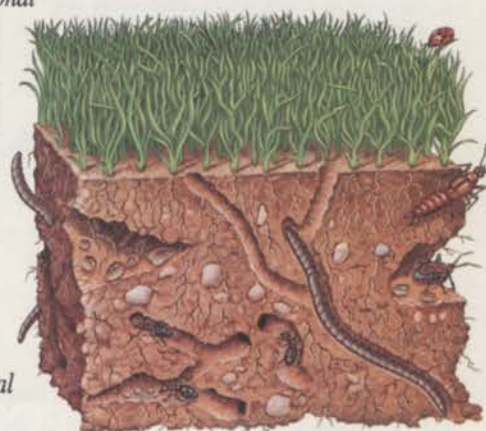
While "alternative" is becoming quite the buzz word, operators are finding they need to re-educate themselves and their clients when choosing to use these products.

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Editor's Focus

ALTERNATIVE CHEMICAL products, better known as biologicals, are in "vogue" again, according to a long time user of both biological pesticides and fertilizers.

And sure enough, lawn and landscape maintenance operators are being inundated with a new wave of alternative pesticides and fertilizers. From suppliers specializing in biological products to those looking to offer an alternative to current chemical pesticides, the products are gaining popularity in the industry.

In a recent random survey distributed to 1,000 of our readers, 33.2 percent of the 333 who responded indicated they intended to purchase organic/natural fertilizers. Twenty-one percent reported they were interested in biological pesticides.

Projected across the readership of LLM, it represents the purchase of nearly \$24 million worth of organic fertilizers and nearly \$7 million worth of biological pesticides.

The products claim to be safer for the environment and are said to have sustained control. In many areas, customers are even beginning to request chemical alternatives because they say they'll feel safer letting their children and pets romp on the lawn.

Most maintenance professionals, no doubt, are struggling to assimilate a mix of products to address the landscapes' agronomic needs as well as customer concerns, but are finding it difficult wading through alternative offerings.

To keep up with the increasing use of alternative products, both operator and customer education is imperative.

Not only must operators understand how to use these pesticides and fertilizers in the landscape, they must be able to communicate their benefits to the customer. Such an explanation should revolve around the use of integrated pest management and the product's specific interaction with the environment, rather than a comparison to chemical pesticides currently used in the market.

The best course of action at this point is a combination of both chemical and alternative pesticides as needed rather than broadcast applications of the past.

Brent Flory, president of Freedom Formulations and Management Co., offers a 100 percent natural, non-chemical program to his clients. The mainstay of his program: "A complete balanced formulation of minerals, proteins, carbohydrates and naturally occurring minerals



strategically applied."

Flory devoted about 50 of his 2,000 farm acres to formulate his organic related program, and said he is most concerned with educating maintenance professionals.

"My goal is to educate any lawn maintenance operator who wants the information," he said. "I want them to know the trade-offs and how to make the transition if that's what they want."

Flory has worked with organic materials over the last 10 years beginning with the formation of Deer Creek Farm Service. He said he spent a lot of time trying to figure out what works and why. "It's not as easy as putting one product down."

The firm does all of its own mixing, and to date uses about six mixes composed of various combinations of 25 to 30 materials. Different mixes are intended for specific lawn conditions and are applied at strategic times.

Ingredients for the mixes come from all over the world including ground rock minerals and other minerals from Israel and Belgium. Most of the materials come in a dry form and are combined with other ingredients to create dry mixes.

"I think operators and consumers alike are interested in these products," he said. "But selling my product isn't all that important to me. My goal is to sit down and train maintenance professionals in the use of alternative products."

As new alternative chemicals become available, suppliers and contractors alike should take the time to understand the benefits of each product and how they can interact with current products in the market as well as the landscape. — Cindy Code

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The mower deck flips up to a vertical position without tools, so blade servicing is a snap. And the high-lift deck saves time between jobs, too. You climb over curbs most other front mowers can't—or drive right on to tilt-bed trucks or trailers.

There's plenty more—like an automatic fuel bleed system that lets you simply refill the tank if you run out; two-speed hydrostatic transmission that

lets you match ground speed to load; and rear-wheel hydrostatic steering and independent right- and left-wheel brakes to help you maneuver through "obstacle course" conditions.

Ford commercial front mowers—they let you get more work done in a day. See your Ford New Holland dealer.

Mower deck flips up vertically for easy access. (Do not attempt maintenance while mower is engaged.)



News in Brief

NEWS DIGEST

Mobay Offers New Toll-Free Info Line

The Specialty Product division of Mobay Corp. has introduced a toll-free telephone number to address questions and concerns from industry professionals.

Operators can receive information from pesticide applications to package disposal. The line can also be used to order product information such as brochures.

Mobay's new toll-free number is 800/842-8020.

Hudson Relocates Sales Offices to Chicago

The professional sprayer and duster division of H.D. Hudson Manufacturing Co., recently moved its sales operations from Overland Park, Kan. to Chicago. Inquiries and orders should now be sent to 500 N. Michigan Ave., Chicago, Ill., 60611; 312/644-2830. Fax 312/644-7989.

Reinhold Leads Michigan Park Board

Melanie Reinhold, president of Reinhold & Vidosh, Pontiac, Mich., has been named president of the Michigan chapter of the National Association of Industrial and Office Parks.

Cincinnati Pest Control Operator Dies at Home

R. Edward Scherzinger, president of Scherzinger Pest Control Co., Cincinnati, Ohio, died recently at his home of complications from pneumonia. He was 63.

The family also runs Scherzinger Lawn Care. Sons Glenn and Steve oversee both businesses.

Memorials may be made to the Multiple Sclerosis Society, 4201 Victory Parkway, Cincinnati, Ohio 45229.

New Brochure/Poster Advocates Composting

International Paper has published a full-color brochure, "Help Nature Put Waste To Work: What Composting Can Do For Your Community," that describes the process and its benefits.

U.S. Supreme Court Will Decide If Cities Can Regulate Pesticides

THE U.S. SUPREME Court has agreed to hear the case of a small Wisconsin village which wants the right to regulate pesticide applications.

For the past four years in Casey, a town of 400, an ordinance has required commercial pesticide users to obtain a local permit and enables local officials to review pesticide-use plans and adjust them, if necessary, to limit exposure to citizens and reduce the risk of groundwater contamination.

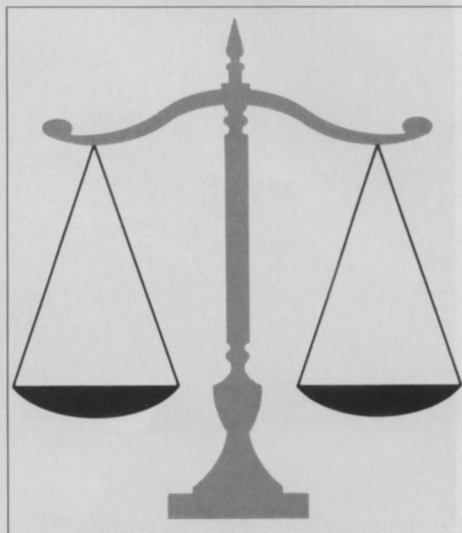
Last March, the state supreme court ruled that local regulation of pesticide use is preempted by the Federal Insecticide, Fungicide and Rodenticide Act of 1972.

Tom Delaney, PLCAA director of legislative affairs, said it's "somewhat bad news" that the United States' highest court has agreed to hear the case because enough evidence has already been presented to state and appeals courts taking pesticide regulation out of the hands of local municipalities.

On a related note, the village of Tarrytown, N.Y., recently passed legislation affecting those in lawn care, tree care, gardening and landscape professions.

Operators working on property not owned by them must register with the village, pay an annual registration and reviewing fee of \$100 and provide the village with a report listing the amount of pesticides and herbicides used by that contractor in the village during the previous year among other things.

Several New York groups will appeal the decision.



Ohio Lawn Care Association Established

With the backing of more than 40 lawn care operators, suppliers, the Ohio Turfgrass Foundation and the Ohio Pesticide Association for Responsible Regulation, the Ohio Lawn Care Association was founded Jan. 9.

The new association expects to recruit 100 members in its first year, according to Phil Fogarty, president Crowley Lawn Service, Cleveland, Ohio. It's estimated that Ohio has 800 lawn care companies.

Although the association won't be limited to any single market segment, the presence of an Ohio Landscape Association may result in the new association being more attuned to lawn care applicators, Fogarty said.

"Our purpose is to affect the image lawn care operators have in the public eye," he said.

Fogarty said the OLCA hopes to deve-

lop a mutually beneficial relationship with the OTF and OPARR and didn't intend to duplicate OTF's annual trade show. OPARR will act as the association's lobbying arm.

OLCA will offer members public relations, training, group discounts when possible and eventually a newsletter. Membership is \$50 per company or branch location.

Expo Attendance Increases by 14%

About 87 percent of EXPO 90 participants are a buying influence, and more than half of those attending are owners or presidents of their companies, according to an independent survey.

The survey was based on a random sampling of 1,000 participants following the International Lawn Garden and Power Equipment Expo.

EXPO posted a 14 percent increase in visitors, setting an all-time high participa-

tion record of 24,793.

The show, sponsored by the Outdoor Power Equipment Institute, boasts both high retention and ability to draw new attendees.

Lawn Care Professionals Gain National Spotlight

April is the second annual National Lawn Care Month and the Professional Lawn Care Association of America is encouraging members to participate through special promotions, marketing activities, publicity campaigns and events surrounding theme weeks.

National attention generated during the month is expected and designed to heighten public awareness of the lawn maintenance industry, inform the public of the environmental importance of turfgrasses and to boost consumer confidence in the quality of service maintenance professionals give.

"Lawn Appreciation Week" runs from April 1-6, "Lawn Maintenance Week" runs from April 7-13, "Lawn Care Product Safety Week" runs from April 14-20 and "Grasscycling Week" runs from April 21-27.

Meet Your Congressmen At Day on the Hill

The Professional Lawn Care Association of America and the National Pest Control Association are co-sponsoring legislative days March 11-12 in Washington, D.C.

For PLCAA, it's their second annual Day on the Hill, while it's the third for the NPCA.

The two associations will hold a joint briefing on industry legislative issues followed by a dinner featuring a local speaker. The next day, attendees will meet with and discuss local environmental issues with their Congressmen.

Registration is \$50 and limited to 100 people. For more information contact: PLCAA, 1000 Johnson Ferry Rd., Suite C-135, Marietta, Ga. 30068; 800-458-3466.



Suggested events include: organizing a community clean-up day; getting grocery stores to print the benefits of lawn care on shopping bags; setting up a lawn care display at a local mall to promote environmental messages; getting a local radio talk show or TV program to address each of the April weekly issues; using lawn care month logos and slogan on memos, flyers or letterhead; recording telephone messages to remind callers about National Lawn Care Month; and including articles on National Lawn Care Month, Grasscycling Week and other theme weeks in customer newsletters.

The PLCAA is offering a complete National Lawn Care Month program with sample letters to publication editors, press releases and fact sheets.

Power Equipment Shipments To Drop

An economic forecast from the Outdoor Power Equipment Institute indicates that shipments of walk-behind powered mowers, front engine lawn tractors and riding garden tractors are expected to decrease in the

(continued on page 10)

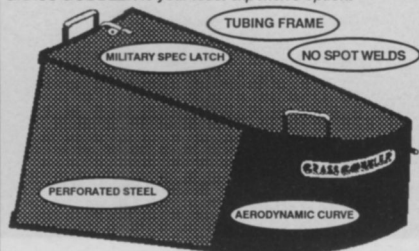
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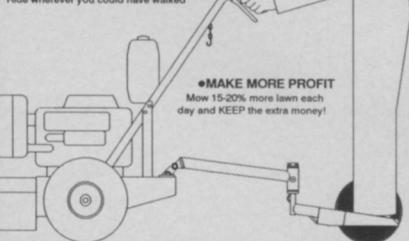
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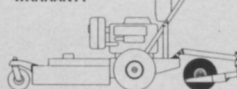
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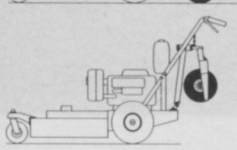
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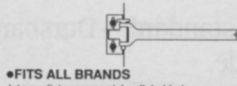
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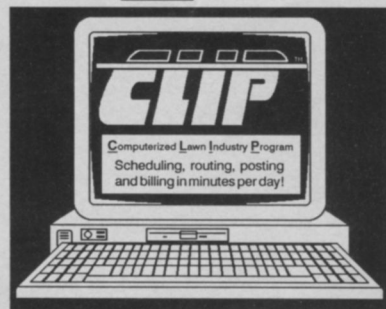


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News

(continued from page 7)

1991 model year.

Increased shipments, however, are forecasted for the model year 1992.

A more optimistic outlook for rear engine riders is predicted with 14.1 percent and 2.8 percent increases in shipments for the 1991 and 1992 model years respectively.

The expected drop in shipments stems from current economic conditions including recession indications, rising unemployment and reduced housing starts across the country.

Proposed Bill Will Regulate Ad Claims

A bill to enact uniform and accurate standards and definitions for environmental marketing claims has been introduced to the Senate committee on Environment and Public Works.

The bill is being viewed as a legislative response to the recent proliferation of products and packaging which claim to be safe for, or not harmful to, the environment.

The measure would govern the use of statements indicating a product or package

is source reduced, refillable, reusable, recyclable, has a recycled content, compostable, ozone neutral, nontoxic or otherwise related to an environmental impact or attribute as determined by the Environmental Protection Agency.

New Warehouse Serves Growing Southeast

LESCO Inc. has announced the opening of a new distribution center/warehouse in Charlotte, N.C.

The site will serve golf course and lawn care customers throughout the mid-Atlantic states.

The facility is 38,400 square feet with six loading docks and is served by a rail spur.

Dave Alexovich, who was previously manager of purchasing in LESCO's Rocky River, Ohio headquarters, is manager of the facility.

The distribution center, 5130 A & B Hovis Rd., Charlotte, (near the intersection of Interstates 85 and 77), will stock fertilizers, turf and horticultural control products, seed, turf care equipment, replacement parts and golf course accessories.

No Hike In Pesticide User Fees — For Now

A proposal by the Office of Management and Budget to raise revenue by increasing user fees, including fees for pesticide registrations, fell through.

The measure would have given the Environmental Protection Agency unlimited discretion to impose new registration fees. Increasing user fees would just add to the large share of costs the specialty chemical industry is already paying for the federal pesticide program.

Reregistration costs and fees will most likely be reviewed again in 1991, when House and Senate Agriculture committees are expected to take up Federal Insecticide, Fungicide and Rodenticide Act legislation.

Mobay Now Offers Dylox In Powder, Granular Forms

Mobay Specialty Products Group has purchased the federal registrations for the production and sale of trichlorifon from Kaw Valley in Leavenworth, Kan.

Trichlorifon is the active ingredient in

(continued on page 12)

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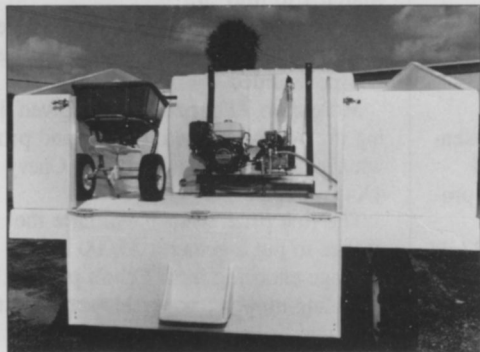
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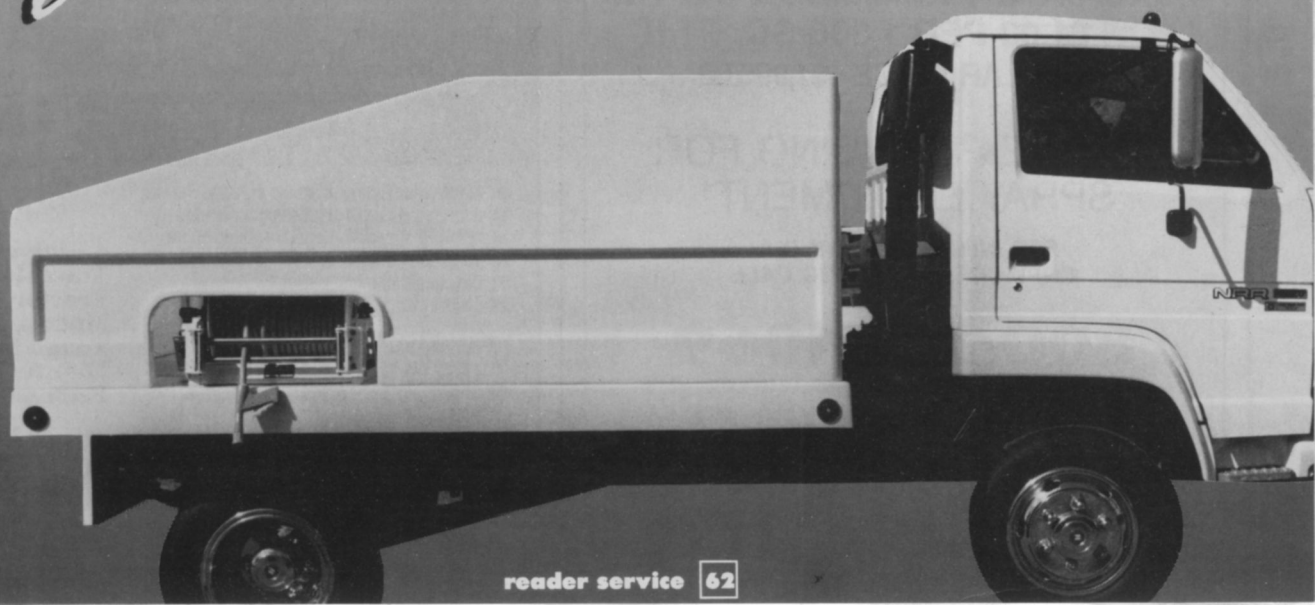
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News

(continued from page 10)

Dylox® insecticide, which is used to control a wide spectrum of pests.

Prior to the acquisition, Mobay offered an 80 percent soluble powder Dylox. Now Mobay is able to offer both the 80 percent soluble powder and Dylox 6.2 granular to lawn maintenance professionals.

OTF Attendees Show Conservative Buying

Almost 4,100 attendees browsed the trade show floor and took advantage of four days of educational seminars at the Ohio Turfgrass Conference and Show held recently in Cincinnati.

The show is the largest regional trade show for the green industry with 500 booths and 300 exhibitors, said John Street, OTF executive secretary. Two contributing factors to its success are its 23-year tradition and strong educational program.

Most exhibitors reported heavy traffic at the beginning of the show, but the general attitude of attendees toward purchasing was said to be conservative because of uncer-

Ransomes Adds Safety Controls

Ransomes has designed operator present controls for all Bob-Cat Mid-Size machines manufactured before 1989 in an effort to enhance safe equipment operation practices.

This state of the art feature, incorporated in all Ransomes Bob-Cat Mid-Size mowers since 1989, is available at a special price to owners of older Bob-Cat Mid-Size mowers.

When the blades have been engaged, controls automatically stop the engine if the operator's grip on the handle is released, stopping the motion of the blade.

tainties surrounding the economy.

A highlight among educational seminars was an opening session presented by James Beard, turfgrass specialist, crop and soil sciences department, Texas A & M University.

Beard's "Challenges and Trends of the 1990s explored his ideas of where the industry is headed in the Decade of the Environment.

High on that list was the industry defending itself on several fronts; continued chemical scrutiny and water use most prominent among them.

Away from agronomic issues, Beard told the crowd that computers and use of integrated pest management will be dominant in the next 10 years.

The 1991 OTF show will return to the Cincinnati Convention and Exposition Center Dec. 9-12.

Echo Offers Power Equipment Sweepstakes

Echo is running a sweepstakes for landscape maintenance professionals from March 1 to May 31.

Sweepstake prizes ranging from a Chevrolet truck to Echo power tool packages will be awarded.

More than 700 prizes will be given during the sweepstakes with one grand prize winner driving home a full-size Chevy 4X4 pickup.

The first prize winner will have the chance to put together a \$5,000 tool package choosing from Echo's product line including mowers, power blowers, chainsaws and hedge clippers.

Details and entry forms are available at participating Echo dealers across the country. No purchase is necessary.



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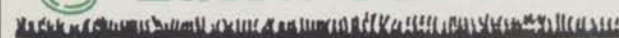
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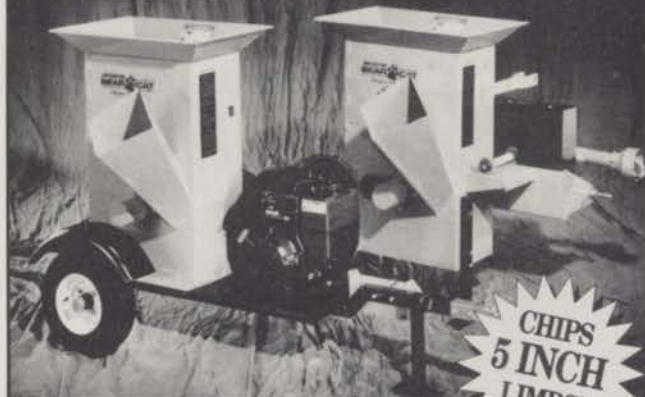
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B E A R C A T

reader service **36**

Association News

THE **ASSOCIATED Landscape Contractors of America** has selected the Walt Disney World Resort to receive its Landscape Contribution Award for 1990.

The award will be presented to the company at ALCA's 21st annual Environmental Improvement Awards Program being held Feb. 20 in Palm Springs, Calif.

This award is presented to a corporation or developer for creating landscape awareness through its dedication to achieving high quality standards at projects by using professional landscape contractors.

Each of the gardens at Walt Disney World Resort has a theme which is established by the landscape architects through a clear definition of intent, careful selection of plants and meticulous attention to detail.

Good installation is critical to the success of Disney's gardens. From big tree moving to laying sod, the installation of the gardens requires an innovative approach to traditional methods.

Annual flowers and seasonal flowering pots provide year-round drama while co-

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Old Towne, Va. 22314
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805/498-6916

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lorful specialty crops, such as bright yellow cascading mums and floral topiary, add fun and interest to the gardens.

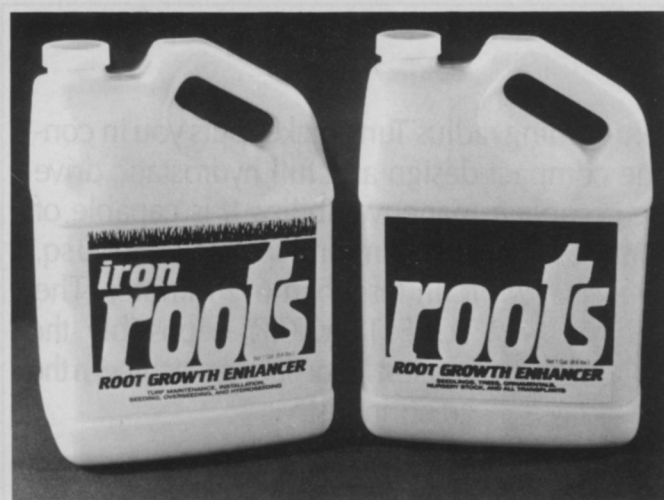
The **Lawn Institute** has released a 40-page booklet titled "The Lawnscape: Our Most Intimate Experience with Ecology."

With the lawn recognized as a complex ecological system of its own providing many health and environmental benefits, the booklet provides an overview of the system. Included are sections covering grasses, pests and the living soil.

The booklet points out that a lawn cut at two inches can be considered a small "forest." Within that vegetative canopy are fascinating organisms that influence one another's lifestyle and respond dramatically to changes in the climate as they influence the natural environment.

Wetlands may be located some distance from us, but chances are good that you walk on a lawn most every day. The information in the booklet is ideal for you and your staff and could even be shared with customers.

It's available for \$5.



SURVIVAL OF THE FITTEST

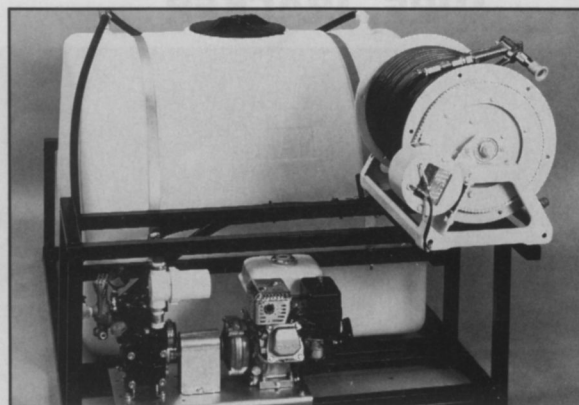
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"EVERYTHING FOR THE LAWN MAINTENANCE INDUSTRY"



reader service **44**

Both manufacturers and users of outdoor power equipment in California will benefit from victories achieved recently through comprehensive efforts by the **Outdoor Power Equipment Institute** before the California Air Resources Board.

A presentation to the California board in mid-December was the power equipment interest's final step in a 10-month effort with the air resources group to establish reasonable emission levels for lawn and garden utility engines.

OPEI efforts included numerous private meetings with the board, participation in all public meetings, submission of official comments and industry information and development of an economic impact study through an outside contractor.

The final regulation represents emission level requirements to take effect in 1994 that are achievable by engine manufacturers with limited engine modifications.

While not every item OPEI requested was included in the final draft, major changes from the original proposed regulations to the final document will prove beneficial to manufacturers — as well as users — of outdoor power equipment.

The **Landscape Horticulture Center for Personnel Development** recently received

approval of its standards and training guidelines for two non-union apprenticeship training programs.

The group is sponsoring organization of the programs that offer training for apprentices in the occupations of landscape technician and landscape management technician.

The apprentice committee established training standards that will benefit the landscape industry nationally by improving its image and the self-esteem of the new workforce.

Contact Jim Keener at the LHCPD for more details.

Landscape contractors and suppliers from California will have the opportunity to attend the **California Landscape Contractors Association** Winter Tri-Board meeting March 8 and 9.

Special activities will include an educational luncheon with a speaker from the Water Resources department, a seminar on "Surviving Economic Change" presented by George Koziaz and a roundtable discussion for the association's elected officials.

Other scheduled meetings include those of CLCA's executive board, chapter presidents, women's auxiliary, landscape educa-

tional advancement foundation, state committees and associate member organization.

For more information, contact Micheyl Barnett at the CLCA offices.

American Standard for Nursery Stock 1990 edition is available from the **American Association of Nurserymen**. Developed and continuously update by AAN's horticultural standards committee, the manual was last published in 1986.

Approved by the American National Standards Institute, the book details height, caliper, branching height/caliper relationships, root spread, recommended B&B specifications and container standards used in buying or selling nursery plants, whether they be container or field grown, bare-root, balled and potted or processed balled.

Also included are standards of young plants, fruit trees, small fruits, understock and seedling trees.

Revisions have been made to sections on coniferous evergreens, deciduous shrubs and rose grades. Grades for box specimen trees appear for the first time. In addition, a contents listing and metric equivalency table with measurements corresponding to those in the text are included.

The book is \$10 per copy.

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Industry Viewpoint

WHAT DICTATES LEGISLATIVE ACTIVITY?

H. Richard Ficco Jr., president of Partners Quality Lawn Service, South Easton, Mass., comments on drinking water regulations proposed by the Massachusetts Department of Food & Agriculture (333 CMR 12.00). If passed, the regulations would require the users of potential groundwater contaminants to receive a variance from the Department of Environmental Protection before applying the material within one-half mile radius of any public drinking water supply well.

I OUTWARDLY OPPOSE the adoption of 333 CMR 12.00 after careful consideration of the proposed regulation and its implications.

The substance and fiber of this proposal are devoid of any known scientific data that would lend favorable support. The

consequences of such a drastic measure in policing our drinking water is economically disastrous.

Further, to propose infeasible restrictions without evidence suggesting real threat to public health is contemptible.

The results of this premature proposal would: incite public fear; disregard economic thresholds; refute scientific research; provide new, frivolous defenses by hardened criminals; discourage integrated pest management practices; and be essentially unenforceable.

For anyone dependent upon drinking water to be opposed to the protection of our water supplies would be foolhardy, indeed. However, we cannot subscribe to morality and emotions whenever we are faced with such a complex issue.

Compelling, although misguided, public

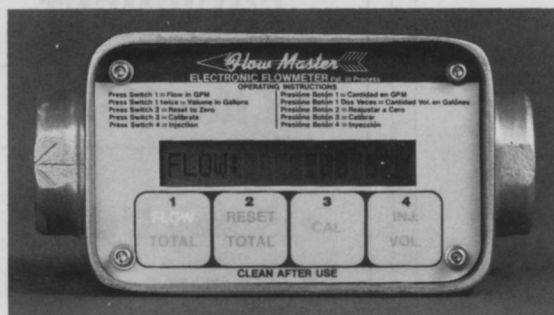
sentiment is too often shaped by jaundiced, misinterpretation of the actual facts. Nature is not a leak-proof system. And, today, with our capability to detect substances in parts per trillion with ultra sophisticated analysis equipment, we may be in for some discomfort.

We are going to have to learn to live with the results, instead of killing ourselves with the stress of worrying how we are going to die by consuming "x" glasses of water per day for the next 15,000 years.

Every leading expert or study in the research of whether or not groundwater contamination is associated with fertilizer/pesticide applications has concluded strikingly similar results:

- Healthy turf and/or sod reduces runoff to next to nothing.
- Years of research don't even reveal 1

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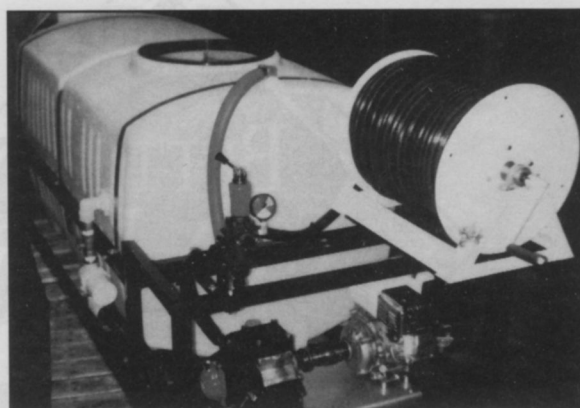
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"EVERYTHING FOR THE LAWN MAINTENANCE INDUSTRY"

ppb traces in test plots used to detect contamination.

- The dense root and shoot system of turf, coupled with a sufficient thatch layer, results in minimal losses of nitrates, 2,4-D and dicamba in root zone leachate.

The turf industry has not been numbed by frantic, fear-mongering dread that is spread by anti-pesticide groups. We do not do business in a vacuum, nor in a callous manner. We steadfastly produce evidence that logically and scientifically refutes false ideological perceptions of our industry that is fraught with "guilt until proven innocent" connotations.

And, although a convenient "whipping post" for politically charged activism, we have continued to strive for excellence despite back alley tactics to regulate us into extinction.

Green industry members have proudly taken it upon ourselves to actively adopt, implement and promote worthwhile environmental programs, research, training and public awareness education. The tools of our trade are not mired in deception. We do our jobs exceedingly well in conjunction with a rapidly shifting climate of change.

The facts of the groundwater issue are that current research undermines a seem-

ingly well intentioned proposal. And, frankly, the public would be stuck "footing the bill" if this overzealous, knee-jerk reaction were imposed.

Overlegislation always translates into economic travesty. This proposal defies logic and real world practicality. Proposed regulations would become yet another "albatross" around our collective necks. Considering the fiscal misery of the Massachusetts economy, I sense we could discover ways to deal with some real problems.

333 CMR 12.00 would contribute to inflation, reduced job security, lengthy paper trails and devalued property. The poison pens of our detractors would turn back the clock of progress. Ultimately, the public's interests, so dear to the authors of the regulations, would not be fairly served.

Proven infinitesimal hazards associated with our applications would not be hastily condemned. Studies indicate that less than 2 percent of the nation's groundwater is contaminated. Reality suggests that the tainting of that 2 percent may have something to do with factors besides fertilizer/pesticides.

Salt water presence, improperly constructed wells, bacteria-laden septic tanks and the application of sewage/animal waste

contribute mightily to some of the problems our water sources face. And the golf course industry is falsely and unfairly chastised with being a major perpetrator of evil.

Remember that the high profile tees and greens that admittedly may receive higher amounts of treatments during a season, only represent about 3 percent of the entire acreage of a course.

Being an optimist, I have a penchant for searching for good, not bad. I believe, sincerely, that both sides of this particular fence can coexist. We both share in the commitment and obligation to protect our natural resources.

Clean, fresh groundwater will not be the byproduct of unjustifiably condemning the green industry. Massachusetts can be on the cutting edge of environmental issues without drumming up misleading propaganda.

Let's continue to place emphasis and monies into better management practices. I support turf management practices that provide for proper handling, calibration, education, improved irrigation practices and continued research.

Our industry is empathetic, approachable and ready to do its collective part. —
Richard Ficco

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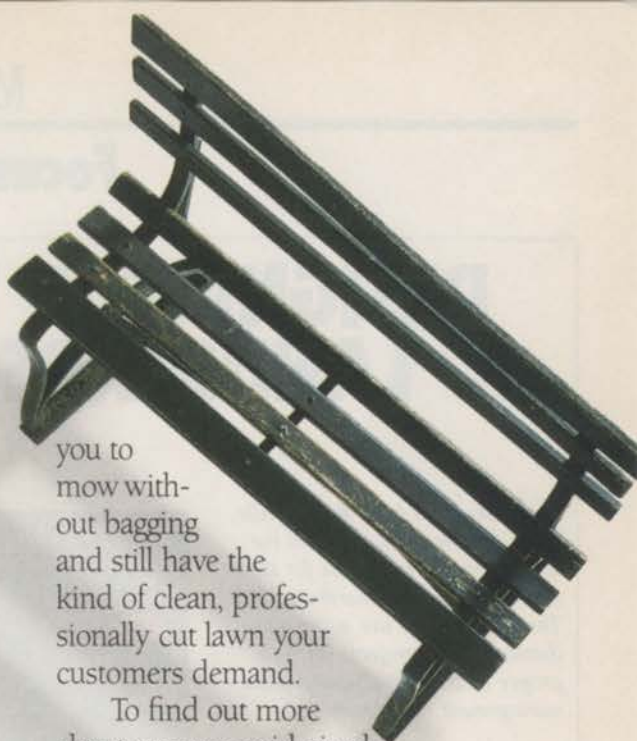
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maneuverability to negotiate anything a landscape artist can put in your way. Instantaneous forward and reverse without stopping to shift. Zero-turning radius. And better traction on hills and wet grass.

Our new mid-size mower also has T-bar steering, an exclusive Toro feature that's becoming increasingly popular among commercial cutters. And for



you to mow without bagging and still have the kind of clean, professionally cut lawn your customers demand.

To find out more about our new mid-sized mower, including the benefits

IF YOUR LAWNS DIDN'T COME WITH HILLS, WALLS, BOULDERS, TREES OR FIRE HYDRANTS, OUR NEW MOWERS WOULDN'T COME WITH HYDROSTATIC DRIVE.

It has to be able to change directions. Mow under benches and picnic tables, then back out again. And it has to turn easily. Sometimes all the way around. Often in very cramped quarters.

As any commercial

cutter knows, all that

shifting,

turning and backing up can stretch a morning's mowing job well into the afternoon.

That's why, at Toro, we've developed a brand new mid-sized ProLine mower that features hydrostatic drive.

Hydrostatic drive gives you more than enough operability and

good reason. With the T-bar, there's no squeezing of pistol grips. The mower is easier to control, and steering is simpler.

It all adds up to less operator fatigue and faster mowing. And that means better overall productivity for your mowing operation.

Our new mid-size mowers have plenty of features to help keep your mowing operation running at its best. A 14 or 18 HP Kohler engine. An oil cooler for lower

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of our exclusive hydrostatic drive and T-bar steering features, visit your Toro ProLine dealer.

No one's better at helping you get around obstacles in the mowing business.



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The Professionals
that keep you cutting



Focus on Landscape

DESIGNING A WATER CONSERVING LANDSCAPE ON A LARGE SITE

Earth Beautiful Inc., Burtonsville, Md., designed and installed the landscape and irrigation for the Bechtel Corp., Gaithersburg, Md. The firm aims to use a xeriscape theme in their projects through proper cultivars and sound plant management techniques.

WITH THE HEAT and lack of rain in 1988, the cost of hand-watering the new landscape at the Shady Grove, Gaithersburg, Md., Bechtel Corp. facility would have exceeded the cost of the underground irrigation system within three years.

This two-acre site proved a design challenge because of a number of conflicting variables. The black-top parking lot surrounding the entire building causes temperatures to break 100 degrees Fahrenheit at times. High daytime temperatures coupled with constant breezes make modern water-conserving irrigation designs a difficult task.

The available water flow at the site is 80 GPM, but the static pressure is a meager 50 PSI. Although a booster pump would enhance the pressure available to the large head turf zones during the low PSI shrub drip zone cycles, it would cause excessive pump cycling and result in premature pump damage.

In addition, a pump would require electrical energy expenses as well as future maintenance costs. Instead, 28 GPM of the 80 GPM available is used through a 2-inch PVC main with Hardie ultra flow valves for additional PSI savings.

With the varying site dimensions of slope vs. flat areas, zoning is achieved by terrain for reduced runoff. Thus, the 28 GPM is more than enough for each different area.

Hunter's four-inch pop-up lawn heads are used in the large turf areas for two reasons: the heads function easily in low PSI, and zones have an ambient working pressure of 35 PSI. These gear driven adjustables can be precisely adjusted to reach



Shrub beds are watered separately from turf.

turf areas. Smaller nozzles can be used on clay turf slopes allowing a slower precipitation rate which the clay slope can accept.

Lawn areas are core aerated and overseeded with modern drought resistant turf-type tall fescue. The nitrogen fertilization needs are supplied by a 75 percent slow-release sulfur-coated urea.

Cultivar selection and a time-release fertilization program further enhance water conservation through fewer irrigation cycles now needed to maintain a healthy, vibrant green carpet-like entranceway into the complex.

Drip irrigation is used throughout the outdoor lunch area to provide each different plant cultivar with its own water allotment. For example, the blue rug junipers that cascade the brick wall have a low water requirement, therefore 1/2 GPH emitters are used. The rhododendrons in the same bed have a higher water requirement

using 2 GPH emitters. Nandina domestica and ilex helleri used 1 GPH having moderate requirements, but not tolerating "wet feet."

The existing large oak trees were installed in too small a soil space, locking them inside the concrete patio. Now that the trees are larger, water requirements are considerably more, but roots are unable to penetrate the 95 percent compaction required under the concrete. Near fatal stress was occurring.

Extensive boring was done, providing each large oak tree with a ring of 5 GPH emitters. The soil area around each oak was core drilled, fertilized and the core holes backfilled with small pine nugget mulch to create a sponge effect for maximum water retention.

Eight weeks following these curative measures, the oaks responded with the foliage returning from chlorotic yellow to vibrant green.

Lightly flooding the liriope bed enables the plants to continually spread, eventually filling the entire planter area. Thus, with only one drip zone all plant types can be simultaneously watered correctly.

Creeping junipers are used in areas of possible pedestrian traffic spillage from the pathways, and taller flowering plant material is placed in the protected areas of the beds.

Shrub head usage would drown the junipers while supplying azaleas, rhododendrons and others with their proper amounts of water. Plant water requirements are as different as the shrub vs. turf zone theme.

Through a professional energy and water conserving irrigation design, the plant material on this site is maturing well, while using the minimal amount of water needed for proper plant growth. — Wade C. Pryor Jr.

The author is president of Earth Beautiful Inc., Burtonsville, Md.

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PLANT GROWTH REGULATOR

Now, with new formulations of Embark and tank mixes with Limit[®], you can *tame* the growth of turfgrasses and reduce the mowing by up to 50% — or you can *slow* it down just enough to make regularly scheduled mowings easier and faster. In either instance, there are no concerns with objectionable discoloration, and the reduction in cost is very significant.

Everett Mealman, President
PBI/Gordon Corporation

The Embark PGR programs for growth regulation of fine turf are surely the most important developments to date in landscape management. They can dramatically increase the productivity of turf managers ... and productivity, of course, is the ultimate generator of profits.

The recommendation for maximum growth suppression of cool-season

fine-turf species is a tank mix of Embark Lite and Limit.

Embark Lite (Mefluidide) is specially formulated and labeled for use on fine turf. And Limit is amidochlor, the root-absorbed turf growth regulator developed by Monsanto and recently acquired by PBI/Gordon.

This easy-to-handle tank mix, when applied to cool-season grasses prior to

the major growth period, will reduce the number of mowings up to 50% for five to six weeks at a cost of approximately \$45.00 per acre — the average cost of one mowing.

But that's only part of the good news: Turf discoloration is avoided with this combination, when used as directed. At the end of the six-week cycle when untreated turf tends to fade, the release of pent-up energies in the Embark Lite/Limit-treated turf results in a rich, vibrant green color.

And, notice, we haven't even mentioned the environmental bonus of reduced clippings.

On the other end of the Embark programs, an application of just Embark Lite will by itself slow down the growth for three to four weeks to such a degree that the mowers will virtually float over the turf ... clippings will be significantly reduced ... you'll be able to stay on schedule even during the peak growing season ... and the cost will be only \$18.00 per acre.

What users say

Paragon Lawn of Edina, Minnesota is typical of the many turf management professionals throughout the country who are using Embark. Paragon is a total landscape management company owned and operated by the husband-wife partnership team of Dan and Jill Rosen.

The business is oriented toward high-visibility commercial properties in the Minneapolis suburbs, where immaculate turf is a vital part of the image the property owners want to project to the public.

A typical area where Jill and Dan Rosen, of Paragon Lawn, use Embark Lite. For approximately \$18.00 per acre they can literally take the fight out of cool-season grass, so that even in the peak growing period they not only can stay on schedule but the mowed premises will maintain their freshly cut appearance longer.



On several properties, Paragon has total responsibility for designing and executing the complete program on an annual bid basis. "Such property owners don't really care what we do or when we do it," says Rosen. "The issue is that a constant image of quality and neatness be maintained."

In such instances the Rosens factor into their bid an Embark Lite/Limit tank mix treatment twice a year. Once in the spring, ahead of seedhead emergence, and a repeat prior to the fall growth season.

"It reduces our mowing costs by more than 50%, at a cost of less than \$45 per acre, while actually improving the appearance of the grass..." states Rosen.

On the other hand, Paragon has many customers who are on a regular mowing schedule. "We get paid a flat fee per mow," says Rosen, "and at the peak of the growing season it can be a real back breaker to stay on schedule and maintain a manicured appearance."

"This is where Embark Lite is ideal. During the peak growing season, we can definitely put money in the bank by spending \$18 per acre out of our own pocket for a treatment of Embark Lite that lasts three to four weeks. It eliminates double mowing... it makes clipping clean-up a breeze... it takes pressure off men handling the mowers... and, best of all, it keeps us on schedule."

Interestingly, the Rosens were hesitant about getting started with Embark, and actually had a gallon in their machine shop for a year before they opened it. Like so many turfgrass professionals, the concept of suppressing growth made them uncomfortable in light of the fact that they had always measured turf quality and health on the basis of how vigorously it was growing.

Consequently, the Rosens started out very cautiously and tested both the Embark Lite/Limit tank mix and the Embark Lite mowing aid program in low-profile areas and expanded the total commitment as the evidence became overwhelming.



The Beauty of Embark Lite/Limit Tank Mix

Above: John Van Haften, director of research and development for PBI/Gordon, demonstrates the dramatic effectiveness of an Embark Lite/Limit tank mix. This test plot of bluegrass and ryegrass in suburban Kansas City was treated on April 25, 1990. It was mowed once, on May 1 after the PGR kicked in, and never touched again until this photo was taken on May 25. This dramatic reduction in growth occurred in spite of abundant rainfall and excellent growing temperatures.

Embark is the original, undisputed leader of all PGRs for use on turfgrass. It is foliarly absorbed and translocated to the growing points of a plant, and redirects the energy to the roots, thus preventing seedhead development and stem elongation.

For almost ten years, Embark has been virtually unchallenged for use on low-maintenance turf such as roadsides and hard-to-reach areas.

But use of Embark on highly visible fine turf was not recommended until 1986, when PBI/Gordon researchers, as well as several universities, had proven that tank mixes of Embark and Ferromec® AC Liquid Iron could eliminate the problems of turf discoloration.

Limit, on the other hand, is root absorbed and has been recognized from its inception as the PGR for maximum growth suppression on fine turf without problems of discoloration. The major drawback was its cost.

Happily, a tank mix consisting of reduced rates of both Embark Lite and Limit has proven to be the perfect marriage. It results in growth control for five to six weeks; control of seedheads and stem elongation; reduction of clipping volumes; strengthening of the roots... and all of this for only \$45 per acre.

New Tank-Mix Combo!



Special Get-acquainted Offer on Embark Lite and Limit

Offer consists of a Combo Pack containing two 1-quart bottles of Embark Lite and one quart of Limit. When tank mixed, this combination will treat one acre of cool-season turfgrass and will give you a clear and rapid understanding of what Embark Lite/Limit can do for you. And the evidence will reach you in time to expand the program yet this year, beyond your original test area. See your PBI/Gordon distributor or...

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ON LINE WITH CLEAN CUT

*Partners Dennis Dautel
and Rex Gore have
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to take the guesswork out
of your business.*

By Cindy Code



(Above) This management team earned Clean Cut a spot on Inc. magazine's list of the 500 fastest growing entrepreneurial companies. Photo: Steve Pumphrey (Right) More than 70 percent of Clean Cut's maintenance and installation takes place on commercial properties.

DENNIS DAUTEL bought his first computer at the same time he bought his first mower.

"I knew from the beginning that running a business without a personal computer was going to be difficult," Dautel said.

From slim pickings in 1983 to 45 year-round employees and 1990 sales of \$1.8 million, Dautel and partner Rex Gore have been through it all.

From guiding their business through a recession to developing a joint ownership concept to developing a computer software package, these two guys know how to make things happen in the lawn and landscape maintenance industry.

Like so many others before him, Dautel started in the business because of its relative ease of entry. Helping both partners out were degrees in economics from Kansas State University.

"I was working in a bank when I started this. I looked at other companies in the business and said, 'It sure looks like they're making a lot of money,'" Dautel said. "And not knowing all the costs of course, an outsider's view is they must be making a whole lot of money charging \$30 an hour to cut grass."

That's how Clean Cut of Austin, Texas, originated, but the substance of the company really started in 1985 when Gore joined Dautel in establishing goals for the fledgling firm.

Gore's analytical, realist approach complements Dautel who operates more on gut feeling and optimism.

"We complement each other well and I think we've found some middle ground now that we didn't have when we first started," Dautel said.

"We've worn off the rough edges," Gore added. "We are both still involved in maintaining the business."

Dautel has responsibility for the firm's internal operations as far as accounting, finance, computer systems, design implementation and operations of those systems, while Gore takes charge of the operations in terms of supervising the actual production by the office and crews.

The firm began when Austin was at the height of expansion, bringing in \$167,000 in sales the first year. The future was looking bright. Then the construction market began to crumble in 1986, but Clean Cut had taken on a number of new accounts and were committed to carrying them out.

Despite the economy, Clean Cut reported revenues of \$480,000 in 1986.

"Of the original owners of high class apartments, maybe only 5 percent of those buildings are still owned by the original owners," Gore said. "The rest of them quickly went back to a lender and in some cases, the lender then went back to the federal government."

The two partners looked at the ownership changes as a challenge rather than an obstacle.

"We were experiencing a great deal of change and uncertainty in our customer base," Gore said. "But if we had properties that looked good, a change of hands gave us an opportunity to reprove ourselves."

During tight times, the firm never resorted to lowering their prices to gain work. In fact, Clean Cut was able to convince some prospective customers that the competition wasn't offering the same level of service for the lower price.

"We've never decreased our price without decreasing our services because we have worked extremely hard to state things ac-



curately," Dautel said. "We have developed some techniques on bidding. We can send three or four of our guys out and they typically all come back with the same estimates."

The companies which survived the 1980s were those who learned to be lean from the start. As a result, most of the companies Clean Cut competes with today were not in business in 1984.

Today, Clean Cut maintains an 84 percent to 16 percent ratio of commercial and residential maintenance work respectively.

The firm has 13 crews, including one in San Antonio, performing maintenance, installation and irrigation services. Eight maintenance crews range from one to nine in size while irrigation and construction crews depend on the volume of work.

About 50 percent of the firm's construction work stems from current maintenance contracts.

Most of the firm's work takes

place in Austin; however, in 1990 a branch office was opened in San Antonio.

Austin is considerably smaller than Dallas or Houston. While

the Austin area has about 700,000 people, Houston has 4 million and Dallas/Fort Worth has 4.2 million.

Clean Cut crews can be at any

of their accounts in about 20 minutes.

"Our market is starting to mature. There's good landscape maintenance being done in Austin at this point," Dautel said. "There are a number of firms here that have the skills, capabilities and dedication to be doing excellent work."

Most unique about Clean Cut is its form of management. Many companies make use of foremen and supervisors, but Clean Cut relies on team leaders to carry out the firm's objectives.

Team leaders are people who show a lot of promise and become responsible for managing their crew or crews. In addition, the team leader is also managing his customers and making the properties look good.

"They have a pretty wide latitude as far as the knowledge about the pricing information and market information," Dautel said. "So we do tend to expect a lot

CLEAN CUT INC.

HEADQUARTERS:

Austin, Texas.

FOUNDED:

In 1983 by Dennis Dautel.

OWNERS:

Dennis Dautel and Rex Gore.

PRIMARY SERVICES:

Installation and maintenance of commercial and residential properties including irrigation design and installation. Beginning to market industry specific software.

EMPLOYEES:

45 year-round, 79 seasonal.

1990 SALES:

\$1.8 million.

out of them."

Team leaders aren't salesmen, however. Dautel and Gore handle that role. The majority of their work comes from current customers.

A foreman's responsibility is to go in and mow, edge and fertilize and so on, while the team leader's responsibility is that plus customer service.

"If I haven't been to a property in a week, and I'm not going to be there for another week, his responsibility is to see if his customer is happy, if there is anything they need to take care of — small things on the property — and to see that the landscape looks good," Dautel said.

Day-to-day actions of the team leaders are similar to a foreman, but ideally the responsibility is much broader in that the property looks good and they make the customer happy within a reasonable budget.

Now in its infancy is a plan to expand the role of team leaders.

Leaders selected by Dautel and Gore will become owners in a portion of the business.

"He becomes an owner in the portion of the business that he is managing," Gore said. "It's a hybrid form of ownership. The individual gains a certain set of accounts and a particular set of equipment, so in that respect they become an owner of their own business within the context of Clean Cut. They are agreeing to buy those same company goals in terms of our technical operation and good marketing image."

Clean Cut provides the over-

There are a number of firms here that have the skills, capabilities and dedication to do excellent work.

head structure — the insurance, the accounting system, the operations system, the computer system and other managerial functions.

"We try to provide all that support at a cost equal to lower than what they would experience on their own," he said. "We are basically taking our good reputation and our system and are leveraging that in the long run over a larger customer base."

As owners, they share in the profits of the work they manage, but they also adhere to restrictions on reinvesting those profits.

Clean Cut has been tinkering with this hybrid form of ownership for nearly a year, but is just beginning to implement its true form with four team leaders.

"To an extent, I think our industry is more like an accounting firm or a law firm where the real value of the service you're providing is wrapped up in the person that's providing a service," Gore said. "That's why law firms offer partnerships. They know if a certain person is the one establishing new business — making customer contacts and a loyal customer relationship — that person says, 'Why do I need to be working for someone else when I could own my own business?'"

Not only do the team leaders gain more responsibility, it should reduce turnover because people are making a long term commitment.

In the following interview, Dautel and Gore discuss the development of Superscape, their industry software package designed to help a manager with schedules, bid management, work orders, invoices, employee time cards and more.

Q: Why did you develop your own software and how did you determine what capabilities it should have?

A: Dautel We developed a system on an IBM personal computer that handled our billing and accounts receivable as well as some managerial and contractual things. It was a flat file so it was limited in what it could do, however, we were able to do word processing and customer mailings among other things.

Rex brought a Macintosh with him when he came to work in 1985, and we started developing a lot of our marketing and bidding on the Macintosh and continued to use the IBM as well.

Both Rex and I consistently

talked about the type of information that we needed to really manage the business as opposed to what happens in vertical market software where generally accepted accounting principles are tailored to a number of industries.

So we built a file based on what we thought a good manager needs to manage his business. Our program is not a financial accounting program. It gives us managerial information — information on our teams and crews — as well as information on contracts, locations and customers. It is also a complete accounts receivable, accounts payable, cash management system. It does all your scheduling and bidding; it has a complete work order system.

Your end of the year financial statement tells you what your bottom line is, but it doesn't give you the information that you need on a daily and/or monthly basis to manage your business. It gives you some information, but not the critical information.

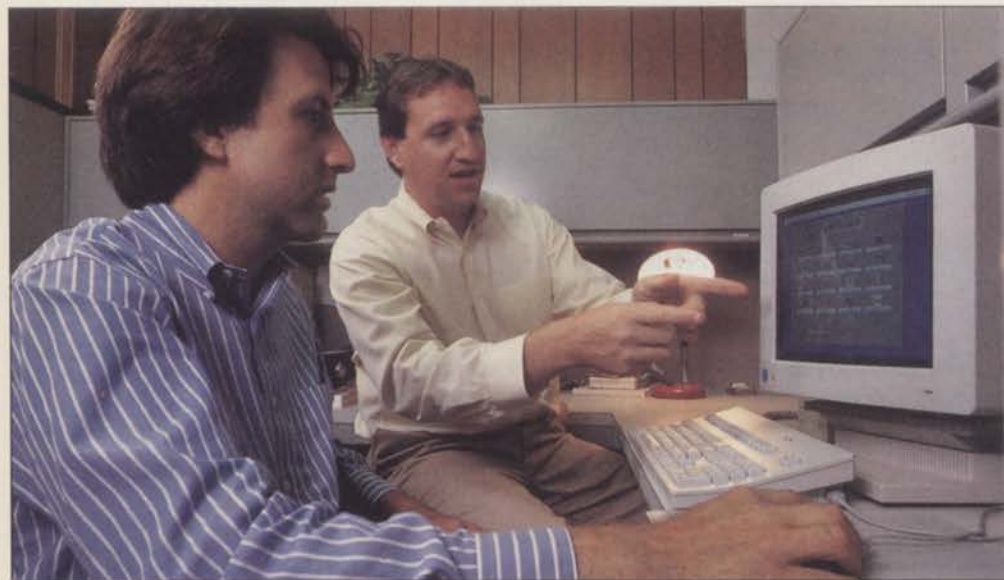
Gore With generally accepted accounting principles and a financial statement, one business can be compared to another because the information is being presented in the same way. But how accurately do those accounting principles say how you would depreciate a particular piece of equipment? If the IRS says that this type of mower should be depreciated over seven years, but in reality that mower wears out in a year and a half, the depreciation expense on a financial statement is understating the true expense that you are incurring to undertake that work.

For a manager to make decisions about whether he's making good money and whether he ought to change the focus of the type of work he is doing, he has to have a managerial financial statement that gives him an accurate idea of what happened last month. That should include how many revenues he generated and what his true economic expenses were.

Q: How does a maintenance operator incorporate your system into his business?

A: Dautel Most businesses in our industry, whether they're doing \$10,000 a month in sales or

(continued on page 30)



Computers have always played a key role at Clean Cut.

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Clean Cut

(continued from page 26)

\$100,000 a month in sales, are all performing the same functions. Our system tells them how to input the information into the computer, ease of entry and how to take the numbers and put them where they need to go to get the appropriate analysis.

Gore Everyone starts out figuring some way to keep accurate track of the hours their crews worked. From an operations perspective it has to be done.

So why not keep it in a form that tells you not only how many hours each guy worked, but how many hours a particular team worked. Or for a given property, how many hours were spent by all crews, including specialty people, who spent landscape time on that property?

It's even better to know how much time was spent on that property doing mowing, fertilization, etc., or if you want to simplify it, how much time was spent performing contractual require-

ments in relation to the amount of time spent doing extra work, for which you're being compensated.

Why not have all that information when you're doing accounts receivable? Why not see how many dollars of revenue that particular location generated, both in regular maintenance and extras that they end up paying for over a given year.

You can quickly figure out if a particular property made or lost money, and the reason it made or lost money.

Q: So you're taking the statistics most companies already track and putting them together into one readily accessible system?

A: *Dautel* Some of the better companies are keeping the information, however, where we have one person operating the system for a \$1.8 million company, to get the same information they would need two to three people operating the system. They don't have ease of entry and they have to manipulate the numbers themselves

rather than letting the software do it.

For instance, if you have a customer who owns more than one property, you're able to analyze the customer and some of the locations. This information is really valuable so you know when to push for a raise on a property and when not to.

And with that same information, you can analyze contracts based on direct expenses and

some properties that will be overpriced relative to what you're required to do and some contracts that are underpriced relative to what you need to do to keep that customer happy.

If it's grossly over or underpriced you'll probably realize that, but where it's overpriced about 5 percent relative to what you're actually required to do to keep the customer happy, you don't know that.

A year-end financial statement doesn't give information you need on a daily or monthly basis.

compare them with other properties you have. Properties with the slimmest margins are those that you have to consistently fish for a raise on or you need to let those properties go as you sell better properties at higher prices.

Gore If you don't have a real firm, close grasp of that, you'll have

If you're not careful, you end up losing those contracts that you had slightly overpriced. On the other hand, you seldom lose the ones that you have underpriced.

So over a period of time, you begin slowly losing the well priced accounts and you begin keeping only the accurately priced and the underpriced accounts.

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Model 83/93 Aerator/Slit Seeder

Provides relief from thatch and compaction while slit seeding. Tractor mounted PTO, 3-pt. hitch, 48" swath on 3" centers. Variable blade depth setting for aeration. Adjustable seed flow.



Model 82



Model 37/38



Model 83/93

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Dautel The key is to have the right information when you go to the customer. In our business, actual numbers and expenses spent on the property are best. On top of it looking good, you've got to show what the costs were in making it look good.

It's difficult to get those costs by hand because you have to pull some from payroll, receivables, equipment, supervision and management. Without a system to do that quickly and efficiently, the tendency is not to do it.

I would guess 90 percent of the maintenance companies out there do not have a system in place to give them the information they need to consistently evaluate contracts.

Q: How many green industry firms are computerized in one form or another?

A: *Dautel* There's probably a little more than 40 percent that have a personal computer — maybe a Macintosh — capable of handling their accounts receivable and accounts payable.

It's certainly better than nothing,

no doubt about that. Our software gives you the analysis you need to manage your customers and your team while you're performing all those things.

Q: How did you develop your system?

A: *Dautel* We developed the design with Mac Management System. It was really a learning experience. I hadn't envisioned some of the graphics they incorporated into the package.

I had envisioned the management information, but some of the graphics and speed of entry he incorporated into the program gave it a finished look. To give you an idea, we had three people doing some of the things one person is now doing.

Q: How will this be made available to the industry?

A: *Dautel* We're offering it on a subscription basis with no commitment whatsoever other than paying the monthly subscription price.

A set up fee of about \$200 is the only upfront cost along with their first month's subscription. We will bring people into Austin for a two to two-and-a-half day training seminar.

We're so convinced that if we put a good software product in front of them and they can't afford to buy it, it won't do anyone any good.

For a landscape contractor doing \$200,000 to \$500,000 in sales to go to a bank and borrow \$8,000 for a software system and another \$4,000 for a computer, he's got a pretty slim chance of getting the money.

Leasing companies are an option, but leasing companies charge a high rate of interest and are forced into a long-term commitment.

If you go one step further, we're so confident it will immediately pay back for the cost of a system like ours. You're getting the capability to analyze your contracts and we're going to let you use the software for a monthly fee.

If you decide three or four months down the road you don't

like it or you can't afford it then you can walk away from it.

Q: How much is a monthly subscription?

A: *Dautel* A monthly subscription is \$199 — that includes all upgrades. They can do the subscription or they can pay the \$7,995 for a package, however, they will have to pay for the upgrades if they buy it outright.

What we concentrated on at first was the management information system they needed to run their business because we figured everybody already has a payroll system.

We have built this system so we can easily add financial and accounting modules as needed. It's a matter of taking time to program the other modules. So it will have a complete payroll and a complete financial accounting package at some point. Once we have enough systems in place, it will be to our advantage to do the payroll, because it will be an additional value to the people who are subscribing to our software.

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Gore In my opinion, even if we develop our own payroll, we will probably continue to use an outside payroll service because we just call in the total numbers and they generate everything.

I know companies that have one person working on payroll all the time. And for the amount of time that they're spending vs. what it would cost them to actually utilize the payroll service, I think you'd have to get to where you're doing the volume we are, and to make it to where it's a clear advantage to have your own people doing it.

Q: Why did you develop your software on the Macintosh?

A: **Gore** Because it's easy to learn. The Macintosh has just as fast a computer as the IBM. IBM, however, has something called windows, an additional layer of software not in the personal computer's operating system.

The different processing systems are the same as far as speed at any level. If I buy a \$4,000 IBM I can buy a \$4,000 Macintosh that has a similar speed range. With

windows you have the same intuitiveness on the IBM as on the Macintosh as far as point and click. The only difference is windows is an additional layer of software which cuts your speed almost 30 percent to 40 percent.

At some point in time, when speed gets so fast that that additional layer of software makes no difference, we're going to go ahead and convert ours to the personal computer. But right now, because of the number crunching ours does and the graphics that are on our computer, it will allow the operator to learn it quicker. So it's important to keep it on a Macintosh because you have actually a faster operating speed than the IBM.

However, it is written in a language that we can immediately convert onto the IBM. We can technically put it on the IBM today except for it's too slow.

Q: Aren't you worried about disclosing your secrets to your competitors?

A: **Dautel** We have an agree-

You can quickly figure out if a particular property made or lost money, and the reason.

ment not to sell it in Austin. As for the rest of the country, it can only help raise the level of professionalism in the industry.

Landscape maintenance is our business and computer software is a sideline. At some point if it takes off and starts producing revenues for us, then we may change our minds.

Q: When do you start marketing it?

A: **Gore** We could sell it right now. We've been using it for six months now, but we still have some of the procedures to finish.

Dautel We started using parts of it a year and a half ago. About 98 percent of it is finished, but

we're still finding little bugs. That will probably go on for another five or six months. We're ready to sell it right now with the understanding that they're going to need time to get associated with the software and help us work out some of the bugs. We have to go into it with that expectation.

If some people are willing to do that, we'll see that they get the system for a lower cost during the initial six months or so.

Q: When do you think your training will start and when will you break even with the package?

Dautel As soon as somebody wants to buy it. We have not been actively selling. We are basically

(continued on page 85)

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Division of Hesston Corporation

PONDERING MOWING COSTS

By Mark Ward

Overhead, mower size, wages, property size and profit are all important contributors when estimating your mowing costs.

TO ACCURATELY estimate mowing costs, all operators — large or small, serving commercial or residential customers — have the same basic task. They must determine the size and difficulty of the turf, how many crew and man-hours are required for the job and what equipment will produce the desired results.

In addition, operators need valid estimates to maintain competitive pricing, to survive on today's slimmer profit margins and to gauge actual vs. expected performance. But beyond the basics, companies in different markets can arrive at their numbers in distinct ways.

For example, owner Stephen Keller of Grasscutters said the Houston area has a large number of tract homes with fairly standard lot sizes. "I offer a standard price per lawn that includes mowing," he said. "My actual mowing costs might go up or down on any individual lawn, but the average stays pretty constant."

At Minor's Inc., of Fort Worth, Texas, president David Minor serves both residential and commercial customer accounts requiring separate estimates, he said. Minor does most estimating himself relying heavily on his experience. But since most commercial clients are multi-family complexes or small businesses, he uses the same cost assump-

tions for both residential and commercial mowing.

By contrast, President Tom Mann of The Caretakers Inc., Eagan, Minn., serves commercial customers exclusively. "Most of our work is obtained by bidding, so we have to win back customers every year," he said.

Given a competitive market where every penny counts, Mann uses computerized estimating to remove as much guesswork as possible.

Commercial customers are also the primary market for Clarence Davids & Co., Blue Island, Ill. Executive Vice President Bill Davids said his company cannot adopt standard pricing "because our customers have high-profile locations. You have to sit down with clients and find out their mowing priorities before assessing the costs."

Despite different approaches to mowing estimates, operators agreed that the recession means everyone is competing for a smaller pie.

"Good estimating is more important than ever," Davids said. "If you make a mistake — either high or low — there won't be as many jobs around where you can make it up next time."

TIME STUDIES & REPORT CARDS. At The Caretakers, accurate mowing estimates begin with time

studies. On a periodic basis, the company has several employees mow a flat lawn of the same size, gaining an average time for completion. Separate time studies are performed for each size mower the firm uses.

"Recently we took a stopwatch and had two- or three-man crews each mow a flat one-acre lawn with the 48-inch walk-behind mower," Mann said. "After timing each person we decided the normal mowing rate for that

equipment is 25,000 square feet per hour."

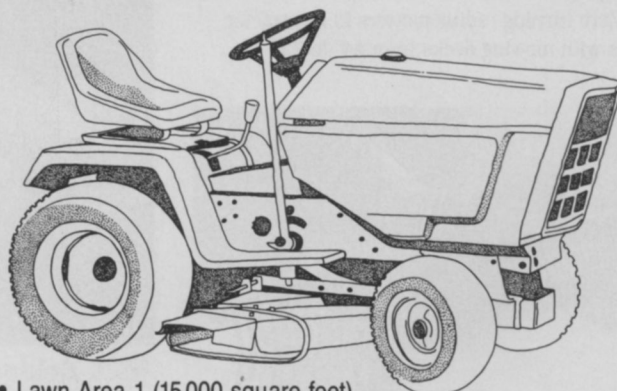
In the same way, Mann has determined normal hourly rates of 44,000 square feet for the company's 72-inch tractor mowers, and 4,500 square feet for 21-inch push mowers.

Specific job estimates start by ascertaining the number of distinct lawn areas within the office or industrial park, and measuring the square footage of each area. These figures are then recorded on a standard estimating form.

For example, an estimator might take an industrial park with three lawn areas that are 100 x 150 feet, 200 x 500 feet and 75 x 110 feet, and determine what size mower to use on each area. He might then estimate the following: (See below, this page)

Deciding which size mower to use is based upon two factors, Mann said. First is difficulty, or whether the site has obstacles or steep grades. Second are the customer's priorities.

"Larger mowers cut faster, but smaller mowers give a nicer ap-



- Lawn Area 1 (15,000 square feet) can be cut with a 48-inch mower (25,000 sq. ft./hour) in 0.6 hours.
- Lawn Area 2 (100,000 square feet) can be cut with a 72-inch mower (44,000 sq. ft/hr) in 2.3 hours.
- Lawn Area 3 (8,250 square feet) can be cut with a 21-inch mower (4,500 sq. ft/hr) in 1.8 hours. Thus the industrial park's three lawn areas can be cut in 4.7 hours under normal conditions.

pearance," Mann said. "We determine the high visibility areas where the client wants the best look. In other areas we use the largest mower practical to minimize our time."

Estimators fill out report cards on lawn areas, rating their difficulty with grades of A, B, C or lower. "A" lawns are normal turf. But for "B" and "C" lawns, estimators add 10 percent and 20 percent, respectively, to the projected man-hours for mowing.

"Though our estimating is computerized," Mann said, "rating a site is where human judgment comes in." Because accurate assessments are crucial, The Caretakers requires its estimators to have three to four years of crew experience, including time as a crew supervisor.

Before labor estimates are finalized, time for loading and unloading equipment is added, plus travel to and from the job site. Estimators may also take into account other factors, such as crews are generally less productive at the beginning of the mowing season, and if crews must remove

Commercial customers are seldom represented by professional facilities managers, he added, "so they don't know who to believe when it comes to mowing frequency. All they know is dollars."

The solution, he believes, is to educate customers on the need to prequalify bidders, and to ensure all vendors are bidding on the same specifications.

Mann is particularly troubled by customers that engage in bid shopping. "It happens a lot where a client gives my price to other competitors, asks if they can beat it and then comes back to me for a reduction," he said.

Nevertheless, he declines to "pad" his mowing bids in anticipation of shopping, and prefers to let such customers go their own way.

In its contracts, The Caretakers protects itself by providing surcharges in the event of price hikes for fuel or landfill fees. However, the company includes a no release clause in the event of a major good-faith bidding error.

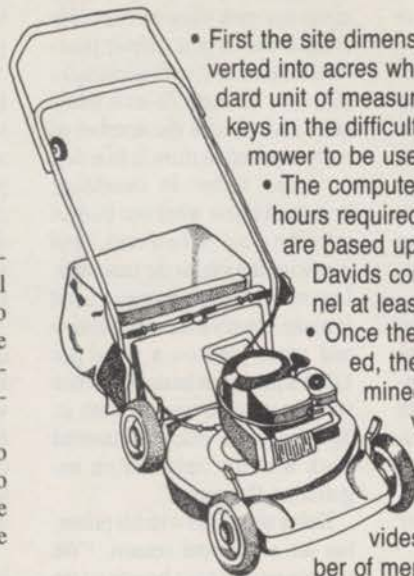
"If we made a mistake in the bid, we'll still perform the job even at a big loss," Mann said.

The labor aspect is where mowing estimates can most often go wrong.

"That's the highest cost," he said, "and the area to watch is underestimating time for loading and unloading equipment, or omitting time for 'unapplied labor' such as when crews stop for gas."

Estimates are needed to price jobs profitably, but can also be a tool for managing jobs profitably. "Crew chiefs must know the expected man-hours so they can keep things on track," he said. "Afterward, it's vital to follow up and compare your mowing estimates to what actually happened. If the variance is plus or minus 10 percent, you need to start asking questions."

Mann cited two surveys, taken in 1979 and 1988, by the Asso-



- First the site dimensions are entered and converted into acres which is the company's standard unit of measurement. The estimator also keys in the difficulty rating and the size of mower to be used.
- The computer then calculates the man-hours required to mow the site. Figures are based upon time studies Clarence Davids conducts with its own personnel at least twice each year.
- Once the labor component is decided, the computer adds a predetermined "equipment rate" that covers the cost of owning and operating the mower.
- From the man-hours figure, the computer divides by eight to find the number of men needed to service the site.

For example, a lawn that is mowed in 32 hours would require four men each working eight hours to complete in a day.

- Finally the computer yields a total cost per man-hour that includes both labor and overhead. This figure is multiplied by total man-hours per visit, and by the number of visits.
- A set percentage of profit margin is added to the total dollar volume. For example, Clarence Davids sets these percentages at 30 percent for jobs less than \$1,000; 25 percent from \$1,000 to \$5,000; 18 percent from \$5,000 to \$10,000; and so on to only 5 percent for jobs costing more than \$100,000. The final price quotation is expressed as a weekly or biweekly fee.

Follow up estimates by comparing them to actual costs and man-hours.

clippings, man-hours are increased by one-third.

Final price quotations are derived by multiplying man-hours times the number of visits per year, with a percentage added for overhead. "What really gives us problems is customers not specifying number of visits in their bid specs," Mann said. "So if a competitor figures less visits, his price looks lower than ours."

ciated Landscape Contractors of America. The average industry profit margin, 5.04 percent in the earlier study, declined to 2.84 percent in the later poll.

"But in 1988, the top one-fourth companies had an average margin of 9.54 percent," Mann said, "which goes to show the importance of being well managed."

ON A SCALE OF 1 to 5. Clarence Davids & Co. computerized its estimating eight years ago to achieve greater uniformity between salesmen who also function as estimators, Davids said.

Nevertheless, mowing estimates still depend heavily on the judgment of sales representatives.

"When a customer calls we send the representative out to measure the site," Davids said, "but he also assigns a difficulty factor of 1 to 5, depending upon things like steepness and obstructions. A rating of 3 is an average lawn, while 1 is easiest and 5 is most difficult."

The decision is a vital one because estimated man-hours for

mowing can be adjusted substantially according to the site rating. For that reason, the firm only hires people with a horticultural education and teaches them sales, rather than hiring people with a sales background and teaching them horticulture.

In addition, the firm conducts a formal training program for its estimators. Each trainee must spend eight to 12 weeks with the company sales director and other senior estimators, both in field work and computer training.

The company's computer estimating is done with off-the-shelf software the firm has modified to its particular requirements. Davids explained the program performs several basic functions: (See above chart, this page)

The company uses the largest size mower practical taking into account customers' desires for high-visibility areas. The firm operates 144-inch and 72-inch tractor mowers, 52-inch and 36-inch walk-behind mowers and 21-inch hand mowers.

Davids estimated each time a

job moves from one size mower to the next highest size, there is a 10 percent improvement in efficiency.

"We use the same hourly-rate assumptions for both commercial and residential customers," Davids said. "Our residential accounts are townhouse developments, condominiums and apartments and large estates — so they're comparable to the commercial clients."

Davids agreed it is vital for operators to follow up estimates by comparing them to actual man-hours and costs. "Every month we do a report on hours sold vs. actual hours. If there's a big discrepancy it could be a lot of things. But you've got to find it and either fix it or allow for it the next time."

TWO TEXAS OPERATORS. While others rely on computer software and standard forms, Minor depends upon a keen eye and a steady instinct. "I have two people who do sales and estimating," he said, "and one of them is me."

Minor constructs his mowing estimates by measuring each site,

judging its difficulty and multiplying out the man-hours based upon his own time studies. He assigns the largest mower practical for the site (the firm runs 21-, 32-, 44-, 52- and 72-inch mowers), and decides the number of men required to mow it in a day.

"I can factor in overhead, because I know what our budget is for the year," Minor said, "and in pricing the job for the customer, I know how much money I need to make. We try to be competitive and quote jobs on a price per 1,000-square-foot basis. But when we give a quote we stay with it. To change the price we instead work with the customer on negotiating the specs."

Keller also sticks with his prices, but for a different reason. "We service mostly tract homes so we charge a flat \$25 to mow a standard lot, and \$30 for a corner lot," he said. "In our area, the ballpark for mowing is \$20 to \$30, so we have to stay in that range."

For Keller, the challenge is not estimating costs and setting a price, but setting a price and then managing costs. "We charge more

than the one- or two-man operations that just mow, blow and go," he said, "but we can't get too pricey either."

With two six-man crews during the summer, each mowing 30 to 40 lawns per day, Keller enjoys some economy of scale over his smaller competitors. He does not need to factor in a difficulty rating for individual lawns, "because when you do so many, these things just average out."

To monitor his work, Keller divides total costs by total square feet mowed and compares this with his charge per square foot for a typical suburban lawn. Such comparisons have, for example, led Keller to stick solely with 21-inch push mowers.

"The self-propelled models only give you more to break down," he said, "and besides, our crews can push the mowers faster than the mowers could propel themselves."

Keller also goes by the numbers when servicing commercial accounts. "I have two basic mowing services," he said, "either a standard cutting or a manicured

cutting. Most want the manicured service. The basic difference is that manicured mowing includes bagging the clippings."

To give a price estimate, Keller multiplies the lawn's total square feet by a factor of 0.002 for manicured mowing and 0.0013 for standard cutting.

"The factors are based upon cost data from my residential mowing," he said, "and have everything built in; labor, overhead and profit. Commercial clients are really the same as residential clients — just a little bigger."

Keller has similar numerical factors for other lawn maintenance services. He multiplies the square feet times the factor for each service the customer desires, adds the total, multiplies again by the number of visits and puts a dollar sign in front of the result.

"I do all the estimating myself and I don't have a computer, but I do my best to give a fair price — and so far it's worked," Keller said. ■

The author is a free-lance writer based in Schroom Lake, N.Y.

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BRINGING NEW CHEMICAL TECHNOLOGY TO THE MARKET

By David Westrick



Photo: ICI Americas

Longer testing periods and fewer years to recoup research costs generally indicates fewer new products will make it to the market.

YOU'RE PROBABLY IN the minority if you've never complained—or at least wondered—why new chemical product introductions to the lawn maintenance market are so few and far between.

Most of the work involved in bringing new chemical technology to the market is accomplished without much public knowledge. Usually there's no public mention of it until it is close to receiving federal registration from the Environmental Protection Agency.

That typically can be nine or 10 years after work on the compound began. Other astounding figures are associated with new product development, such as about one of every 10,000 new compounds discovered by researchers ever makes it to shelves. The

cost of that process can range from \$20 million to \$40 million.

DISCOVERY. As expected, the process begins in the research laboratories of major chemical companies. Here researchers are working to find a control for a certain pest problem. Compounds may be selected from a chemical library maintained by the company or "designed" by scientists relying on their knowledge that certain molecular combinations will have specific desirable effects.

At DowElanco there's an additional step in this preliminary stage, according to Mike Shaw, product development director. That is defining the major market crops the "product" would be beneficial to.

"Because the process is so cost-

ly, we have to be fairly certain early on that there is a sizable market for the control method," he said. "Beyond that, we have to be certain this product would be different enough from other products on the market. So, in essence we're competing against all the other chemical companies and ourselves. It wouldn't do us any good to develop a product fairly similar to one we already have."

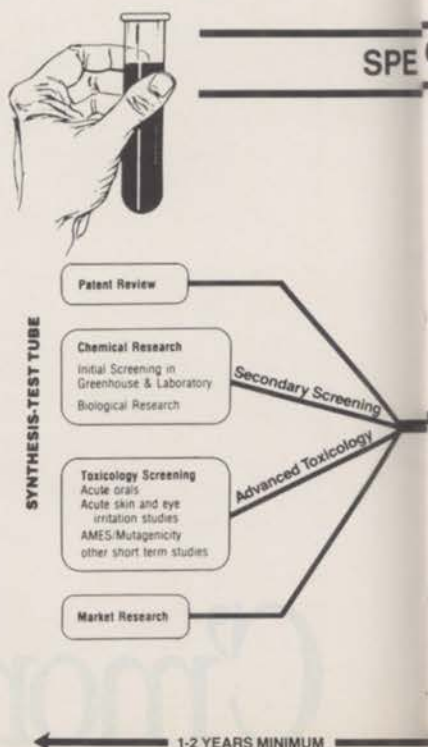
On an annual basis, Sandoz Crop Protection analyzes upward of 5,000 chemical compounds for the potential development of a new product, said Rudy Sandmeier, vice president, research. But lately the decision to develop compounds into products has been at the rate of about one every two years.

The compound chosen does not miraculously jump out at researchers. In that two years' time, a good amount of money, time and resources are expended. Of the 5,000 compounds initially examined in a year, about 90 percent are eliminated while the other 50 or so go on for further testing. Of that lot, about half are cut after a second round of testing.

"Each year we have probably 20 to 30 candidates that we examine closely for efficacy, behavior in the environment, potential toxicology problems," he said. "In a good year, we'll have five that we are confident enough in to do more involved testing.

"To say it is an arduous process is quite an understatement. Scientific researchers are rare. The results of their work is rarely noticed. They have to gain professional satisfaction from some of the most minute advancements."

ON SOLID GROUND? After the discovery and initial testing period—generally at least two years—the compound moves on to more rigorous company testing.



From test tube to market is at least 10 years and \$20 million.

At Mobay Corp., Kansas City, Mo., these in-house field trials typically last three to four years, according to Dan Meek, product manager for turf and ornamental products.

The compound goes through major testing during this phase including short- and long-term toxicology studies. These include effects on animals, fish and wildlife. Other testing areas in this phase are looking for effects on plant and animal metabolism and its environmental effects on soil, water and air.

The next step involves outside entities testing the potential product. This is usually performed by universities.

"It used to be that the university research on a product took about one year and two at the most," Meek said. "Now that can easily be four or five. There are many more concerns and great duplication to ensure the results are the same."

At the same time, once a compound was being tested by universities its fate as a product that would actually make it to the market was more guaranteed than it is now, Meek said.

"If a compound tested successfully at that level, we believed it would make it," he said. "But

with environmental concerns progressing at a much faster rate now, you can be partially through EPA registration when a problem arises — something that wasn't a problem before."

No matter at what level in the 10- or 12-year process, Meek said, the objective is the same.

"The bottom line in all of this is that insecticides kill insects; it can only kill the intended target," he said. "Whether it's the company testing, university personnel or the EPA, the objective is to ensure it doesn't harm animals, aquatic life, birds or humans."

MORE THAN RESEARCHERS. Also compounding the process and adding to the cost is an almost company-wide involvement in the development of a new product, Meek said.

After the first couple years, when the compound is undergoing its major in-house testing, other departments in addition to research begin to get involved.

Mobay calls it a new product task force. It includes at least one representative from every group in the company. These include marketing, manufacturing, production distribution and others.

"We can't wait for final approval from EPA to find out if the new

Only about one of every 10,000 new compounds discovered makes it to the market.

product is going to require a different manufacturing process or how we will market or package it, he said. "All of that is going on during that time."

PATENT MEANS EXCLUSIVITY.

Another kink thrown into this mass configuration is when to apply for a patent on the compound. In the United States, a patent lasts for 17 years. This means that for 17 years after the patent is granted, the patent holder is the only one permitted to use and sell it. When that time has expired, that product is literally up for grabs. Any company can use it. In essence it becomes "generic."

The problem then becomes how much of that 17 years is actually left by the time the product makes it to the shelves.

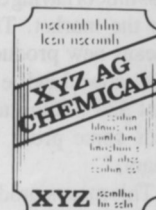
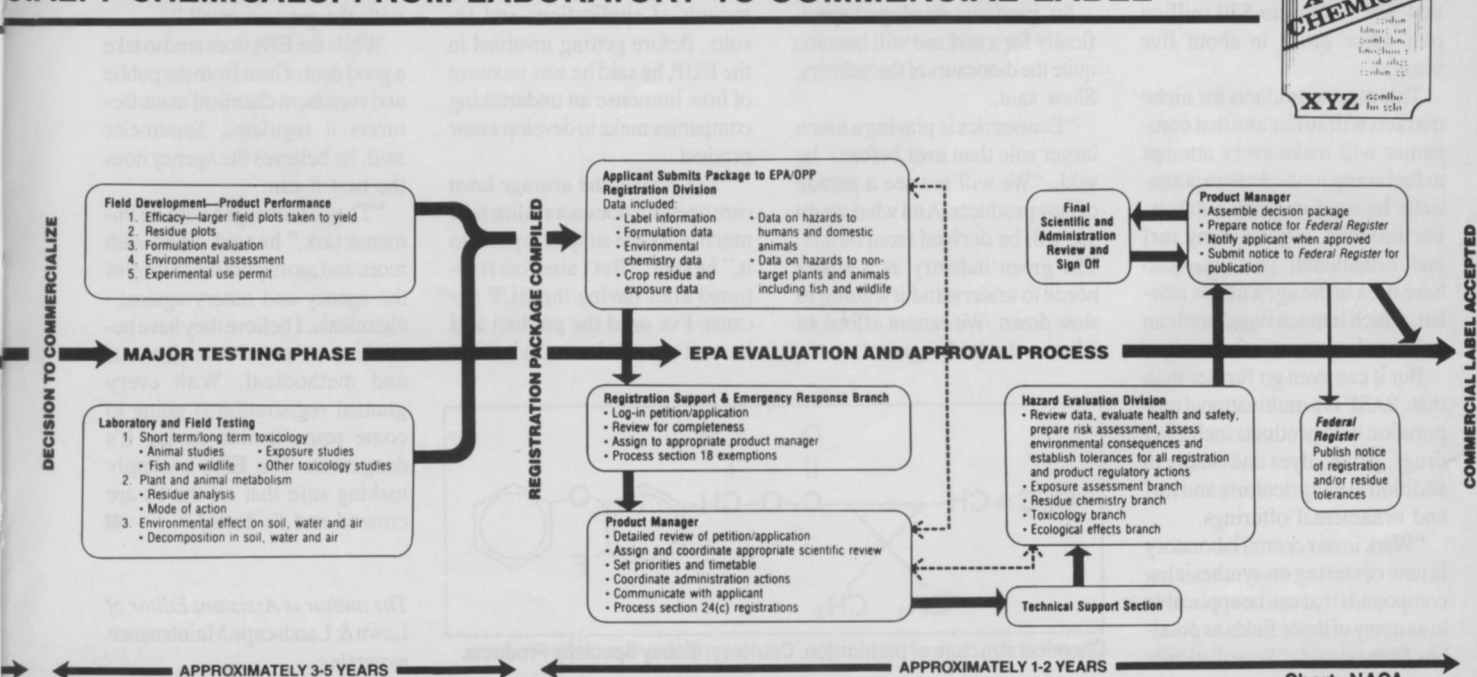
It can be five years considering patents are applied for during the second or third year of testing. One bonus in the United States,

Sandmeier noted, is that the patent's term of exclusivity does not begin until the patent is actually granted by the Patent Office. That process usually takes about a year or more. In some other countries, the clock starts ticking as soon as the registration is filed.

The juggling act becomes how long the company can hold off filing for the patent. That's becoming quite a fine line to balance oneself on, said Terry Hanson, business manager, specialty chemicals division of BASF, Durham, N.C.

"Everyone in the industry would like to see a longer patent period, but that doesn't look to be on the horizon," he said. "You definitely must have the patent before taking the compound to universities. Once a faculty member publishes a paper, that information is in the public domain. If that compound isn't protected

SPECIALTY CHEMICALS: FROM LABORATORY TO COMMERCIAL LABEL



FIFRA RE-REGISTRATION PROCESS COSTLY

ACCORDING TO revisions to the Federal Insecticide Rodenticide and Fungicide Act that took effect in 1988, all EPA-registered chemicals have to undergo a re-registration by 1997.

This totals about 20,000 chemicals. Of that number, about 30 to 35 are specific to the turf and ornamental industries, said Al Heier, press officer with the EPA.

For this re-registration process, companies have to pay a fee of \$150,000 and an annual maintenance fee of \$425. The price is discouraging some companies with older, not-so-popular products to forego the process.

But there's no definitive word yet on turf products.

"With the deadline being 1997, we're expecting 1994 and 1995 as being the big crunch years," he said. "Right now for a lot of companies this is something they know they have to do, but it can also wait for a while."

Heier did say he anticipates the agency will take special notice of 2,4-D when it comes up for re-registration.

Company officials quoted in the accompanying story were reluctant to judge how the EPA is handling its appointed task.

But that doesn't mean theories don't

abound. Some say the agency will be so busy with re-registrations that getting approvals for new products will take even longer.

Others think the agency is overworked and understaffed. But the prospect of an increase in its budget is highly unlikely when considering the present condition of the economy and, more specifically, the cost of the Savings and Loan bailout.

And finally, there are those that think the agency is buckling to undue public outcry against chemicals and becoming gunshy in its process of original registrations and the re-registration process.

by a patent, there's a lot of work for nothing."

Usually an application is filed when something has been identified as having unique or new properties.

"You'd certainly rather err in applying too early," Hanson said. "Having the five years after the product is finally on the market is a whole lot better than being too late with something that already has seen considerable amounts of work."

FEWER NEW PRODUCTS? A general consensus among chemical manufacturers is that the number of new products making it to the market will continue to dwindle. The longer testing process means less time of having exclusive rights on the market. This, in short, means new products must have wide appeal and be able to recoup that \$20 million to \$30 million plus some profit in about five years.

This means products for niche markets will suffer and that companies will make every attempt to find compounds that can potentially be used in many markets. For instance, a good many turf and ornamental products also have uses in the agriculture market, which is much bigger and can deliver a larger potential market.

But it can even go further than that. BASF is a multinational corporation with products including drugs, paints, dyes and others in addition to its agriculture and turf and ornamental offerings.

"Work in our central laboratory is now centering on synthesizing compounds that can be applicable to as many of those fields as possible, Hanson said. "So realistically

our researchers can be synthesizing a compound that has herbicidal and drug-related potentials."

Will this have a negative impact on the products that do make it to the turf market? Hanson's belief is no.

"Just because a compound has

SEEN UP CLOSE. Rick Steinau, president, Greenlon Inc., Cincinnati, Ohio, and past president of the Professional Lawn Care Association of America has been a witness to the process.

Greenlon was granted an EUP to use Monsanto's as yet unregis-

tered to use it and I want others to have it available too."

IGNORANCE FUELS OUTCRY.

Much of the slowdown in developing new products for the market can be attributed to public scrutiny and growing perception that all chemicals are hazardous.

The public at large is seemingly critical toward things it doesn't understand or are too complicated, Sandmeier said. A perfect example of that is the Alar controversy in 1989.

"Someone actually came to my door saying he was starting a grass roots campaign to make EPA more accountable and to stop it from registering such dangerous chemicals as Alar," he said. "Obviously this man had no idea of my profession. After I asked him a few basic questions about EPA, it was clear he was not familiar with the process at all."

While the EPA does tend to take a good deal of heat from the public and even from chemical manufacturers it regulates, Sandmeier said, he believes the agency does the best it can.

"They are charged with an immense task," he said. "And with more and more public scrutiny of the agency and outcry against chemicals, I believe they have become even more conscientious and methodical. With every granted registration is going to come some faction saying it's dangerous. The EPA is simply making sure that all the t's are crossed and i's dotted." ■

Economics is playing a much larger role than ever before. We will not see a parade of new products.

potential in different areas doesn't mean the quality is being reduced," he said. "It means science is becoming incredibly sophisticated."

So, products developed specifically for a turf use will become quite the dinosaurs of the industry, Shaw said.

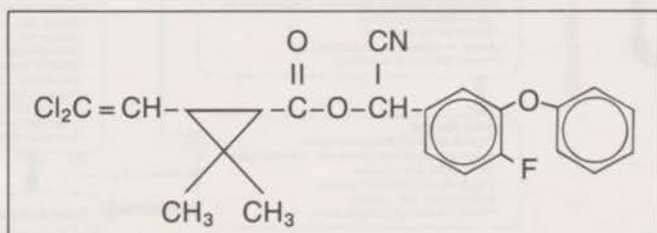
"Economics is playing a much larger role than ever before," he said. "We will not see a parade of new products. And what we do see will be derived from others. The green industry as a whole needs to understand it's going to slow down. We cannot afford an Alar in the turf segment.

tered Dimension broadleaf herbicide.

Taking part in an EUP is quite involved, he said.

It requires keeping exacting records of applications and results. Before getting involved in the EUP, he said he was unaware of how immense an undertaking companies make to develop a new product.

"I'm certain the average lawn care operator does not realize how much work the suppliers put into it," he said. "But I also feel frustrated after having the EUP because I've used the product and know it's good. I want to be able



Chemical structure of trichlorfon. Courtesy: Mobay Specialty Products.

The author is Assistant Editor of *Lawn & Landscape Maintenance* magazine.

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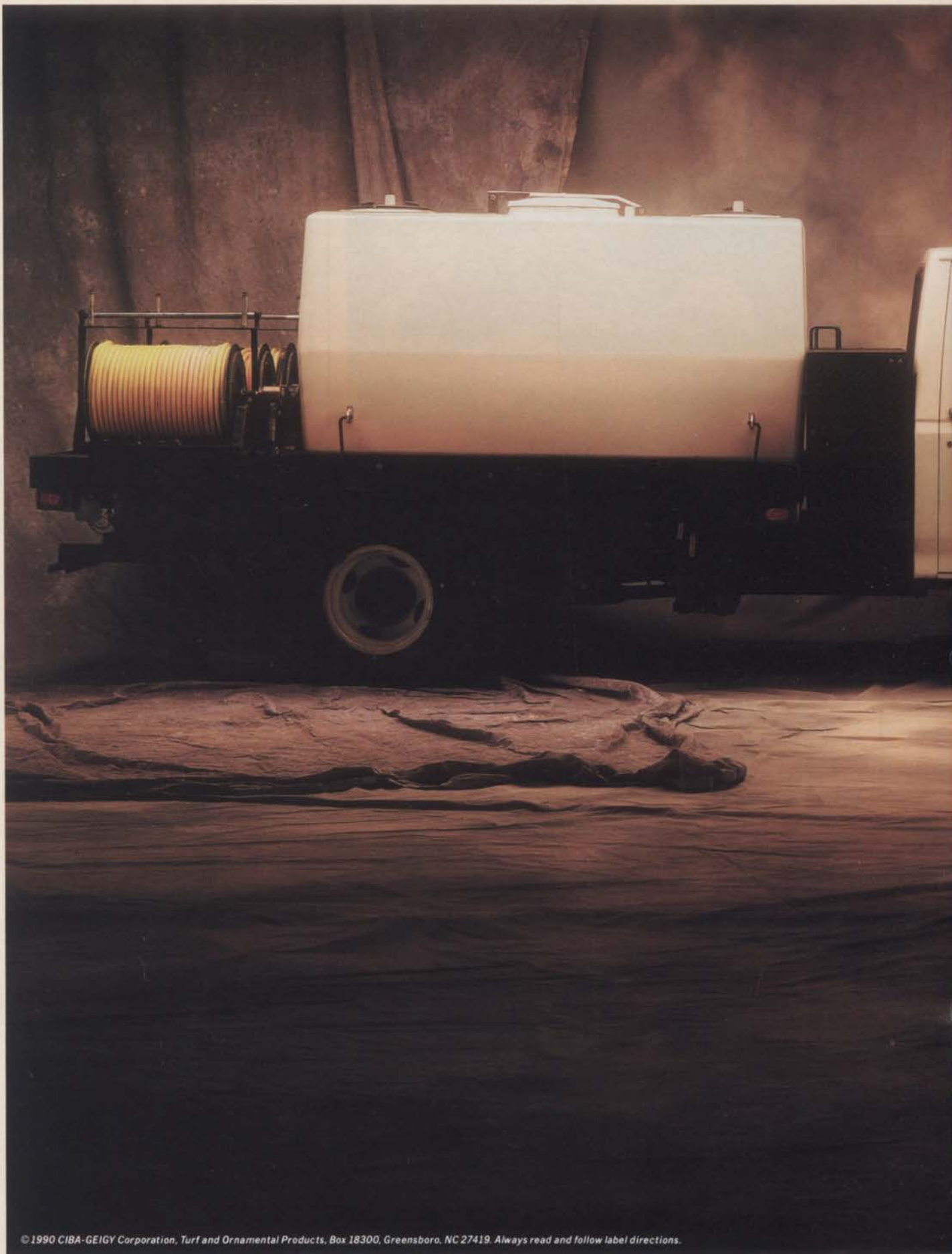
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It simply controls turf insects (even not so little ones) better than anything else on the market.



BUILDING CONFIDENCE IN LAWN CARE STARTS WITH YOUR CUSTOMERS

By David Westrick

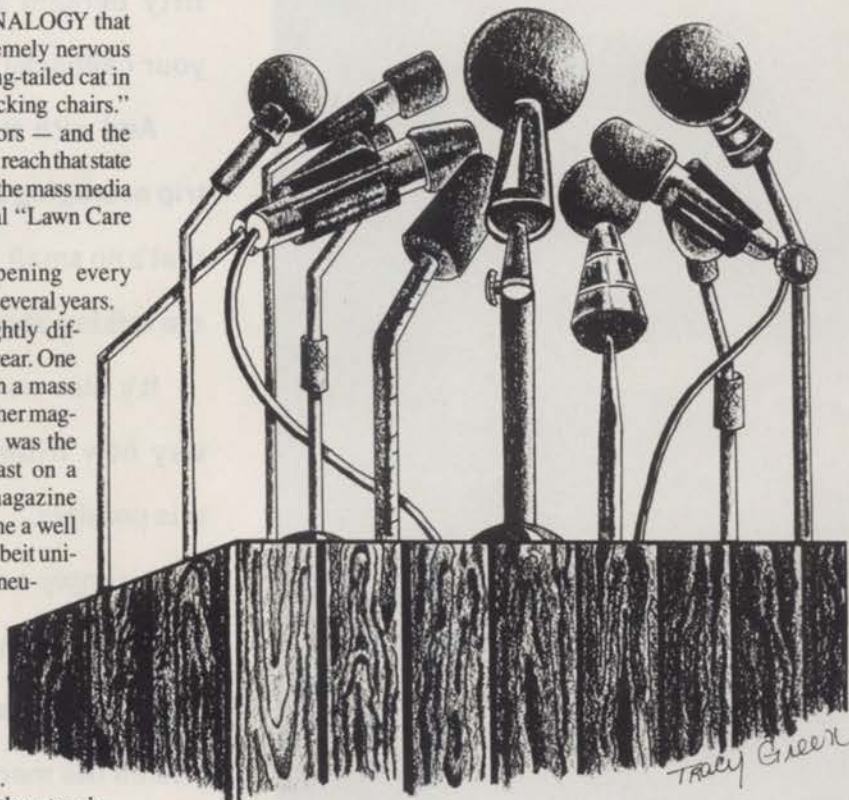
THERE'S AN ANALOGY that compares an extremely nervous person with a "long-tailed cat in a room full of rocking chairs." Lawn care operators — and the industry — seem to reach that state every spring when the mass media launches its annual "Lawn Care Scare."

It's been happening every spring for the last several years. Sure, it has a slightly different spine every year. One year it started with a mass circulation consumer magazine. Then there was the "expose" broadcast on a popular news magazine show. Another time a well intentioned, but albeit uniformed actress maneuvered to have it tied to Alar and apples. And this past fall, it was a Michigan dog keeling over from eating grass.

Regardless of the story's particular details, the message to the American people is the same: If you're a responsible human being, you'll give up your dreams of a lush green lawn so your kids, pets and neighbors can stay alive.

Don't think 1991 is going to be any different. The mass media is cyclical and stories of allegedly dangerous products or services sell newspapers and attract viewers. What can change is how the 1991 barrage of negative press directly impacts your operation.

The blame for the problem



Experts say both your communication and public perception can be greatly enhanced by sharing your concern for the environment and by answering questions head-on and truthfully, but not in a confrontational manner.

reaches far beyond the media and actually rests in the industry's lap, according to Peter Sandman, director of the Environmental Communication Research Program,

Rutgers University, New Brunswick, N.J.

START WITH CUSTOMERS. Sandman is an expert on communi-

cating risks and believes the lawn maintenance industry needs to rethink its position for the situation to ever change.

While the media may run negative stories on a regular basis, changing that ought to be a secondary concern to communicating more effectively with customers.

"Before running to the media and telling them how viable lawn care services are, you have to convince your customers," he said. "After all, they're going to be the ones reading and listening to what you tell the media. What good is the media exposure if they don't believe what you told the reporter?"

While the country's interest in the environment is growing, his research shows it has not reached a fervent, anti-chemical sentiment.

"When faced with a choice between a slightly hazardous, but effective product and a hazard-free, but less effective product, most consumers will choose the more effective product without expressing all that much concern about the hazard," Sandman said. "The problem with the lawn care industry is that it, for the most part, does not offer customers that choice."

According to Sandman, the first step in altering the image of lawn maintenance services is through customers, not the media.

"The cornerstone of effective communications is taking steps to ensure customers aren't treated

(continued on page 46)

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STRATEGIES TO IMPROVE MEDIA ENCOUNTERS

SENSATIONALISM IS interesting reading. Many times news is defined as "out of the ordinary" events that happen.

The fact that all planes landed safely is not reported, but an air crash gets first page coverage. A story that "grass is nice" gets no coverage. A report that turf uses too much water challenges the reporter and readers.

In order to be more successful in working with the press, set up a goal to help educate them about your issue. This should be done concisely. Put the facts into a framework, tell what it means and have a good conclusion.

Even when a story is 90 percent negative, if someone is interviewed who has a reasonable statement telling the other side, the audience usually sees that reason ring true. This makes it important to take every opportunity to present your side, even if limited to 20 or 30 seconds. It can make a difference.

If you get involved with the media, how should you prepare?

- Organize the facts.
- Anticipate the questions, don't face it blind.
- Develop answers to these questions.
- Decide what you are going to say.

- Limit the length of your answers.
- "Winging it" leads to a crash.
- Decide what you do not want to talk about.

SOME DO'S:

- Do make good eye contact.
- Do stand or sit up straight with hands in an appropriate place.
- Do try to steer answers to what you want to say.
- Do have a clear, concise, true point.
- It's O.K. to say "I'm glad you asked that" before you make your point.
- Do have a short, succinct statement that makes a good quote.
- It's O.K. to ask in advance what information the reporter is seeking and who else they might interview.
- Do develop a theme to follow, even though the reporter may have another theme.
- Do give the reporter written material, especially if it is documented, as a follow-up.
- Do keep your cool and add some control to the situation.
- Do appear to be a good sport.
- Do offer to send further information by fax if the interview is by phone.
- Do give the reporter your phone num-

ber and offer to talk again if they have any questions.

SOME DON'TS:

- Don't be abrasive (it's O.K. to be assertive).
- Don't say "no comment".
- Don't lose your cool.
- Don't lie or try to shade the truth.
- Don't repeat any part of a reporter's question that is negative.

THE FOUR F'S OF THINGS NOT TO DO:

- Don't FIGHT with the reporter. The reporter has the final edit. Be assertive, but not obnoxious.
- Don't show FRIGHT. If the media surprises you with a microphone in your face, ask for time to prepare; that you don't want to be put on the spot.
- Don't FUDGE the facts.
- Don't FORGET what you want to say. An inadvertent mistake can haunt you.

If you don't know the answer, say so and give them a contact to call who will answer to your favor, but truthfully. — Ford Rowan

Mr. Rowan is a lawyer, journalist and university professor who often delivers speeches at trade shows and conferences on proper media relations tactics.

Building Confidence

(continued from page 44)

like uninformed dullards," he said. Although he hasn't counseled many operators, his impression is that for too long when a customer expressed some concern about the use of pesticides the typical response was something like this:

"Don't worry. We know what we're doing. This stuff is safe."
"That's all wrong," he said.
"This sounds as though you think you are superior. It trivializes their concerns."

His advice is to have a conversation with a person who expresses concern about the use of pesticides. "Tell them that you are concerned too, after all these chemicals meant to kill weeds or bugs; tell them the chemical is diluted; tell them you take precautions and use safety equipment; tell them applicators are licensed and trained; tell them its best to stay off the lawn for a day or two.

"Tell them there are some risks, but reassure them that you take every possible step to reduce and minimize those risks. Empower them by providing information.

Give them a feeling of control and make them aware of what's going on."

The practice of notification before an application should be encouraged not discouraged. Sandman's research has shown people generally don't worry when they don't feel blind sided.

If you don't tell them when you're coming and they find out later, that creates an impression of you sneaking around and not having all your cards on the table.

FIRST-HAND EXPERIENCE. While most maintenance operators have at some time faced concern, even

irrational fears from customers and the like about the use of pesticides, probably no other company has equaled the intensive hands-on experience of ChemLawn Services Corp., Columbus, Ohio; more specifically, the lawsuits it's dealt with in New York over the company's advertising and purported claims of safety.

"Even though we settled earlier this year, that in no way was an admission of wrongdoing," said Steve Hardyman, ChemLawn vice president, environmental and media relations. "It becomes incredibly expensive to defend yourself against a claim. We literally produced thousands of documents."

As a result of the New York suit, ChemLawn is reworking its informational brochures. The new versions will address public perceptions about pesticides and will follow more of a risk communication approach, Hardyman said.

"Risk communication is not a new innovation," he said. "It's been around for a long time. Our new literature will delve deeper than before. The delicate part is

(continued on page 48)



The most important thing to remember when talking to the media is to keep your cool and give short, succinct answers. Set your own agenda and be prepared to get your point across.

TeeJet Just Made It Easier To Change The Way You Spray.



Now there's a way to make all your spraying applications easier and safer. The New TeeJet® Lawn Spray Gun, with its interchangeable shower head-type nozzles *and* a spot-spray wand, helps you match the tool to the task.

Three nozzles help you control volume and drift. The optional low-volume extension wand is ideal for spot spraying and "touch-up" work. To keep the kinks out of the hose there's even an optional swivel. So the operator can concentrate on controlling the spray, not the hose.

The TeeJet Lawn Spray Gun is the only lawn care gun with a trigger guard. It protects the applicator and the environment from accidental discharge.

So change the way you spray. Change to the TeeJet Lawn Spray Gun.



reader service 13

TeeJet®

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finding a middle ground. We've been plagued by overreacting in the past. We have to present it in a way that the public will not overreact — which in the past usually caused us to overreact."

In his thinking, the industry's image and public perception is directly tied to the Professional Lawn Care Association of America. And right now Hardymon is perplexed by falling membership numbers.

"I don't understand why people are dropping out of the association at a time when the industry is under attack and so many individuals and companies say they need help adapting to what already has become known as the Decade of the Environment," he said. "We should be pulling together for the common cause and common benefits."

Several noticeable changes dealing with the image of the lawn maintenance industry have been accomplished by PLCAA in the last year or so. The association's "A Professional Cares" series of pamphlet/fliers has been developed for distribution to customers; the GrassCycling program was developed to encourage lawn maintenance customers to leave clippings on their lawns; a public relations network started last year is being expanded for 1991 and the second annual National Lawn Care Month is planned for April.

Sandy Marting, PLCAA's director of public relations, developed the GrassCycling program and sought K mart corporate involvement. The No. 2 U.S. retailer is taking steps to place the GrassCycling emblem and information about the program on all fertilizer and pesticide containers.

"This is the first chance the association has had to get its name out in the public and build some name recognition," she said. "The hope is that homeowners will learn about GrassCycling and help cut down the country's landfill dilemma. At the same time, they'll realize there's a group of professionals out there taking care of lawns. That should help create a better public perception and help the industry gain some respect from outside."

Information on April's Lawn Care Month was sent to members last month so they have plen-

BUILDING AN EFFECTIVE NEWS RELEASE

A NEWS RELEASE "is a simple document whose purpose is the dissemination of information in ready-to-publish form."

While the definition is fairly obvious, it can be difficult to determine just what to write releases about.

When writing a release, keep it as brief as possible. Try not to exceed one page, but certainly not two. Somewhere near the top of the page under a heading such as "Contact person" or "For more information," include your name, title and phone number (with area code just in case it may be different).

Also call the media outlet and ask who would be the most appropriate person to receive that information. Address the envelope to that person so it is routed directly to someone rather than an ambiguous "editor."

If you don't hear from them in a week or so, make a follow-up phone call to make sure they received it. When calling a reporter or editor, always ask if they are on deadline. If the answer is yes, ask when it would be more convenient for them to talk. Call them back at that time.

ty of time to prepare. A 26-page booklet provides effective step-by-step ideas for promoting lawn maintenance to your customers and community at large.

Another service to members is an expanded public relations network now being called the Media Kit. For a yearly subscription fee of \$425, PLCAA and an outside communications firm will supply you with a monthly press release that can be sent to as many as 50 local media contacts.

Program benefits include becoming a source of positive information about the value of turfgrass for your local media, promoting your name and expertise through consistent contact and exposure and generating positive public relations as your name and company are mentioned in the local media.

"Creating a top-notch image for your company is crucially important today with so much more competition out there," Marting said. "Doing that often can be a full-time job in itself. This provides a great amount of work at a fraction of the cost."

One person who's sure to be a subscriber to the service is Denny Linnell, vice president, Lawn Life, Salt Lake City, Utah. He was involved last year when PLCAA supplied the monthly releases and didn't have an outside firm to do the work.

"It can only get better this year," he said. "One, because the presentation is going to be more professional and two, I've had some

experience and now know what the media looks for."

Last year was a learning experience for Linnell because he previously only had limited contact with the media.

"I thought that just because I took the time to send them a press release they would use it or call me for more information," he said. "I had no idea of the volume of press releases they receive in just one day's mail."

APPROACHING THE MEDIA.

Realizing that and understanding members of the media are busy — facing stringent daily deadlines — helped him better understand his role as a provider of information.

"A few days after sending a release, you have to follow up with a phone call to make sure the person received it," Linnell said. "They may not use the first several you send; it depends a lot on timing, available space and other things. But having them get used to your name and what you do will eventually pay off."

This is a route Sandman also suggests for establishing a rapport with local media contacts.

"Typically someone in lawn care might want to start out with the gardening editor," he said. "If negative stories about pesticides seem to come out at the same time every year, give this person a call a month or so before. Explain there are a lot of benefits to professional lawn care and briefly run through some of them, and offer

to mail more detailed information."

This Sandman calls planting the seed.

"It's something that can be referred back to later on," he said. "The process is slow; you don't see immediate results. The main objective at first is to get enough interesting information to them that they file it — and your name — for future reference."

Calling that person every few months for a brief five- or 10-minute conversation is also part of Sandman's recommendation. Don't bog them down with details they'll never use.

Cover basics such as increased property value and cooling effects of turf. Hit the fact that mulching doesn't lead to thatch and can reduce fertilization requirements. Tell them most people overwater and recommend running a small piece on watering guidelines.

Establishing a working relationship such as this is no guarantee, Sandman said.

"Most negative stories that break usually come from a wire service — meaning no one on the newspaper staff is involved in writing or reporting the story," he said. "This is when you call your contact and see if he or she can write a small sidebar (smaller accompanying story) about the positives of lawn care or at least add some quotes from you to the main story to make it more balanced."

Also to assist in understanding the inner workings of the media, DowElanco has a videotape titled, "When a Crisis Strikes," that takes the viewer through a simulated crisis at a lawn care company.

The video along with accompanying workbooks, can guide you in fielding media questions. By giving several responses to questions, it demonstrates the best manner in which to answer inquiries.

The video and 10 workbooks are available for \$22.50. For more information contact: DowElanco, Attn: Karen Ferency, 9002 Purdue Road, Quad IV, Indianapolis, Ind. 46268. Be sure to specify the name of the video when ordering.

The author is Assistant Editor of Lawn & Landscape Maintenance magazine.

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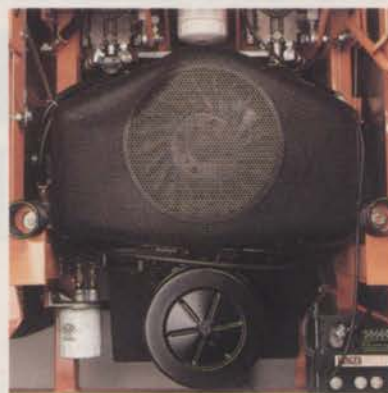
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UNSCRAMBLING THE ALTERNATIVE PUZZLE

By David Westrick

Maintenance professionals are struggling to assimilate a mix of products to address the landscape's agronomic needs as well as customer concerns, but are finding it difficult wading through alternative offerings.

BIOLOGICAL. Environmentally safe. Organic. Environmentally friendly. Bio-rational. Natural organic. Synthetic organic.

Don't feel bad if you don't have definitive definitions of all these terms. Practically nobody does.

Despite the fact that meanings for these terms are not generally agreed upon by green industry professionals, they are being banded about at an increased rate. This, of course, is leading to a considerable amount of confusion in the marketplace because not every product is what it claims.

In the most basic sense, organic refers to any material containing carbon. This can be natural or synthetic. A natural organic is derived from nature while a synthetic is created by man in a laboratory. Urea is an example of a synthetic organic. A biological material is one derived from a living organism, either plant or animal.

Consider one marketer of organic lawn care materials who attributes the boom to Earth Day and the residual environmental awareness it instilled in the public.

"With the anniversary of Earth Day, 1990 was much like five years worth of exposure," said Mark Nuzum, president, Harmony Products, Chesapeake, Va. "Without that impetus and the magnitude of publicity it generated, I can't imagine interest in organic and biological products jumping so fast."

Among Harmony's stable of products are two 14-3-6 fertilizers referred to as lawn food. One contains 60 percent water insoluble nitrogen while the other contains 20 percent. Also included in the

line is a 3-6-3 flower, tree and shrub food.

The products are derived from poultry waste and converted into a homogeneous granule. According to Nuzum, the company's products are completing a circle.

"If you accept that the turf industry is closely related to the agriculture industry and farming, this is simply returning to the way farmers used to operate," he said. "With the introduction of chemical pesticides, we forgot how to be good farmers. We became very dependent on the quick green-up and other results and turned away from the natural way of doing things."

Nuzum isn't advocating a ban of chemical use in turf, but is suggesting that organic products be considered.

"The continued use of chemicals has really played havoc with soil ecology," he said. "It has gotten grasses into a dependency mode. The well manicured golf course green that we've become accustomed to is the most unnatural turf condition. That's a sterile condition and the only way

to keep the turf is by literally pouring fertilizers, fungicides and herbicides on it."

The first concern when using an organic method, according to Nuzum, is soil fertility. That involves a soil test to determine its condition.

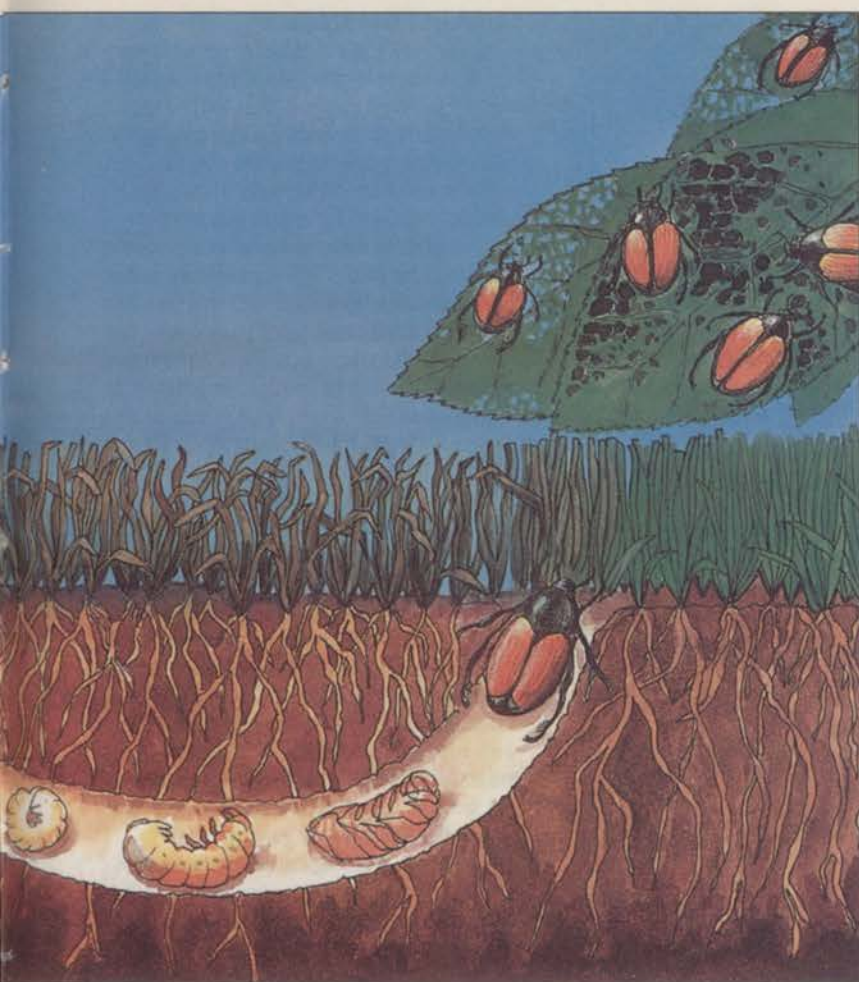
"The goal is to improve soil conditions because what you see above the ground is a direct correlation of what's going on below the ground," he said. "Fertile soil will defend against pests, stresses and fungal attacks. Chemically stressed soils will not."

REAL LIFE APPLICATIONS. One of the major deterrents from offering alternative lawn care programs has been the cost. At The Davey Tree Expert Co., Kent, Ohio, the company spent a considerable amount of time studying and analyzing pilot programs before making its integrated pest management program a company wide offering, said Roger Funk, vice president, technical and human resources.

And in the end, Davey prefers to call the offering its Plant Health



**"Cut back on the
amount of
nitrogen and
work on
improving soil
fertility."**



Increased interest in alternative chemical products can be attributed to Earth Day and a general environmental awareness. Illustration: Ringer.

No longer were the major needs chemical materials and large trucks.

Now the emphasis has been shifted to extensive training so applicators can monitor lawns to find symptoms of a problem rather than relying on broadcast applications.

"It used to be if there were five weeds on a property, the applicator went in and did the broadcast application without even taking notice of the number of weeds," he

said. "He simply did a full application. Now we're identifying those five weeds and applying herbicide only on them."

That has increased the amount of time an applicator spends on a property. It also required extensive training of operators and customers.

"Our big saying to both employees and customers was: 'We're trading pesticides for training,'" Funk said.

ALTERNATIVES COMPLEMENT CHEMICALS.

While suppliers and users of alternative methods do have strong opinions concerning chemical lawn care, they're not working for the demise of chemicals, but a more symbiotic relationship between chemicals and alternative methods.

An example of that is the first early spring application of a pre-emergent and fertilizer, said Scott Boutilier, commercial marketing director for Ringer Corp., Minneapolis, Minn.

"There virtually is no alternative for that pesticide," he said. "No option unless the customer

doesn't mind crabgrass invasion."

But the story, according to Boutilier, changes later in the season.

Ringer's organic fertilizers are good for late spring and summer applications because no chance of phytotoxicity exists. The company's turf fertilizer carries an NPK analysis of 10-2-6. The fertilizer lasts about five to seven weeks and its main source of nitrogen comes from bone meal.

While the product can be used in conjunction with a chemical program, it cannot actually be combined with a chemical application. Boutilier said that's because it's microbially driven. It also does not release well in cold weather.

Cost is another perceived deterrent to using organic products, according to Boutilier.

"Operators are fixed on comparing everything in terms of cost per 1,000 square feet," he said. "If you're continually applying four pounds of synthetic nitrogen at the cost of \$40 a year, you can do the same thing with 2 1/2 pounds of our organic nitrogen also for \$40 a year."

A major benefit to the organic application is a more efficient use of nitrogen and less chance of losing the nitrogen source. Also for about the same charge to customers the soil system is being built up to naturally fend off stresses, Boutilier said.

"Research has shown that many turf diseases can be attributed to over-fertilization," he said. "We're saying cut back on the amount of nitrogen and work on improving the soil."

BIOLOGICAL PESTICIDES.

In addition to alternative fertilizers, pesticide options are also available. Common are nematodes that are natural predators of cutworms, armyworms and sod webworm larvae.

One supplier of these nematodes is Biosys of Palo Alto, Calif. The nematodes are placed in suspended animation in an algae-

Care Program.

When first considering the move, customers were polled about their general attitudes toward the company, the use of chemical pesticides and their environmental concerns.

"Overwhelmingly, the results said customers wanted less chemicals used on their lawns, but at no extra cost to them and with no visible change in the quality of their lawns," he said. "Basically they said they would not tolerate paying the same price — or more — to have more weeds in their lawn."

A survey conducted by the Roper organization last year to determine the public attitudes and individual behavior patterns concerning environmental issues reported the "average" American is willing to spend about 6 percent more for products that are less detrimental to the environment.

While not using organics and biological pesticides, the Davey program incorporates more use of soaps and oils along with the basic philosophy of IPM includ-

ing close monitoring and spot chemical treatments.

Insecticidal soaps and oils work by breaking down or evaporating a film that encapsulates many pests. Pores in these films help them breathe. When they are dissipated, the pest actually suffocates, Funk said.

Because they have no residual, soaps and oils must be applied directly on a pest to have the desired effect. For this reason, they are much easier to use on trees where a pest's presence is much easier to detect. But with proper monitoring, they can be used in turf, Funk said.

The company developed and patented its own spray equipment for the program. If a technician sees weeds while walking a lawn, the spot sprayer will discharge 4 milliliters of herbicide for one-sixth of a second.

That has led to a 50 percent reduction in herbicide use and a 42 percent reduction of insecticides.

The most challenging factor in devising the program was reappportioning resources, Funk said.

nate gel and packaged, said Paul Dick, the company's national sales manager. When water is added, they are released and can be sprayed the same as a conventional pesticide.

Once applied to the turf, these nematodes seek out and destroy larvae. After entering the larva, the nematodes release bacteria that kills the insect within 24 to 48 hours.

Indigenously, nematodes exist to kill insects," Dick said. "Through biotechnology we've provided a way to put a high concentration of these natural bug killers into the soil."

The company's BioVector insecticide is available as a turf formulation as well as an



Customer contact and re-education are essential for an organic program.

ornamental formulation.

Biosys and Ciba-Geigy are currently negotiating terms to give Ciba-Geigy marketing rights for Biosys products. Studies conducted over the last couple years were promising and Ciba-Geigy wants to market the products under a re-named label, said Scott Moffitt, product manager for insect control.

"We think it makes sense for certain niche markets," he said. "This agreement makes the most sense because it will still be a test of sorts. I don't think there's any doubt that eventually all the major chemical formulators and suppliers will be involved in developing biologicals. This is a safe first step to test the strength of the market and response to the product."

The products will be available to the markets that want it, and the company will also have an added period to see how it can be integrated into its overall product offerings.

"The scrutiny of lawn chemicals is not over," Moffitt said. "For operators to survive with fewer bumps and bruises, they'll have to take a more holistic approach. It'll definitely take marketing savvy. But we can't flood the market with biological products if lawn care companies aren't ready to use them. Suppliers cannot force or create demand. Right now that demand is limited and geographical."

Ringer has a biological pesticide for control of Japanese beetle grubs. It is a Milky Spore product available either as a powder or granular. Grubs attacked by the product develop Milky Spore disease, produce millions of new spores, become sick and die.

Another supplier of alternative lawn care materials is Organic Lawn Care of Minneapolis, Minn. Mark Miles, its owner, has a lofty goal for 1991: To have his products applied to one billion square feet of turf.



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Exmark Midsize Walker

"The industry cannot maintain the standard of broadcast applications. There is no legal, moral or ethical justification for it."

One of the products to help him achieve that goal is Liquid Compost. Miles claims it works just like any other compost. It is in a liquid form because it is derived from liquid extracted from plants.

"Basically everything a plant takes in is in this compost," he said. "If a plant was fed 50 nutrients, then the liquid we extract contains all those same nutrients."

The other major product distributed by the company is Bug Out, a biological pesticide derived from citrus peels. It breaks down the

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protective layer of oil on grubs and eventually causes them to die.

ANSWERING GEOGRAPHICAL DEMAND. Steve Zein, president, Living Resources of Citrus Heights, Calif., offers organic landscape maintenance to about 100 customers. While the rest of the country may have the perception that the entire state of California is environmentally conscious, it actually varies, Zein said.

In his area, residential customers are much more concerned about organic lawn maintenance while commercial property owners aren't all that interested. But in several cities, including Berkeley, municipal maintenance departments have made the move to using organic and biological products.

Even educating clients who've shown an interest in alternative methods can prove tricky.

"Some customers can't believe that they sometimes see me hand weeding their lawn," he said. "They think if they're paying someone for a service it should include more elaborate techniques than what they're capable of doing themselves."

Phil Catron, president, Naturalawn, Damascus, Md., shatters another myth about

The biggest challenge is convincing customers that it's OK to have an occasional weed or two in the lawn. It's natural, he tells them.

Like others using organics or IPM principles, Naturalawn does use chemicals for spot applications.

Catron's pride is in the fact that other operators have tried, with varying degrees of success, to follow his lead in the Northeast.

"Competition is good and it's healthy," he said. "But there are a good amount of people simply jumping on the bandwagon without knowing what they're doing."

His favorite example of that involves the company that slapped the word "organic" on

its trucks, then put raw sewage in the tanks and sprayed it on lawns.

"It sure stunk big time!" he said.

Funk, who spent years developing the Davey program, believes the writing is on the wall and lawn maintenance firms can either comply or be left behind.

"The industry cannot maintain the standard of broadcast applications," he said. "You cannot justify it. There is no legal, moral or ethical justification for it. Sure it's easier, but that doesn't wash."

The author is Assistant Editor of Lawn & Landscape Maintenance magazine.

Suppliers cannot force or create demand. Right now that demand is limited and geographical.

alternative methods: The one about it not being profitable because it takes so much more time and attention.

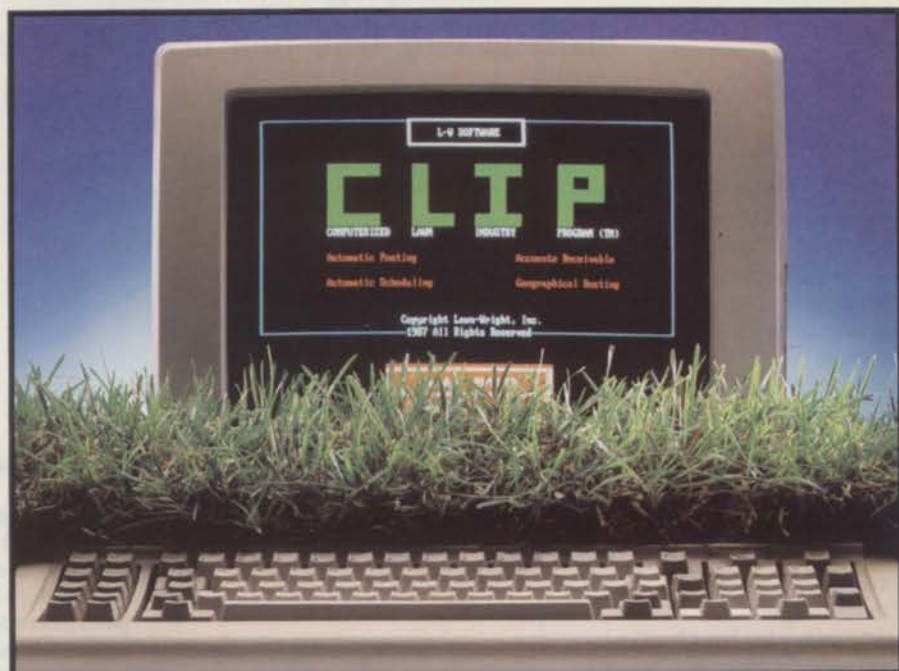
He has suspended sales of franchises because he wants more control over the growth. Another aspect holding him back — which isn't all that new — is finding workers compatible to the system.

"There's an interest out there that is immeasurable," he said. "There are a lot of contributing factors. High on the list is the new interest in the environment and dissatisfaction with other services."

Catron doesn't hold back when discussing the failures of the chemical lawn care industry. He and his partner Beecher Smith were both branch managers at ChemLawn at one point.

"For too long the industry disregarded customer concerns; the typical response was: 'We're trained. We're professionals. We know what we're doing,'" he said. "I trained a lot of chemical applicators in my time and I know that a good many of them don't know what they're doing."

Catron claims Naturalawn combines an IPM approach along with the customer service that "most chemical guys only pay lip service to."



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LIABILITY INSURANCE

RATES STABILIZE FOR THE TIME BEING

By Mark Ward

Developing a relationship and mutual understanding with your insurance agent is the key to weathering cyclical insurance costs.

FOUR YEARS AGO, the "insurance crisis" made national headlines. But today, at least in the green industry, "the cost and availability of liability coverage is as good as it's been in years," claimed Gary Thornton, chief executive officer of Thornton Environmental Industries, Maineville, Ohio.

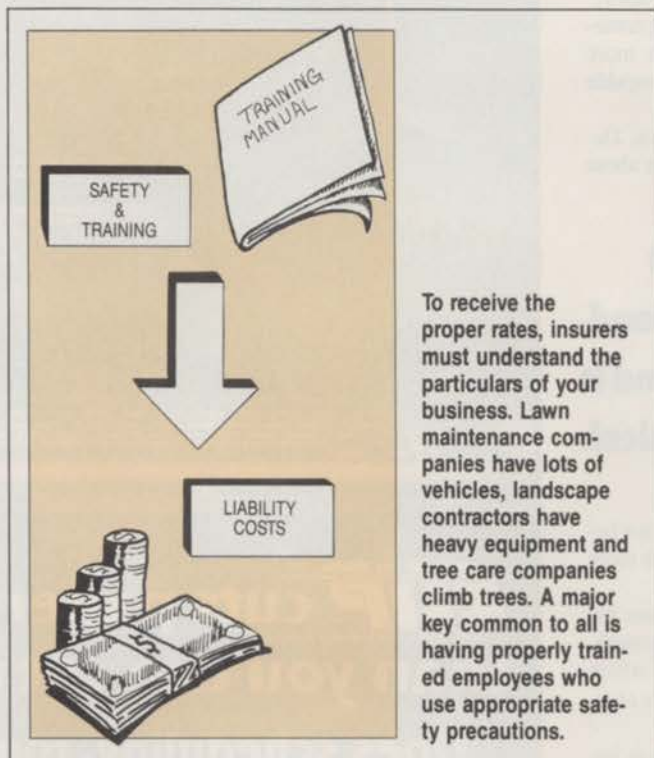
Since rates skyrocketed during the mid-1980s, industry associations have moved aggressively to use their clout, educate insurers and establish solid group insurance programs.

"The key has been familiarizing insurers about our business so we're not lumped with higher-risk groups," said Thornton, past chairman of the Associated Landscape Contractors of America insurance committee.

Working with insurers who understood the risks ALCA members are exposed to, he said, allowed the association to set up a group program that offered policies nationwide and provided both general and specialized coverages to companies of all sizes.

The ALCA group program now boasts 6,000 policyholders with combined annual premiums of more than \$50 million, about eight times the amount originally projected. With such large numbers the association succeeded, for example, in regaining pollution liability coverage for many contractors whose former insurers had canceled their policies.

The Professional Lawn Care Association of America faced the same challenge last year in seek-



ing a new group insurance program. "Our members wanted a comprehensive risk management program," said Richard White, PLCAA board member who heads ServiceMaster's lawn care division, "and that meant finding insurance agents willing to seriously research the risks and loss experiences of lawn care operators."

He said many insurers have dropped pollution liability coverage, but PLCAA's agents can provide competitive policies "because they've done their homework and know the industry."

In the years 1987-88, ServiceMaster and other companies "had

a real crunch with insurance availability and price," White said. But because of the insurance industry's cyclical nature, and also because maintenance operators have responded through their national associations, he said, liability insurance rates and availability are more stabilized today.

Russell Frith, president of Lawn Doctor Inc., Matawan, N.J., agreed availability was scarce between 1985 and 1988. But today availability and pricing are much better — even though premiums are always higher than he'd like to pay.

Lawn Doctor franchisees are

independent businessmen free to solicit their own insurance, but are bound by their franchising agreements to obtain coverage for product and equipment liability, plus insurance mandated by state or local law.

"Most of our franchisees, however, elect the group coverage offered through Lawn Doctor," Frith said, whose insurance is sponsored by the International Franchise Association, of which Lawn Doctor is a member.

"It's important to pool your risk with other companies who have similar exposures," he said, "and to deal with insurers who understand how your group differs from other types of businesses."

Through the Irrigation Association, contractors can also find liability insurance at group rates underwritten by Fireman's Fund Insurance. By assembling coverages tailored to specific risks of these businesses, "we can offer competitive rates that, so far, are keeping us at a 90 percent retention rate," said Tom Tumilowicz, vice president of marketing at PDP Group, Hunt Valley, Md., which brokers the program.

UNDERSTANDING DIFFERENCES.

Trade associations have also been striving to educate insurers about the major divisions within the green industry, and that there are different risks for different types of business, Thornton said.

Lawn maintenance companies, for example, have lots of vehicles, landscape contractors have heavy

(continued on page 56)

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Some years ago, Thornton had two divisions of the same national insurance company provide him quotations for the same policy.

"One bid was much higher," he said, "because the estimator saw the word 'Environmental' in our company name and assumed our business had something to do with chemicals."

Insurers must understand distinctions within the green industry "so the insurance rates they charge accurately reflect risks," suggested Dick Schuessler, executive vice president of CPI Insurance Group Inc. Morristown, N.J.

The firm administers the ALCA group insurance program, which in turn is underwritten by the CNA Insurance Cos., Chicago, Ill.

"Rates for maintenance operators, for example," Schuessler said, "are not as high as those for design/build landscape contractors, since maintenance requires no lifting, no open trenches and no heavy equipment."

Insurance companies often hold misconceptions about the green industry, Schuessler said. He has frequently seen some insurers rate irrigation contractors as plumbers, or rate interior landscape firms as nurseries. In either case, the misconception could result in substantially higher insurance costs.

"We provide insurance not only through the ALCA program, but to companies in all segments of the industry," he said. "In doing so, we recognize seven divisions for rating purposes: maintenance operators, design/build contractors, interior landscapers, nurseries, irrigation contractors, chemical applicators and arborists."

Larger lawn and landscape firms that perform multiple services can further benefit when their insurers understand these different work environments.

"If a policyholder is big enough," Schuessler said, "we can split maintenance operations and design/build activities and provide separate coverage so the maintenance division pays lower premiums."

Insurance rates can also vary



Just as employee training is important, make sure your insurance agent is acquainted with your specific services. Different activities in the green industry carry with them varying degrees of risk.

according to the policyholder's geographic location. Since vehicle accidents are the most frequent loss for many lawn and landscape firms, Schuessler pointed out insurance rates may be higher in urban areas where more cars are on the streets. Other considerations might be mountainous northern regions where roads can be icy, or states with no-fault requirements.

The legal climate in a state may impact insurance rates — with California being a prime example — Schuessler said. And worker's compensation insurance rates vary along with state-mandated benefits.

"Illinois workers' compensation insurance is expensive because the state mandates generous benefits," he said, "but right next door in Indiana insurance premiums are much lower because benefits are less."

How policyholders are categorized can make a large difference in rates they pay for workers' compensation insurance. Charles Glossop, chief operating officer at Green Masters Industries Inc., Plymouth, Minn., said he knows "other operators that are lumped into landscaping and pay a 21 percent loss factor. But we're not categorized in building maintenance and pay only 13 percent."

Mistaken identities occur be-

cause the green industry is fairly young, and in the past, there wasn't much independent research in risk exposures and losses for operators.

Insurers tended to lump maintenance contractors with design/build contractors," said Lloyd Benedict, assistant vice president of Sedgwick James, a multinational insurance brokerage headquartered in Portland, Ore. The firm administers the PLCAA group program, which is underwritten by several insurance carriers.

Since the mid-1980s, according to Benedict, most insurers "have been leery about writing pollution liability insurance for companies involved in chemical applications." But where PLCAA's former group insurance program ceased to provide such coverage, Benedict said, his agency was able to construct a new pollution liability program after researching the industry.

"If insurers are going to rate the green industry fairly," he said, "they must understand not only the basic business, but must also keep up with new developments."

Continuing research and improvements in lawn care chemicals have made the pollution exposure for maintenance operators both definable and controllable,

he added.

Benedict suggested chemical hazards today are "overstated," and said PLCAA's group insurance program is primarily driven by vehicle liabilities "because that's where most losses occur."

If insurers are beginning to understand the green industry better, Robert Dahlin, president, Green Baron Inc., Yakima, Wash., offers a simple explanation. "Compared to a decade ago, there are a lot more companies in our industry, and so we're a bigger presence to be reckoned with."

AGENT RELATIONS. While national associations have educated insurers about the green industry, many agreed such education is also needed on an individual level between policyholders and insurance agents.

"It's essential to deal with an agent who knows the industry, rather than just getting anyone and trying to educate him," said Gary Borgman, vice president, finance, Clarence Davids & Co., Blue Island, Ill. To assure his agent is familiar with the business, Borgman obtains insurance through the ALCA group programs.

Glossop agreed insurance agents should be knowledgeable, but also argued "to get good service, the agent must be someone you can really talk to and level with."

In addition, "your insurance agent has got to be a person who'll go to bat for you with the insurance companies," according to Thornton.

From the agent's viewpoint, Schuessler suggested communication goes both ways. "Companies should keep their agents informed about what's going on in their businesses," he said, "such as when equipment or employees are added or taken away. These developments can change your risk exposure, and the agent needs to know so he can give you maximum service. At the very least, you should meet with your insurance agent annually."

In looking for agents, Benedict advised lawn and landscape firms to "assess their competence and industry knowledge, check their references and investigate the financial capacities of the insurance companies they represent. After that, the agent should

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Liability Insurance

(continued from page 56)

be willing to really research your company's individual risks and loss potential."

Benedict recalled one North Carolina client whose former agent was unaware of the state's financial requirements for lawn maintenance operators, ultimately resulting in a large fine and three years' probation.

Another client was once sued for polluting a property through chemical drift and suffered two years because the former agent did not recognize the company's lawn care compounds were chemically incapable of causing the alleged damage.

Insurance agents can also be partners in helping growth and profitability by evaluating whether specific operations generate enough revenue for the risk involved, Benedict said. "Having an agent work with you that way is very important, as lawn care operators today are often diversifying into new services."

In one case, Sedgwick James

agents persuaded an operator to drop a service that kept pigeons off customers' roofs. "The service was a sincere effort to help customers maintain the appearance of their homes," he recalled, "but it put them into the insurance risk category of roofing contractors — with hazards such as breaking gutters, damaging shingles and falling off ladders."

Tumilowicz suggested in-house safety programs is a second area where insurance agents can help their clients. "It's in both parties' interests to prevent and minimize losses," he said. "And if your insurer isn't sending a loss control engineer to your place of business at least once a year, you're not getting your money's worth out of your premiums."

Fireman's Fund, Sedgwick James and CPI Insurance Group all work with sponsoring organizations to develop safety and training standards for group insurance program participants.

All three agreed lawn and landscape firms have strong incentives to carry out these recommenda-

tions because insurance carriers pay close attention to in-house safety programs when calculating rates.

That assessment was confirmed by companies throughout the green industry. They suggested a number of steps for working with insurance agents to improve safety and lower premiums:

- ServiceMaster reviews driving records before hiring employment applicants and maintains ongoing training programs for driver safety and pesticide handling, White said. The firm also makes wide use of safety manuals and related materials available through PLCAA.

- "Another good idea is to evaluate the equipment you use, the services you offer and the way services are delivered," he said. "We employ granular delivery because ServiceMaster can use smaller trucks that reduce the severity of any accidents. Granular delivery also reduces the potential for trucks to spill chemicals."

- Driver safety is also a concern at Lawn Doctor and, Frith said, he works with his insurance

agents to conduct one-day training programs at individual franchise locations across the country.

- At Green Masters, Charles Glossop and other top managers meet weekly with crew supervisors to discuss safety concerns. In addition, small-group "tailgate talks" are held three to four times weekly for employees.

"The key is communication between management and the field," he said.

Keeping good records is essential to show insurance agents the safety of company operations. "For example, time cards should be broken down according to various jobs each employee performed each day. Then you can prove, for example, that workers spent much of their time in lower-risk activities."

Glossop also walks his insurance auditors through his plant and on a typical field job.

"We had the local police and fire marshals go through our building and make safety and security recommendations," he said, "and we want to make sure the insurance company is aware

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• Regular facility inspections, regular employee safety meetings and a safety committee that reviews all accidents are mainstays at Clarence Davids, Borgman said. A bonus program has also been installed that pegs workers' awards to the company's safety record.

Borgman and fellow managers regularly re-evaluate insurance policies. "Every business changes," he said, "and we want to make sure the coverages we're paying for are no more — or less — than the company really needs."

SHOPPING AROUND? When asked what basic coverages lawn and landscape firms needed, agents pointed out the risks of different types of businesses and the licensing requirements for operating in different states. It's suggested, however, that all companies cover liabilities stemming from vehicles, chemical spills, damage to customers' or neighbors' property and worker's compensation.

Insuring assets, property and equipment also helps assure continuation of a business should any loss occur.

Both insurer and insured likewise advised companies are "better off when you form a long-term relationship with the insurance agent and carrier," Borgman said. "We get bids each year because insurance is a big expense."

"The package includes a bid specifications sheet, vehicle and equipment lists, accident records and an outline of our safety program. But we don't change agents on price alone. Longevity is important. If we changed frequently, agents would lose interest in quoting our policies."

Because Glossop's Green Masters takes a long-term view of its own landscape customers, he understands why insurance agents desire the same relationship with him. Nor are premium costs his prime consideration, since "cheap rates aren't a good thing and fail to screen out marginal operators that give legitimate companies a black eye. In fact, our insurability helps us get prequalified for bidding jobs."

Frith said he prefers long-term relationships with anyone he deals with, and claimed the advantages of loyalty outweigh the disadvantages.

Similarly, White warned, companies that shop agents every year had better learn to be insurance experts themselves.

Another peril for companies that frequently change agents is that many insurance companies get into various coverages when times are good by "low-balling" quotes and "buying" businesses, Tumilowicz said, but when times are bad they get out of that coverage, and policyholders are left high and dry.

Schuessler suggested getting insurance bids every three years.

"Local agents know each other," he said,

"and if a contractor gets a reputation for jumping around frequently, the agents become uninterested in the account."

After all, it takes a lot of money and effort to start up a new policy — and one year doesn't really give the agent a fair chance to prove his customer service."

Policyholders are also advised to obtain all their liability coverages from a single insurance carrier.

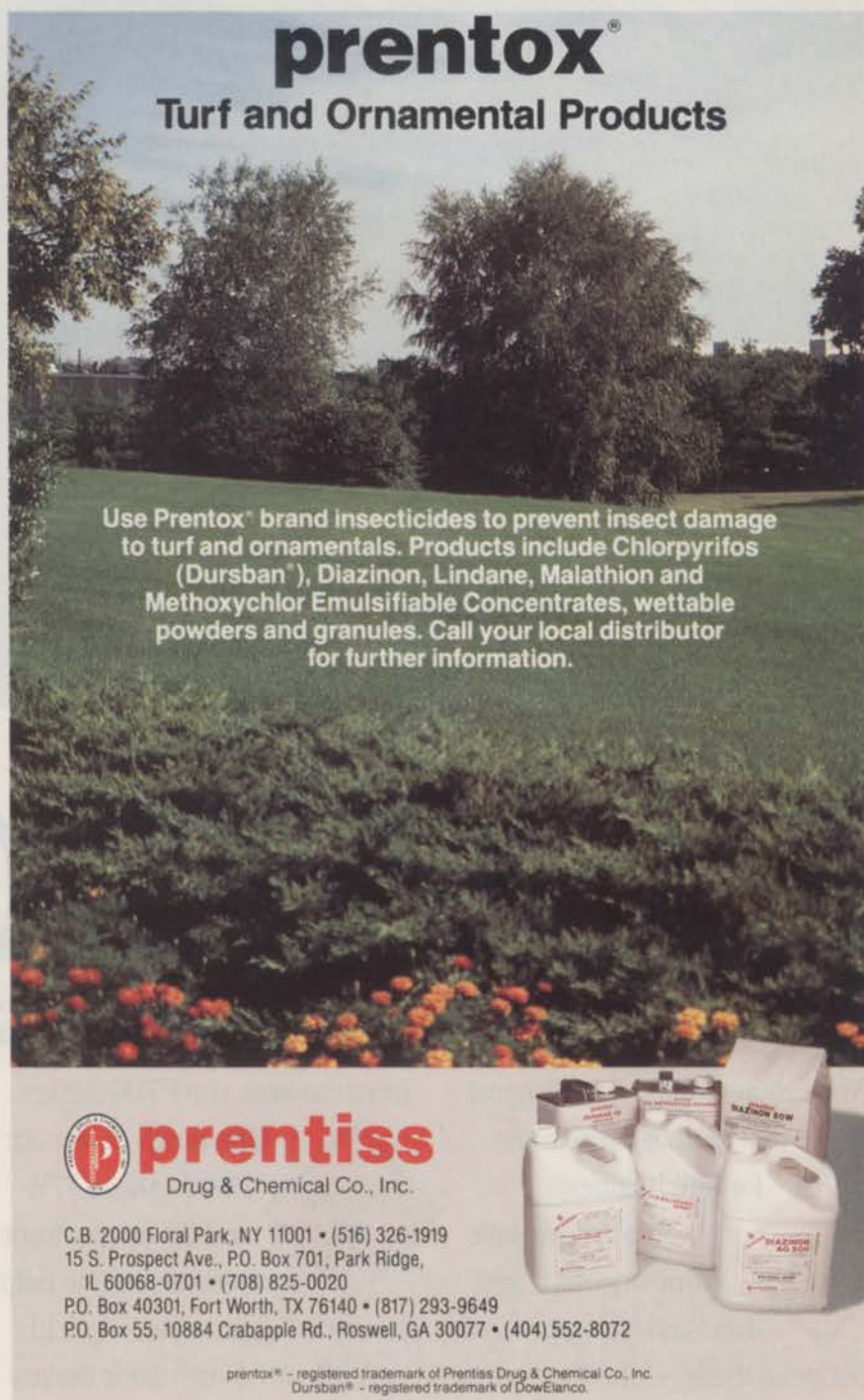
"With more premium dollars going to one company," Schuessler said, "your account becomes more valuable and you get better service. And besides, many insurers will refuse to write your auto liability coverage, for ex-

ample, unless they write your general liability and workers' comp as well."

Though costs and availability of liability coverage is fairly stable today, Benedict said, the insurance industry is cyclical, and the pendulum will eventually swing back the other way. His prediction is that rates will rise and availability tighten by 1992.

"You can weather the storm a lot better," he said, "if you've got a solid relationship with an agent and a carrier who know your business and care about the industry." ■

The author is a free-lance writer based in Schroon Lake, N.Y.



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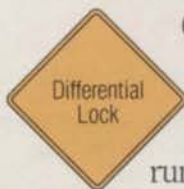
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By Neal Howell

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	Degradation likely - Spray combinations or pH ranges are not recommended.	

Optimal pH Stability Range											
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Insecticides											Remarks/Half-Life
Trade Name (Chemical Name)											
Begon (pyrethrin)											Accept strong alkaline conditions
Bayer (pyrethrin)											4.0 = 18 days 7.0 = 7 days 9.0 = 1.5 days
B.T. (Bacillus thuringiensis)											Accept alkaline conditions
Cygon (dimethoate)*											2.0 = 21 hours 5.0 = 12 hours 9.0 = 48 minutes
LESCODazomet 500											5.0 = 21 days 7.0 = 100 days 9.0 = 100 days
Durban (chlorpyrifos)											4.0 = 52 days 7.0 = 20 days 8.0 = 30 days
Dyphos (phosphamidon)											6.0 = 3.7 days 7.0 = 5.5 hours 8.0 = 40 minutes
Guthion (carbamate)											4.0 = 40 days 7.0 = 34 days 9.0 = 2.5 days
Kalthene (dicofol)											Accept alkaline tank mixes
Lindane (lindane)											Accept strong alkaline tank mixes
Mesothion (malathion)*											4.0 = 1.7 days 6.0 = 7.8 days 9.0 = 5 hours
Merkapto (disulfoton)											3.0 = 30+ days 6.0 = 30+ days 9.0 = 1.2 days
Mesopropyl II (pyridoxal methyl)											4.0 = 107 days 7.0 = 40 days 9.0 = 2.5 days
Mesopropyl (pyridoxal methyl)											4.0 = 1.7 days 7.0 = 21 days 9.0 = 5 hours

LESCO's pH Stability Range Chart.

If the pesticide is put into an unfavorable environment it can begin to break down into smaller chained structures. These structures may or may not have the

same properties as the parent structure. If the material is broken into compounds that do not function as the parent material then, obviously, the job is not going to

be accomplished as intended.

The stability of most chemicals is affected by the degree of acidity or alkalinity of the spray solution. This stability is usually given in a term called half-life.

All of our chemicals eventually break down into their basic elements and the time required to change from the usable form to a non-usable form needs to have a reference — this is what a stated half-life is — the amount of time for ½ of the chemical to be rendered ineffective. This can be months, days, hours or even minutes, but is always expressed in some form of time reference.

The longevity of most chemicals is greatly affected by the pH of the carrier solution. Hydrolysis is the term usually used when speaking about the breakdown of chemicals into smaller and less effective compounds. Hydrolysis can be either acidic or alkaline.

Alkaline hydrolysis is usually the term mentioned as many chemicals, especially insecticides, are severely affected by high pH solutions. An example is trichlorfon (prolox) which at a pH of 6.0 has a half-life of 3.7 days, at a pH of 7.0 has a half-life of 6.5 hours, at a pH of 8.0 it has 60 minutes before half of the effective chemical is ren-

(continued on page 64)

Fine Lawn Research proves . . . not all Kentucky Bluegrasses are created equal.



Experienced sod growers and professional turf managers know there are measureable differences between turf varieties . . . differences in overall turf quality, color, summer density, shade performance and more. As the ratings shown here prove, Chateau Kentucky Bluegrass has consistently outperformed some of the most popular bluegrass varieties.

So, for truly premier turf year after year, choose Chateau Kentucky Bluegrass. Strength of breeding always shows.



- A truly elite bluegrass—one of the best available.
- Beautiful emerald green color.
- Outstanding shade performance.
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- Very wear-tolerant—excellent for athletic fields.
- Semi-dwarf growth habit for lower mowing and attractive appearance.
- Excellent resistance to leaf spot, stripe smut and powdery mildew.

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Top Rated Chateau Kentucky Bluegrass

Turf Quality

NATIONAL TURFGRASS
EVALUATION PROGRAM 1986

VARIETY	AVG. SCORE
Chateau	6.0
Classic	5.9
Challenger	5.8
Ram I	5.7
Julia	5.7
Eclipse	5.6

Rated 1-9; 9 = Best

Turf Color

LINCOLN NEB.-2 YR. MEAN

VARIETY	AVG. SCORE
Midnight	7.9
Chateau	7.0
Baron	6.9
Fylking	6.8
A34	6.5

Rated 1-9; 9 = Dark Green

Summer Density

NATIONAL TURFGRASS
EVALUATION PROGRAM 1987

VARIETY	AVG. SCORE
Chateau	7.3
Challenger	7.2
Bristol	7.1
Julia	7.0
Liberty	6.8
Nassau	6.6

Rated 1-9; 9 = Maximum Density

Shade Performance

MARYSVILLE, OH 1981-82

VARIETY	AVG. SCORE
Chateau	2.32
Eclipse	2.20
Birka	2.01
Glade	1.65

Rated 1-4; 4 = Best



For additional information,
see your distributor or dealer, or
write to Fine Lawn Research, Inc.
4900 Blazer Pkwy. Dublin, Ohio 43017

pH Balance

(continued from page 62)

dered worthless.

At a pH of 10 it has a half-life of two minutes. Obviously, unless you have a sprayer capable of MACH 1 speeds, you must adjust the pH to hit the maximum half-life of your target chemicals.

Why bother with all this "pH" business? The reason is this: Most

water sources in the United States are alkaline in nature having pH values of more than 7.5 with many more than 9.0.

Most city municipalities further increase the pH of their water to prevent corrosion to water lines. Sometimes these values exceed a pH of 10.0. Future guidelines set down by the EPA state that the acceptable pH for treated water should be a minimum of 8.0, so

if you pull city water for spraying use, take care.

pH values fluctuate sometimes raising or dropping by more than two points depending upon the time of the year. Water sources greatly affect pH values and sometimes values can vary greatly just on opposite sides of a town. The following table gives some pH ranges from different cities and states.

What is pH? How does it affect different chemicals? Can it be adjusted? How do you ensure that your sprayer is delivering all the chemicals in a manner to ensure optimal performance?

The following points will help you ensure that you will get the job done in the most efficient manner. pH is basically a numerical reading of how acidic or alkaline a product is. The scale runs from 0 (very acid) through 7.0 (neutral) to 14 (very alkaline).

How acid is acidic? Many times a person will refer to a product as very basic or highly acidic — what do these terms mean? Acid or alkaline simply refers to their pH values. While caution should be used when handling any chemical, a basic reference as far as pH should be established when using common products as a benchmark. For example:

pH Range

Acid

0	Very Strong Acid
1.0	Phosphoric Acid
2.0	Lime Juice
3.0	Apples
4.0	Beer
6.0	Butter

Neutral

7.0	Blood
-----	-------

Alkaline

8.0	Seawater
11.0	Ammonia
12.0	Lime
14.0	Caustic Soda Solutions

Do you need to buffer your spray water?

If so, how low should you go? What are the optimal pH ranges for turf/ornamental care products?

Until recently there has been no published list of products with their effective stability ranges. To remedy this problem, LESCO has attempted to gather, confirm and publish a list of the most commonly used products.

The chart (see page 62), "The LESCO pH Stability Range Chart," is a full color, heavy paper stock brochure which is intended to be used at both the planning and mixing sites to ensure optimal chemical performance.

To obtain a copy call LESCO at 800/321-5325 or ask your lo-

(continued on page 82)

State/Location	Source	pH Range
Birmingham, Ala.	Cahaba River/Surface Water	8.0-9.4
Huntsville, Ala.	Tennessee River	7.5-8.1
Mobile, Ala.	Wells—Groundwater	6.8-8.1
Little Rock, Ark.	Surface Water	7.8-8.3
Yuma, Ariz.	Colorado River	7.6-8.0
Los Angeles, Calif.	Owens Valley Lake	8.2-8.5
Sacramento, Calif.	American/Sacramento rivers	8.5-9.0
Palm Desert, Calif.	Wells	7.9-8.5
Denver, Colo.	Surface Water	7.2-8.0
Boca Raton, Fla.	Wells—Groundwater	8.8-9.0
Coral Gables, Fla.	Wells—Groundwater	8.5-9.0
Daytona Beach, Fla.	Wells—Groundwater	8.6-8.8
Fort Myers, Fla.	Caloosahatchee River	7.1-7.5
Gainesville, Fla.	Wells—Groundwater	7.4-7.6
Hialeah, Fla.	Wells—Groundwater	8.9-9.0
Miami, Fla.	Wells—Groundwater	8.9-9.0
W. Palm Beach, Fla.	Wells—Groundwater	8.7-8.1
Atlanta, Ga.	Wells—Groundwater	7.8-9.0
Honolulu, Hawaii	Groundwater	7.9-8.1
Champaign, Ill.	Groundwater	8.6-9.0
Chicago, Ill.	Lake Michigan	8.0-8.3
Joliet, Ill.	Wells—Groundwater	7.5-7.9
Fort Wayne, Ind.	St. Mary's/Maumee rivers	7.3-8.7
Indianapolis, Ind.	White River	7.1-8.5
South Bend, Ind.	St. Joseph River	7.5-8.6
Frankfort, Ky.	Ohio River	7.2-8.9
Amherst, Mass.	Surface Water	5.7-7.1
Springfield, Mass.	Surface Water	6.0-6.2
Detroit, Mich.	Lake Huron	7.2-7.5
Kalamazoo, Mich.	Groundwater	7.0-7.5
Lansing, Mich.	Groundwater	8.0-8.9
Minneapolis, Minn.	Mississippi River	8.2-8.5
St. Paul, Minn.	Lake (Surface Water)	8.5-9.0
Albany, N.Y.	Hannacroix Reservoir	6.8-9.0
Rochester, N.Y.	Lake Hemlock/Ontario	7.4-8.4
Syracuse, N.Y.	Lake Ontario (Surface Water)	7.4-7.9
Cincinnati, Ohio	Ohio River/Wells	8.1-9.5
Cleveland, Ohio	Lake Erie	7.3-7.7
Pittsburgh, Pa.	Allegheny River	6.5-7.6
Myrtle Beach, S.C.	Wells-Groundwater	6.8-8.5
Knoxville, Tenn.	Groundwater/French Broad River	7.5-7.7
Salt Lake City, Utah	Big Cottonwood Canyon	8.0-8.5
Austin, Texas	Colorado River	8.0-8.9
Dallas, Texas	Lake Ray Hubbard/Trinity River	8.5-10.0
Houston, Texas	Surface Water	7.8-9.0
San Antonio, Texas	Surface Water	7.5-8.0

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*Suggested retail price. Always read and follow the label for Roundup herbicide. Roundup[®] is a registered trademark of Monsanto Company. © Monsanto Company 1991 RGP-1-170B

reader service 27

Focus on Trees & Ornamentals

A GROWING PHENOMENON

BIGGER BEDDING PLANTS PROVIDE SHOWY DISPLAYS

Landscape professionals agree that the trend toward bigger and better bedding plants, grown in larger celled flats and 4- to 6-inch pots, is here to stay.

FOR PURE VISUAL impact, what could be more effective than hundreds of colorful annuals? Bigger annuals, according to many growers and landscapers, especially from California.

"Landscapers appreciate the obvious fact that annuals transplanted from 4- to 6-inch pots allow for a more spectacular array of blooms — instantly," said Terry Humfeld, executive director of the Professional Plant Growers Association, Lansing, Mich. — the association of bedding and pot plant greenhouse growers.

And this trend, which began several years ago in California, is now growing nationwide.

PACK/POT SIZE TRENDS. Don Majeski Nurseries, a grower, wholesaler and retailer operation in West Seneca, N.Y., produces most of their annuals in 4-, 5-, 5.5- and 6-inch pots.

"We're growing less packs. Five-inch is gaining in popularity even more here than 4-inch," said Dan Majeski. In addition to growing annuals in pots, they are also be-

(Right) This bed includes pink petunias and white vincas. (Below) If the area is well lighted, go with bold colors.

ing grown in larger cells.

"Twenty years ago, we used to purchase flats with at least 72 cells per flat," said Ed Engledow of Engledow Inc., a landscape contractor firm in Indianapolis, Ind. Now, Engledow purchases flats with 18 to 36 cells per flat.

Ivy Acres, a wholesale grower in Long Island, currently sells flats with 48 cells to the flat. Jack Van de Wetering of Ivy Acres said he's expanding his line to include 24 plants to a flat — eight packs, each cell measuring about three inches. Why? "My customers, especially landscapers, are asking for them."

Bigger is better because when annuals in 72 cells per flat are transplanted, three or more weeks can go by before they produce the show of 4-inchers, according to Engledow, who provides horticultural services for office buildings and commercial complexes.



This can translate to a fourth of a typical growing season in many geographical areas. Calculated this way, a longer blooming season can prove more economical.

Engledow considers providing customers the greatest impact of color as early as possible in the year to be more of a public relations, rather than a facilities management, function. This involves showy flower beds subliminally signifying to association and corporation employees that their employers care about them.

Another advantage in using larger transplants is their improved overall strength and health. Plants grown in 4- to 6-inch pots are generally more robust because they are less stressed than their smaller cousins housed in flats — both in the flats and after being transplanted.

The smaller the cell size in a flat, the more quickly delicate root systems can be damaged. Plants grown in larger cells or in pots retain water for longer periods of time, a feature which significantly reduces both transportation and transplant shock.

"Some landscapers ask how many plants are in a flat — as if quantity means value," Majeski said. But he reminds customers that flats dry out quickly, and if plants must be stored for several days before planting, they may need to be watered a number of times a day.

Plants in large-celled flats or 4- to 6-inch pots require water less frequently, withstanding the rigors of wind and temperature better than smaller plants.

Susan Crosely, staff horticulturist at the Findlay Country Club in Findlay, Ohio, learned this lesson the hard way when she single-handedly transplanted 380 flats — mostly 48 to 72 cells to a flat.

(continued on page 68)



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Focus on Trees & Ornamentals

(continued from page 66)

In fact, annuals grown in pots, because they do not need to be watered as frequently, are often the superior choice for less-than-ideal locations. Areas with poor watering systems and plants which cannot be transplanted immediately, are two examples.

BLOOMING PLANT LOCATIONS. In addition to offering customers immediately blooming flower beds, "landscapers must consistently create unique, imaginative flower bed designs for their clients," Humfeld said. "Bedding plants look splendid planted almost anywhere imaginable."

A few suggestions are building entrances, beside signs, along driveways, in parking lots, along fences, next to benches, around patios, in raised planters, in night-lighted areas — anywhere that soil, light and water are available.

When creating flower beds, there are several helpful guidelines to consider. Dark colors recede and light colors dominate. Therefore, when Engledow uses white flowers in combination with dark flowers, he makes sure the ratio is at least two of the other color to one of the white.

Flower arrangers know to set dark

RULES OF THUMB FOR TRANSPLANTING BEDDING PLANTS

BEFORE PURCHASING bedding plants, draw a plan to scale on graph paper. Calculate the planting area to determine how many plants will be needed. If the bed is designed "free-form," separate it by triangles, rectangles or squares.

An area of a triangle = $\frac{1}{2}$ base x height. An area of a rectangle or square = length x width.

Once the total area is calculated, determine your plants per square-foot factor according to the following chart:

Spacing	Plants/Sq.Ft.
4"	9.00
6"	4.00
8"	2.30
10"	1.40
12"	1.00
15"	0.65
18"	0.45
24"	0.25

For example, if you want to plant a 10 by 30 foot bed of petunias, the petunias can be planted 10 inches apart. The number of plants required can be figured by multiplying 10 x 30 = 300 square feet. 300 square feet x 1.4 (plants-per square foot factor, see above) = 420 plants.

The general rule of thumb for transplanting is about 25 flats of bedding plants per person per day. To transplant the 300-square-foot petunia bed, for example, could take between a half and three-quarters of a day.

Keep the versatility of larger plant materials

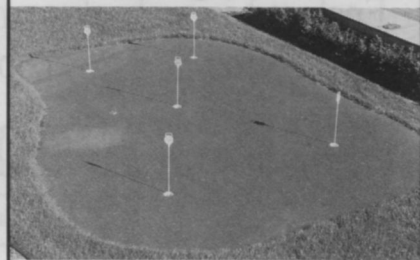
in mind when you consult your grower. Ask questions about what species and varieties will grow best for you in the locations you wish to plant.

In addition, be sure to place orders early — preferably between August and early November — especially if you have something specific in mind for your clients. In this way, your grower will be able to provide the plants you want in the sizes that work best for you — in plenty of time.

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flowers higher and light colored flowers lower in arrangements to achieve a more 3-D appearance. So should contractors by using, for example, rudbeckia, geraniums or marigolds in the background, with white or pastel alyssum, dusty miller or vinca in the foreground.

The Professional Plant Growers Association officials often suggest that strategically locating one or several large beds can prove far more dramatic and therefore effective than sporadically planting many small beds.

Humfeld suggests flower beds should be at least 10 by 50 feet, especially when designed in one color. Engledow also likes seeing "large sweeps of color," of which one of his favorite designs includes a large area planted with four 12- by 60-foot flower beds.

Commercial jobs, with an acre or more of rolling hills, can look wonderfully restful and stimulating at the same time. How? Incorporate a meandering bed of annuals. If the area generally appears dark, use light colored flowers. If the area generally is brightly lighted, incorporate mostly dark colored flowers.

When the bed backs up to woods, consider using 3- to 6-foot tall bloomers, such as amaranthus, canna, oleoma, gloriosa daisies, day lilies or hibiscus. Not only are they generally easy to maintain, but they offer an informal cheerful appearance. Then in the foreground, incorporate one or two tiers of free-flowering annuals, like celosia, coleus, impatiens, marigolds, salvia, sweet alyssum, verbena or vinca.

To incorporate a formal landscape design, especially near the entry, along the driveway or beneath the company or commercial park sign, use low growing impatiens. New Guinea impatiens, French marigolds, pansies, petunias or vinca. Probably the easiest way to achieve an attractive formal design is to choose one or several colors of one species.

MANAGEABLE SIZES. It's one thing to create imaginative flower beds, but it's another to transplant and maintain them.

Before planting, lay out a plan that includes the shape, size and location of the beds you have in mind. If planting and maintaining flower beds or if the site you

are planting is new to you, consider starting out small.

"It's better to plant and nurture a few beds that will thrive throughout the growing season than to plant too many beds, some of which may end up looking neglected by August," Humfeld said.

Does the site offer automatic watering? Is the soil porous and rich in nutrients? Are the plants to be installed low, medium or high maintenance? How many species of blooming plants have been chosen for the various sites?

Beginning home gardeners are told not to tackle more than a 100-square-foot garden or try to grow more than 10 species of flowers, herbs, and/or vegetables during their first year of gardening.

While professional landscapers understand the rudiments of amending soil and recognizing insects, diseases and nutrient deficiencies — similar guidelines should apply, but based on a five day, 40 hour week schedule.

Even Crosley, an experienced landscaper, felt that she almost bit off more than she could chew in her first year.

"I didn't have automatic watering, a place to store plants before transplanting or help to transplant approximately 11,592 square feet of beds," she said. "I tried to establish too many beds this first year. I also tried to grow too many species I have never grown before."

Landscape professionals agree that the trend toward bigger and better bedding plants is here to stay. Try it for yourself. See if you don't agree with your California colleagues that bedding plants grown in larger celled flats and 4- to 6-inch pots provide a welcomed showier display. And avoid "biting" off more than can be transplanted and maintained, allowing customers to enjoy beautiful annual beds throughout the growing season.

For more information about how landscape professionals can use and care for bedding plants, the Professional Guide to Flowering Annuals is available through the Professional Plant Growers Association, P.O. Box 27517, Lansing, Mich., 48909. Each copy is \$2. — *Kathy Zar Peppler* ■

The author is a free-lance writer based in Toledo, Ohio.

Coming Next Month

Recycling landscape wastes is the issue emphasis for the March issue of *Lawn & Landscape Maintenance*. We'll bring you reports to help you incorporate recycling into your business. Among them:

MULCHING MOWER PERFORMANCE From mulching plates to recyclers, what makes these mowers perform and what kind of results do they yield?

COMPOST APPLICATIONS Who's composting and what becomes of the end product?

CHIPPER/SHREDDER OPERATIONS What role will these products play as recycling concerns increase?

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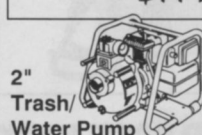
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People

TONY ARNOLD has been appointed product manager in the vegetation and pest control ventures department at American Cyanamid.

With Cyanamid since 1981, Arnold started as a technical service representative in the pesticides department. Most recently, he was regional research manager.

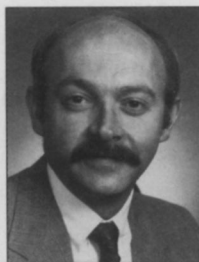
Also in the same department, **Mark Walmsley** has been appointed product manager for turf.

Walmsley joined Cyanamid in 1984 as a technical service representative in the crop protection chemicals department. Previously, he was regional manager in that department.

At Briggs & Stratton, **Charles Brown** has been promoted to vice president of quality assurance.

In this post, he will be charged with design assurance, measurement automation, supplier quality and total quality systems programs. He'll be responsible for those functions at the corporate level and for their coordination among the divisions.

After a six-year term as marketing direc-



Thoma



Dorer

tor for Ariens, **Steven Dunlap** has been promoted to vice president of marketing for the company.

Dunlap joined Ariens in 1978 as a district sales manager and later moved into the marketing department. In his new post, he will continue to oversee all marketing and advertising activities. He will also be responsible for North American sales and the Ariens service department.

Warren Thoma Jr. has joined Century Rain Aid as a consultant for marketing and sales.

His experience includes development of irrigation products and authorship of the

irrigation section of Ortho's booklet on "Landscaping."

Moyer & Son Inc. recently promoted **Richard Shearman** to sales representative for the specialty fertilizer division. He'll be covering southeastern New York, Long Island, southern Connecticut, New Jersey and Northeastern Pennsylvania.

Shearman has more than nine years of lawn care experience. Prior to this promotion, he served as an account representative in the lawn care division. He's also been involved with the management of his family's lawn and tree care company in New York.

John Dorer has been appointed technical and marketing manager for the East Coast at CoRoN.

He has considerable experience in the turf and specialty fertilizer industry, most recently working for Moyer and Son.

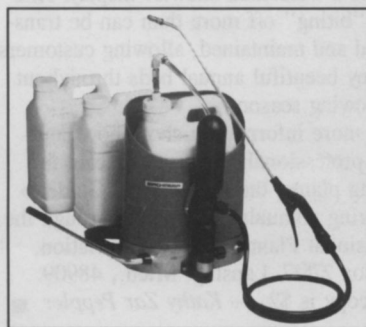
Oldham Chemical has announced the promotion of **Carl Forehand** to sales manager where he will be responsible for six sales representatives and 11 branches. ■

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Focus on Seeding



Cheyenne turf-type bermudagrass vs. Arizona common bermudagrass.

Supplies of New Seeded Bermudagrass Will be Tight

CHEYENNE TURF-TYPE bermudagrass will be available this spring from Penn-ington Seed, Madison, Ga. Arizona certified production fields at the company's affiliate Cactus Seed Co. has produced seed as scheduled, said Ronnie Stamp, vice president, seed.

Supplies are expected to be "somewhat tight" because of high demand. Production acreage will be expanded as soon as possible to meet market demand for the new seeded bermuda variety, he said.

Cheyenne is expected to see high use because of its compact growth, dark green color, excellent cold tolerance and ease of establishment from seed.

Test pilots have shown that it stays green significantly longer in the fall and greens up earlier in the spring.

Tests have also shown that Cheyenne performs extremely well when maintained at heights as low as 1/2-inch.

All Cheyenne will be tagged with Arizona certified blue tags to ensure quality, and will be available in five-pound plastic jugs, 15-pound buckets or 25-pound bags.

Searching for A Kentucky Bluegrass Endophyte

Researchers at Rutgers University are actively seeking a Kentucky bluegrass endophyte.

Although older botany textbooks describe endophyte-like symptoms in

bluegrass, modern breeders have been unable to isolate a Kentucky bluegrass endophyte.

Endophytes are beneficial fungi that live symbiotically within the veins of grass plants, giving them insect resistance via the chemical products they secrete. Other turf species, such as perennial ryegrass and tall fescue, greatly benefit from the presence of the endophyte.

Reed Funk of Rutgers and graduate student Suichang Sun searched among 1,000 plant samples of eight different species of *Poa* for the elusive bluegrass endophyte. Though unable to find endophyte in Kentucky bluegrass, they did discover one in big bluegrass — *Poa ampla* — a close relative.

Funk and Sun crossed the infected *P. ampla* plant with Kentucky Bluegrass and screened the 4,000 progeny for Kentucky bluegrass characteristics.

Both Kentucky bluegrass and *P. ampla* are highly apomictic and produce offspring asexually. ■

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*All guarantees subject to our written warranty policy. \$20 restocking fee on all returned packages.

Products

Mycogen Corp. has announced name and logo changes to several of the products it licensed from Safer Inc. earlier this year.

The former Insecticide Concentrate will now be known as M-Pede™ insecticide, and Moss & Algae Killer now carries the name DeMoss™ moss and algicide. Sharp-Shooter™ herbicide retains its name.

M-Pede is an environmentally compatible insecticide/miticide used for control of soft-bodied pests, including whiteflies, on a wide variety of ornamental plants. DeMoss offers control of mosses and algae on walkways and rooftops while Sharp-Shooter provides fast burn down of a broad spectrum of weeds in a number of landscape and arbor care settings. All are based on naturally derived fatty acids.

Circle 127 on reader service card

The new F911 front mower from **John Deere** replaces the last air-cooled model with liquid cooling. The large-area mower is powered by a 22-h.p. liquid cooled KHI engine. It's an overhead valve v-twin cy-

Product Spotlight

THE NEW MODEL 918L flail-type mower from **Ford New Holland** simplifies large-area mowing. Rough grass and weeds are mowed evenly for a smooth, finished cut. Clippings and leaves are shredded and distributed for an attractive lawn without need for clipping removal.

The mower is available in 50- and 60-inch cutting widths for use with tractors up to 30-h.p. The three-point hitch unit is offset to allow close trimming around trees and along walls.

Rotors are electronically balanced for vibration-free operation. Free-swinging cutting flails attach by one bolt and swing back to pass obstructions. A full-width rear gauge roller mounts close to the flail rotor to regulate cutting height and avoid scalping on uneven ground.

Circle 126 on reader service card



linder powerplant for more power in a compact engine, improved fuel economy and smoother running.

This latest change now makes the entire Deere line of commercial mowers liquid-

cooled. The benefits include quieter operation, consistent performance in hot conditions and prolonged engine life.

The F911 can be teamed with a 60- or 72-inch cutting deck. Standard features in-

Comprehensive Insurance Programs for Lawn Care Operations

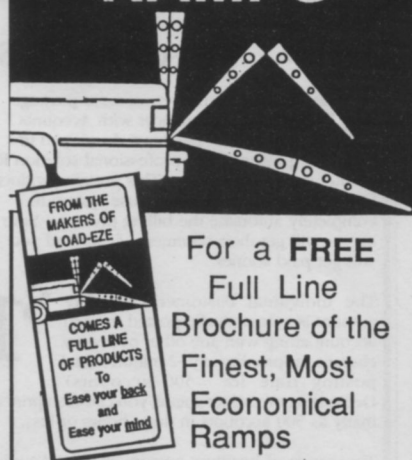
We currently have three Property and Casualty Programs for Lawn Care Operators underwritten by A+ rated insurance companies. Coverage is available in all states except Hawaii and Alaska. Herbicide/Pesticide Applicators coverages, General Liability, Property, Inland Marine, Commercial Fleet, Workers Compensation and Umbrellas are available.

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clude a professional seat, 5.5 U.S. gallon fuel capacity, two-pedal hydrostatic foot control, power steering, differential lock and transmission oil cooler.

Circle 128 on reader service card

TWO NEW GRANULAR combination products have been introduced by **Lebanon Chemical** for use on professionally maintained turf areas.

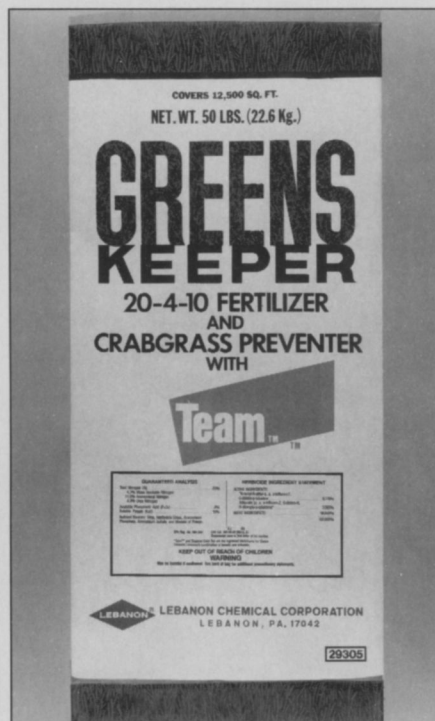
Greenskeeper 20-4-10 with Team™ 1.155 percent is designed to do two jobs in one operation. The premium homogeneous fertilizer base with 4.8 units Win offers quick green-up and sustained feeding.

At the same time, the preemergent Team herbicide kills the seed of annual bluegrass, smooth and hairy crabgrass, goosegrass, barnyardgrass and green and yellow foxtail as they germinate.

Greenskeeper 20-4-10 with 0.60 percent Dursban® feeds turf essential nutrients while controlling both surface and soil insects. When applied at the recommended rates, the product will control chinch bugs, sod webworms, ants, ticks, crickets, cutworms, earwigs, sowbugs, as well as larvae of Japanese beetles and European chafer.

Both products are available in 50-pound

bags that provide up to 12,500 square feet of coverage. Recommended application is 175 pounds per acre yielding two pounds



active Team per acre and one pound active Dursban per acre.

Circle 129 on reader service card

Thornton Computer Management Systems announces the new SLICE 386SX system designed for small businesses or those just starting with computers.

The system will run the award winning SLICE software designed exclusively for green industry business operations. The product provides a platform that is superior to PCs and networks as a cost effective solution for the smaller, growing company.

The complete system includes comprehensive hardware and the SLICE green industry software. Responsive telephone support, expert on-site training and in-depth classroom instruction is available as needed.

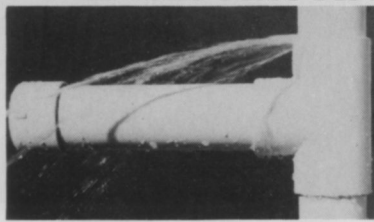
Circle 130 on reader service card

Kubota Tractor Corp. recently added three new models to its L-Series tractor lineup — the L4350, L4850 and L5450. These four-wheel drive, direct injection diesel tractors feature Kubota's "Ever Clutch" and long lasting hydraulic shuttle transmission. Ranging from 38 to 49 PTO horsepower,

(continued on page 78)

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reader service **54**



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And there's a pendimethalin control for virtually every turfgrass application.

30-3-10 Fertilizer Plus Turf Weedgrass Control, with up to 8 times more particles per square inch than typical competitive physical blends, provides the ultimate preemergent weed control plus a controlled-release, methylene urea-based nitrogen feeding.

22-0-6 Turf Fertilizer Plus Preemergent Weed Control combines urea, sulfur-coated urea, and a potassium feeding with unsurpassed control of 6 grassy weeds and 9 broadleaf weeds before they sprout. Fine particles increase weed control efficiency over typical competitive physical blends.

14-0-14 Nitrogen/Potassium Fertilizer Plus Turf Weedgrass Control combines nutrient sources with pendimethalin for effective preemergent control of 6 annual grassy weeds and 7 broadleaf weeds.



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Southern Weedgrass Control provides optimum utilization of pendimethalin necessary for season-long control on southern turfgrasses.

Turf Weedgrass Control provides unsurpassed preemergent weed control in both cool and warm season grass applications.

Weedgrass Control 60 WP offers liquid-applied pre-emergent control in both cool and warm season grass applications. It comes in convenient, easy-to-handle, water-soluble packets.

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and turf-safe for more than 6 years. Why risk your turf to anything less when you can count on these proven performers?

Your Scott Tech Rep is ready to help you select the formulation that's best for your course as part of a total turfgrass program. For more information, contact him today. Or call 1-800-543-0006.

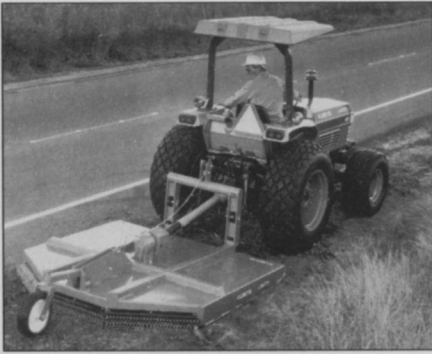
There's no better way to control weeds, or your budget.



Products

(continued from page 75)

the L-series tractors are designed for powerful, easy operation in grounds maintenance.



The "Ever Clutch" is a wet-type clutch providing a steady stream of filtered hydraulic oil, which flows through eight separate discs and pressure plates to reduce heat caused by friction.

Other features include hydrostatic power steering, spacious operator area, greater three-point hitch lift capacity, increased hydraulic capacities and dual air cleaner.

Circle 131 on reader service card

Two 50-inch **Dixon** ZTR riding mowers have been introduced for the landscape maintenance contractor.

The two Series 500 mowers in Dixon's 1991 line are the ZTR 502 and ZTR 503 HG. Both feature Sundstrand BDU piston-type hydrostatic drive transmission with continuous fluid recirculation to help prevent overheating and stalling under grueling conditions.

A 20-h.p. Kohler engine powers the ZTR 503 HG. Independent Hydro-Gear units on each drive wheel are sealed for life in a self-lubricating assembly. The combination of Kohler power and Hydro-Gear drive delivers Dixon's smooth, quiet zero turning radius operation. The ZTR 502 is powered with an 18-h.p. Kohler engine and chain drive to the rear wheels.

Circle 132 on reader service card

Neelco Industries recently unveiled its "Premier" lawn spray truck line. Its features make it operator and mechanic friendly.

The model features a 500-gallon fiberglass holding tank and a 100-gallon fiberglass drop tank with dual jet agitation. The Wanna Hydra Cell model D25 pump is

powered by an 8-h.p. Honda electric start engine.

A convenient curbside compartment provides easy access to all valves, sight gauge for the drop tank, pressure regulator, pressure gauge and the remote starter switch for the pump engine.

A Hannay electric hose reel with a chrome roller assembly and 300 feet of 0.5-inch spray hose is mounted curbside for easy operation.

Circle 133 on reader service card

With the new shuttle system from **Stellar Industries**, one truck operator can, without leaving the cab of a truck, load and unload or change truck beds in less than a one-



minute cycle.

The truck can be loaded with the material to be transported while on the ground,



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then the truck backs up to the body and, in less than a minute, places the loaded body onto the truck and drives away.

One truck can support numerous bodies. All controls are mounted in the truck cab for operator safety and ease of operation.

The shuttle is available in 3,000-, 8,000-, 12,000- and 20,000-pound capacities and can accommodate truck beds from 8 to 24 feet lengths. All models also feature a 50-degree dump angle.

Circle 134 on reader service card

Model N080-2 compact excavator from **Nissan Kizai Nissei** has standard hydraulic capabilities turning the unit into a high capacity power supply for a wide variety of attachments and tools such as breakers, augers, tampers, saws and pumps.

The unit can easily fit through a standard 30-inch gate and measures 27.5 inches wide and weighs only 1,650 pounds. The compact size offers high maneuverability for working in tight spots.

Powered by an 8.5-h.p. Mitsubishi, two-cylinder diesel engine, the unit is fuel efficient while supplying 1,760 pounds digging force. Its standard 14-inch bucket has a capacity of 0.07 cubic yards. The N080-2 has a digging depth of 63 inches and a maximum reach of more than nine feet.

Circle 135 on reader service card

Feldmann is offering its new Model 2340-48 pull-behind core plug aerator in a 48-inch swath.

For fast-paced core aeration, productivity is 47 percent faster than a 32-inch swath. The unit design is similar to the company's 32-inch version.

The lift-up handles will promptly pop

the 10-inch pneumatic tires into position for transport and just as quickly let the unit down to start core plugging. Penetration up to 2.5 inches allows oxygen, water and fertilizer to penetrate the root system, as well as promote thatch deterioration.

Also available is a gang bracket to combine three units together for a 132-inch swath.

Circle 136 on reader service card

Finn has released Hydro-Gel A 1000C in a clear plastic bottle having a net weight of five pounds. With the convenient handle, special shaker and pouring insert, the user has control of the flow for increased efficiency.



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Circle 137 on reader service card

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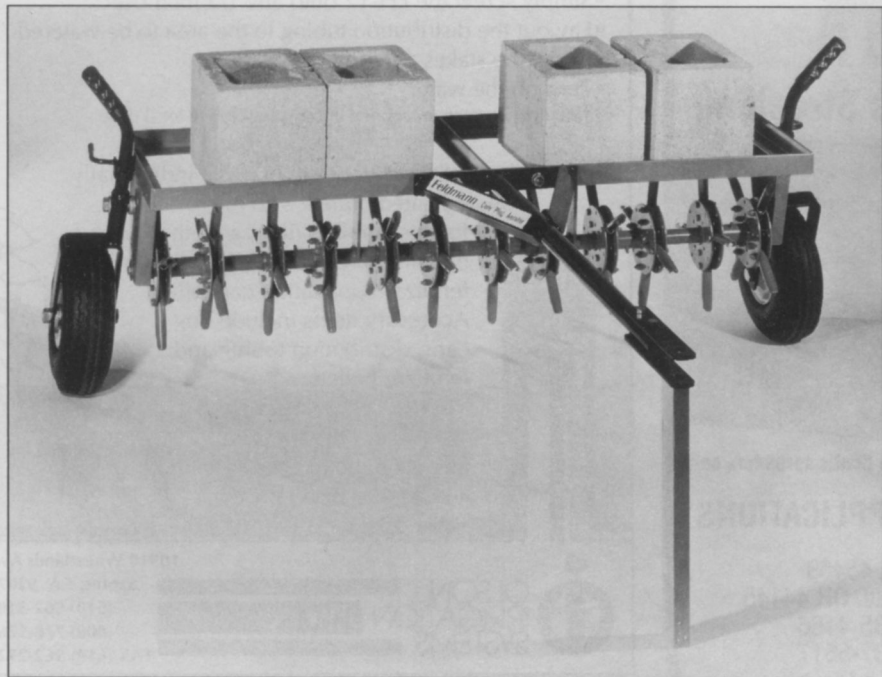
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Calendar

FEB. 21-22

1991 Landscape Industry Conference and Trade Show sponsored by the Associated Landscape Contractors of Colorado, John Q. Hammons Trade Center, Denver, Colo. Contact: ALCC, 3895 Upham St., Suite 150, Wheat Ridge, Colo. 80033; 303/425-4862.

FEB. 22-23

ALMA Expo, Bayfront Convention Center, St. Petersburg, Fla. Contact: Barbara Ganz, American Lawn Maintenance Association, 800/992-2562.

FEB. 25-26

The 26th Annual International Society of Arboriculture Shade Tree Symposium, Hershey Lodge and Convention Center, Hershey, Pa. Contact: Elizabeth Wertz, ISA Pennsylvania-Delaware Chapter, P.O. Box 293, Bedminster, Pa. 18910.

FEB. 26

Hazard Tree Evaluation Seminar, Center

for Urban Horticulture, University of Washington, Seattle, Wash. Contact: Dave Stockdale, Center for Urban Horticulture, GF-15, University of Washington, Seattle, Wash. 98915; 206/685-8033.

FEB. 26-27

Winter Seminar '91, Rosemont Holiday Inn, Rosemont, Ill. Contact: Illinois Landscape Contractors Association, 2200 S. Main St. #304, Lombard, Ill. 60148; 708/932-8443.

FEB. 26-28

Western Pennsylvania Turf Conference and Trade Show, Pittsburgh Expo Mart/Radisson Hotel, Monroeville, Pa. Contact: Pennsylvania Turfgrass Council, Landscape Management Research Center, Orchard Road, University Park, Pa. 16802; 814/863-3475.

MARCH 2

20th Annual Long Island Tree Conference sponsored by the Long Island Arboricul-

ture Association at State University of New York, Farmingdale, N.Y. Contact: LIAA, P.O. Box 69, Holtsville, N.Y. 11742; 516/698-3366.

MARCH 11-12

The National Institute on Park and Grounds Management 20th Regional Sports Turf Seminar, Omaha, Neb. Contact: National Institute, P.O. Box 1936, Appleton, Wis. 54913-1936; 414/733-2301.

MARCH 14

Designing With Color Seminar, Center for Urban Horticulture, University of Washington, Seattle, Wash. Contact: Dave Stockdale, Center for Urban Horticulture, GF-15, University of Washington, Seattle, Wash. 98915; 206/685-8033.

MARCH 14-15

The National Institute on Park and Grounds Management 21st Regional Sports Turf Seminar, Baton Rouge, La. Contact: National Institute, 414/733-2301. ■

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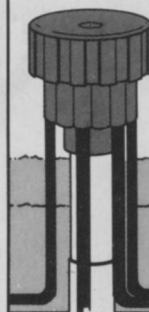
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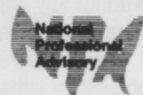
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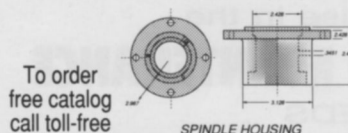
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Four 1985 Ford F-350 600-gallon SDI spray units. Hose reels, spray guns; \$8,750 each. Miscellaneous storage tanks, aerators, seeders. Call for more information: Days 317/887-3343. Evenings 317/882-3749. Ask for John.

FRONT MOUNT MOWER

1988 F-930 front mount John Deere mower. 60-inch mower deck, 48-inch snow thrower attachment, tire chains. 24-h.p. Onan engine. Under 600 hours. \$7,500. Tuff Turf Inc. 616/845-7926.

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FREE CATALOG of landscape training programs. More than 75 titles available including irrigation, pesticides, equipment maintenance, arboriculture, safety, pruning, tool use, plant selection, soils, planting, turf management, xeriscape, IPM and more. Money back guarantee — lifetime warranty. California Polytechnic State University, 800/235-4146.



EQUIPMENT

Glycerin gauges, \$10.99; 2100122 Flo-Jet pumps, \$81.68; SP Estate Keeper back paks, \$59; Canaan 30-gallon, 12-volt skid assembly, \$393; Spray Systems, Hannay Reels, Raven tanks; Hypo, FMC, Udor, Delavan and Flo-Jet pumps. Canaan Sprayers; Walkover Sprayers; FREE UPS freight on orders over \$500; FREE professional spray consultation. Dealers wanted. Call today. **Canaan Industries, 800-633-7560.**

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Top firm needs foreman. Quality conscious Texas-based landscape management firm has immediate opening for detail-oriented landscape maintenance foreman. If you have outstanding professional and horticultural skills and are not afraid of hard and healthy teamwork, then you could qualify for a top position with the finest landscape firm in the Southwest. Outstanding compensation and opportunity. Reply to: *Lawn & Landscape Maintenance*, Box 325, 4012 Bridge Ave., Cleveland, Ohio 44113.

...

PRESIDENT AND CEO

6-year-old lawn care company seeks dynamic, aggressive, sales and detail oriented person to grow company from \$300,000 to \$1 million by 1995. Excellent North Jersey market. Send resume and salary history to: *Lawn & Landscape Maintenance*, Box 351, 4012 Bridge Ave., Cleveland, Ohio 44113.

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LANDSCAPE MAINTENANCE SUPERVISORS

West suburban Chicago firm has great opportunity for individuals with horticultural degree or three years field experience. Duties would include site supervision, pesticide applications, quality control and servicing of accounts. Please send resume or contact: PEZZA LANDSCAPE INC., P.O. Box 607, Berkeley, Ill. 60163; 708/544-4348.

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pH Balance

(continued from page 62)

cal LESCO representative.

What do you do? Balance the solution to the chemical. One of Howell's Imutable Laws of Barroom Logic states that the more expensive a chemical is, the more rapid its breakdown in unfavorable spray solutions. In order to lower the pH of alkaline water, some form of acidifying agent should be used. Every person who is in the spray business should have a quality pH meter. It is your neck that's on the line and every tank should be tested prior to adding the chemical.

Remember, if you spray a product that has a specific function and due to reduced half-life it goes out at 50 percent, 24 per-

cent, 12 1/2 percent, 6 1/4 percent strength and so on, you're soon going to be out spraying again and repeated applications cost Big Bucks.

The author is product manager for specialty fertilizers at LESCO, Rocky River, Ohio.

Clean Cut

(continued from page 32)

going to let this finance itself. We've already spent a tremendous amount of money programming it and it's not like we have to have the product be successful in six months to determine our success.

Gore We've already incurred the majority of the development cost. It would be nice if we get money back — it's important — but if we don't, we were convinced of the value of this software package when we originally set out to develop it.

In fact, we weren't intending to market it. We just budgeted for it to cost thousands of dollars to get it the way we wanted it as opposed to what we could buy out there. For our own purposes, it would pay itself off in three or four years.

As we were developing it and describing it to some of the people around here, we saw enough interest on their part to indicate there might actually be a market out there. So we continued with the software plans, but with a different product orientation.

But because we have incurred those costs and were intending to spend the money without any expectation of immediate return, we're in a good position.

Since we're offering contractors a non-obligatory subscription, it's the best guarantee they can get for a high quality package with continual updates. The money from the subscriptions will be used to continually upgrade the program.

We know that if we don't have the best program out there at all times, there's nothing that says that they can't and won't switch to something better if there's something better available.

That's kind of like having a maintenance contract on a property.

The author is editor of Lawn & Landscape Maintenance magazine.

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*"If you can't buy it, build it."
And so we did!*



When Jim Gourley moved up to TURFLON, callbacks in Kenosha went down, way down.



"Our resprays have decreased by almost 50%." —

Jim Gourley, owner
Lawn Masters,
Kenosha, WI

If you're like most LCOs using standard three-way herbicides, there are days when you wish the phone wouldn't ring again. Callbacks and cancellations can really get you down. Well, maybe it's time you moved up to Turflon® herbicide.

One good reason to switch.

"We switched to Turflon because we were having too many resprays," explains Jim Gourley. And after 22 years in the business, he's happy with the results: "Our records show that we do have much better weed control and many fewer resprays this year than we've ever had."

You'll save money in the long run.

"Yes, we pay more for Turflon," Jim says. "But when I figure how much it costs us per respray, it's saving us lots of money. And that justifies the extra cost."

Jim adds that there's another reason he can't afford to make too many callbacks. "When you have to go out and do a respray, you're taking a chance on losing that customer."

Isn't it time you moved up to a better herbicide for better weed control? For technical information, call toll-free: 1-800-352-6776.

Move up to Turflon.



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reader service 45