



Posting required by spring?

By JAMES E. GUYETTE
Associate Editor

MASSACHUSETTS—The Bay State is expected to have a sign posting law in effect by April 1.

The proposed regulations include a 4-by-5-inch sign to be placed on customers' lawns and a Q&A-style "con-

sumer sheet" to be delivered to lawn care patrons.

"Right now, nothing's been finalized," said Paul Gosselin, supervising inspector of the Massachusetts Pesticide Bureau.

The consumer sheet being prepared will contain "basically just general information about minimizing ex-

posure to applications," Gosselin said. "A good consumer sheet answers a lot of questions raised by consumers. We have gone this route because we have a similar sheet for termite control applicators," he explained.

Homeowners will be excluded from the regulations,

See **POSTING**, Page 47

LAWN CARE INDUSTRY

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Volume 10, Number 14 \$2.50

(HBJ) HARCOURT BRACE JOVANOVICH PUBLICATIONS

FEBRUARY 1987

Major acquisitions:

ChemLawn, Barefoot Grass buy competitors

By ELLIOT MARAS
Editor

COLUMBUS, O.—ChemLawn Services Corp. and Barefoot Grass Lawn Service, Inc. have strengthened their market positions by acquiring major competitors.

ChemLawn acquired the Omaha and Lincoln, NE branches of Shur Lawn Co. and Long Island, NY-based Lawnrite Corp. Barefoot Grass bought out Tempo 21, Inc., a two-branch operation in Chicago.

Shur Lawn, meanwhile, sold its third branch, in Cedar Rapids, IA, to Iowa-based All American Turf Beauty, Inc.

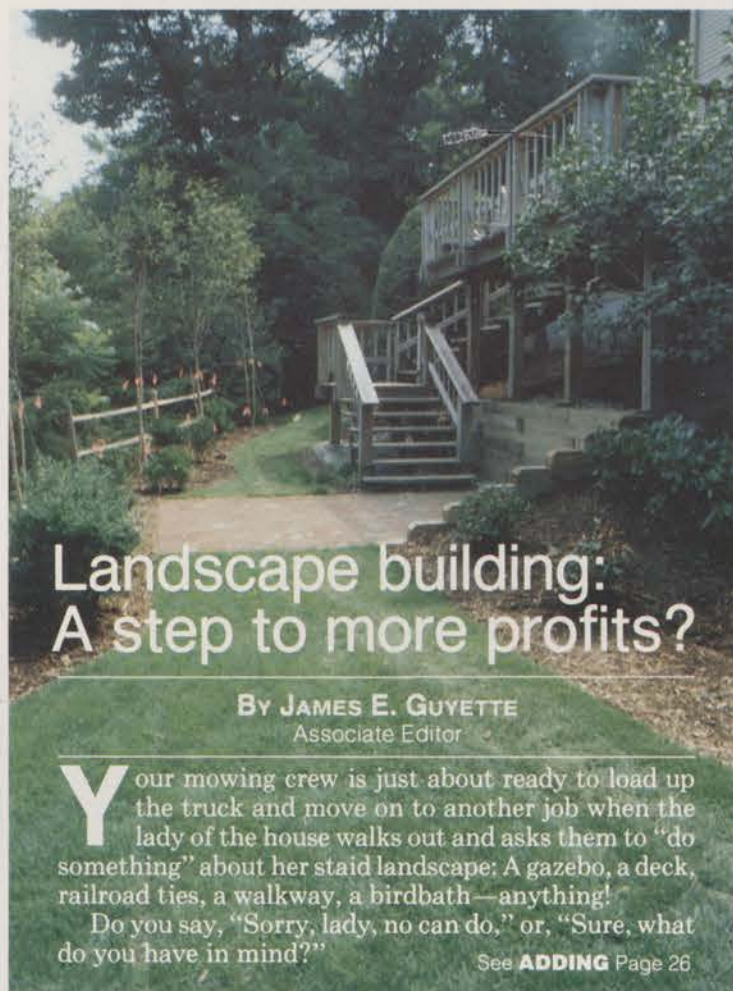
ChemLawn's Nebraska ac-

quisition will give it two branches in Omaha and one in Lincoln. Peter Poll, the company's Midwest zone vice president, did not know if any branches would be closed. "There are operational decisions forthcoming," he said, to be based on discussions with the Shur Lawn employees. About 30 are employed in the two branches.

Keith Weidler, president of Shur Lawn which he started in 1971, will no longer be involved with the company and is not sure about his future plans. He said he had been thinking of selling the company for some time but did not wish to elaborate.

Shur Lawn was ranked 29th in LAWN CARE INDUSTRY'S 1986 Million Dollar List. The company's total lawn care revenue was \$1.7

See **BUYS**, Page 28



Landscape building: A step to more profits?

By JAMES E. GUYETTE
Associate Editor

Your mowing crew is just about ready to load up the truck and move on to another job when the lady of the house walks out and asks them to "do something" about her staid landscape: A gazebo, a deck, railroad ties, a walkway, a birdbath—anything!

Do you say, "Sorry, lady, no can do," or, "Sure, what do you have in mind?"

See **ADDING** Page 26

Study shows:

LCOs' sales up 24.3 %!

COLUMBUS, O.—While the nation's Gross National Product slipped in 1985 from the previous year, LCOs' sales marked a bigger percentage gain, according to the 1986 Operating Performance Ratios released by the Professional Lawn Care Association of America.

Figures provided by the 87 companies studied indicated a 24.3 percent jump in sales in 1985. The jump in 1984 was 20.6 percent.

The Gross National Product "Real" percent change was 2.2 percent in 1985 and 6.5 percent in 1984.

Gross profit as a percent of net sales dipped a bit, from 42.6 percent in 1984 to 40.6 percent in 1985. The study credits this to stiffer competition.

But despite this, the average LCO improved his bottom

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NEXT MONTH

- A detailed market analysis of the growing Dallas-Ft. Worth area.
- A research update on slow-release fertilizers.

Gas leaf blowers getting brush-off in California

By JAMES E. GUYETTE
Associate Editor

CALIFORNIA—Gas-powered leaf blowers are being outlawed in several California communities because residents say the devices are too loud.

The most recent town to consider a ban on the ma-

chines is Belvedere, located in the San Francisco area.

"I'm afraid you have a full-scale movement on your hands," said Paul Hawken, president of Smith & Hawken, an area landscape supply firm. He favors the ban.

"The leaf blowers break the state law," Hawken said, citing the noise levels.

The dry climate results in the machines being used for dust control on driveways, porches, patios and parking lots.

"All the noise is reflected and it's magnified" by the flat expanses of concrete, Hawken

See **NOISE**, Page 28

LATE NEWS

Expo draws national attendance

NORWALK, Conn.—The Landscape Exposition, scheduled to open March 3-5 at the O'Hare Exposition Center in Rosemont, IL, has already received substantial attendee pre-registration for the second annual show. Initial response indicates a strong national as well as regional interest.

A large number of registrations are from Illinois and the surrounding states: Iowa, Wisconsin, Michigan, Indiana, Ohio, Kentucky and Missouri. However, a number of registrants come from as far as Massachusetts, Florida, Texas and California. A total of 36 states are represented in these early registration figures.

Other than the Illinois/Midwest region, the U.S. is evenly represented with registrants from New England, the Mid-Atlantic states, the Southeast, the Rocky Mountain states and the West.

See **EXPO**, Page 24

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Circle No. 109 on Reader Inquiry Card

Options ample for controlling winter weeds

ATLANTA, GA.—Winter weeds can meet their deaths by a number of methods, according to Dr. B.J. Johnson of the University of Georgia, who spoke about weed control in warm-season grasses at the recent Professional Lawn Care Association of America regional seminar in Atlanta, GA.

He said that simazine, an old corn herbicide, is labeled for turf for annual bluegrass control; plus control of corn speedwell, parsley piert, hop clover and spur weed. The best, most consistent, control came with a two-pound granular application in September, Johnson said.

The amine form of Turflon gets better activity than 2,4-D, he said, and even better weed control is gained when the two are mixed together. **LCI**

Hall: Don't compromise on quality

BALTIMORE—"Don't compromise on the quality of your product. It's your life blood." That was the message from Jack Hall, extension agronomist in turfgrass at Virginia Polytechnic and State University to attendees at the Professional Lawn Care Association of America convention in Baltimore.

Compromises are a topic of conversation today among LCOs because of the public furor over chemicals.

It's all right to change the chemicals you use, Hall said, as long as you know what adjustments will need to be made.

"In every compromise you make, there is no single effect," he said.

One change many LCOs are contemplating is switch-



Hall: Don't compromise.

ing from phenoxy herbicides to non-phenoxy herbicides for post-emergent weed control.

Hall refrained from taking sides on this choice, but said the non-phenoxy compounds—bromoxynil, chlortoluenol, dicamba, mecoprop and trichlopyr—have undergone considerably less individual and combination testing than 2,4-D, a

popular phenoxy.

Research at Virginia Tech by Dr. Wayne Bingham shows that the three-way combination of chlortoluenol, dicamba and trichlopyr gives excellent control of white clover, dandelion and red sorrel. Less than excellent control was shown for corn speedwell, hawkweed, mouse ear chickweed, ground ivy and plantain.

However, Hall said, there are other materials being tested that show promise against these hard-to-kill weeds.

Bingham's research also shows the mixture of fenoxaprop, a new non-phenoxy post-emergent, and pendimethalin to be an effective pre- and post-emergent combination, Hall said. **LCI**

Elanco's team explains uses of Team herbicide

CLEVELAND—LCOs in Northeastern Ohio recently had a chance to learn about Elanco's new Team herbicide.

The preemergence compound is a mixture of benefin and trifluralin. "Together

they form the product called Team," said Elanco's Dr. Tom Perkins during a technical talk to the assembled LCOs at a Cleveland area hotel.

Team is tightly and strongly absorbed by the soil, plus it is

low water soluble. "It makes no difference, no matter how much it rains," Perkins said. A zone of protection is created when portions of the product vaporize within the soil.

The mixture is economical

and effective when liquid Team is used with dry fertilizer, requiring only one pass. Greg Richards of LESCO, Inc., Rocky River, OH, said his customers are happy with the product's performance. **LCI**

MEMOS

Housing starts are expected to boom through 1990, according to Salomon Brothers, Inc., the New York-based securities firm. A recently-released study projects annual housing demand at 1.9 million units through 1990. The demand was earlier projected at 1.6 million to 1.7 million.

Housing support industries, such as lawn care, would contribute much more than the current 4.5 percent to 5 percent to the Gross National Product, the study claims.

The study predicts 300,000 units will be needed each year to replace old houses and that growth in the number of heads of households will give an additional demand of 300,000 to 600,000 per year.

The demand will drop to 1.6 million units through 1995 and decline by more than 100,000 through 2,000, the study says.

Alachlor use will continue because the Environmental Protection Agency has decided that the benefits of continued use outweigh its risks. Could this be a good sign for 2,4-D?

Alachlor, the most widely-used herbicide in the United States, was under special review (the EPA's first step towards changing a product's user status) because it had been shown to cause cancer in laboratory animals and was suspected of

causing cancer in humans.

The product is made by Monsanto Co. and is marketed under the trade name Lasso. It is used mostly to control weeds in corn, soybean and peanut fields.

EPA has ruled that only certified workers apply the product and that it remain enclosed during mixing. The ban on aerial spraying was lifted on the condition that no people work on the ground as "flaggers," signaling crop-dusters where to spray.

EPA estimated a ban would cost farmers \$510 million to \$758 million the first year in increased weed control costs and decreased crop production.

Sandoz Crop Protection Corp., created through the merging of VS Crop Protection and the agrichemicals business of Zeecon Corp., has experimental use permits for a herbicide and a fungicide, both of which would be used for various markets including turf. The herbicide's trade name is Endurance. The fungicide's is Risolex.

Sandoz has also signed an agreement with Monsanto Co. concerning combinations of glyphosate and dicamba, according to Dale Miller, president and chief executive officer. The combinations will be released in the near future.

Richard W. Ballantine has resigned from his position as senior vice president, treasurer, chief financial officer and director of ChemLawn Services Corp. after about two years of service to the company.

He accepted a position with the New York securities firm, Salomon Brothers, Inc.

New England Green has acquired Mister Lawn Care of Grand Island, NY. The announcement follows the merger of Springfield MA-based New England Green, Inc. and Plymouth, MI-based Turf Pro Industries, Inc. under the name of New England Green.

Mister Lawn Care had revenues of about \$500,000 and about 6,000 customers in 1986, said Mike McKee, who co-manages New England Green now with Dan Chopp, founder of Turf Pro. McKee said most of Mister Lawn Care's staff has remained except for Jeffrey Gardner, who was president.

The company's headquarters is in Plymouth, MI.

Sign posting has been proposed in Lincoln, NE. Dave Redler, owner of Turf 'N Tree Lawns, estimates 35 lawn care companies would be affected. Given the city council's legislative pace, Redler doesn't expect anything until 1988. **LCI**

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Lawn-Plex™ 8% Fe Plus 8% Sulfur Provides The Following:

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- Fully compatible with virtually all (NPK) formulations and pesticide tank mixes.
- Will not stain your customers' sidewalks or your equipment.
- Extremely low phytotoxicity. Ideal for spray application even during the heat of the day.
- Buffers pH to prevent alkaline destruction of pesticides.
- Maximizes green-up without excessive nitrogen.

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No slam to your staff, but most commercial grounds care laborers aren't exactly a sensitive group.

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Which is why John Deere commercial walk-behinds are built the way they are.

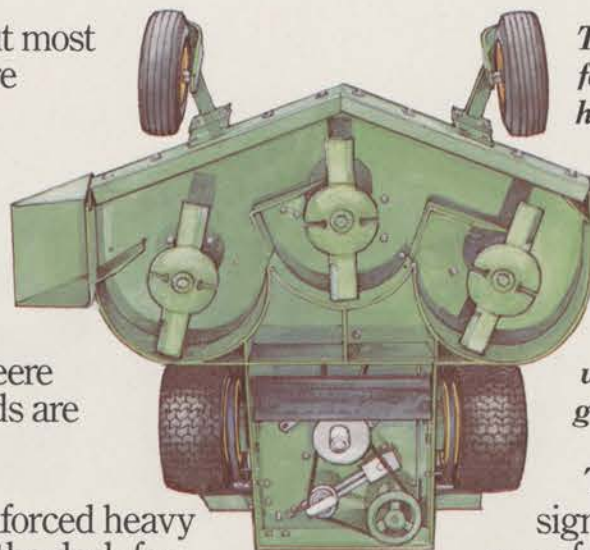
Tough.

With welded and reinforced heavy gauge steel throughout the deck for long life. An under-belly shield to keep drive components protected. And heavy caster-mounted pneumatic wheels up front that stay on where

others snap off.

Overlapping blade design provides a more uniform cut and helps eliminate stripping—even in wet mowing conditions.

But standing up to tough conditions is only one thing a John Deere commercial walk-behind does well.



The center-spindle-forward 48-in., 17-horsepower model shown here features a baffled under-deck design that improves air-flow for less windrowing and good bagging.

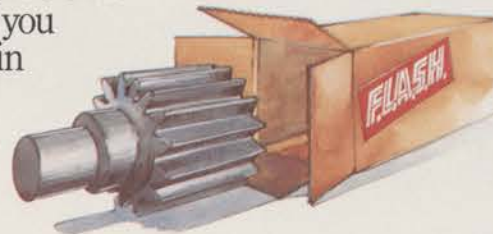
They're also designed to give you one of the cleanest cuts

in the business, too.

With a baffled under deck design that improves the airflow for less windrowing and good bagging. An overlapping blade design for cleaner cutting without stripping. Plus precise hand clutch steering for responsive turning in tight areas.

And to keep you cutting, crew after crew, John Deere's FLASH™ parts system can even get you temporarily out of stock items quickly. In most cases overnight.

Ask your dealer for more facts on his four commercial walk-behinds with cutting widths from 32 to 52 inches. See how a mower built to survive tough mowing problems can help you survive in a tough business.



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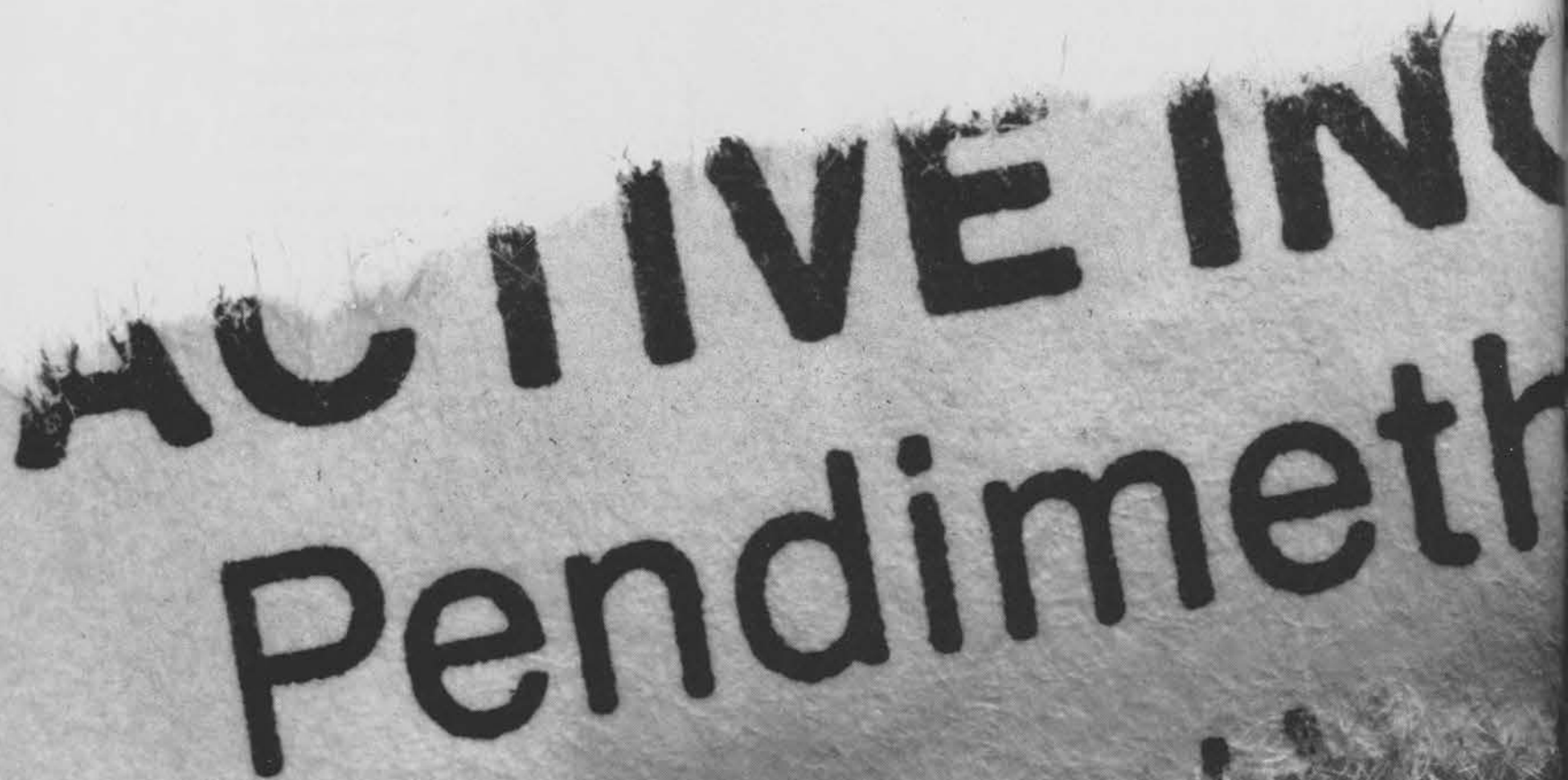
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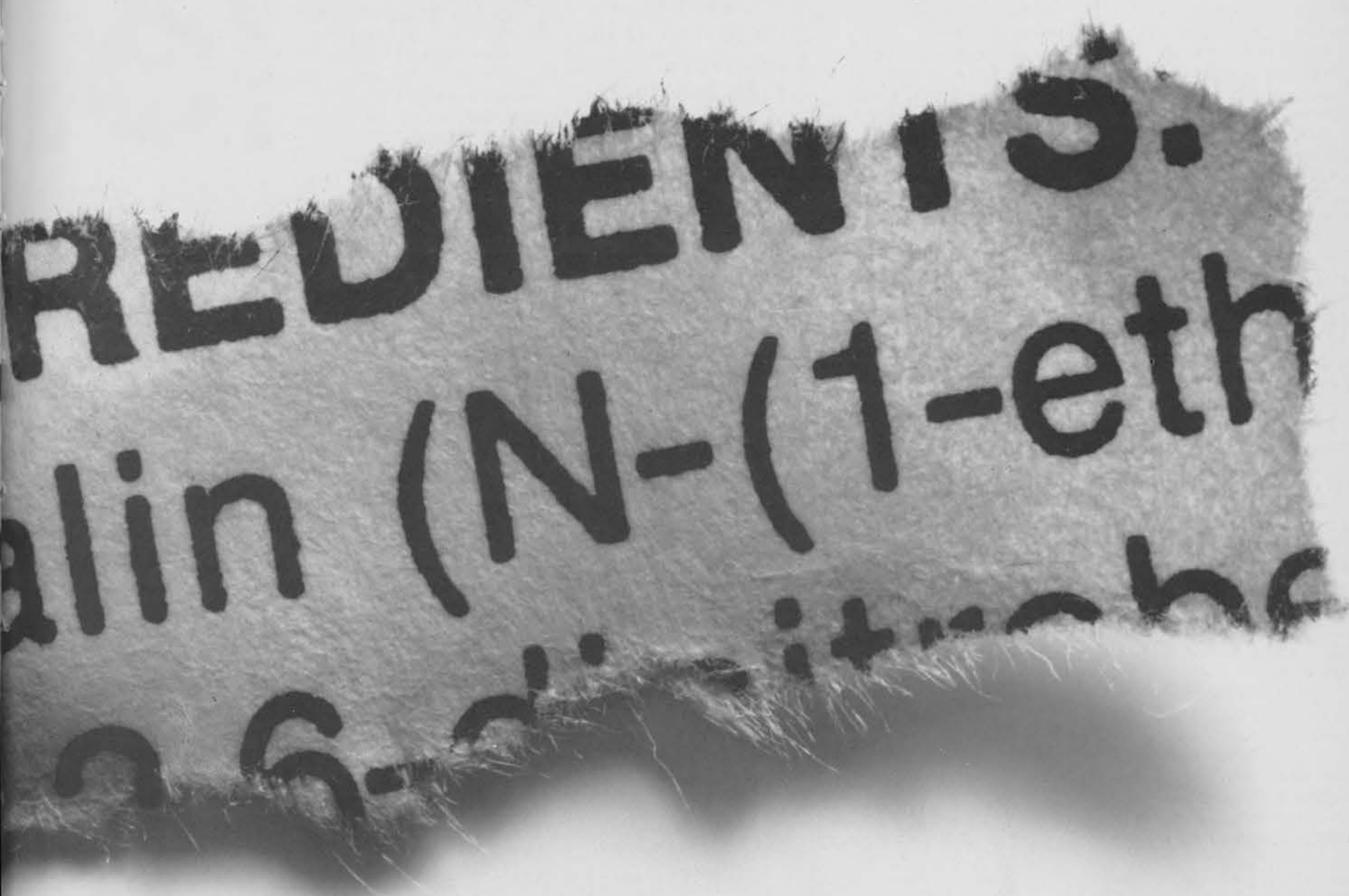
Take our

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

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

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and goosegrass control.



word for it.

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

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

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

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Remember the 'organic' food craze?

THE EVENTS OF RECENT HISTORY OFFER OUR INDUSTRY A LESSON

By **ELLIOT MARAS**
Editor

The dealers of "organic" fertilizers and pesticides are dealing the lawn care industry a wild card. The products evoke curiosity, resentment and enthusiasm, depending on whom within the industry you talk to.

Among the reactions we received to our articles addressing "organic" products in the October issue was the charge that we were promoting such products. The charge was made despite our repeated claims that more research is needed, the difficulties we attributed to the products, and our assertion that the one national firm that has used "organic" products is considering returning to the more conventional ones.

The fact of the matter is, I'm neither enthused nor put off by "organics." I only get nostalgic.

Remember the late 1960s when "back to nature" was in vogue? It was a time when "different" meant "better," and one manifestation was the "organic" or "natural" food craze.

Masses of people were suddenly convinced that rice, beans and curry could add years to their lives as long as they were cooked in unprocessed vegetable oil. "Natural" food stores and eateries cropped up.

So pervasive was the fascination with the "organic" that it extended, most ironically, to the drug culture. "Organic" drugs were said to give "purer" highs than those that were synthetically manufactured.

Now I admit I felt a certain mystique about my first bottle of ginseng cooler; its taste was unlike the carbonated drinks I was used to. It refreshed one in a somewhat different way.

But no matter how many granola bars I ate, my fingernails didn't get harder, my memory didn't get sharper and the pimples on my adolescent face didn't go away.

Eventually, I just saw "organic" food as blander and more expensive than "regular" food. A lot of other people got to feeling the same way. In time, the "organic" food establishments faded.

The lawn care industry is not pushing the fanatical experimentalism of the late 1960s. But companies are aware that the public is asking for more selective use of chemicals, and the "organic" products are seen as one alternative.

Some companies, to

emphasize concern for public safety, are promoting themselves as "organic" companies. I suspect this inclination will pass.

Professor Norman Hummel of Cornell University points out that fertilizers and pesticides can be "organic" and at the same time be synthetic, depending on one's definition of "organic." Lawn care firms can mistakenly think they are using a more natural

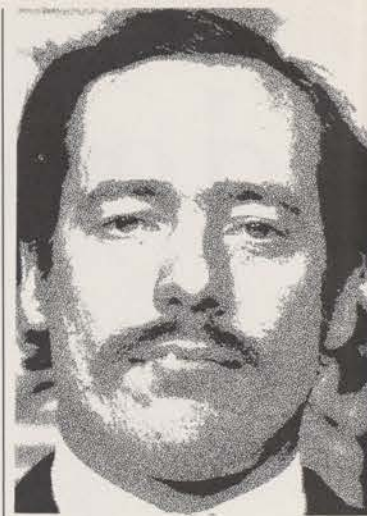
Look for the interest in 'organics' to follow that of the health food stores of the late 1960s.

product on their customers' lawns.

As for the truly natural

fertilizers and pesticides, little can yet be said about either their effectiveness or safety. The research has barely begun.

I predict the industry will find there is some benefit to the more natural fertilizers and pesticides, but not enough to warrant a significant change in the present programs. Look for the interest in "organics" to follow that of the health food stores of the late 1960s. **LCI**



Elliot Maras



What could be more economical than a Toro?

You can find cheaper equipment on the market, but how much will it cost you in the long run?

Would you rather build a business on reliable equipment that gets the job done on time, or on cheap equipment that breaks down and produces unhappy customers. It's a simple formula: happy customers equal profitability.

And if you're serious about your customers, your reputation for cutting on schedule, and your competitive prices, few grass cutters can be as

economical or provide as much value as a Toro.

How can we keep your charges competitive when your competition is buying cheaper machines? By designing more productive, labor-saving mowers.

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hillside stability and balanced designs. With more efficient grass collection systems. And with comfort and safety designed into every machine for less driver fatigue.

We help you reduce operating costs with your choice of engines offering different fuel efficiencies—gasoline or diesel. We offer



TYPICAL PERCENTAGE INCOME STATEMENT

Net Sales	100.0%
Cost of Sales and Direct Expenses:	
Cost of Chemicals Used	19.7%
Direct Payroll and Related Costs	23.0%
Production Vehicle and Equipment Expense	12.5%
All Other Direct Expenses or Cost of Sales	4.2%
Total Cost of Sales	59.4%
Gross Profit	40.6%
Indirect Expenses:	
General & Administrative Expenses	9.7%
Other Salaries, Wages & Benefits	13.9%
Facilities (or Occupancy) Expenses	3.4%
Advertising & Promotion (or Marketing) Cost	5.6%
All Other Operating Expenses	2.3%
Total Indirect Expenses	35.1%
Operating Profit	5.6%
Non-Operating Income	1.3%
Non-Operating Expenses	2.0%
Net Profits Before Taxes	4.9%
Net Profits After Taxes	4.8%

SALES,

from Page 1

line by implementing better

expense control. Total indirect expense as a percentage of net sales dropped from 37.5 percent in 1984 to 35.1 percent

in 1985, and net profits after tax as a percentage of sales rose from 4.1 percent to 4.8 percent.

The primary reason for the decline in indirect expenses as a percentage in net sales was lower payroll costs. These dropped from 37.3 percent of net sales in 1984 to 34.3 percent in 1985.

Sales growth was highest in the Northeast, 31.4 percent, followed by the West, 27.9 percent, South, 22.6 percent, and North Central region, 15.3 percent.

While the North Central firms trailed in sales growth, they led in return on net worth, or return on owner's investment, with an average 58.1

PROFESSIONAL LAWN CARE INDUSTRY OPERATING PERFORMANCE (1985 RESULTS)

KEY PERFORMANCE MEASURES—ALL FIRMS

PROFITABILITY	TYPICAL
Net Profit After Tax to Net Sales	4.8%
Net Profit After Tax to Total Assets	15.9%
Net Profit After Tax to Net Worth	40.3%
Net Profit Before Tax to Net Sales	4.9%
Net Profit Before Tax to Total Assets	17.3%
Net Profit Before Tax to Net Worth	50.8%

CHEMICAL SUPPLY PURCHASE DATA

Percentage of Total Purchases:	
Granular Fertilizer	31.5%
Pre-emergence Herbicides	16.6%
Liquid Fertilizers	14.8%
Insecticides	15.0%
Post-emergence Herbicides	10.0%
Grass Seed	5.0%
Fungicides	2.2%
Soil Amendments	1.6%
Other	3.3%
Total Chemical Supply Purchases	100.0%

percent return. The Northeast followed with 56.7 percent, followed by the West at 43.9 percent and the South at 19.4 percent.

Strongest growth was among the smaller firms, those with less than \$300,000 in sales volume. Smaller firms posted a 37.5 percent sales growth while larger firms, those over \$300,000, grew 16.3 percent.

Firms identified by the study as high profit firms, those among the upper 50 percent, exhibited superior expense control. Such firms had lower costs relative to net sales in every cost category.

For example, total cost of sales was only 56.6 percent of net sales for the high profit firms compared to 59.4 percent for all the firms. Likewise, total indirect expenses were only 28.5 percent for the high profit firms compared to 35.1 percent for all the firms.

The study was performed by Industry Insights of Columbus. It has been sent to PLCAA members and is available for \$150 to non-members.

PLCAA can be contacted at 1225 Johnson Ferry Road, N.E., Suite B-220, Marietta, GA 30067. LCI

TYPICAL PERCENTAGE BALANCE SHEET

Cash	16.5%
Accounts & Notes Receivable, Trade (Net)	11.8%
Inventory	7.1%
Other Current Assets	4.9%
Total Current Assets	40.1%
Fixed Assets, Net of Depreciation	51.3%
Other Long-Term Assets	8.6%
Total Assets	100.0%
Accounts Payable	5.4%
Current Notes Payable	10.7%
All Other Current Liabilities	7.2%
All Long-Term Liabilities	40.6%
Total Liabilities	64.0%
Total Net Worth	36.0%
Total Liabilities & Net Worth	100.0%

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Davey Tree Co. studies lawn care's alternatives

RESEARCHERS EXAMINE POSSIBILITIES FOR INSECTICIDAL SOAPS AND CITRIC OIL

By ELLIOT MARAS
Editor

COLUMBUS—Dr. Roger Funk, vice president of human and technical resources for Davey Tree & Expert Co., Kent OH, is a man with a vision. He sees a day in the near future when more lawns will be cared for with fewer chemicals.

Funk, newly named to the board of directors of the Professional Lawn Care Association of America, described his vision in giving the opening address to the Ohio Turfgrass Conference and Show in Columbus recently.

Customers today are asking for more selective use of pesticides, he said. "We have to investigate alternatives to pesticides. I think everybody in our industry is going to have to have some kind of selective control."

Reduction of pesticide use is the major focus of Davey's research division.

The company has already reduced its use of pesticides by implementing a customized spraying device. It consists of a meter that injects pesticide concentrate into the spray line—no pre-mixing is necessary. Funk said herbicides have been cut back by as much as 50 percent.

New techniques in spraying, coupled with alternative biological controls, will reduce the amount of pesticides used even more.

This year, Davey plans to reduce its pesticide use in tree and shrub care by 75 percent, Funk said. It will do this by using a new spraying method and by introducing insecticidal soaps.

"We're coming up with a radically different approach to spraying," he said, which will be a modification of an existing piece of equipment.

The soaps, made by Safer, Inc., are made with fatty acids. The soaps control soft-bodied insects without leaving a residue, Funk said, but they can be harmful to fish if they contaminate water.

Davey's research crew has tested soap for insect control at five different sites in the Midwest and Northeast.

In the near future, Funk said he expects Davey to use citric oils in its tree care program. Citric oils have already been tested as insecticides in the structural pest control industry. Funk said a citric oil/insecticidal soap combination is already being used for interior plant care.

Citric oil is presently used as a foliage penetrant for herbicides, he noted.

Farther down the road, Funk said the industry might use caffeine as an insecticide. He said it has shown insecticidal properties in research.

Research is also under way in electrostatic sprays. Funk said that as charged pesticide particles are sprayed into the vicinity of a plant growing in earth, a charge transfer occurs within the plant. The pesticide particles are then electrostatically attracted to the plant surfaces.

This will reduce the amount of pesticide needed and the amount that would drift.

"It's very intriguing re-

'I think everybody in our industry is going to have to have some kind of selective control...It's very intriguing research.'

search," Funk said. Research has been done at the Ohio Agricultural Research and Development Center and on cotton fields and apple orchards at the University of Georgia, he said.

Chemical companies, Funk

said, are researching ways to reduce pesticide odors and capacities for allergies by encapsulating molecular particles. The process is known as microencapsulation.

Davey is also testing some of the natural organic fertilizer

products. Funk said the products have been shown to give a healthier lawn, but have not eliminated the need for pesticides.

"I don't think we're at a point yet where we can go to organics completely," he said.

Davey has not yet made a decision on whether or not to continue using 2,4-D in its weed control program in 1987, Funk said. Having reviewed the epidemiology studies on 2,4-D, he does not believe it is carcinogenic. **LCI**



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The team: Davey's research division includes, standing from left to right: Thomas P. Mog, Brian Jeffers, Richard G. Rathjens, Jeffrey Krejci; and seated, left to right: Roger Funk, David Whitworth and Balakrishna Rao.



Rowan urges industry not to be shy on TV



Rowan: Educate reporters.

By JAMES E. GUYETTE
Associate Editor

BALTIMORE—LCOs should not be shy about expressing their viewpoints on television and in the newspapers, said Ford Rowan, a former NBC-TV news reporter who is now a consultant to the Professional Lawn Care Association of America.

"You have to compete in the marketplace of ideas," Rowan told people attending the PLCAA's 7th Annual Conference and Show in Baltimore. "The drumbeat of bad publicity can do you in," he warned.

"Most of us in our common sense experience know that the sky is not falling. Use the facts to fight the fear," Rowan said.

It is important to make your points known and to be sure to tell the truth, he said. "You've got to educate reporters," Rowan noted. "All good reporters want an accurate story... Most reporters are in a big hurry (because of deadlines and a heavy work load) and they don't know a whole lot about the story before they go out to cover it."

Television, though, can be tricky because of its reliance on pictures. "Television is not going to care much about statistics," Rowan said. "It transmits sensations but not facts... the picture tells the story, and that's the hard part."

As an example he cited the noted 20/20 report, which featured a child who had become ill allegedly because of lawn care chemicals. "This little girl can do more damage to your industry than a whole panel of scientists because she's so darn cute," Rowan explained. "This grabs ya."

Rowan recalled the near disaster at the Three Mile Island Nuclear Power Plant. "I covered Three Mile Island and I tell ya you could cut the fear with a knife," he said as he pointed out that people tend to fear involuntary exposure to perceived danger the most. "That's something for your industry to think about."

Continued complaints about the media are not all that productive because "reporters are looking for the out-of-the-ordinary and most things out-of-the-ordinary are bad," Rowan explained. The media is shallow, sensational and subjective, he said, noting that "we carry our opinions with us and reporters do too."

The best defense is to be honest and forthright about making your opinions known, Rowan said. "We think you can win in the arena—in the marketplace of ideas." **LCI**

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From the turf care group at Union Carbide.



Think like Holmes, Kojak to detect lawn difficulties

By JAMES E. GUYETTE
Associate Editor

COLUMBUS—LCOs should think like a detective when attempting to diagnose lawn diseases, according to Maria Cinque, turfgrass specialist at the Cornell Cooperative Extension Service, Long Island, NY.

Cinque conducted a seminar at the Ohio Turfgrass Conference and Show in Columbus.

Just like Sherlock Holmes, an LCO on the prowl for grass difficulties should carry a magnifying glass. "If you are going to diagnose turf problems you need tools," she said.

"It makes you look very professional even if you don't know what you are doing," Cinque told the chuckling delegates. A knife is another handy item to have, as are publications and guides about turf diseases to point out the situation to clients.

"You have something to show them," Cinque said. "The customer now (adays) wants proof."

A questionnaire is a good thing to prepare. "Ask questions and develop a fact sheet."

Cinque stressed the importance of asking the customers questions. "What you see often will not give you a total picture of the problem."

The extra clues you can get from the client can help. "Diseases are not the easiest things to diagnose... You can't tell by looking at it," she said.

With insects, "you've got to get down on your hands and knees, with a hand lense, to see what is going on," Cinque said. (Hand lense is her term for a magnifying glass.)

She offered the conventioners a tip for detecting cinchbugs: Take a coffee can and cut off both ends. Put it in the ground and add warm water. The little critters will float.

The cultural aspects of lawn problems are particularly challenging to budding grass gumshoes. "Here's where your detective work really comes into effect."

Ask the customer when the problem first became apparent and what it looked like.

What about the progression of the symptoms?

Are other plants damaged? Cinque said diseases and insects do not hit nearby weeds and shrubs.

"Look around at the surrounding lawns—is the same thing happening throughout the neighborhood?"

How is the yard used? "Is the lawn host to the Saturday afternoon football game?"

You probably will want to find out how old the lawn is, and whether it was seeded or sodded, Cinque said.

If it's a sod job, evaluate the

workmanship. You may elect to "just rip it up and start over again."

It is a good idea to determine the thatch level, Cinque said. "This is where a knife would come in handy."

Ask the client about their watering habits. "Most people will not admit that they killed a lawn because they did not water it."

Remember that there can be different types of soil within a single yard. "Certain areas will dry out faster than others," Cinque said.

Mowing techniques are important. Find out how they

cut. "Most customers hate to do it so they move the mower down and scalp it," she said. "The higher the grass, within reason, the better the root system." Also, let the client know that it is important to keep the blade sharp.

Fertilization rates are another factor—including type, timing and amount.

Ditto for pesticides—make sure they've been applied correctly.

Cinque offered another source of turf troubles: chemical spills. "People are using all types of materials and they

don't know where to throw it so it winds up on the lawn."

The clever lawn detective will be on the lookout for vandalism, Cinque pointed out. "Diseases don't happen in four-letter words."

Theft is another problem. Cinque told of a family who had gotten a sod job just the day before she got the call to help them out:

"They went to bed with a beautiful lawn and when they woke up the next morning it was gone," Cinque told the laughing Turf Grass Show attendees.

LCI



Cinque: Be a grass gumshoe!

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Ford also offers many other attachments for grounds maintenance work: rotary cutters, flail mowers, front and rear blades, landscape rakes, scoops and posthole diggers.

State says Jersey LCOs have good track record

By JAMES E. GUYETTE
Associate Editor

JAMESBURG, N.J.—Professional pesticide users in New Jersey are getting good marks for their safety records and the low amount of complaints received by state officials.

The complaint level is going up, but, "I think it's just increased public awareness," said Ray Ferrarin, director of the Bureau of Pesticide Control at the New Jersey Department of Environmental Protection.

Ferrarin was guest speaker

at the annual meeting of the Alliance For Environmental Concerns, Inc. in Jamesburg.

For fiscal year 1986 the Bureau of Pesticide Control received 971 total complaints, up from 628 in 1985 and 529 in 1984.

"Overall, I think that's a very good track record," Ferrarin said.

Sixty-nine complaints were received about lawn spraying (although ground-based tree spraying was included with the figures).

June had the most gripes at 27, followed by 16 in May and 8



Ferrarin: Good track record.

in July. The LCO-type complaints amounted to 7.1 percent of the bureau's total complaint level, ranking fourth in regard to category.

(Unregistered applicators of all kinds placed first with 414 complaints, followed by termite control people at 106.)

Although New Jersey has no posting laws that apply to LCOs at this point, Ferrarin told the group that he is conducting a survey to determine the extent of pesticide use on trees and lawns, pending possible state-wide posting regulations. (Indoor pesticide

users will be included, too.)

The survey is to be conducted in February. "Now don't get too upset yet," Ferrarin said. "Let's get the forms out now and then we'll get your feedback. The ball is in our court right now to come up with some proposals. We're going to see if we're on target."

The Garden State does have notification laws, but they apply only to large-scale users, such as aerial tree sprayers. "It's one that we rassed with back in 1983 when we first introduced notification in the state," Ferrarin said of the issue. "What we will do is narrow the scope a bit" in regard to LCOs and pest control operators, he said.

"The whole ordinance issue really puts us, me, in a bind. It's always finding that balancing point (between the industry and concerned citizens)," Ferrarin said. "What we're doing is basically is regulating courtesy. It's basically homeowners telling their neighbors," he added.

Ferrarin's remarks seemed to generate a positive response from the assembled members of the Alliance For Environmental Concerns. The group includes LCOs, PCOs, golf course superintendents, farmers, nursery operators, Christmas tree growers, restaurateurs, hospital and nursing home administrators, mosquito control specialists, arborists, florists, business operators, public health officials and concerned citizens, said Chris Forth, president.

"We represent quite a diverse group of people here," said Executive Director Ilona Gray. "Organizations such as ours will become even more paramount in the state" as more people take an interest in the issues, she said.

Forth said the group made great progress in 1986. "It's been an exciting year." LCI

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In his tests with pre-emergence herbicides, Dr. Thomas Watschke of Pennsylvania State University got almost the same control in the second year of tests with only a half-rate of application, he said. With no retreat, his plots maintained almost 60 percent control because of the decreased weed pressure, he told those attending the Elanco Products Co. lawn care seminar in Indianapolis, IN.

LCI

ACCLAIM

Summer annuals controlled with minimum toxicity

By JOSEPH C. NEAL

Many preemergence herbicide options are available for the control of crabgrass and other summer annual grasses in turfgrasses. However, for many reasons, escapes and control failures still persist.

Until recently, the only herbicides available for the removal of these unsightly pests were methanarsenates such as MSMA or DSMA. While these materials certainly are effective for crabgrass control, objectionable phytotoxicity to desirable turf species as well as inconsistent control are often observed. Turfgrass managers also cite the necessity for sequential applications to be inconvenient and costly.

Acclaim, a new herbicide developed by the Hoechst-Roussel Agri-Vet Co., will be available for the control of summer annual grasses in cool season turfgrasses. In tests conducted over approximately the last four years, Acclaim has provided excellent control of smooth and large crabgrass, barnyardgrass, foxtails and goosegrass; with minimal phytotoxicity to desirable turfgrasses.

In these experiments, numerous factors have been investigated which may influence Acclaim activity. Among these are: drought stress, weed growth stage, application method, tank mixing and mowing interval. Before discussing each of these factors individually it will be helpful to obtain an understanding of the herbicide's general uses, selectivity, chemistry and action.

General uses and selectivity

Acclaim may be used by professional turf managers for the selective removal of summer annual grasses from athletic turfs, sod farms, lawns, rights-of-way, and other commercial turf areas. Acclaim is recommended for use on perennial ryegrasses, fine fescues, tall fescues, Kentucky bluegrasses (KBG) and annual bluegrasses, but not on annual bentgrasses or warm season turfgrasses.

Table 1 provides a summary of susceptible and tolerant grass species.

Even with tolerant turfgrasses, some growth reduction is to be expected, with certain varieties of KBG exhibiting more phytotoxicity than others. The phytotoxicity which may be observed consists of temporary growth reduction and reddening of the foliage. Plants will generally recover within four weeks.

Mixed stands of bluegrasses



Closeup: Goosegrass plants treated with 0.16 pounds ai/a show death of the growing points. The older leaves will stay green longer than the young foliage.

or of KBG with perennial ryegrass will probably exhibit less phytotoxicity than will a pure stand of a more sensitive KBG variety such as Baron.

two pints of Acclaim IEC per acre. The rate selected will depend on the weed growth stage and the vigor of the weeds; larger weeds or plants under

growing points in the shoot and root. Weedy grasses cease growth within days of treatment, but obvious injury symptoms may take 10 days to become evident.

Yellowing, reddening and death of the growing point is typical of Acclaim injury after two weeks. Reddening of the foliage may become more pronounced before the plants collapse and decompose.

Very little soil residual activity can be expected; however, sensitive species may be injured by small amounts of residues; therefore, a 21-day waiting period is recommended before overseeding with Kentucky bluegrass.

Smaller weeds are more easily controlled with Acclaim. As weeds get larger and begin to tiller, higher application rates will be required to obtain satisfactory control.

know that goosegrass is more difficult to control after tillering than is crabgrass. Therefore, careful attention to plant growth stage and appropriate application rates will pay off in better weed control.

Drought stress

The severe drought in 1986 dramatically demonstrated the impact of moisture stress on Acclaim activity. In 1985 research plots, early applications of Acclaim (two- and four-leaf crabgrass) provided excellent (almost 100 percent) control of smooth and large crabgrass with no phytotoxicity to the Kentucky bluegrass turf.

However, in 1986 similar treatments provided very poor control (see Table 3). Reduced control was attributed to the severe drought stress in 1986. Crabgrass control with MSMA was also affected by drought, but to a lesser degree than Acclaim. Other work has shown that control of goosegrass and barnyardgrass will also be reduced by drought stress.

When making applications to weeds which are moderately drought-stressed, use the next higher labeled rate of Acclaim than would otherwise be recommended for the growth stage and species present. Also, where possible, irrigation several days prior to treatment will improve weed control.

Application method

Although Acclaim is a systemic (translocated) herbicide, thorough coverage of the target weed is essential to obtain the best results. This is best achieved with a pressurized hydraulic sprayer using flat fan nozzles, operating at 30 to 60 psi, with an output of 30 to 60 gallons per acre (gpa) (0.7 to 1.4 gallons per 1,000 square feet).

Application volumes below 30 gpa with flat fan nozzles have provided poorer control; presumably due to inadequate spray coverage. Applications with other low gallonage

See **ACCLAIM**, Page 21

Table 1. SENSITIVITY OF GRASS SPECIES TO ACCLAIM

Very Sensitive	Sensitive	Tolerant
broadleaf signalgrass	barnyardgrass	annual bluegrass
fall panicum	large crabgrass	bluegrass (perennial)
giant foxtail	smooth crabgrass	fine fescue
goosegrass	yellow foxtail	tall fescue
green foxtail		ryegrasses
johnsongrass		quackgrass
		daligrass

Note: Warm season turfgrasses are injured by Acclaim. Source: Hoechst-Roussel Agri-Vet Technical info. bulletin AHF 2463

Bluegrasses are also more sensitive to early season applications of Acclaim than to later treatments. For this reason treatments to KBG are not recommended prior to June 15.

Recently-seeded turfgrasses may be treated with Acclaim, but with certain restrictions. Fine fescue, tall fescue, perennial ryegrass, and annual bluegrass must be established at least four weeks prior to Acclaim applications or significant injury may result.

Kentucky bluegrass is more sensitive; therefore, only established stands (at least one year old) of KBG should be treated. Research has shown that a well established fall seeding will tolerate low rates of Acclaim the following summer; however, immature turfgrass will be injured.

Fescues and ryegrasses may be overseeded immediately following Acclaim treatments; however, a 21-day waiting period should be observed before seeding other turfgrasses.

Chemistry and action

Acclaim is formulated as a 1-pound-per-gallon emulsifiable concentrate (EC) of the active ingredient (AI), fenoxaprop-ethyl. The recommended application rates are between 0.12 and 0.25 pounds AI per treated acre, or one to

stress will require the higher rates.

When applied to susceptible plants, fenoxaprop is rapidly absorbed into the foliage, then transported to

The color photo shows growth stages of a typical grassy weed.

In table 2 the recommended application rates are provided for the appropriate growth stages. It is also important to

TABLE 2. RECOMMENDED RATES FOR ACCLAIM

Turfgrass	Stage of growth for Weeds	Application Rate lb. ai/A	pints/A
Fine Fescues	3 leaf to	0.18	1.5
Tall Fescues	1 tiller		
Perennial Ryegrasses	2 to 3 tillers	0.25	2
Annual bluegrass	4 to 5 tillers	0.35	3
Established Kentucky Bluegrass	2 to 4 leaf	0.12	1
	1 to 2 tillers	0.18	1.5
	3 to 4 tillers	0.25	2

Note: Some Kentucky bluegrass varieties can be sensitive to Acclaim. Use the correct rate for the weed stage of growth to avoid unnecessary use of higher rates.

Source: Acclaim IEC herbicide specimen label

Table 3. PERCENT CRABGRASS CONTROL IN 1985 AND 1986 EXPERIMENTS

Herbicide	Rate (lb ai/A)	Not Stressed (1985)	Stressed (1986)
Acclaim	0.18	100	21
	0.25	—	26
	0.36	100	—
MSMA	2.0	88	71

*Percent crabgrass control relative to untreated plots; visually rated 6 to 8 weeks after treatment. Herbicides were applied when crabgrass plants had 2 to 4 true leaves.

Note: 1985 treatments were not drought stressed; however, 1986 plots were under severe moisture stress at the time of application, resulting in dramatically poorer control than that observed in 1985.



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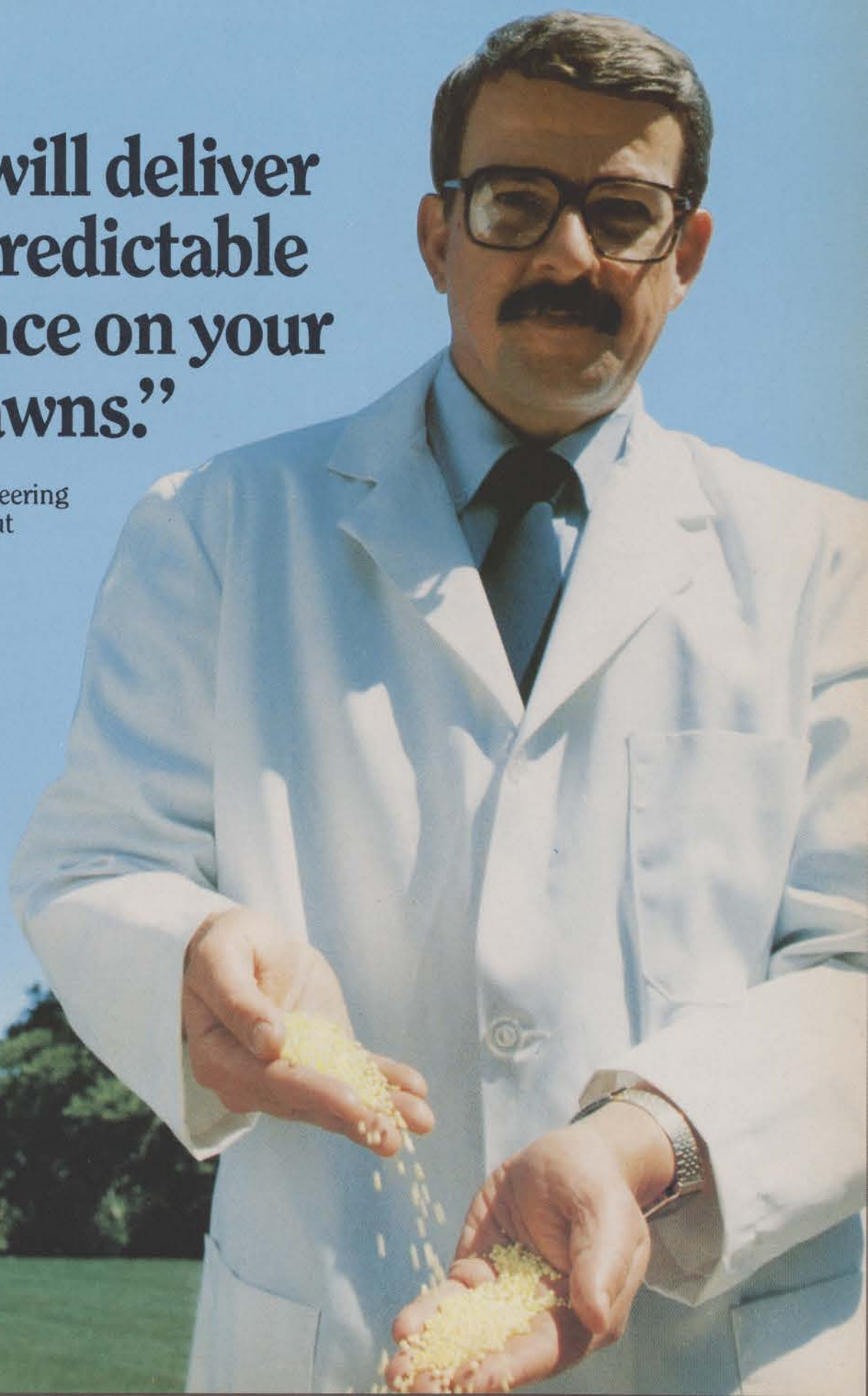
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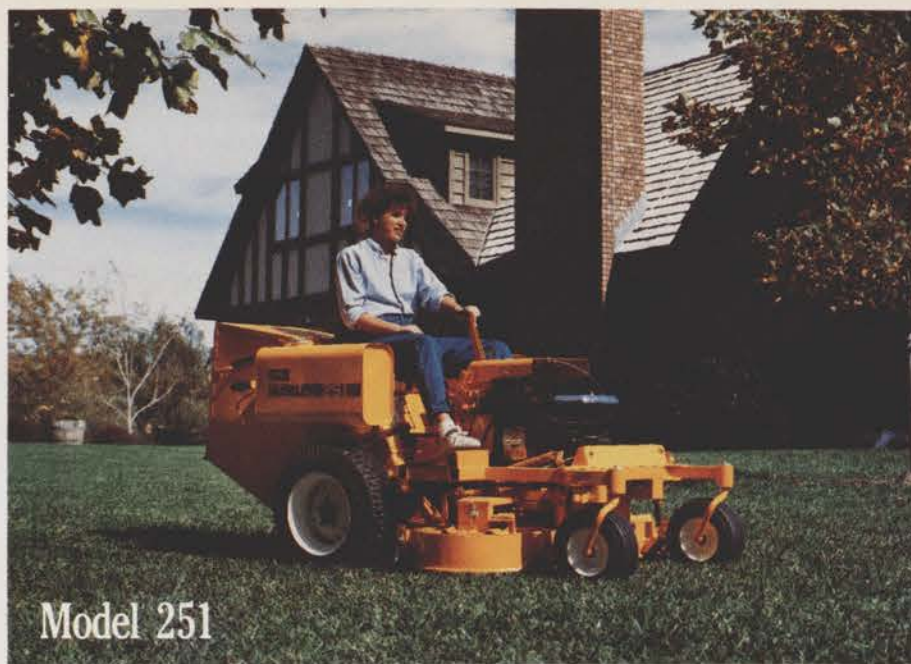
How does the price of Scotts SCU measure up against competitive products? "You'll find that the cost of this SCU compares very favorably with what you're used to paying. Because we have a unique computer-controlled manufacturing process that uses fewer raw materials, we're able to give you a more reliable product at competitive prices."

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Ed Scheiderer, Scotts quality engineering manager (SCU Products), talks about Scotts **sulfur-coated urea**.





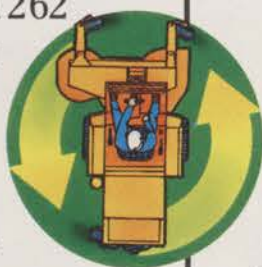
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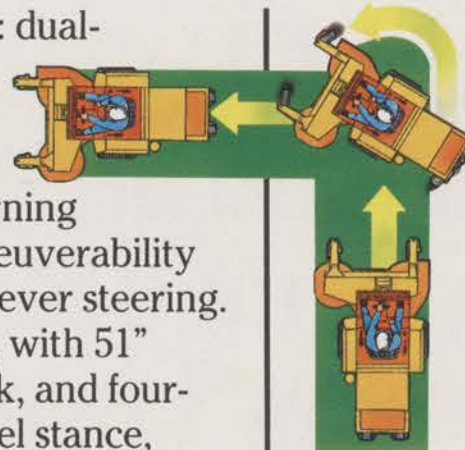
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Model 320
21.5 hp, 72"



Model 340
28.5 hp, 72"



Model 400
34 hp, 72"



Model 602D
32 hp, 72" hillside

ACCLAIM,

from Page 16

equipment such as rain-drop or whirl chamber nozzles, or controlled droplet applicators may also result in poorer weed control; however, more research should be done to investigate ways in which Acclaim might be effectively used with this equipment.

Spray volume up to 120 gpa, applied with flat fan nozzles and a pressured sprayer will produce good results. However, applying the same volume with a large orifice flooding nozzle did not provide acceptable weed control in recent experiments.

Similarly, applications with low pressure (less than 10 psi) handguns have provided less consistent results than applications with the recommended pressurized (30 to 60 psi) hydraulic sprayers. When making high volume applications (greater than 100 gpa) addition of an extra 1/4 percent (by volume) of a non-ionic surfactant will improve results. A non-ionic surfactant is recommended; other types of surfactants may increase the potential for phytotoxicity to the turfgrass. Unfortunately, addition of the surfactant does not enhance the activity of flooding nozzle applications to

a level comparable with flat fan nozzle treatments.

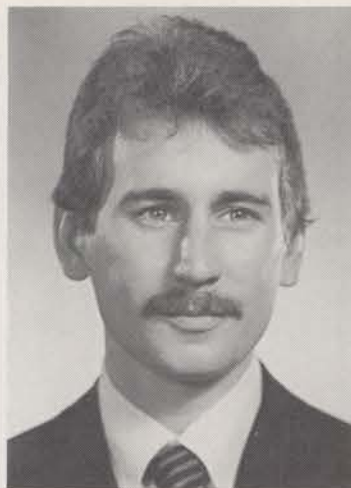
These differences in control are most apparent when the weeds are under some environmental stress. Under good growing conditions, good to excellent control has been obtained with many types of application equipment including those discussed above.

Spot treatments are possible with backpack or hand-held sprayers when these sprayers are properly equipped with pressure gauges and flat fan nozzles. When making spot treatments with these types of sprayers it will be important to maintain a constant walking speed. With constant speed, pressure and nozzle output, a hand-held sprayer may be calibrated in the same manner as a tractor-mounted spray rig.

Mowing

All aspects of turfgrass management will affect weed growth, and in many cases, herbicide efficacy as well. Proper mowing height and frequency not only reduces weed pressures and maintains a dense healthy sod; but also affects the performance of Acclaim.

The growing points of grasses are close to the base of the plants. In closely-mowed



About the Author

Joseph P. Neal, Ph.D., is assistant professor of weed science at Cornell University, Ithaca, NY.

areas, these growing points are more exposed and thus are more accessible to herbicide sprays. Control under these conditions has been excellent. However, close mowing prior to treatment may remove tender growth and cover the weeds with clippings; both factors contributing to reduced control. Conversely, turfgrass which is too tall may cover the weed growing points and make it difficult to obtain the necessary spray coverage.

The optimum timing is to make the Acclaim application after regrowth from mowing

has occurred but before the turfgrass has reached cutting height (recommended cutting height will vary with turfgrass species and level of management). This will provide accessibility to growing points as well as lush growth for rapid absorption of the herbicide.

Do not mow the grass within 24 hours after treatment as reduced control may result. Adequate time must be allowed for the herbicide to translocate from the foliage to the growing points.

Tank mixing

Tank mixing Acclaim with preemergence herbicides such as DCPA (Dacthal), bensulide (Betasan), or pendimethalin (Pre-M or Weedgrass Control), for early postemergence applications (two- to four-leaf crabgrass) has provided excellent season-long weed control. Such tank mixes have two obvious advantages.

First, the guesswork of pre-emergent herbicide timing is eliminated. Often pre-emergent herbicides are applied too early to be effective because the volume of business prevents timely applications to all areas. As a result, second applications are usually necessary or skips in control will occur. With early post tank mix treatments, the pre-

emergent timing will be late enough to provide season-long control with a single application.

Secondly, since the application is early postemergent, the timing for Acclaim activity is optimal.

Do not tank mix Acclaim with broadleaf herbicides. Experiments have shown that reduced crabgrass and foxtail control will result when Acclaim is tank mixed with phenoxy or benzoic acid herbicides. These include 2,4-D, MCP, 2,4-DP and dicamba.

There is also evidence to suggest that triclopyr (Turflon) tank mixes will reduce Acclaim efficacy. Even separate applications (not tank mixed but applied on the same day) will result in reduced grass weed control. If possible, allow five to seven days interval between broadleafed weed control treatments and Acclaim treatments.

In summary

Acclaim is an excellent herbicide for the control of crabgrass, goosegrass and other summer annual grasses in cool season turfgrasses when applied according to label directions. Many factors

See **ACCLAIM**, Page 24



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Before

These "Before" and "After" pictures were sent to us by a user in Texas. The turf was very chlorotic, obviously dry, and had not responded to prior fertilizer and water treatment. Ferromec was applied in split applications of 5 ounces per 1,000 square feet.



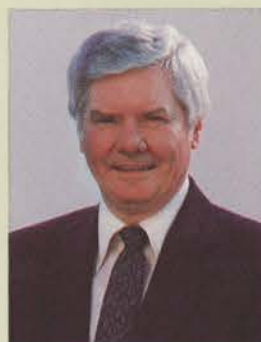
After

The initial response in 48 hours was very dramatic and, as the "After" photo demonstrates, chlorosis was eventually eliminated. Don't you have a spot where you would like to test a sample of Ferromec?

Turf, Shrubs, Plants Green Up in 48 Hours With Fe^{++} FERROME[®]C Iron

Let us send you a sample of Ferromec so you can see for yourself how fast, easy, and economical it is to change the color of your world (and perhaps your wallet) from a weak chlorotic yellow to a strong, vibrant green.

Everett Mealman, President
PBI/GORDON Corporation



No wonder we are so eager to get a sample of Ferromec in your hands!

The Facts About Ferrous Iron and Ferromec

Perhaps you are interested in knowing why it is that Ferromec is able to produce such a superior response. It's because of a patented process that enables us to actually bond a ferrous iron molecule to a molecule of urea, so that the iron is stabilized in the ferrous state.

As you know, only iron that is in the ferrous state can be utilized by a plant. But *ironically*, untreated ferrous sulphate turns to the non-usable ferric state almost immediately when it is applied.

Thousands of turf and landscape professionals, as well as countless nurserymen, used Ferromec for the first time in 1986, and to summarize their response in one sentence...

"... Thanks! I needed that!"

Ferromec causes green up virtually over night in some instan-

ces. It speeds up the activity of herbicides. It reduces the tendency to over-fertilize in an effort to produce fast color. It provides a quick therapeutic shot of iron ...and it does all this so easily and economically that the practice of using expensive, slow-working chelated iron will never be the same again. Nor will the practice of over-fertilization.



Before



After

Trees, shrubs, and herbaceous plantings will respond to Ferromec as dramatically as turf, when they are deficient in iron. These before-and-after pictures show how Liriope greened up when Ferromec was applied in August of 1986.

Thus it is that scientists devised chelating to fix the iron molecule in the ferrous state. If chelating is properly done it is effective, but it is very expensive and is so slow to release that it takes a long time to produce a significant color change.

Ferromec, on the other hand, works right now! The PBI/Gordon patented process of bonding ferrous sulphate to the urea molecule not only keeps the iron stable, but also speeds up the process of plant intake.

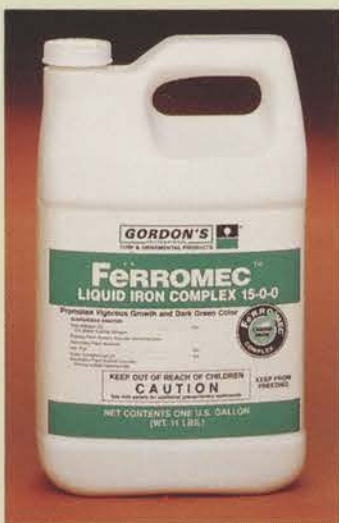
Because plants have such a voracious appetite for nitrogen, they ingest Ferromec right now via foliar intake to get the urea, and presto-chango...they ingest the iron right along with the urea, and it's green-up time in your world.

New Formulas for Multiple Tank Mixing and Soil Deficiencies

Amid last season's applause for Ferromec were several friendly tips for making it even better.

First of all, some lawn care companies wanted enhanced iron mixing compatibility for multiple tank mix situations containing an amine herbicide. To fill this need we have developed Ferromec AC.

Others wanted an amine compatible Ferromec containing manganese, and for them we developed Ferromec MAC as well as Ferromec M. Still others wanted a Ferromec to use in situations where there are multiple micronutrient deficiencies, and for them we have developed Ferromec MZ.



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*Offer expires June 1, 1987.



These side-by-side containers of Manhattan Euonymus, pictured at a nursery, show what Ferromec can do for the nurseryman. The plant on the right was as chlorotic as the one on the left before it was sprayed with Ferromec.

If You Have Questions About Iron, Talk to Ironman Himself.

Iron is definitely established as an essential micronutrient required by all plants. Yet, the amount required can vary dramatically depending on the pH of the soil, the composition of the fertilizer that is being used and the plant that is being fed.



To help you better understand how to use iron in your turf program, we invite you to visit with Neal Howell, our Plant Nutrition Product Manager. He is a leading authority on iron and is as near as your telephone when you have questions.

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ACCLAIM,

from Page 21

potentially may affect the type of control which you will obtain. These include the following:

1) Weed control stage:

As weeds get larger, a higher application rate will be required to obtain satisfactory control.

2) Drought stress: When treating weeds which are under mild moisture stress, a higher rate will be more effective. Severe drought stress will dramatically reduce Acclaim activity. If possible, irrigate a few days prior to treatment when it is dry.

Application method:

The best results are obtained with flat fan nozzles operating between 30 and 60 gpa; however, good results can be obtained with other equipment. The important thing is good coverage of the weeds.

4) Mowing: Do not mow immediately prior to or immediately after Acclaim applications. Wait a few days after mowing before treatment. Wait about 24 hours after treatment before mowing.

Tank Mixing: While Acclaim does an excellent job alone; tank mixes with pre-emergent herbicides have provided better overall season-long performance. Do not tank

mix Acclaim with broadleafed weed control herbicides.

These topics and others are discussed on the herbicide label. By carefully following the directions and precautions on the label, excellent grassy weed control can be obtained with Acclaim. Before using any pesticide, read the label carefully; the information with the least risk to desirable plants, the user and the environment.

LCI

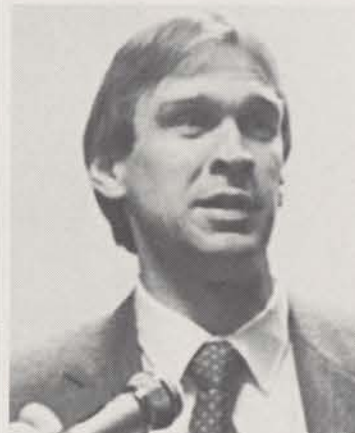
"I know I saw it in LCI."

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Cultivation is OK after preemergents applied

By JAMES E. GUYETTE
Associate Editor



Branham: Keep on cultivating.

COLUMBUS—It is OK to core cultivate after using pre-emergence herbicides, according to a study at Michigan State University.

"It would appear from what we've seen here that you can go ahead and cultivate after applying herbicides," said Dr. Bruce Branham, a turfgrass specialist at MSU's Department of Crop and Soil Sciences.

Branham was in Columbus to speak at the Ohio Turfgrass Conference and Show.

The MSU experiment, involving crabgrass control, was done over two seasons.

Four plots were used: One was core cultivated three inches deep with one pass; another was core cultivated three inches deep with three passes; vertical mowing was done on another plot, while the fourth served as a control plot.

"Cultivation had no effect on the crabgrass control on our plots," Branham said.

"I was quite shocked when I got these results," he said, "I didn't set out to find this."

Branham added that "vertical mowing is perhaps the most damaging" to pre-emergence herbicide applications.

The experiment results could be an economic benefit because it means that cultivation work can continue even after the herbicides are applied, he said.

Overseeding should be done well before the application of herbicides, Branham said in response to a question from the audience.

Another spectator wanted to know why crabgrass grows more often near sidewalks and driveways. Branham said crabgrass is attracted to the heat generating from the cement.

Someone wondered if broadleaf weeds increase after cultivation.

"If your turf's in good shape ... the answer would be 'no' because it's going to heal up quickly," Branham replied.

"The best defense against a weed is a tight, robust turf," he said with emphasis.

LCI

EXPO,

from Page 1

There will be about 30 educational sessions.

The Landscape Exposition is sponsored by WEEDS, TREES & TURF and LAWN CARE INDUSTRY magazines. HBJ Expositions is managing the show.

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Avoid unsafe practices by checking trucks, drivers

By JAMES E. GUYETTE
Associate Editor

As the snow continues to fall in most parts of the country, now might be a good time to curl up in front of the fire and review the safety program for your trucks.

What safety program?

You are not alone if you ask that question of yourself, because experts in the safety business say that it is usually viewed as a low priority matter—until there is an accident.

"Think about the cost to you and your company for not being prepared ..." said Dr. Chuck Darrah, director of technical services for Chemlawn Services Corp.

"Probably the biggest thing is selecting the drivers," said Gene Gladziszewski, a loss control manager for Nationwide Insurance. People in the lawn care industry tend to hire employees for other skills, not their driving ability, or lack thereof.

"They forget that driving might be an important part of the job," said Gladziszewski. "Probably the last thing owners do is check what their driving history has been."

The Associated Landscape Contractors of America recommends that potential driv-

ers' records be checked and a road test given if necessary.

The more mature members of a crew should be behind the wheel, said Skip Smayda of Liberty Mutual Insurance. "Statistically, you're going to have better luck with older fellows," he said.

Make sure your drivers are licensed. Sound silly? A lawn management contractor in Cleveland once sent out a crew foreman whose license was under suspension—and the company truck had expired plates! The only harm done was a costly ticket from the local police, but imagine the legal and financial consequences if that vehicle had been involved in an accident!

"Safe driving is a management concern," said Gladziszewski, and employees should never be allowed to forget it. "Make sure that safe driving is an important part of the job."

A defensive driving course for workers is a good investment. ALCA suggests that "tailgate meetings" be conducted periodically by supervisors to ensure that safety concerns are discussed and kept fresh in the mind.

Notices placed in paycheck envelopes and little safety awards, such as a pin, dinner

or sporting event tickets are a good motivational factor, Smayda said.

In addition to a preventive maintenance program to detect mechanical difficulties, trucks should be outfitted with a first aid kit and instructions, an insect bite kit and a fire extinguisher.

Because vehicle fires happen so quickly, the fire extinguisher should be in the cab within grabbing range of the driver—and no fair stuffing it behind the seat under the raincoats!

"Having it out of sight is a bad deal," said Chief Terry Weber of the Fire Prevention Bureau of the Ohio State Fire Marshal's Office.

"Usually we want to keep emergency equipment in plain sight," Weber said. This makes people aware and makes it easier to inspect the gear and keep it up to date.

There are different types of extinguishers for different kinds of fires, and it is important to use the correct model. "We recommend that if you go to the trouble of buying a fire extinguisher that you know how to use it," Weber said.

When stowing gas cans—clearly labeled, of course—in the bed, use bungi cords to keep them in place. "We don't

want that container to be moving around or falling over," he said. A spill that drips on an exhaust pipe can cause a fire.

String trimmers and edgers are included. "Be sure that the gas tank on the equipment is tightly capped when they move it," Weber said.

Oil/gas can catch fire, too. "If you mix a little oil in it, it doesn't make it any less dangerous. The vapors from gasoline are dangerous all the time," he said.

"Most fires involving that type of equipment occur during refueling," Weber said. (Leaking fuel lines are the No. 2 cause.)

No smoking while filling fuel, even if it just takes a second, and don't turn a hot mower over to look under it. (Fire cause No. 3.)

Weber said that technicians should not refuel a mower while it's still hot. "Maybe that's a good time to sit down and rest."

Chemicals, even small amounts, should not be kept in the cab, said Doug Mampe, a consultant to the pesticide industry. "If there is an accident or spill the driver doesn't have the chemical on top of him," he said.

Chemicals should be stored



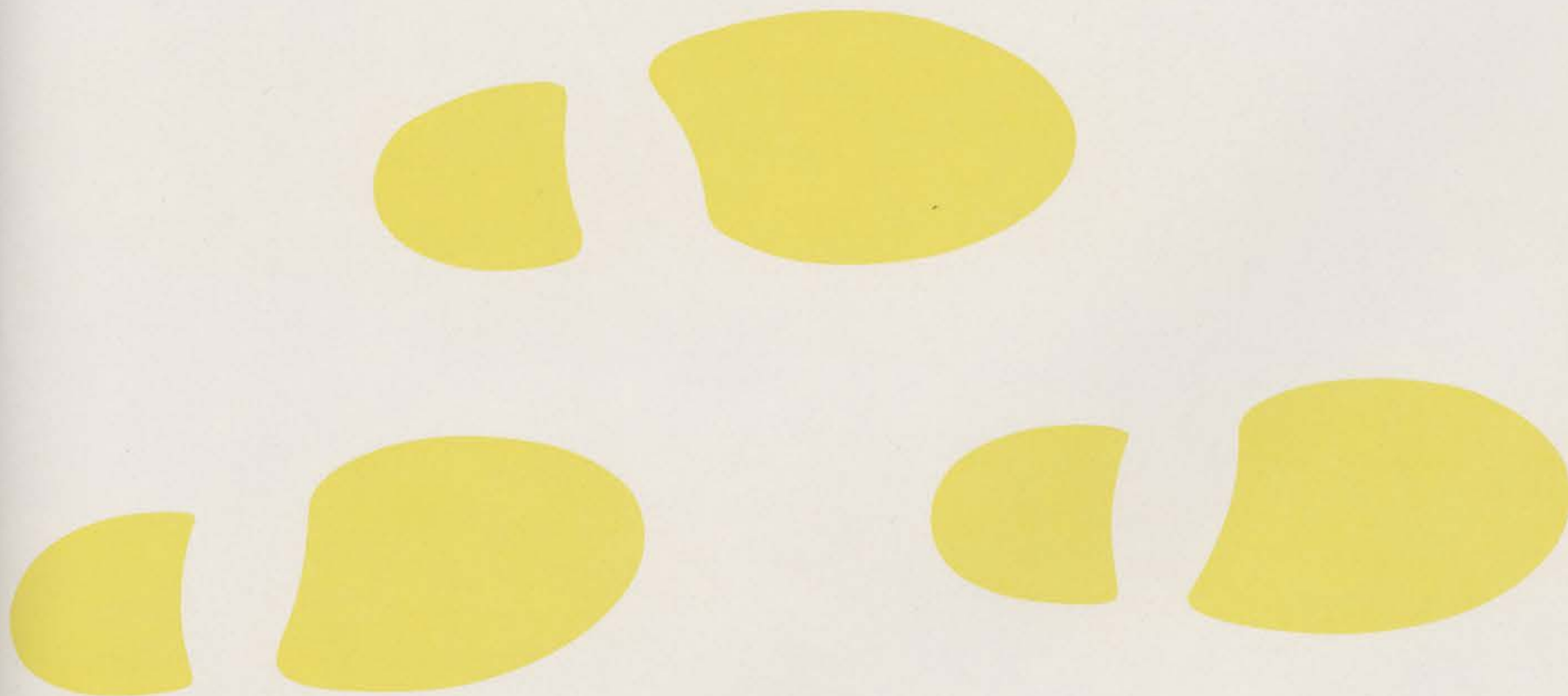
Darrah: Plan for spills.

in separate unbreakable containers under lock and key to protect the general public from accidental contact, Mampe said.

Some sort of absorbent material should be on board. Mampe said a product called "Spill Control" is good because it turns into a gel when used. "You can scrape it up and put it right back into the spray tank."

Chemlawn's Darrah recommended the Hazorb absorbent pillow from Precision Laboratories, Inc., Northbrook Ill. "The Hazorb pillow is an excellent containment device," he said.

See SAFETY, Page 68



ADDING,

from Page 1

There are varied opinions as to whether lawn management people should get involved with landscape construction.

● **Not if you can help it!** That's how Fred Sydow feels. Sydow, owner of the Sydow Construction Co., Middleburg, FL, builds gazebos, decks, docks and assorted forms of precision woodworking. "If you don't know what you're doing you'll get yourself in trouble," he said. His helpful advice: Subcontract, let a pro like himself do the work—it will get built faster, better and with fewer headaches.

● **Go for it!** That's the opinion of Richard Gaffney of Gaffney Landscaping, South Euclid, OH. Serve the customer, he said. "The general public thinks that if you cut the grass you do the installs, too. Today people are more concerned with getting it done rather than who is doing it or how much it costs," he said. "That's the big thing—getting it done, they don't want to be put off." If you are unfamiliar with the task at hand, hire someone with the proper experience to help—or use a how-to book. "The only way you can do anything is to just jump in and do it," Gaffney said.

● **Be careful!** Richard D. Akerman of Oregon Landscape Maintenance, Tigard,

OR, echoed Sydow's comments as he warned his colleagues to avoid getting in over their heads, particularly because some insurance policies do not cover special projects. "I hear insurance horror stories every day in the industry. If you're going to do something, know how to do it and know how to do it well," he said.

The landscape construction business continues to expand. "It's growing like crazy," Sydow reported.

"People can't afford vacations so they're staying home ... and taking pride in their homes and places of work," said Teddi Davis, marketing executive with the Garick Corp., Cleveland, OH.

Garick, a wholesale landscape supply and lumber company, was ranked No. 256 out of the 500 fastest-growing privately held companies in the United States, according to *Inc.* magazine, grossing about \$2 million annually after being in business for just six years.

Company Vice President Gary Trinetti said the field shows no signs of slowing down. "I believe that a lot of your readers could tap into that market," he said. "I think there's a niche there."

Boost the price

Homeowners will find landscape improvements a particular boon, especially if they are



Hard edge: Customers of Lawn Care Associates, Ludlow, MA, will be offered the use of plastic edging made by Eberhart Steel Products Corp., Mishawaka, IN.

planning to sell, according to David Yurko, an associate realtor at Metro Brokers, Atlanta, GA. "It will add somewhat to the price and it will help sell the property quicker, which in itself is a value," he said. About 30 to 50 percent of the landscape improvement cost can be added to the price.

(Kitchen and bathroom work is No. 1, with a 75 percent add-on rate.

An in-ground pool rates only 10 to 50 percent, and could be a drawback. "Most people say, 'I'd rather have a pool down the street and not have to take care of it,'" Yurko said.)

Know the client

When undertaking an additional project it is important to discover exactly what your customer wants. "It all depends on their personality and style," said Marie J. Bradway, project coordinator at Lawn Care Associates and LCA Enterprises, Ludlow, MA.

Are they formal or informal? Do they like rustic or contemporary?

"All you have to do is find out what the person wants and what they have in mind for a budget," Bradway said. "They can spend as little or as much as they want, but you have to find out how much. Don't waste your time or the cus-

tomers' time." If the client desires a Japanese garden, "you're not going to get it with \$1,000," she said.

"A lot of it depends on the soil," Bradway continued as she discussed how to plan. "Will it grow there? Will it withstand the weather?"

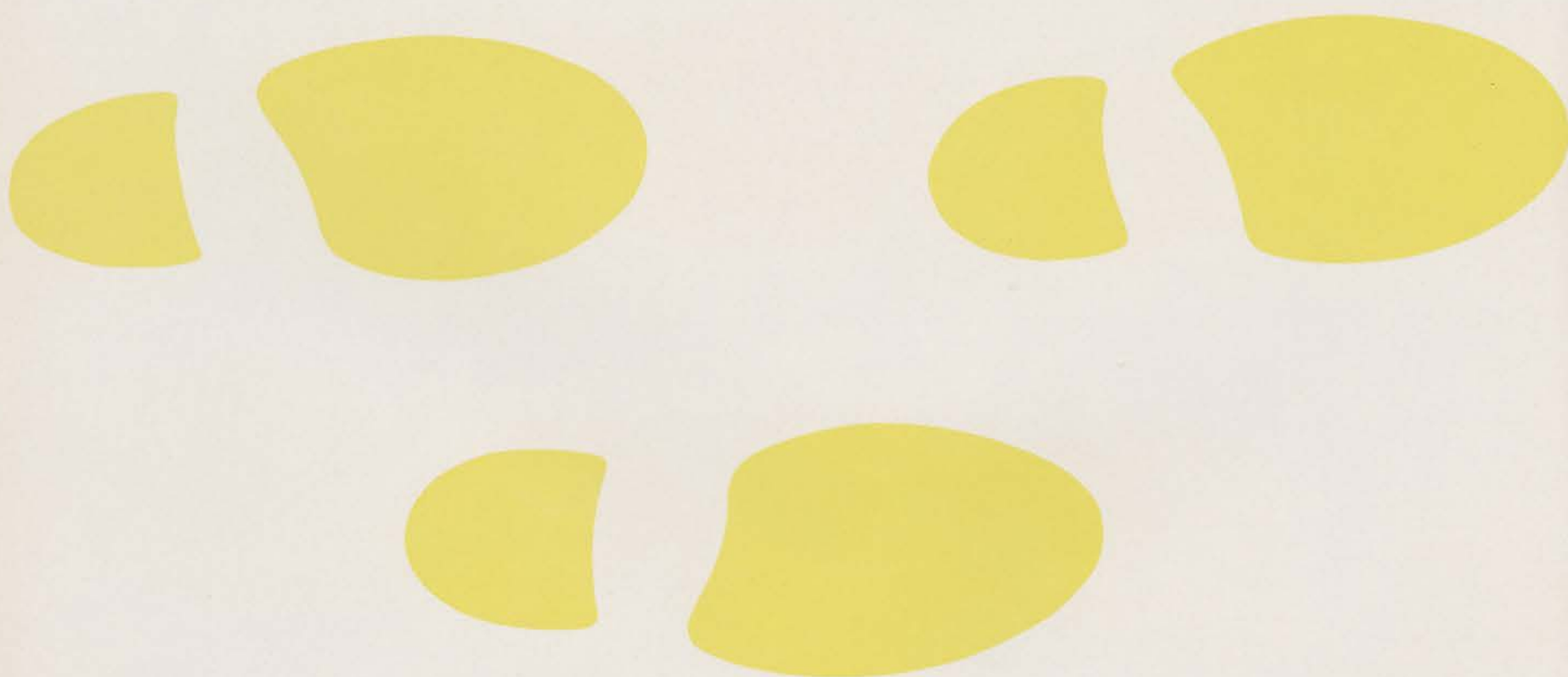
Guide the customers with ideas of your own. "You've just got to let the people know what you offer," she said.

In Bradway's part of the country the old-style stone wall is popular for fencing. "People ask for that all the time. The stone wall is typical New England," she said.

The colonial settings lend themselves to beds of natural, low maintenance flowers.

"Edging is good because it puts down a good line to mow by," Bradway said. Aluminum is out: "It looks cheap." But plastic edging by Valley View Specialty Co., Crestwood, IL, is a good product, she said, and starting this year customers will be offered plastic edging made by Eberhart Steel Products Corp., Mishawaka, IN. The small sections are handy for use around curves, Bradway said, and the smaller boxes it comes in makes it easier to transport and work with.

Bradway emphasized that callbacks are a waste of time and money, and LCA reduces them because "we always use the highest quality materials."



Among them are cloth weed barriers made by the DeWitt Co., Inc., Sikeston, MO. "In the long run it saves you hassles because if you don't have it you're going to be out there pulling up weeds," she said.

New Englanders are not partial to stone in their beds. Bark mulch is preferred over nuggets by Bradway because "it's much easier to work with ... I think it looks a lot nicer."

Learn the job

"If you're going to expand your horizons you have to have the experienced people," said Akerman of Oregon Landscape Maintenance. Either subcontract or first try out a task on your own before doing it for a customer. A poor job will irritate even a steady patron: "Then they lose the account," he said. To a small operator, a lawsuit "can take everything he owns" if there is not proper insurance coverage.

"I wouldn't get into designing things if I'm not in the design business," Akerman said.

Gaffney of Gaffney Landscaping encouraged his colleagues to tackle difficult jobs just to get the experience under their belts, assuming you are insured. "Find the right books, find the experts," he said. "You just do it."

Plan your workload

Often when a smaller oper-

ator takes on an extra project the routine work gets neglected, Akerman cautioned. "Other customers falter because he can't get to them."

"You've got to be on top of things and schedule so you don't get behind," said Richard A. Hettrick Jr., production supervisor at Earthtone Development, Inc., Houston, TX.

"The best thing you can do is not ignore people," Hettrick said. "You can't say, 'Ya, I'll get it next week,' and then take a month." When at the jobsite make sure the order is taken correctly: "You'd better have a pen and paper with you

so you remember."

"Allocate your easy work," Gaffney advised. Hire extra help, work longer hours or Saturdays. If you still get behind, just be honest. "If the people call I tell them that I'm working on a big job. They like to see you get a big job once in a while. It intrigues them," he said.

Check with your supplier

It is not a bad idea to form a close relationship with the supplier of your materials, said Davis if Garick's. It can be a big help. "The terminology is confusing," she said. "You kind of have to find out what

terminology they're using."

For example, "there's a difference between pressure treating and dipping," Davis said, adding that even redwood used for decks and fences can vary. "Is this a nice redwood stain (on regular boards) or is this a redwood tree?"

The railroad tie has variables, too. They can be treated with the oil-based creosote or the salt-based chromated copper arsenate, often known as CCA or wolmanizing. Sometimes ties made of pine last longer because the softer wood accepts the CCA treatment better, Davis said.

It is best to check with your supplier before ordering any materials, Davis concluded.

Regional tastes

Different parts of the country are partial to different styles, as witnessed by Bradway's account of New Englanders' preferences.

In the southwestern area, "what we're after down here is a very manicured look," said Hettrick in Houston. Flowers featuring seasonal color, such as potted begonias and pansies are big. Jasmine makes a popular ground cover and grass has to be smooth. "We try to keep it flat like a glass top," he said.

Shrubs are used a lot to shield air conditioner covers, and a uniform cut is part of the plan.

"We do a lot of tropical look," reported Joan Hickman, manager of the maintenance division of Smallwood Landscaping, Inc., Naples, FL. "It's more of an organic shape than the symmetrical look," she said.

A "sense of tropicalness" with rough textured foliage and lots of colors for accent are hot on the Gulf Coast, said company President JoAnn Smallwood. Landscape design is a big issue because "here you can live outside 365 days a year."

The rolling hills, sloped lots and sandy soil of Atlanta lend themselves to retaining walls and the use of sod, said Associate Realtor Yurko.

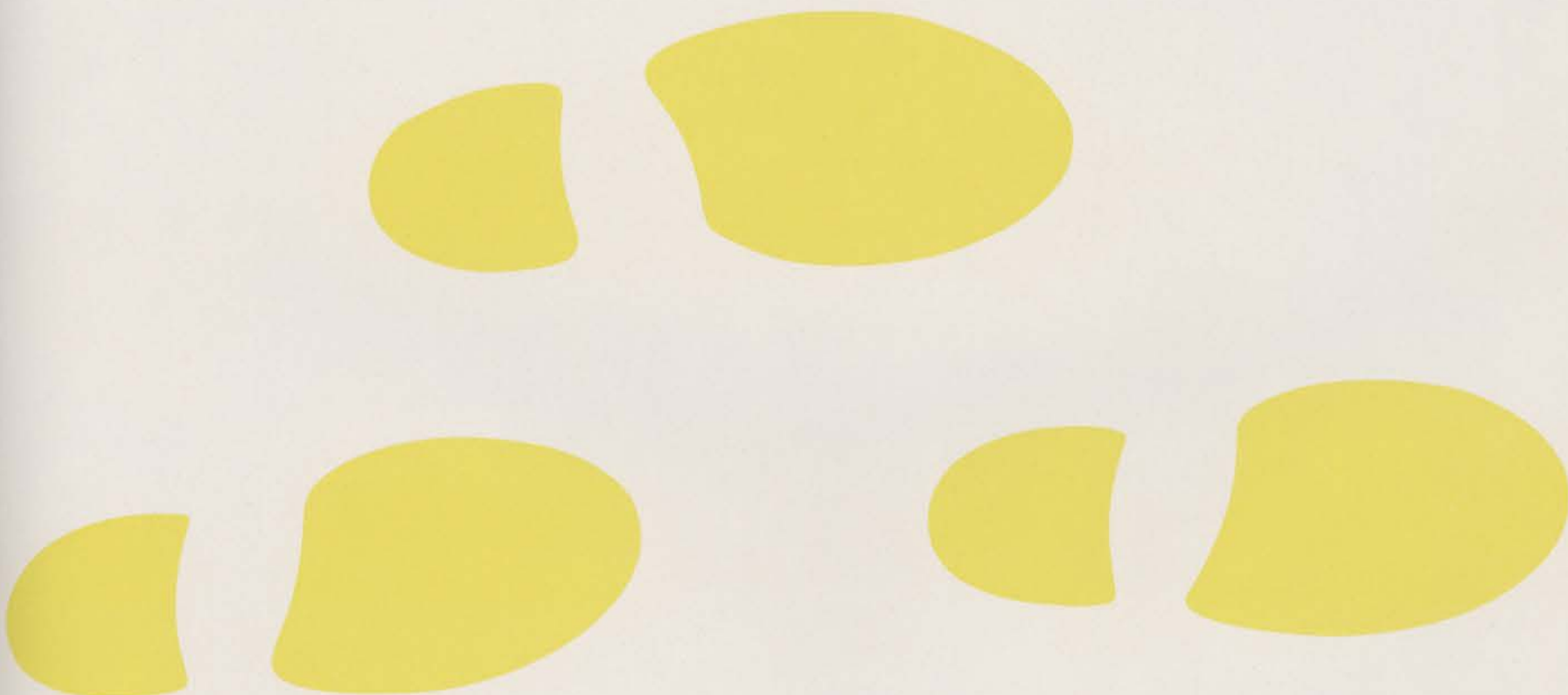
Seasonal colors are blooming in the Northwest, said Akerman, with some plantings being done two and three times a year. The fitness craze is reflected in commercial accounts as more and more firms are installing putting greens, running paths and basketball courts.

That has to be good news for Sal Rizzo. His Salsco, Inc., Cheshire, CT, markets the Sidewalker, a smaller paving machine, for under \$10,000. With a paving speed of 50 feet per minute, Rizzo said it's perfect for doing extra projects with asphalt. "They can go in and do jobs that they have never been able to do before," he said.

LCI



Sideline: Business operators looking for additional projects may want to use the Sidewalker, made by Salsco, Inc., Cheshire, CT. "They can go in and do (asphalt) jobs that they've never been able to do before," said owner Sal Rizzo.



BUYS,

from Page 1

million in 1985, a 21.4 percent jump over 1984.

Shur Lawn was ChemLawn's major competitor in both cities, Poll said.

American Turf Beauty, Inc., which bought Shur Lawn's Cedar Rapids, IA branch, will merge that branch with an existing All American Turf Beauty branch in that city.

ChemLawn will incorporate Lawnrite's 5,000 lawn care and 900 tree/shrub care customers into its existing three branches on Long Island, said William Vorn Holt, vice president of east coast operations.

Lawnrite was one of ChemLawn's major Long Island competitors, Vorn Holt said, along with Tru Green Corp. and Lawn Doctor, Inc.

Vorn Holt said Lawnrite, founded by Paul Kampe and his wife, Linda about 12 years ago, had revenues of about \$1 million and 14 employees. "We feel good about it and so does he (Kampe)," Vorn Holt said. "He's done a good job with his business. They're the kind of customers we would like to have."

Vorn Holt said Kampe will help manage special projects for ChemLawn after he phases the Lawnrite customers into ChemLawn's operations. He



Weidler: Plans uncertain.

said he expects most of the 14 Lawnrite employees to be offered positions.

Barefoot Grass

Barefoot Grass's acquisition of Tempo 21 will give it five branches and about 85 employees in the Chicago area, making it second only to ChemLawn. "It definitely puts Barefoot into a stronger position in the market," said ChemLawn's Poll.

The most significant aspect of the acquisition is that more of the Chicago market will be serviced by all-dry fertilization, Poll said, a feature of Barefoot's lawn care program.

Robert Parmley, president of Tempo 21 which he started with three employees and one truck in 1972, will serve as co-manager of Barefoot Grass's Chicago branches. He will supervise administration, com-

puter systems, marketing and some commercial sales.

"We did see it as a strong opportunity for all of our people," Parmley said. "That was one of the reasons we listened to them when they came to us. We're really excited because Barefoot is number four in the industry and they have a good growth record."

Barefoot Grass had about \$22 million in lawn care revenue in 1986 while Tempo 21 did close to \$2.6 million. Patrick Norton, president of Barefoot Grass, expects 1987 revenue to top \$30 million with more than 150,000 customers.

Norton noted that prior to the acquisition, Barefoot Grass and Tempo 21 vied closely for the number two position in metropolitan Chicago, along with Excelawn Corp., Tru Green Corp. and Spring Green Lawn Care Corp.

According to LAWN CARE INDUSTRY'S 1986 Million Dollar List, Barefoot Grass was the number four firm in the country with revenues of \$16.5 million in 1985. Tempo 21 was number 22 with revenues of \$2.4 million.

LCI If you are interested in obtaining any available or additional editorial research or reference materials published in this or previous issues, direct inquiries to Kathleen Maciuszko at 216-826-2839.

NOISE,

from Page 1

said. "People object to something like this (being used) every day," he said.

Don't even *think* about using a gas-powered leaf blower in Carmel, or the mayor might turn you every which way but loose. The machines have been illegal there since the 1970s, said Greg Dambrosio, assistant city administrator. Mayor Clint Eastwood could not be reached for comment.

Landscape management contractors originally objected to the law, but now there are no complaints, Dambrosio said. "They can use electric leaf blowers."

"The ones I know don't use them," said Hawken, noting that the hilly terrain is not suitable for growing large areas of grass. "This isn't lawn country," he said. "I don't think there's a flat piece of land within 30 miles of here."

Belvedere City Manager Ed San Diego said the ban could cost landscape management customers extra money for raking, but they don't care because they can afford it. (The average house there costs \$615,000.)

"It was acknowledged that there would be an economic impact, but the extent was unknown," San Diego said. "The reason behind the ban was

noise pollution. A lot of people work in their homes."

The towns of Sausalito and Ross also have swept out the machines, and Mill Valley has a partial ban.

Hawken said leaf blower makers have only themselves to blame. "The industry has not effectively dealt with the noise issue." If the machines were quieter "there'd be no fight and no problem. They can either spend the money to lobby (against local ordinances) or they can retool (and make softer-sounding blowers)," he said.

The technology needed for such a task at this point would make blowers too expensive for people to afford, said Bob Rubin, manager of engineering for Billy Goat Industries, Lee's Summit, MO. "The cost would be prohibitive."

The fans and intakes have to be loud to work correctly, Rubin said. "Look at the home vacuum cleaner, they've been around for years and they're still noisy—at least I haven't seen a quiet one yet."

Besides, said Rubin, people sometimes object to leaf blowers because their neighbors deposit debris onto their property. "It isn't so much the noise, but they're using the noise (issue) to get back at them," he said. There should be no trouble if "you use good common sense" in picking up the leaves. LCI





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What are the real benefits of 'organic' products?

By NORMAN W. HUMMEL, JR.

The lawn care industry has been plagued recently by very negative and misleading publicity. As a result, it has been pressured to consider alternatives to conventional lawn care programs. Among them are the "organic methods."

"Organic" is probably the most misused word in the green industry. The definition of the word has not been consistent; therefore, there has been a great deal of confusion over what is and is not organic.

If you look up "organic" in any English dictionary, you will realize that it is the English language itself that is the source of this confusion. There are 12 definitions of "organic" in my dictionary. Here are a few examples:

organic—of, relating to, or containing carbon compounds.

Many products used in the green industry would fall within this definition, including urea and most pesticides.

organic—of, or relating to, or derived from living organisms.

This definition more closely defines organic as most of us think of it, but it is still very vague.

organic—relating to, produced with, or based on the use of fertilizer of plant or animal origin without use of chemically formulated fertilizers or pesticides.

This definition of organic is probably what is most often meant when "organic" gardening or lawn care are mentioned.

Perhaps a better way of defining organic products would be to describe them as natural as opposed to synthetic organics.

Unfortunately, there are some in the green industry who have capitalized on the loose use of the term "organic." There are many products on both the commercial and consumer markets that claim to be organic.

However, some of these products may be called organic simply because they contain carbon compounds when the lawn care operator is interested in a natural organic.

For example, there is one "organic" product on the market that has an analysis of 19-0-2. The literature on this product is critical of synthetically produced fertilizers because of the stress they create when applied to turf.

Closer examination of the label of this product shows that 98 percent of the nitrogen is water soluble nitrogen in an organic slurry. The source of nitrogen is urea, a synthetic organic fertilizer! This is just one example. There are many more like it.

Natural organic fertilizers do exist and are available. The

CONFUSION IS CAUSED BY THE MANY DEFINITIONS OF THE WORD

lawn care operator should be careful, however, when selecting organic products for his program.

Most natural organic products have a nitrogen analysis of 10 percent or less, more commonly in the one to three percent range.

If organic fertilizers have an analysis of much greater than 10 percent, you can be relatively sure that the fertilizer analysis has been upgraded by a synthetic nitrogen source.

Synthetic soil conditioners

This past August, I spoke at an organic symposium on the importance of organic matter in the soil. A representative from LAWN CARE INDUSTRY was present at the meeting and reported on it in the October issue. Unfortunately, much of the information I presented at the symposium is in need of clarification.

The points that concern me most with the article have to do with the use of the term "organic soil conditioner"

(OSC).

An OSC is not the same thing as soil organic matter. The importance of organic matter in the soil is indisputable. However research has yet to prove that the addition of an OSC to a turf will have the same effect on the soil as organic matter that developed in the soil over a period of thousands of years.

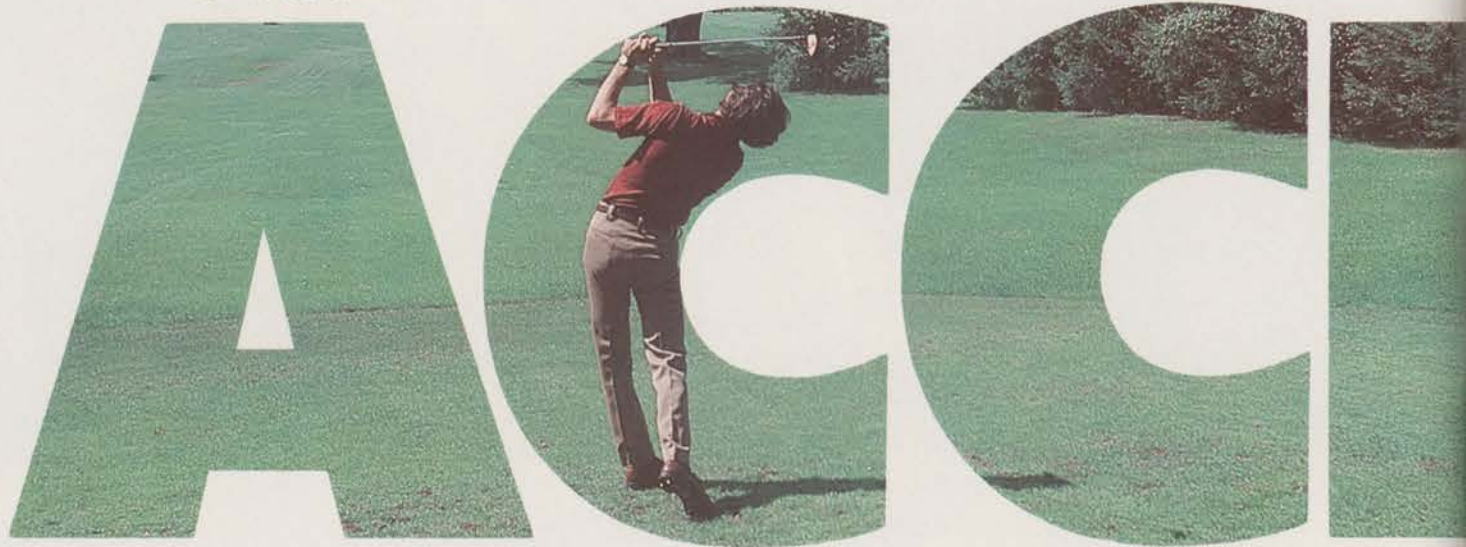
Organic matter is an essential component of any productive soil. Organic matter improves the productivity of a

soil by improving soil physical properties, and serving as a source of essential plant nutrients. The organic component of the soil, however, is much more complex than most are led to believe.

The turfgrass system

Organic matter in a turfgrass system actually takes many forms. The least decomposed portions of the organic component are the dead plant parts that make up thatch. In the thatch layer, re-

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The revolutionary chemical, fenoxaprop-ethyl, gives Acclaim the power to translocate from the site of contact to the heart of weed growth — without the turf injury problems associated with other postemergence herbicides.

Acclaim also eliminates the problem of unsightly patches caused by dead weeds. When applied thoroughly, Acclaim will cause the weeds to turn pale yellow in 4-10 days. In 12-21 days, leaves turn red or purple. Then, the stems turn black as the entire

cently deposited organic residues serve as a food source for soil microorganisms that decompose it. The organic matter will continue to break down in various stages until the end product of decomposition, humus, is all that remains.

Humus is present in the soil primarily as a coating on soil particles. Here humus acts as a cementing agent, holding soil particles together in larger aggregates. Aggregation of the soil into pea-sized particles increases the porosity of the soil, improving aeration and water infiltration.

Humus is also chemically active, increasing the nutrient



About the Author

Norman W. Hummel, Jr., Ph.D., is assistant professor of turfgrass science at Cornell University, Ithaca, NY.

holding capacity (cation exchange capacity) of the soil. In very sandy soils, humus will increase the water holding capacity as well.

Plant ecosystems have throughout the years produced and maintained a supply of organic matter in the soil. One of the more productive systems in terms of organic matter are the grass prairies in the midwestern states. The fertile black soils of the Midwest are a product of thousands of years of organic decomposition by grasses.

A turfgrass system is not much different, and a well managed lawn will provide a

continuous influx of organic matter into the soil.

Situations exist on home lawns where a turfgrass soil could benefit from the addition of organic matter.

The prime example is the developer who strips off the topsoil in a housing development and sells it. The homeowners are usually left with a poorly structured, heavy subsoil on which to grow their lawn, landscape plants, and gardens. The addition of organic matter could improve the chemical and physical properties of the soil. Many types of organic amendments are available for this purpose.

The most common organic

amendments are the peats. A well decomposed peat humus has very good soil conditioning characteristics. Moss peats such as sphagnum and hypnum are not as well decomposed as peat humus. They are more fibrous in nature, but still possess fair to good soil conditioning properties.

Various types of compost are becoming more readily available in many parts of the country. Clean composts (free of soil) have good conditioning properties, and are relatively inexpensive. Composts are not an end product of the total decomposition, so the residual or long term effects may not be as pronounced with peat humus.

Soils high in organic matter include sedimentary peats and muck soils. These soils often have a high percentage of silt and clay, have poor conditioning properties, and are rarely recommended as soil amendments.

Liquid and dry conditioners

Organic soil conditioners come in two basic forms: liquid and dry. The liquid soil conditioners are usually a wetting agent of some form, sometimes derived from plant by-products. Research has shown that wetting agents have some soil improving characteristics on problem soils. The benefits, however, are usually short term. Thus, repeat applications must be made.

The dry soil conditioners may vary in composition. Those that I am most familiar with are composted organic by-products, sometimes with added enzymes and microorganisms. Research is being conducted to a very limited extent with these products at universities, and only very recently. Therefore, we cannot confidently judge these products at this time.

A soil amendment or conditioner should be incorporated to a depth of at least six inches to modify the soil throughout the major portion of the root zone. Topdressing with an amendment or conditioner would only be expected to influence surface soil characteristics. On established turf, core cultivation would assist in working the amendment to deeper depths.

Research needed

The manufacturers and distributors of organic products have presented the commercial turfgrass market with products that are very interesting in concept, and have very strong testimonials to back them up. Unfortunately, there is little research data to support the many claims they are making.

The lack of data is not to suggest that these products do not work. Researchers at Michigan State University recently reported that they were able to significantly reduce thatch using high rates of a



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weed decomposes, leaving nothing but green!

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barnyardgrass, foxtail species, Panicum species, and johnson-grass...all with the same level of effectiveness.

Great Turf Deserves Acclaim!

As a professional, you take pride in having and maintaining lush green turf throughout the season. Well-groomed, weed-free lawns mean fewer call-backs, more renewals, and more referrals for lawn care operators; and for golf course managers – a course people can play at their best. Either way, Acclaim gets you the acclaim you deserve!

Contact your distributor to purchase Acclaim today. Take aim on grassy weeds all season long!



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Circle No. 123 on Reader Inquiry Card

natural organic fertilizer/conditioner.

They hope to look at long term benefits of this product using more realistic rates. Other research conducted at Michigan State found that turf treated with this same product recovered more quickly from patch diseases than it did with urea applications.

More research needs to be conducted on the myriad of products available. In the meantime, turfgrass managers interested in organic programs should use caution in their product selection. Be aware that there are many organic products on the market that

are not much different than conventional products, but are sold at a premium because of their "organic" label.

Lawn care operators should also understand that organic lawn care is not a panacea for all of the industry's woes. At least for now, synthetically produced fertilizers and pesticides are going to be an essential part of any quality lawn care program.

As more research information becomes available, we may find that organic products, in the truest sense of the word, will become an important and viable alternative to the traditional lawn care programs. LCI

Jonathan Green & Sons establishes new firm

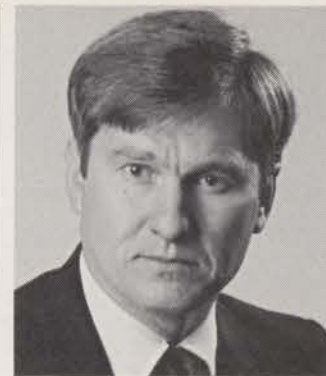
TUALATIN, ORE.—Jonathan Green & Sons, Inc., Farmingdale, NJ has established a new company to market new grass varieties—Cascade International Seed Co. Cascade Seed, based in Colorado, will supply Jonathan Green as well as other seed suppliers.

"We are interested in contracting with farmers, providing varieties that will give us a good yield and also are very good performers,"

said Barry Green, Jr., vice president of sales for Jonathan Green.

Cascade will market *Mesa* turf-type tall fescue and *Destiny* Kentucky bluegrass produced by Jacklin Seed Co. Other new varieties and releases include: *Allaire* turf-type perennial ryegrass, *Aztec* turf-type tall fescue, and *Lexington* Kentucky bluegrass. In addition, more will be announced.

Jonathan Green is doub-



Jacob: "Conservative approach."

ling its warehouse space at its New Jersey headquarters to about 50,000 square feet to accommodate the expansion. The company will also install its first test plots on about two acres of land, Green said.

President of the new company is Irv Jacob, formerly national seed marketing manager for Ferry-Morse Seed Co.

"Cascade Seed will take a conservative approach to marketing varieties of seed from both public stocks and private developments," Jacob said. LCI

Higher tax rates affect ChemLawn

COLUMBUS—Higher tax rates cut ChemLawn Service Corp.'s net income in 1986 by 4 percent from 1985, the company announced in a recent news release.

Net income was \$12.1 million in 1986 compared to \$12.5 million in 1985. Revenues were up 6 percent to \$353.5 million and pretax income was up 7.1 percent (to \$22.5 million).

But ChemLawn's effective tax rate jumped from 40.3 percent in 1985 to 46.4 percent in 1986, the company reported. The increase was due to a major reduction in capital expenditures which provided investment tax credits and, to a lesser extent, the elimination of the Investment Tax Credit.

The Investment Tax Credit was eliminated under the Tax Reform Act of 1986.

There were other factors too.

"Reduced levels of new sales and unexpectedly high cancellations in the third and fourth quarters resulted in lower than anticipated revenues and net income," said Jack Van Fossen, president and chief executive officer.

"Recent environmental concerns will be addressed by expanding our consumer education program about the low risk associated with the use of lawn care chemicals," and other measures. LCI



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We're so sure our revolutionary new walk-behind 2-cycle crankshaft system will stand up to what you run into, that we're backing it with an exclusive two-year warranty.

No one else in the industry offers a two-year crankshaft warranty on small trimming mowers. Because no one else has what Jacobsen has. A revolutionary (patent applied for) crankshaft protection device incorporating an adapter and stiffener that help prevent twisting, bending or breakage. Thus, effectively extending engine and equipment life, while maximizing productive cutting time.

In fact, extensive testing showed this unique Jacobsen design to be

vastly superior to anything in the market. At full throttle, a solid steel, one-inch shaft was placed in the path of the rotary blade. Competitive crankshafts bent on contact, yet the Jacobsen crankshaft survived. Not once, but again and again, without damage.

Combine the exclusive new Jacobsen crankshaft system with our durable 2-cycle engine, rugged lightweight aluminum magnesium alloy deck, heavy-

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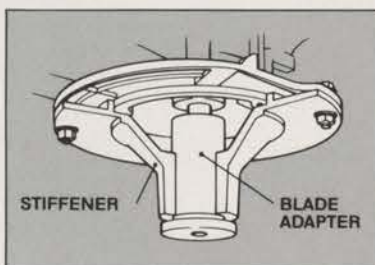
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That's an exceptionally strong statement, Ray. But let's start with the product. Is it something new?

"We're talking about pre-emergent turf herbicide products using pendimethalin, and this is the first time they've been widely available to lawn service companies."

And you can back up that statement about Scotts® pendimethalin products being the best? "I sure can... with over six years of extensive formulation and field research."

What makes pendimethalin so good? "Its broad-spectrum action. Look at all of the tough grassy weeds it controls—crabgrass, goosegrass, foxtail, barnyard-grass, fall panicum, and *Poa annua*."

What broadleaf weeds does it control? "Oxalis, prostrate spurge, chickweed, cudweed, hop clover, henbit, and eveningprimrose. And soon we may be able to add to that list."

That sounds good, but how long does it last? "It provides excellent residual activity...four to five months for most weeds when properly applied."

How many species of turfgrasses can I use pendimethalin on? "Right now, it's labeled for use on nine species of established cool and warm season turfgrasses."

What forms does it come in? "Four. In addition to water-dispersable granules, we also offer three exclusive ready-to-use dry-applied products—a fertilizer/pendimethalin combination and two straight pendimethalin products—one for cool-season grasses and one for warm-season grasses."

And how much does it cost? "On a square-foot basis, the price is very competitive. Factor in the broad-spectrum action and residual...which should reduce callbacks...and Scotts pendimethalin products become an unbeatable value."

For more information about pendimethalin turfgrass herbicide, call Scotts Lawn Care Service Supply Division at 800-543-0006. In Ohio, call collect 513-644-2900.

"You can't get better pre-emergent control of grassy and broadleaf weeds... or a better value."

Ray Huey, Scotts project leader (Herbicide Research and Development), talks about Scotts pendimethalin-based turf products.

Circle No. 137 on Reader Inquiry Card



How noisy is your company's work environment?

LAWN MANAGEMENT FIRMS CAN PROTECT EMPLOYEES FROM NOISE-RELATED ILLNESSES

By BOBBY LOOPER

A recent survey of a dozen lawn care/landscape management companies in the Little Rock, AR area revealed that more than 80 percent provide their employees with eye protection. Only 25 percent, however, offer any form of hearing protection.

In today's litigious business climate, this weak concern about hearing protection is most unwise.

Lawn management crews are particularly susceptible to hearing damage, because much of their equipment (backpack blowers, spin trimmers, hedge trimmers, etc.) is operated in close proximity to the head.

The U.S. Department of Labor estimates that more than 5 million workers suffer from noise-related hearing loss. Besides being responsible for hearing damage, noise has been cited as a major contributing cause of ulcers, heart disease, hypertension and psychiatric disorders.

Noise is also a stressor. It causes fatigue, nervousness and irritability, any of which can result in degraded job performance and increased likelihood of on-the-job accidents.

Noise levels

Noise intensity is measured in units called decibels (dB). The decibel system operates on a logarithmic scale. Each increase of 3dB represents a doubling of sound energy and an increase of 20dB represents a 100-fold increase in sound energy.

Some approximate dB levels are:

Whisper at 5 feet	25dB
Window air conditioner	55dB
Average office bldg	75dB
Busy city street	80dB
Tractor trailer rig	90dB
Gas powered lawn mower	95dB
Jackhammer	110dB
Heavy metal rock concert	130dB
Howitzer cannon	190dB

The Occupational Safety and Health Administration (OSHA) has set a standard of 90dB as the maximum permissible exposure level for an eight-hour workday. Unprotected sustained exposure to levels of noise at or above 90dB can result in hearing loss.

Some symptoms

Noise can temporarily or permanently damage hearing or result in a wide variety of impairments leading up to a total loss of hearing.

The body's first warning signal is usually a high-pitched ringing or buzzing in the ears called tinnitus. Some workers complain of a muffling of sound at the end of the workday.

Both symptoms usually dis-

sipate after a period of quiet rest. Prolonged exposure to noise over a period of years causes permanent damage to the sensory cells of the ear.

Noise-induced hearing loss is a permanent condition and cannot be treated medically. Symptoms include the inability to hear simple consonant sounds or difficulty in understanding speech.

Hearing protectors?

OSHA recommends the use of hearing protectors for work-

ers exposed to sustained levels of 85dB and above. Features to look for when shopping for hearing protectors are:

- 1) Level of noise attenuation.
- 2) Wearer comfort and acceptance.
- 3) Non-allergenic qualities.
- 4) Adaptability to hardhats or eyeglasses.

Basically, there are two types of hearing protectors with a multitude of variations.

1) **Plugs**—Ear canal sizes often vary on the same indi-

vidual. For this reason, plugs must be fitted to each ear separately. Plugs come in several models, including hard, soft, malleable, tapered and disposable.

Attenuation levels range from 22dB to 35dB. In hot and humid climates, many workers prefer plugs over muffs.

However, since plugs are actually inserted into the ear canal, maintaining proper hygienic levels can be a problem in workers with dirty hands.

2) **Muff-type protectors**—The fall 1986 catalog of the Direct Safety Co. of Phoenix, AZ lists 16 different models of muff type protectors. In conditions where workers encounter problems with proper hygiene, muffs fit the bill nicely.

Many models permit the muffs to be worn over the head, under the chin, or behind the head. For hot and humid conditions, glycerine-filled muffs are offered.

Models are also available

Introducing BREAK-THRU:TM A Bold Stroke of Non-Phenoxy Genius... A Masterpiece of Formulation Technology



The Andersons



For over 20 years, The Andersons has supplied turf professionals with a wide range of quality herbicides, insecticides and fertilizer products.

which permit adaptability with eye/safety glasses and also hardhats. Levels of noise attenuation range from 19dB to 28dB.

Enforcing employee compliance

Some employees hesitate to wear hearing protection even when it is provided by the employer.

Common complaints by employees include: claustrophobia, excessive perspiration, headaches and ear infections due to poor hygiene.

Another very real problem with hearing protectors is the inability to hear oncoming traffic, warning shouts, or the

sounds of malfunctioning equipment.

Discretion should be used when employees are working near traffic or other dangerous areas. To encourage compliance, employee feedback should be considered when implementing a hearing protection program.

Proper training of employees is critical in any successful safety program.

Workers that understand why they need to protect their hearing are more likely to cooperate by wearing their protectors.

For additional information, contact your local OSHA office.

LCI



About the Author

Bobby Looper is owner of Bob's Lawn Service, Little Rock, AR.

Check debt/equity ratio regularly

MILWAUKEE—Cash flow problems often snag the growth of lawn care and lawn management firms because the managers fail to keep track of return on equity. If the growth rate exceeds return on equity, the company might not have enough cash to meet its obligations.

Tips on financial management were given by financial consultant George Koziarz at the recent Green Team Conference and Trade Show in

Milwaukee. The show was sponsored by the Associated Landscape Contractors of America's Landscape Management Division and the Professional Grounds Management Society.

"If you want 20 percent growth, you'd better have 20 percent return on equity," said Koziarz, who works with horticultural and construction firms in Glenview, IL. "The basic reason for business failure is (poor) cash management."

He cited the following four components to effective financial management: an established collection program, established credit terms, an established inventory program and inventory control.

"I see higher inventories in our industry than anywhere else," he said.

Companies should also be aware of the debt-to-equity ratio, the amount of money invested by outsiders to what has been invested by the company itself. In service companies, this ratio varies from 1:1 to 4:1.

Koziarz recommended that companies check their debt-to-equity ratio and their profitability quarterly.

LCI



Koziarz: Watch your equity.

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BREAK-THRU is the only turf herbicide that will *quickly* and effectively control dandelions without the use of 2, 4-D or other phenoxy herbicides.

In addition, as a non-phenoxy, BREAK-THRU can be sprayed with applicator and customer confidence.

BREAK-THRU is recommended for use on both warm season and cool season turf.

BREAK-THRU in combination with Banvel™ and Turflon™ industry accepted herbicides, provides broad spectrum weed control at reduced rates. That's a fact, University tested and commercially proven by turf pros just like you.

BREAK-THRU plus Banvel plus Turflon: Your cost-effective answer to oxalis and spurge control.

BREAK-THRU's unique formulation enhances uniform — on target — distribution of its active ingredient for increased efficiency and *quicker response*.

BREAK-THRU has a low odor, will not bleach, and is rapidly and completely degraded in the environment within 1½ to 2 days.

New BREAK-THRU: Available Now.

BREAK-THRU is available exclusively through your Andersons' distributor in 2½, 30 and 55 gallon containers. For the name of your close-by distributor, call The Andersons Product Information Center today. Call toll-free 1-800-225-ANDY.

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Refining the art of weed control.

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Circle No. 103 on Reader Inquiry Card

**New Distributors Needed
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Call 1-800-225-ANDY.**

Coleman Co. buys Dixon Industries

WICHITA, KAN.—The Coleman Co., Inc., of Wichita, KS recently completed its acquisition of Dixon Industries, Inc. of Coffeyville, KS, which manufactures and distributes lawn mowers.

Dixon, which makes five models of zero-turning-radius riding lawn mowers, will operate as a part of Coleman's Associated Divisions Group. No changes are planned in management.

Coleman manufactures and distributes widely diversified lines of camping and outdoor recreation equipment, marine sports products and home comfort products throughout the United States, and more than 100 other countries. LCI

Dow Chemical Co. study reveals:

Exposure to insecticide minimal for technicians

By ELLIOT MARAS
Editor

BALTIMORE—In the normal field setting, the amount of airborne insecticide that lawn care technicians are exposed to is insignificant, according to a study by the Dow Chemical Co.

The lower calves and hands/wrists are the areas most exposed, but this exposure can be reduced significantly by wearing protective clothing.

James Vaccaro, product development manager for Dow Chemical Co., explained the results of his company's insecticide exposure study at the Professional Lawn Care Association of America convention in Baltimore.

Exposure was measured on six technicians over a two-week period under normal field conditions. A chlorpyrifos-based formulation was used in the normal concentration—roughly one tenth of a percent. Each technician treated a lawn for 30 minutes. (This included the time unreeling and reeling the hose.)

The study consisted of three separate phases:

1) Airborne exposures were measured using sample tubes in the breathing zone. The tubes were changed after 30 minutes of actual spraying time, followed by a second, 30-minute trial. The tubes were analyzed by gas chromatography for micrograms of chlorpyrifos.

The airborne exposures indicated very low levels of the chemical in the technicians' breathing zones during actual application.

If the technician continued to breathe at the same rate for eight hours, the total inhaled chlorpyrifos would be only 22 micrograms per day, Vaccaro said, a more than safe level. The threshold value would allow for about 2,000 to 2,400 micrograms per day, he said.

2) Exposure to the hands and wrists were measured using absorbant glove liners. The glove liners were changed after each of two 30-minute spray trials.

3) Exposure to certain anatomical areas were measured on four-inch-square gauze patches placed over the specific areas. There was one on the sternum, two on the fronts of the thighs, two on the backs of the thighs, two on the fronts of the calves, and two on the backs of the calves.

Exposure to gloves averaged 18 milligrams of chlorpyrifos per hour; leg and body patches averaged about 22.0 milligrams per hour.

Of that found on the body patches, the lower legs had the greatest deposit of chlorpyrifos, with the thighs receiving about

a third of that which was deposited on the lower legs.

Protective clothing helps

"We also determined that if a piece of protective clothing equipment was designed and it covered the lower legs, a significant portion of the absorption would be reduced," Vaccaro said. Protective clothing was found to reduce absorbed material by 30 percent, he said.

The tests showed that between 200 and 250 milligrams of chlorpyrifos fell on the uni-



Vaccaro: Exposure levels safe.

forms and on the gloves in an entire day. But less than one milligram was actually found in the urinary metabolite of the urine, indicating a 200- to 250-fold decrease in the amount getting into the body.

"This was probably the most important factor that came out of the entire study," Vaccaro said.

In monitoring the urine and blood, no change in the plasma cholinesterase levels were found throughout the entire study, he said.

Technicians' cholinesterase levels should be tested every two weeks to a month, Vaccaro said.

He said a 50 percent drop in plasma cholinesterase merits special attention, and an 80 percent drop means the technician should be taken out of the field until plasma cholinesterase levels return to normal. **LCI**

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Employees pay for losses in tool control program

REPLACEMENT COST, NOT JUST TOOL'S VALUE, DOCKED AT REINHOLD LANDSCAPE

By JAMES E. GUYETTE
Associate Editor

MILWAUKEE—A landscape management contractor in Michigan docks an employee's pay each time a tool is lost.

That was just one of many suggestions offered in a far-ranging discussion about preventing equipment loss and abuse.

The session took place in Milwaukee at the Green Team Conference and Trade Show, a joint effort of the Associated

Landscape Contractors of America Landscape Management Division and the Professional Grounds Management Society.

A few landscape management contractors said they have salary-docking programs to prevent tool loss, but Melanie Reinhold Sawka, president of Reinhold Landscape, Flat Rock, MI, seemed to evoke the most response as she outlined her firm's policy.

If a worker loses a tool, the replacement cost, not just the tool's value, is deducted from



Sawka: Make them pay.

that week's paycheck, Sawka said.

If there is a question over who actually lost the tool, the

foreman and crew members decide among themselves what should be done. If no decision can be reached, all the crew members share in the fine.

Practice questioned

A member of the audience said such a practice is against the law, while another person in the crowd said it is legal as long as the fines do not dip the worker's salary below minimum wage.

Sawka pointed out that employees are not charged for ex-

pensive items that are lost—otherwise they would quit. She added that there is no deduction for stolen or broken tools if proper precautions were taken.

Crew members are held responsible if tools are not properly secured with bungi cords on the trucks. Sawka told a story of how her company had to settle out of court after a rake fell off a truck and struck an attorney's car.

Employees supportive

How do the employees feel about such a policy? "They take it very well because they don't lose much," Sawka said.

"We try to offer a lot of incentives," said Neal Radonski of Kujawa Enterprises, Inc., Cadahy, WI. "Incentives are better than fines," added Rich Akerman of Oregon Landscape Maintenance, Tigard, OR.

"You have to teach people (proper care of tools) before you enforce something ... People have to be taught to keep your eye out," Akerman said.

Various incentives

A landscape management contractor in the audience said he pays 50 cents per hour per employee into a special fund; each member of the crew gets that bonus if they stay all season. If a tool turns up missing or damaged by stupidity the entire crew is docked from that fund.

Another spectator said that he has "no problem" with lost equipment in his business. If there's too much loss he simply holds back on pay increases.

Crews who take care of their equipment get first crack when new tools are bought, while sloppy crews get "hand-me-downs," said one participant.

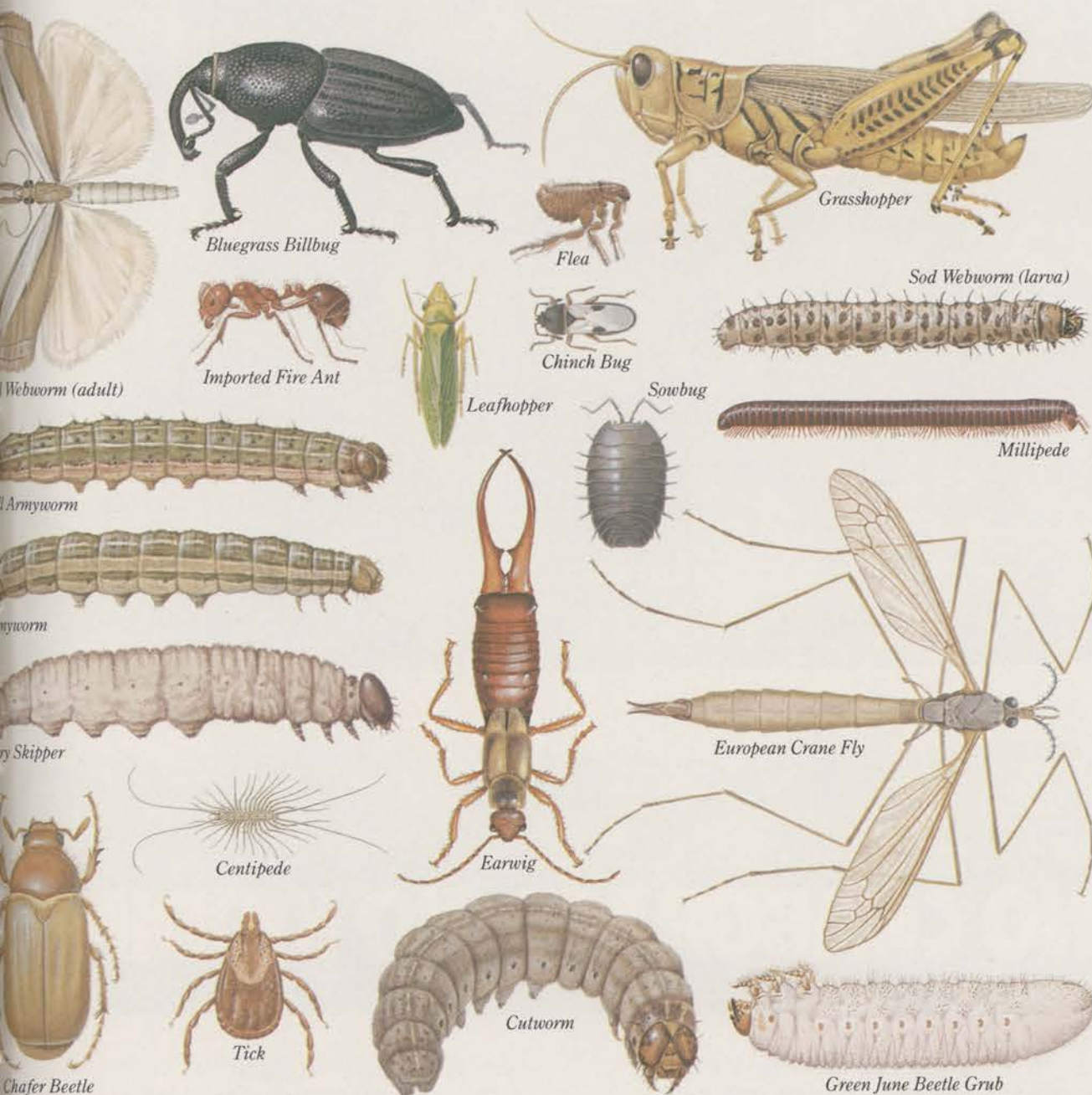
Each member of a crew "belongs" to a certain piece of equipment, said a business operator. "That seems to work pretty well."

Sawka outlined some other techniques that Reinhold uses to hang on to its gear: Each truck is equipped with a cable and lock to secure tools sitting out by the curb while on a job.

Also, each truck has a painted-on number—as do all the tools, including shovels, trimmers and radios. If an extra tool is needed the company has a check-out system, plus each employee has a locker. The foremen supply their own tools for mechanical work in the field.

A final bit of advice from Sawka: "Try to screen your employees as well as possible." LCI

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Individualized approach best for multi-family units

Northwest Landscape, Inc. will never be the McDonald's of the lawn care business. Standard treatment programs have no place for this firm which manages about 5,000 multi-family properties in and around Santa Clara County, CA.

The 14-year-old firm operated by brothers Warren, Paul and Douglas Nakamura prides itself on its problem-solving approach to each individual lawn.

This means looking for the best, not the easiest, solutions to lawn problems. "The best solutions are lasting solutions," said Warren, the company's president.

"We decided not to do this as a run-of-the-mill operation, but to do it as professionals, using our heads as well as our hands," he said. "Common sense can often take the place of spending a large amount of money to resolve a problem."

Vandalism problems

Warren points to the case of a homeowners association that had a problem caused by vandalism—an excess of atrazine had been spread on the lawns.

"Others advised them that the only solution was removal and replacement of up to a foot of soil. The area affected was several thousand square feet, and it would have cost thousands of dollars to replace the topsoil," Warren said.

"We researched the problem and found a sorgham sudan-grass that absorbs atrazine as it grows.

"As the grass grew and was mowed, the excess atrazine was removed with the clippings," he said. "We were able to bring the soil contamination down to where regular lawn grass could be grown again in eight months. It cost pennies on the dollar as compared to the soil removal process, and we were able to save the association thousands of dollars."

The research process

The Nakamuras invest a lot of time in information gathering. They get their information from many sources, including the University of California Cooperative Extension Service, the agricultural commissioner's office, chemical company representatives and other sources.

Innovation pays

If nothing is available from suppliers, the Nakamuras try to come up with the answer themselves. They learned this innovative spirit from their father, who started the business.

"Our father fabricated a grass catcher for a 60-inch-wide lawnmower because he thought we should catch the clippings. People started to ask about the machine be-



Planning the strategy: Warren (left) and Doug Nakamura discuss plans for a client's lawn.

cause it did such a nice job," Warren said.

"Major equipment manufacturers have now developed grass catchers for their larger mowers, and their use is widely accepted," he said.

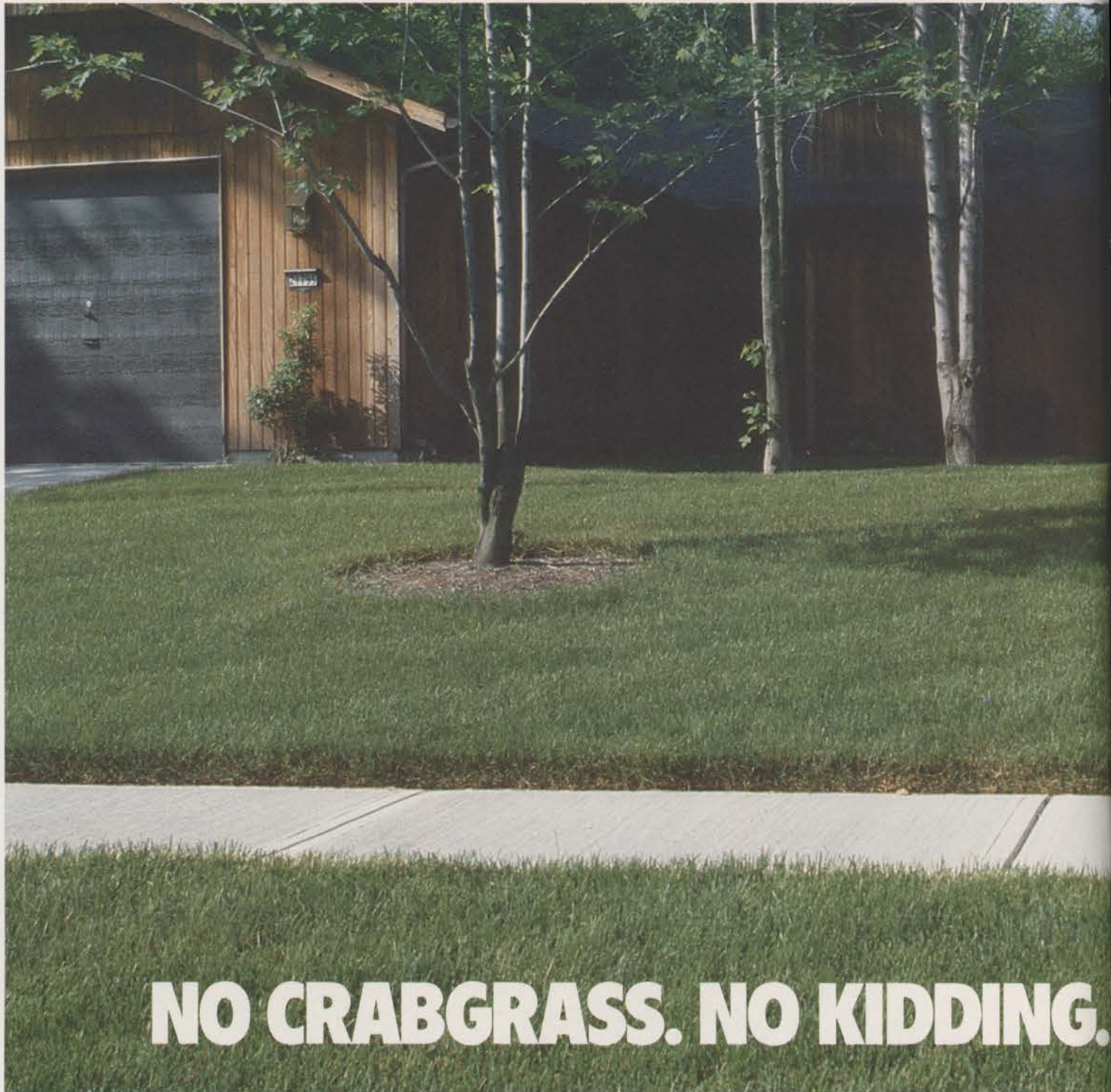
The Nakamuras pay close attention to new products on the market, and to new applications for existing products. They want the most economical applications possible.

"One application of Chipco Ronstar saves us an incredible amount of manpower," Warren said. The product is a pre-emergent herbicide for both

lawns and shrub beds.

"In the past, we used it in new plantings because of the long residual activity and the fact that it's handy to use a small granular spreader in a confined area," Warren said. The product recently received a wettable powder label, enhancing its versatility.

Gathering information has proved useful in another aspect of Northwest's business: the process of educating clients. "In our business, we have to educate clients because they are not lawn care professionals," Warren said. **LCI**



This coming season Fermenta Plant Protection is going to make sure you beat crabgrass.

And here's how. We will guarantee the performance of Dacthal W-75 and Dacthal Flowable Herbicide for full-season preemergence control of crabgrass in turf. This guarantee applies to the geographical areas indicated on the map.

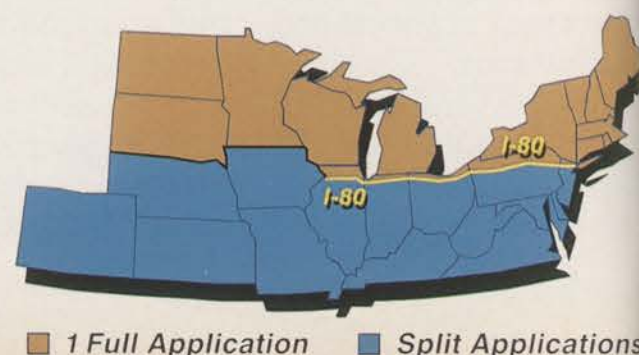
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If you are located in the brown area on the map, north of I-80 (excluding Nebraska and Iowa), make

one full application of Dacthal at 10.5 lbs. a.i./A in the spring prior to weed seed germination.

South of I-80 and the entire states of Nebraska and Iowa (blue area), Dacthal must be applied on



Make uncommonly safe mower cuts with Unblade



Safe cut: Brooke Nadeau watches as her uncle, Mike Nadeau, an employee of the Unblade Co., Utica, NY, bolts on an Unblade.

By JAMES E. GUYETTE
Associate Editor

UTICA, N.Y.—Has anyone ever wondered why the principle behind nylon string trimmers hasn't been applied to rotary mower blades?

Well, it has.

Anyone who cuts a lot of grass will occasionally hit an unseen object, and perhaps even bust a blade, damage an engine or send the object hurtling through the air.

That problem will become a thing of the past if the makers of the Unblade have their way.

"The Unblade will go places where you'd never take a steel blade," said Dallas Jones, president of the Unblade Co., Utica, NY.

The Unblade consists of a star-shaped plastic hub with two monofilament lines attached to the ends of each point. Jones said the sturdy plastic hub will "outlast the lawnmower" and keep working for a lifetime. "It's almost indestructible—it doesn't break."

The design of the Unblade makes it virtually impossible to bend a mower crankshaft or

break an engine's timing key, which often happens when a steel blade hits a solid, hidden object, Jones said. A shear pin on the Unblade protects the shaft, rod and bearings, he said.

The Unblade is particularly handy for use in areas where there are tree roots, rocks and other objects because it does not throw or destroy things in the mower's path, Jones said.

"Almost every lawnmower owner should have one," he said, even if it is just used occasionally as an accessory. (When installed backwards the Unblade works as a leaf mulcher.)

A nursery in San Diego, CA uses the Unblade to cut under fruit trees because weedkiller cannot be used in the orchard. Another customer uses the Unblade to cut near glass buildings to avoid smashing the windows with flung stones, Jones said.

Closer cuts can be made without damaging trees, shrubs and bushes, and it will not scalp lawns, Jones said. It will not become unbalanced like steel blades can, he said.

The Unblade "cuts like a dream," Jones said. It makes a smoother cut when used with higher engine speeds. A 3 1/2 hp motor is recommended with speeds of 4,000 rpm and above. Jones reported that some customers successfully use the Unblade on smaller engines.

The diameter of monofilament line to be used varies from .08 to .15. "The thicker the line, the less quality cut," Jones explained.

"The longer the line, the better the cut because it works like a bullwhip," Jones said. When mowing a 1/3 acre lot weekly a line installation lasts 4-6 weeks, he said. The product can be used by any landscape management contractor with a good supply of line. "He'll buy it in big rolls."

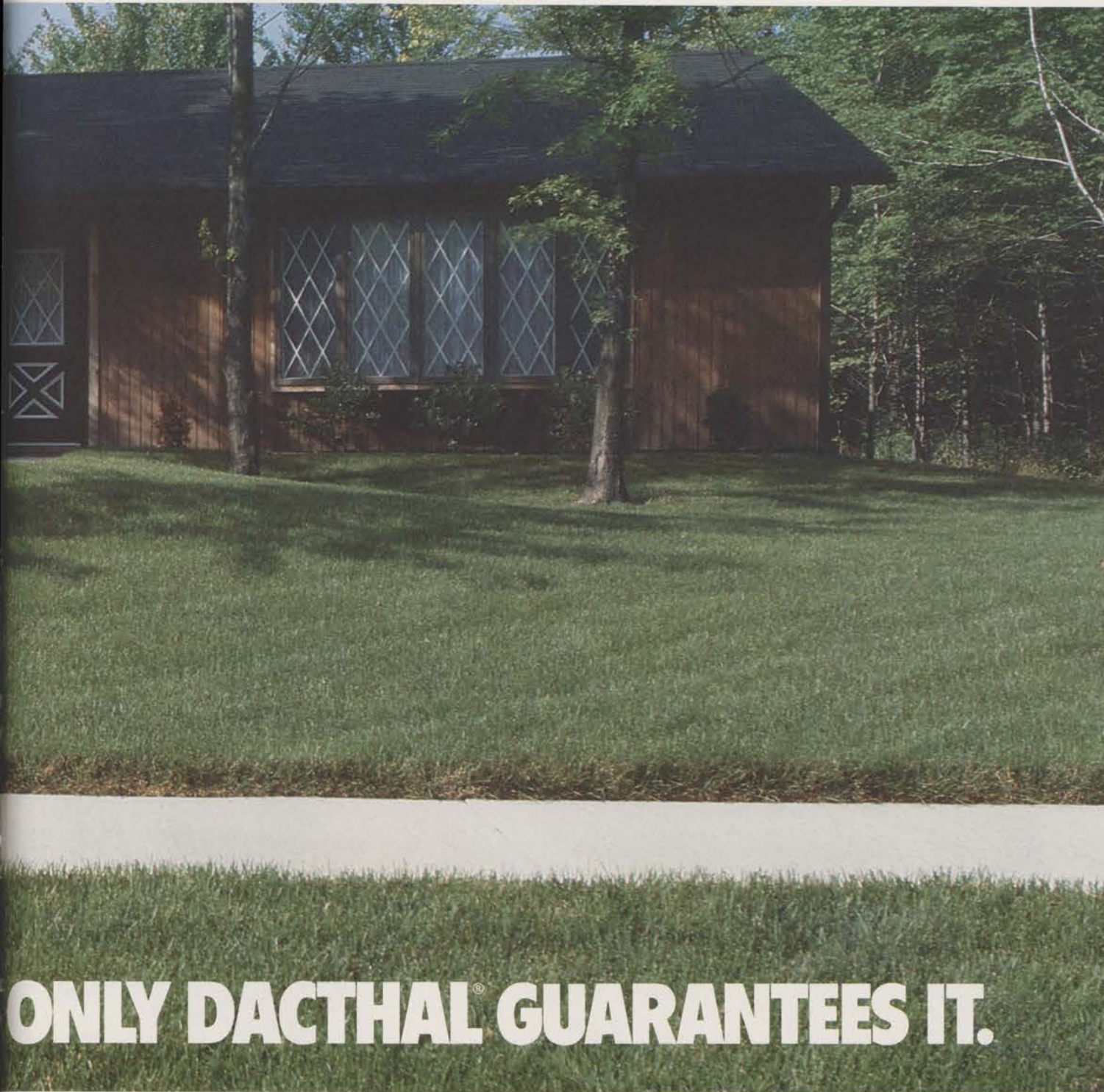
One possible drawback would be that a steel blade creates a vacuum that stands the grass up and allows it to be blown into a bag after cutting. Jones said that is not a problem because vacuum-producing ridges are molded into the hub. "It fills a bag as good as a blade."

Jones said that another big plus with the Unblade is the safety factor. The Consumer Product Safety Commission estimated that 77,000 blade-induced injuries occur each year. "Everyone knows somebody who got hurt by a lawnmower."

The Unblade is so safe that it is exempt from national lawnmower safety standards, Jones said.

The suggested retail price of the Unblade is \$12.95, but prices in stores have ranged from \$10 to \$20, Jones said.

Jones can be contacted at Department L, Box G, Utica, NY, 13503. **LCI**



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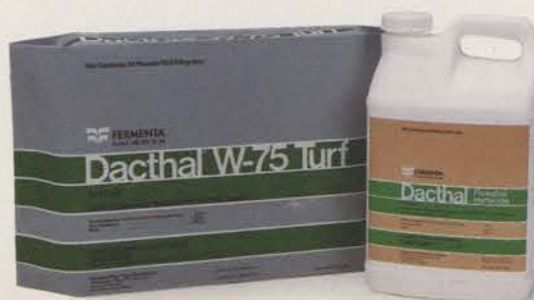
a split application program. Make the first Dacthal application at 10.5 lbs. a.i./A in the spring prior to weed seed germination. Make the second Dacthal application at 5 1/4 lbs. a.i./A, 45 to 60 days later.

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Warm season grasses well adapted to Southwest

TURFGRASS MANAGERS MUST FIRST DEFINE THE DESIRED LEVEL OF LAWN MANAGEMENT

By MARK MAHADY

Selecting a particular turf type that will ultimately fulfill our performance expectations can, at times, be a most difficult and critical decision. In most cases, the selection of a warm season grass turf type should be based on criteria such as adaptability to environmental conditions, use and level of management.

Warm season grasses are well adapted to the coastal, inland valley and desert regions of southern California. These grasses, as a group, can provide high quality turf stands despite varying soil and climatic conditions.

Warm season grasses provide a useful versatility within the landscape itself and can fulfill the needs and expectations for a wide range of turf uses.

Warm season grasses can also provide a challenge in terms of the level of management necessary to provide turf of acceptable quality. For this reason, it is essential to understand the level of management desired (i.e., a smooth, green carpet of hybrid bermudagrass mowed at 5/16 of an inch, or a medium green, medium-textured Common bermudagrass stand mowed at 1 1/4 inches) and the level of management that can be provided (i.e., three light vertical mowings per year, a monthly fertility program, and a ten-blade reel mower, or a spring application of ammonium sulfate and a rotary mower.)

The objective of this article is to review the adaptation, identification and cultural management of some of the warm season grasses commonly used in southern California.

With the challenges of increasing population growth and limiting available water resources, it is our responsibility as turf managers to maximize the efficient use of all resources within the scope of the landscape complex.

This includes a better understanding of the judicious and timely use of water, fertilizers and, when deemed necessary, pesticide materials to improve the growth of warm season turfgrasses.

There are approximately 14 distinct warm season turfgrass types found throughout the world. They are distributed in warm, humid, subhumid and semi-arid climates, and originate in Africa, Asia and South America. There are distinct advantages to support the use of warm season turf grasses in the landscape.

These advantages include: 1) low water use rate, 2) heat tolerance, 3) greater tolerance to insect and disease pressure

than cool season grasses, 4) vigorous, rapid recovery from injury, and 5) versatility in use.

Warm season grasses may also present challenges or disadvantages that may discourage their use. Such disadvantages may include: 1) more intense management, 2) poor low temperature tolerance, and 3) poor winter color retention.

Common bermudagrass and the improved turf type

bermudagrasses are well adapted to the climatic conditions in southern California. These grasses grow best under the extended periods of high temperature that characterize this region.

Adaptation

Significant growth response has been observed at temperatures as high as 110 degrees Fahrenheit, although the optimum temperature for growth is approximately 90

degrees Fahrenheit.

The low temperature tolerance of bermudagrass is quite poor. Average temperatures below 50 degrees Fahrenheit result in winter discoloration, although variation in winter color retention does exist among the hybrid selections. It exhibits a very high light requirement, and performs poorly in shade conditions.

Bermudagrass can tolerate a wide range of soil types and conditions. Although it is con-

sidered a drought tolerant species, adequate soil moisture levels are necessary for proper growth.

Water use rates for bermudagrass are approximately 50 percent of the level necessary for quality growth of cool season grasses.

It will tolerate temporary flooding, but generally, growth response is minimal under saturated, waterlogged conditions.

Acceptable growth re-



sponse has been reported in those soils with electrical conductivity levels as high as 15 to 20 mmhc/cm.

Plant identification

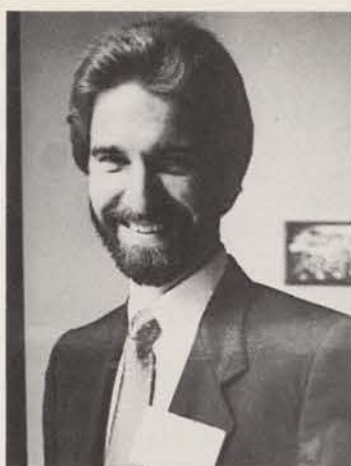
Common bermudagrass is a medium green, coarse textured perennial that forms a vigorous, aggressive turf of moderate density through the development of an extensive system of rhizomes and stolons.

It is subject to longer periods of winter discoloration than the improved hybrid bermudagrass types, and is the only turf type bermudagrass that is established from seed.

Common bermudagrass is

often used where minimum managed turf is required. In the past, insect and disease pressure was not a significant problem with this warm season grass. However, field observations indicate that bermudagrass scale, bermudagrass mite, spring dead spot and *Pythium* are beginning to become more of a concern in southern California. Common bermudagrass can produce an acceptable stand of quality turf with proper management.

Santa Ana, Tifgreen and Tifway are the three hybrid bermudagrasses commonly used in southern California. There are distinct advantages and distinct disadvantages for



About the Author

Mark Mahady is assistant research scientist for the western states for ChemLawn Services Corp.

their use in the landscape, particularly in comparison to Common bermudagrass, and these factors must be given consideration *before* establishment.

Hybrid bermudagrasses exhibit a medium to dark green, carpet-like appearance, greater resistance to wear, higher tolerance to salinity, greater tolerance to closer mowing, and rapid recovery from injury.

However, hybrid bermudagrasses also require a significantly higher level of management. More nitrogen, more frequent mowing, and more frequent thatch removal is required in order to main-

tain a high quality turf stand.

Comparative economic analysis indicates that a hybrid bermudagrass may cost upwards of two and one half times more to maintain than Common bermudagrass.

Santa Ana hybrid bermudagrass was developed by the late Dr. Victor Youngner and the California Agricultural Experiment Station in 1966 in order to meet the specific demands of California growing conditions. Santa Ana exhibits a deep, blue-green color and medium-fine texture.

Winter color retention is excellent under mild fall and winter conditions. It is resistant to smog, and exhibits a high level of tolerance to the Eriophyid mite and saline soil conditions.

Santa Ana produces more seed heads than either Tifway or Tifgreen. The establishment rate of Santa Ana is slightly slower than Tifway. However, recovery of Santa Ana is faster due to its very dense, active rhizome system.

Tifway bermudagrass was released through a combined effort of the United States Department of Agriculture and the Georgia Agricultural Experiment Station in 1960. Tifway exhibits a dark green color, stiff leaves, medium fine texture, and high shoot density.

This hybrid bermudagrass selection shows good winter color retention, good low temperature hardiness, and fast spring green-up.

Tifway is susceptible to smog injury, and exhibits minimal seed head formation and is tolerant of bermudagrass mite and sod webworm. It is recommended for use on lawns, fairways and golf tees.

Hybrid bermudagrass selections are very difficult to differentiate due to their very similar vegetation characteristics. Stan Spaulding, staff research associate Emeritus for the University of California Coast Field Station, developed the following system to distinguish Tifgreen, Tifway and Santa Ana hybrid bermudagrass:

Remove a mature stolon with representative leaves from the edge of the turf stand. Try to obtain plants that are missed during mowing. Using a ten power hand lense, observe sheath, color and upper and lower leaf surfaces.

Tifgreen will have sparse hairs on sheath and collar. Both the upper and lower leaf surfaces should be naked—having no hairs.

Tifway will have a coarser texture than Tifgreen. It will have sparse hairs on the upper leaf surface and no hairs on the lower leaf surface.

Santa Ana will be similar in texture to Tifway. It will have sparse hairs on the upper and lower leaf surfaces.

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cultural management.

Cultural management

Common bermudagrass is established at a seeding rate of one or two pounds per thousand square feet. Hybrid bermudagrasses are established by sprigging or stolonizing at a rate of three to five bushels per thousand square feet.

The cutting height of bermudagrass varies with species and variety. Mowing recommendations for common bermudagrass range from half an inch to one inch. Tifgreen will accept mowing as close as 3/16 of an inch.

Mowing frequency increases as height of cut de-

creases. During active growth periods, hybrid bermudagrasses must be mowed a minimum of twice per week in order to maintain high quality turf stands.

An understanding of what level of management is desired and knowledge of what can be expected of the available turf types will enable the turfgrass manager to select the turf type best suited to his particular needs.

LCI
If you are interested in obtaining any available or additional editorial research or reference materials published in this or previous issues, direct inquiries to Kathleen Maciuszko at 216-826-2839.

Looking for extra income? Consider getting into asphalt maintenance

MILWAUKEE—Ever consider investing in asphalt maintenance equipment? It could be very worthwhile if you work on grounds adjacent to asphalt surfaces.

Lawn management firms can reap additional profits patching and striping parking lots and repairing damaged driveways, said Steve Shultz, president of the Sherwin Corp., Milwaukee, WI. Shultz, whose company manufactures asphalt



Shultz: Fill in the cracks.

mixes and distributes pavement equipment, spoke on additional income opportunities at the recent Green Team Show in Milwaukee.

Striping machines range in price from \$600 to \$10,000, Shultz said.

Besides the additional income opportunities it offers, asphalt repair makes sense for lawn management firms since they are held responsible for damages they sometimes do to asphalt.

The sealants are either water-based or oil-based, and they vary a lot in quality. The most important factor, according to Shultz, is cleanliness.

Color coating, often needed on walkways, athletic grounds and shopping centers, is another lucrative opportunity, Shultz said. He said it requires an investment of \$200 to \$300.

Another accessory item lawn management firms should consider are bumper stops for when they get damaged on client properties. He recommends the plastic ones.

The Green Team Show was sponsored by the Associated Landscape Contractors of America's Landscape Management Division and the Professional Grounds Management Society. **LCI**

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people. When you put Roundup to work for you, you'll be helping to make your entire operation more professional—more profitable.

Environmental Industries buys firm

CALABASAS, CA.—Environmental Industries, Inc. has acquired Botanical Concepts, a Colorado Springs-based interior landscape contracting firm. The acquisition will be part of the interiorscape division of Environmental Care, Inc., Environmental Industries' landscape management company.

Botanical Concepts provides design, installation and long-term management of interior landscapes. Debbie R. Drury, the company's founder, will remain in a management position.

The acquisition will enable Environmental Care to strengthen its market share of the interior landscape business in the Colorado Springs area, said Bruce A. Wilson, president of Environmental Care. The company presently has 12 offices in the western United States.

Environmental Care provides exterior landscape management and mature tree care services as part of Environmental Industries. **LCI**

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VERSATILE



EFFECTIVE

Customers want workers to listen, show respect

By JAMES E. GUYETTE
Associate Editor

How your employees treat your customers has more to do with how many customers you have than anything else.

According to extensive studies by Dr. Lawrence D. Kokkelenberg, the attitude shown toward customers by your employees is the single most important factor when people are choosing a lawn care service.

A whopping 68 percent of clients who quit cited a negative employee attitude as their reason. (Other factors involved are: 14 percent don't like the service; 9 percent find a better deal; 5 percent have a friend in the business or another connection; 3 percent move away; and 1 percent die.)

Kokkelenberg is president of the Center for Business Development, a consulting firm that has worked with LCOs for the past six years. He spoke at the recent Professional Lawn Care Association of America 7th Annual Conference and Show in Baltimore.

"The interaction you have with your customers is more important than your clean trucks ..." Kokkelenberg said as he challenged the assembled delegates: "Can the people who work for you go out and make a good impression?"

The solutions include a carefully designed training program, good examples by management, support from the company and reinforcement of the firm's values.

"If you think training is expensive, consider the cost of ignorance," Kokkelenberg said.

As an example, he cited a 20-1 ratio; it takes \$20 to overcome every single bad-mouthing by a customer. In a season, that adds up to about \$160 for one customer who is getting four applications. If you lose that customer's neighbor, that's another \$160. When it is all factored together it means that you've just sacrificed \$6,400 between lost revenue and the money it costs to obtain two new clients through advertising and other

marketing techniques.

"What is the value of your company's name?" Kokkelenberg asked.

He continued to stress that employees in the field must be trained to deal with clients. "A lot of people we hire to greet the customers would rather avoid the customers."

A profile of the typical technician is that he's 22-years-old, single, has a high school education, likes being outdoors, is an independent worker, lives and thinks for today, loves to party and is an active person, Kokkelenberg

said. This same fellow wants to "do the job, jump on the truck and leave."

That has got to stop, he said. "You're selling peace of mind ... it means a thousand little things—it's personalized attention."

Management can do its part toward presenting that attention. Kokkelenberg suggested sending greeting cards for appropriate occasions. Instead of a Christmas card, how about sending a Thanksgiving card? "Your card is remembered all year round."

Kokkelenberg recalled

speaking with a fantastically successful arborist: "How did you do it?"

"I answered the phone."

If you can't get to the calls yourself, hire a live answering service and make sure every call is responded to in 24 hours, he said. "I think living people make a difference."

If you must use an answering machine, keep the message warm, friendly and bright, Kokkelenberg said.

Always smile before you pick up the receiver, because the other person can feel it when you "smile into the


phone."

When sending out bills, break down the charges: "Tell me what I'm paying for."

Another tip offered by Kokkelenberg is to maintain a positive atmosphere on the jobsite.

"Nobody wants to work in a war zone," Kokkelenberg said. "If you don't like who you work with it shows," he added.

Customers can pick up on a negative attitude, and for their dollars they want to see effort extended toward the task at hand—not toward a beef with a coworker. **LCI**



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Kokkelenberg: Teach workers "people skills."

Dietz off on environmentalism

David Dietz (program director of the Pesticide Public Policy Foundation) claims in the November issue of *LAWN CARE INDUSTRY* that environmentalists are against free enterprise, private initiative, progress and technology. He is totally off base.

I am an environmentalist who took private initiative and started my own business. I believe in progress and technology so long as it does not harm the environment. There are many other environmentalists who would agree with me.

Dietz further says environmentalists want to deny Americans the freedoms that were intended by the Founding Fathers. We have, in the U.S.A., the privilege of doing anything we want so long as our actions do not affect the health and well being of another individual or group. If the choice is between the further denigration of the environment by the overuse and abuse of chemicals, or a healthy and vibrant environment, then I will choose the latter.

I am sure that our Founding Fathers would be appalled to see what some of us have done to the beautiful country they bequeathed to us.

Mr. Dietz states, "They (anti-pesticide advocates) want to change society—theirs is a movement of values. Do we have the determination to protect our own values?"

Is there something wrong with people who value health and the health of future generations? What are the values that Mr. Dietz espouses?

"We are healthier today than ever before," Mr. Dietz says. That is certainly a true statement, but not in the context of pesticides. Improvements in the standards of public health, antibiotics and better nutrition account for our better health.

He points out that without pesticides, hospitals, restaurants and other establishments and institutions would not be sanitary. But the manner in which we handle, store and dispose of garbage leaves a lot to be desired. Better sanitation practices would eliminate the need for many pesticides.

Mr. Dietz seemingly does not like the Clean

Air Act and Clean Water Act. So I can assume by his arguments that he will not tolerate clean air and clean water so long as it doesn't affect the bottom line of anybody's balance sheet.

The preservationist philosophy has also influenced worker safety guidelines, Mr. Dietz says. What percentage of injured workers would be acceptable to Mr. Dietz?

"The restructuring of America is possible," says

Mr. Dietz. This is a typical response by a person who sees unwelcome change coming and reacts by implying that those who favor change have some sinister motive.

I strongly believe in our personal freedoms and in the free enterprise system, but with an eye to respecting the rights of others and preserving the environment.

**Robert Mulder, Owner
Amsterdam Landscaping
Raleigh, N.C.**

Ad was disturbing

Controversy about the safety of our products is one thing our industry can ill afford within its own ranks these days.

A story about Green Pro Cooperative Services organic lawn care program, reported on Page 15 in the October issue of *LAWN CARE INDUSTRY*, contained the following statement: "Organics also alleviate fears about chemicals, although (Robert) Riley (Green Pro president),

who thinks pesticide chemophobia is unfounded, doesn't tout this as his program's main advantage."

How can Mr. Riley make such a statement while running an ad such as the one that appeared on Page 34 of the same issue? The ad depicts a pile of pills and a hypodermic needle with a catchy phrase about lawns being chemical junkies.

Shame on Green Pro for



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using such low class marketing and attempting to play on the fears and genuine concerns of our industry. And shame on LAWN CARE INDUSTRY for running such a piece of marketing.

Phil Catron
Consultant
MAVC Services
Damascus, MD

If you are interested in obtaining any available or additional editorial research or reference materials published in this or previous issues, direct inquiries to Kathleen Maciuszko at 216-826-2839.



Foreman: Eat less meat.

Expert says control stress for success

ATTITUDE DOES MORE FOR YOU THAN APTITUDE

By JAMES E. GUYETTE
Associate Editor

MILWAUKEE—If you want to be a success, you should try to control your stress.

That's a portion of the advice given by Ed Foreman, a former Congressman ("I work for a living now") who is president of Executive Development Systems, Dallas, TX. Foreman spoke at the Green Team Conference and Trade Show, a joint effort of the

American Landscape Contractors of America Management Division and the Professional Grounds Management Society.

Keeping a positive attitude is the key to being successful, Foreman told the conventioners in Milwaukee. "It's your attitude, not aptitude, that gets you altitude," he said.

"Life is for living like a calvary charge—not like a nude running into a barbed wire fence," said Foreman, who

added that he even learns from losers: "I find out what they're doing and I don't do it."

Winners and losers can easily be separated, he said. "Life is for laughin', lovin' and livin', not whinin' worryin' and workin'."

While losers don't like to work, winners don't like to either, but, "winners will do unpleasant tasks to get a good end result," said Foreman.

"Balance, moderation and variety" are qualities of living that can produce a healthy lifestyle, Foreman said. He is a firm believer that diet has a great impact on one's emotional health.

"Most of us take better care of our pets than we take care of ourselves," Foreman said. He added that it is best eat a big breakfast, small lunch and smaller dinner. "Eat breakfast like a king, lunch like a prince and supper like a pauper."

Reducing the amount of red meat you eat and increasing the amount of fiber foods you consume will make you feel better, he said. Fiber helps clean out the bowel. A person who eats large amounts of red meat is likely to have 5-10 pounds of it clinging to the inside of the bowel: "If you're full of it, you'll act like it."

Another tip was to "throw away your salt shaker and sugar bowl." The attendees at the convention gasped when Foreman told them they should weigh the same as they did at age 21.

Foreman, who said he is a millionaire, maintained that a less stressful lifestyle will reap benefits that might not be apparent at first. "There's more to life than material things—you want to feel good about yourself." **LCI**

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Estimating workshops set for contractors

LITTLETON, COLO.—Charles Vander Kooi, a consultant to landscape contractors on pricing and estimating strategies, will hold workshops in Columbus (March 19-20), Boston (March 26-27) and Chicago (April 2-3). The workshop will give attendees an entire estimating system designed to fit individual companies.

Vander Kooi's system considers the many variables found on landscape projects. The workshop gives contractors a chance to estimate a project both lump sum and unit price.

Vander Kooi can be contacted at P.O. Box 621414, Littleton, CO 80162. **LCI**

How to decide between new and used equipment

This year, companies will have to evaluate their equipment needs in light of many new products introduced to the market. At the recent Professional Lawn Care Association of America trade show, there were introductions of low volume spray devices, electric hose recoil systems with remote activation, and other equipment designed to enhance the profitability of lawn care companies.

The question that all firms will eventually have to address

SHORT-TERM VERSUS LONG-TERM GAIN IS THE FACTOR TO CONSIDER

is: "Should we buy new equipment or purchase used equipment similar to what we are already using?"

Following are lists of questions that should be answered before making a decision.

Used equipment

Questions lawn care managers should ask themselves about used equipment are:

1) Will the replacement equipment be placed on an existing vehicle because of an

older unit's failure?

2) Will the used equipment be added to an existing equipment combination so that the used equipment purchased will be the weakest operating device on a unit?

3) Will the used equipment be similar to other equipment in use, thus reducing spare part cost in inventory?

4) Will there be ease of maintenance on the used equipment because of its similarity to other equipment al-

ready in use?

5) Will the used equipment purchase option conserve capital for other important uses by the company?

6) Is the used equipment available at such significant financial savings that the decision would be justified on that basis?

7) Will the used equipment be an upgrade to the existing equipment without requiring a complete revamping of operating and servicing practices?

8) Will the used equipment be an interim investment strategy before replacing a major segment of the company's equipment some year in the future?

While each firm will attach different degrees of importance to the various questions, it is imperative that the questions be answered before the purchase is made. Too often we hear of a firm that acquired an asset at a significant savings because it was used. However, when the equipment was placed in service in the new operation on the properties the company was servicing, it failed to work as anticipated.

New equipment

The following questions should be asked about new equipment:

1) Will this be a new addition to the operation because of business expansion requirements?

2) Will the new equipment be purchased as part of a total equipment changeover?

3) Will the new equipment be a significant upgrade to the operations or replace equipment that is worn out or requiring excessive maintenance?

4) Will the new equipment be such a significant improvement in technology that profit margins will increase because of reduced equipment down time or improved operator efficiency?

5) Will the new equipment be easier to maintain because of its similarity to other equipment already in use?

6) Will the new equipment allow the firm to reduce the manpower needed to deliver services to the customer load expected for 1987?

7) Will the new equipment allow the firm to not purchase an additional over-the-road vehicle for the year 1987?

8) Will the first year tax benefits received from a new equipment purchase make it an advantageous decision compared to the lower cost of purchasing used equipment?

The concerns in evaluating the options of new and used equipment purchases, we can see, will be different.

Every company needs to determine whether it is looking at short-term or longer-term profitability. Like many of the decisions facing owners and managers of lawn care companies, the choice between new or used is not always black or white. Different companies will select options based on the needs of their own operations.

Even similar quantitative results in evaluating options will find one firm selecting used equipment and another new equipment because man-



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About the Authors

Rudd McGary and Ed Wandtke are senior partners for All-Green Management Associates, Columbus, OH

agement is driven to achieve short-term rather than long-term profitability.

New equipment, though offering many technical advantages, is not always the correct choice. Equipment purchase decisions need to consider many years' benefits.

Economic implications of the options for a purchase should not be ignored nor should they be the only basis for making the buying decision. Evaluate the implications of your purchase decision for both the short- and long-term benefit to your company.

It is only through a careful analysis that the profitability of your company can be maximized.

LCI

POSTING,

from Page 1

but golf courses and municipal and public properties will not.

The proposed signs will say "Keep Off" and will display a "Ghostbusters" insignia as an additional warning, according to Ian Oppenheim, executive director of RAP—the Massachusetts Rational Approach to Pesticides Alliance.

"The signs are really uncalled for and it's going to introduce quite a panic," Oppenheim said, adding that other drawbacks include the expense involved in printing and distribution, "mass confusion" on the part of customers

and increased costs in securing liability insurance.

The consumer sheet was criticized by Oppenheim, who said, "That may not be a ringing endorsement of the lawn care industry."

The April 1 effective target date is too late to get the proper materials printed, "putting the applicator in a box," Oppenheim said. "You're not giving people very much time to comply with the law."

"We've been meeting with a lawn care task force," Gosselin said. The six-person task force includes two LCOs, one environmentalist and state officials from the Department of

Food and Agriculture and the Department of Health. "We're giving everyone a pretty good shot at it."

The Professional Lawn Care Association of America is considering legal action to fight the law, said Richard I. Lehr, the PLCAA's attorney. "We've been involved in researching a number of issues," he said.

It is "premature to comment" on any possible court fight because a list of the various legal strategies is still being compiled, Lehr said. "We're still ... really in the process of analyzing and drafting. The association will decide what to do," he said. LCI

"I know I saw it in LCI."

Can't find the issue that contained the article you wish you'd clipped and saved but didn't? If you are interested in obtaining a copy of an article you read in a past issue of LCI — or related articles on a certain subject, direct your inquiries to:

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Fine fescue mixtures suggested

PLEASANT HILL, TENN.—Seed mixtures for fall seeding should contain 30 to 50 percent fine fescues to see that all grasses get off to a good start, according to the Lawn Institute.

Fine fescues germinate quickly and establish rapidly in either sun or shade, the institute claims. They have low fertilizer requirements and thus do not compete adversely with other slower growing grasses in the mixture. They also separate grasses of different species and create a population of plants with improved vigor and disease resistance.

Fine fescues function as good companion grasses in lawn establishment, then develop into a permanent component of the sod that helps create a high degree of hardness and ease of maintenance.

As conditions favor bluegrasses, fine fescues give way and provide needed room. As other conditions might reduce the growth of bluegrasses, the fine fescues move in and fill in the space so that a high quality ground cover is maintained.

The Lawn Institute recommends the following names—*Banner*-chewings type, *Ensylva*-creeping type, *Koket*-chewings type, *Reliant*-hard fescue, *Jamestown*-chewings type.

LCI

From the Source.

The advertisement features a collection of UAP products arranged on a dark surface. In the background, there are two large white bags: one labeled 'PENDIMETHALIN' and another labeled 'TURCAM 2.5G INSECTICIDE'. In the foreground, there are several smaller containers: a large white jug labeled 'MEC AMINE-D', a white jug labeled 'DIAZINON AG500', a white jug labeled 'DPD ESTER', a white jug labeled 'IRON 18%', a white jug labeled 'BETASAN 4-E', and a white jug labeled 'DACTHAL 75% WDG'. At the bottom of the advertisement, the UAP logo is prominently displayed, followed by the text 'THE SOURCE'. Below the logo, there is a list of locations and phone numbers: Omaha, NE (800-228-0096), No. Kansas City, MO (816-842-8211), Cordell, OK (405-354-2001), Madison, WI (608-241-9479), Columbus, OH (614-274-9424), Greeley, CO (303-351-7110), and Frederick, MD (301-845-6817). At the very bottom, there is a small line of text: 'Betasan is a registered trademark of Stauffer Chemical Company • Dacthal is a registered trademark of SDS Biotech Corporation • Turcam is a registered trademark of HOBAN Chemical Company • Mec Amine-D is a registered trademark of United Agri Products, Incorporated'.

Turf problems most diverse in Southern California

LAWN CARE SPECIALISTS MUST KNOW ALL INSECT, DISEASE AND WEED PROBLEMS

By JIM TRUSLOW

Nowhere are turf problems more diverse than in southern California.

The southern California basin has every sort of weed, insect and disease problem because of the wide variety of climatic conditions, everything from moderate coastal influences to extremely hot desert conditions. Both cool and warm season grass can be grown, although each requires its own type of care.

Turf managers must therefore be prepared to offer a wide variety of programs.

This article will examine the most common turf diseases, insect problems and weed problems in southern California.

Turf diseases

Turf diseases are difficult to control. But by learning what environmental conditions are conducive to diseases and how to quickly diagnose them, the turfgrass manager can mini-

mize their effects on turf.

Dollar Spot occurs between temperatures of 60 and 90 degrees Fahrenheit. It does well under humid conditions, warm days and cool nights. Symptoms are usually silver-dollar-sized bleached spots on closely mowed turf, and larger spots on higher mowed turf, such as bluegrass.

Turf blades exhibit tan bands with a distinct brown margin extending across the blade. Adequate nitrogen levels will help control this dis-

ease.

Red Thread occurs in spring and fall on turf growing slowly from lack of nitrogen, irrigation, or from cold weather. Perennial ryegrasses are very susceptible. Symptoms include initial yellowing, then pink stroma (mass of fungal threads) forming on the tips of grass blades.

Rust can be a severe problem from fall until spring. Bluegrass, ryegrass, fescue, bermudagrass and zoysiagrass are all susceptible to at least

one species of rust. Adequate nitrogen will help mask the unsightly yellowed turf by sending out new growth, but a proper fungicide may be necessary for control.

Helminthosporium Leaf Spot and **Melting Out** are usually most severe in the spring and fall, but can also occur in summer months. It starts as purplish-brown lesions on the leaves and in two to three weeks proceeds down to the crown and roots of the plant, causing a general thinning of the turf.

Kentucky bluegrass, ryegrass, bermudagrass and St. Augustine grass are all susceptible. Adequate nitrogen and potassium levels will help control this disease.

Powdery Mildew is an occasional problem on turf. Shady areas with poor air circulation are especially susceptible.

There are only four patch diseases that occur in hot weather that can be confused with one another. These are Summer Patch, Brown Patch, Southern Blight and Pythium Blight.

Summer Patch (formerly Fusarium Blight) is only one of the patch diseases that can produce the typical "frog eye" patch. Besides high temperatures, it likes high fertility and low soil moisture and will reoccur under these conditions year after year.

In this case, a preventative fungicide program is best if the conditions cannot be altered.

Southern Blight is not frequently found in turf, but it can be devastating to bentgrass, bermudagrass and Kentucky bluegrass. This disease can be identified by tearing into the thatch at the outer edge of the patch. White seed-like structures called sclerotium and white mycelium will be present.

Brown Patch occurs under hot weather, high nitrogen and high humidity. The initial patch can look like a smoldering halo before blighting the turf. Usually, water-soaked lesions appear on crown and roots with dieback of outer blades. Avoid excessive thatch and watering in the evening.

Pythium Blight can devastate overseeded ryegrasses as well as bentgrasses, annual bluegrasses and other cool and warm season grasses. Warm temperatures and an abundance of water, especially in areas of poor drainage, quickly bring on this disease.

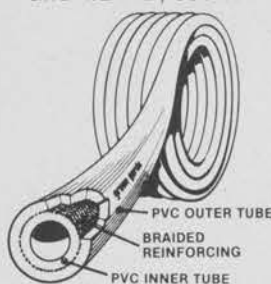
Symptoms include spots with dying, water-soaked tissue and cottony fungal growth. Reduced nitrogen rates and improved drainage can aid in prevention.

Anthrachnose usually attacks annual bluegrass, but can also cause damage to fine-

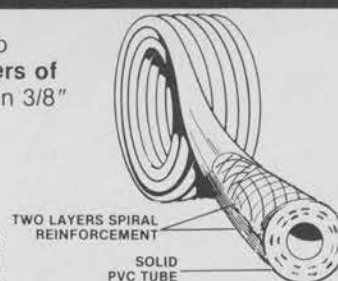


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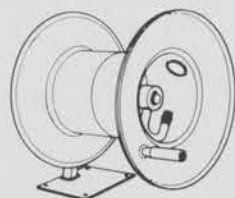
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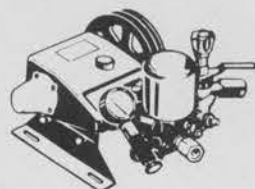


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leaved fescues and perennial ryegrass. It can be managed by providing the turf with moderate nitrogen levels during the summer and applying an appropriate fungicide preventatively.

Fairy Rings are caused by many types of fungi that produce a thick mat of fungal threads in the thatch and soil. Green, circular rings are produced by the breakdown of fungal tissue and organic matter which release nitrogen and green up the turf. Dead circular rings can occur in hot weather where the fungal mat is so thick that water and nutrients cannot penetrate.

Unsightly mushrooms also detract from the uniformity of turf.

Fusarium Patch can occur in cold, wet weather. It produces circular patches of blighted turf with pinkish margins. Many fungicides will control this disease.

Insect damage

Turf insect damage can sometimes be confused with other types of damage. To detect insect damage, the turf manager should be aware that some insects live and feed above the soil surface—these are surface feeders. Others do their damage below the surface—these are soil inhabiting pests.

Two surface feeders do their damage mainly on the turf foliage—army worms and chinchbugs. Army worms consume the grass blades while chinchbugs are small insects about three-sixteenths of an inch long that suck sap from the stems of foliage.

Extensive chinchbug feeding causes grass to first turn yellow, then reddish-brown, in irregular patches.

Cutworms are mainly a problem on bentgrass. The adults are harmless moths, with damage occurring from the larvae. The larvae feed at night by snipping off grass blades in a circular pattern around their burrows—forming brown spots, one or two inches in diameter.

Sod webworms are also the larvae of small moths. They have a dark head and construct silken-lined tunnels throughout the thatch. At night, they emerge to feed on grass shoots and blades.

Soil-inhabiting insects include in warm weather regions white grubs and billbug larvae. White grubs are the larvae of various beetles. They have long life cycles and damage turf by feeding on the roots—causing large dead patches.

Often secondary pests such as skunks, raccoons and birds will tear up the turf in search of white grubs.

Billbug larvae are much smaller than white grubs and are the larvae of snouted weevils. They also feed on turf roots causing irregular dead areas when hot weather arrives.

Weed control

Weed control is important in turf because weeds detract from the uniform color and texture of a lawn. Winter annual broadleaf weeds germinate in the fall and winter. Henbit, clovers and chickweed are examples and can be controlled by spraying them after they emerge with a selective herbicide that will not harm the grass species present.

Crabgrass is an annual grassy weed that germinates in warm weather regions. Most control efforts are centered around applying a pre-emergent herbicide. Goosegrass, or silver crabgrass, germinates later, usually in April. There

are selective herbicides to remove these weeds post-emergent.

However, several applications are usually needed on cool season turf. Bermudagrass can tolerate stronger chemicals that can selectively remove crabgrass and goosegrass in one or two applications.

Summer annual and perennial broadleaf weeds, such as dandelion, cheeseweed and spurge germinate in the spring. They are much easier to control with selective herbicides before they become established.

Nutsedge, dallisgrass and sand dropseed are tough to

control. Usually only repeated applications of selective herbicides will eliminate them from turf areas.

There are a wide variety of weeds that can invade all types of turf grown in Southern California. However, by using good cultural practices and proper application of herbicides, a uniform stand of turf is indeed possible. **LCI**

About the Author

Jim Truslow is a sales representative for Mobay Chemical Corp. based in Vista, CA.

The Super Show for Superintendents: The Landscape Exposition, March 3-5.

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Circle No. 149 on Reader Inquiry Card

How Super Trimec® Can Turf Herbicide Help You Increase Your Profits in 1987:



"With this new generation herbicide, you can start earlier in the year; eliminate call-backs; handle more customers; reduce your herbicide cost; and make salesmen out of your customers. Let's visit a little bit about this opportunity."

Everett Mealman, President
PBI/Gordon Corporation

Super Trimec was developed for the lawn care operator who has the expertise to handle professional products, and is willing to utilize this talent to increase his profit . . . today . . . and tomorrow.

That's you, isn't it? All right then, here is what Super Trimec can do for you:

Super Trimec enables you to start earlier in the season: Of all the formulations we have developed, nothing equals Super Trimec in terms of rapid and thorough penetration. Most of the active ingredient gets into the weed within 30 minutes after contact.

Thus, weather is no longer such a problem to you. A sudden rain is not a threat, nor is a sudden drop in temperature. Even if it freezes, Super Trimec will not be aborted because it will remain viable inside the weed, and complete its mission when the weather warms up.

Just think how much earlier in the season you can start your program when you use Super Trimec!

Super Trimec helps you eliminate call-backs: Because the activity of Super Trimec is so effective, it produces visible response virtually overnight. Your customers can see that it is working, so they don't call up and complain. And because the spectrum of Super Trimec is so broad, it controls those tough, exotic weeds that can create problems for other herbicides.

Super Trimec reduces your herbicide cost: It is so effective that only one gallon is required to cover four acres. But that's only part of the good news . . . most lawn care companies that are using Super Trimec tell us that they only use it as a general spray once per season and then spot treat any later emerging summer weeds.

The bottom line is that Super Trimec is the most economical herbicide on the market in terms of cost per acre of immaculate weed free turf.

Super Trimec enables you to handle more customers: You start earlier in the season; you waste less time taking care of call-backs; your customers become your salesmen. Add it all up and it's easy to see why LCOs tell us they can handle more customers when they use Super Trimec.

What LCOs Should Know About Trimec Formulations

We discovered in working with radioisotope tracer studies that formulations can make a difference in the performance of selective pre-emergent herbicides. One of our better known accomplishments to result from these studies was the development of our original Classic Trimec.

In working with formulations of Classic Trimec we discovered a procedure of react-

Schematic drawing shows why Super Trimec is best herbicide for the LCO.

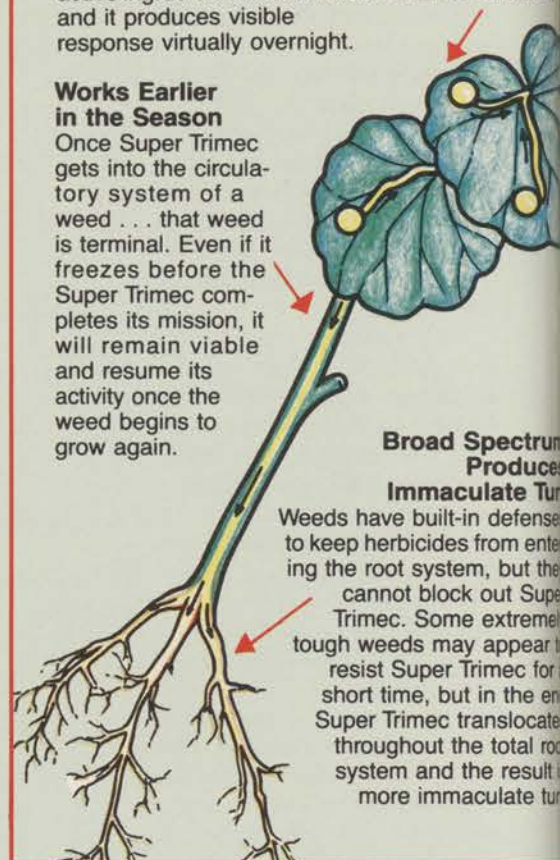
Fast, Visible Response Eliminates Call-backs
Super Trimec has unparalleled power to rapidly penetrate even the toughest weed. Most of the active ingredient is in the weed within 30 minutes, and it produces visible response virtually overnight.

Works Earlier in the Season

Once Super Trimec gets into the circulatory system of a weed . . . that weed is terminal. Even if it freezes before the Super Trimec completes its mission, it will remain viable and resume its activity once the weed begins to grow again.

Broad Spectrum Produces Immaculate Turf

Weeds have built-in defenses to keep herbicides from entering the root system, but they cannot block out Super Trimec. Some extremely tough weeds may appear to resist Super Trimec for a short time, but in the end Super Trimec translocates throughout the total root system and the result is more immaculate turf.



ing the three acids together so that we not only achieved greater synergism but also an homogenous complex in which every droplet is a mirror image of the total.

Thus, Classic Trimec is more efficient than a tank mix of the three chemicals because every droplet of Trimec that hits the target is uniformly loaded and contains the correct chemical ingredients in the proper ratio to trigger a maximum synergistic response.



SUPER



"Suburban Lawn and Garden Inc., is one of the most successful and respected full service landscapers anywhere in the country. They have been using Classic Trimec for a number of years in their lawn maintenance division, but have always made it a policy to continually test new products. You can imagine how gratifying it is to hear Don Tannahill,

Manager of Suburban Liquid Lawn Services, say that side-by-side tests of all post-emergent herbicides clearly show that Super Trimec is by far the most efficient, and that they are going to use it exclusively for their first round of treatments in 1987.

Everett Mealman

In further experiments, we discovered the secret of how to combine certain esters with dicamba. No one else has ever been able to do this and, of course, this secret process is the basic building block of Super Trimec.

Not only does Super Trimec have unparalleled power to rapidly penetrate even the toughest cuticle and translocate to the root system, but it is also friendly to the environment **because the dicamba is in acid form** and does not migrate in the soil moisture and thus endanger off-target ornamentals.

Our Challenge to You in 1987:

In many ways 1987 is shaping up as a year of tremendous opportunity for the alert LCO. Virtually all economists are predicting a higher percentage of employment and more spendable income. Home-owners are going to want lawn care service, and they are going to be able to afford it. And yet there is every indication that your expenses can actually be lower than they were last year.

You'll never have a more favorable climate to make the switch to Super Trimec.

Yes, it's going to cost you more per gallon than Classic Trimec, or (heaven forbid) some three-way tank mix — but your initial outlay for Super Trimec will come back to you many times over, before the end of the season; your total annual herbicide expense will be less; you'll be able to start earlier in the season; you'll do better work; and you'll make more money!

We challenge you to make the move to Super Trimec!

Yes, Super Trimec is a low volatile ester. Yes, Super Trimec is labeled for professional use only — but you *are* a professional. Utilize your professionalism to increase your profits.

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In some local areas we are seeing an interest in a herbicide that does not contain 2,4-D. If you're in such a boat, we can help you with a D-FREE Trimec.

To all intents and purposes, the weed control of our D-FREE Trimec is very much like our Classic Trimec. It costs a little more because of ingredients, but it does have the same synergistic activity and homogeneity that makes all Trimec formulations so effective. If you have any questions about any of our Trimec formulations call, Toll-free: 1-800-821-7925. In Missouri: 1-800-892-7281.

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Report measures employee's quality and efficiency

ENVIRONMENTAL CARE'S SCIENTIFIC METHOD APPLIES TO PERFORMANCE EVALUATIONS

By ELLIOT MARAS
Editor

Employers know that training influences productivity. But do employees?

Environmental Care Inc., a full service landscape management firm based in Santa Ana, CA, has a program designed to make its 900 employees aware of the quality and efficiency of their work. Its called the Quality, Quantity and Efficiency (QQE) System.

Managers and technicians receive numerical grades on all of their projects. The grades are then used to determine financial bonuses.

Projects are graded for thoroughness in six areas: weed control, neatness and detail, plant vigor and appearance, irrigation, plant health and client relationship.

Bill Arman, company president, said the QQE System is designed to provide the greatest possible objectivity and consistency in evaluating per-

QUALITY REVIEW	
DATE: _____	
PROJECT NAME: _____	JOB # _____
CLIENT CONTACT: _____	PHONE _____
FOREMAN/SUPERVISOR _____	
	TOTAL POINTS POSSIBLE ACTUAL
1. WEED CONTROL	15
2. NEATNESS & DETAIL	16
3. PLANT VIGOR & APPEARANCE	25
4. IRRIGATION	19
5. PLANT HEALTH	9
6. CLIENT RELATIONSHIP	20
TOTAL SCORE	100
COMMENTS: _____	

formance.

Once these grades are determined, the jobs are also graded for efficiency. Efficiency refers to how much labor and materials are used by the crew.

Arman said the company's goal is for crews to maintain a score of 85 percent for both quality and efficiency.

Work crews scoring 85 percent on all their jobs in both areas receive bonuses: \$60 for the foreman and \$30 for the technicians. The foreman for the highest scoring crew for a

six-month period receives \$500, and the technicians get \$75 each.

"By having a clear set of goals, the employee can visualize where he currently stands and know when he has arrived at the next career destination," Arman said.

Quality scores of a 100-point maximum are determined as follows:

• **Weed Control—15 points.** Five points awarded for control of weeds in sidewalk cracks; five points for weeds in curbs, streets and tree cover areas; and five points for weeds in turf areas.

• **Neatness and Detail—16 points.** Three points for cleanliness of entranceways; three points for cleanliness of corner areas; five points for cleanliness of ground covered edges, areas around trees and shrubs, and areas around walls and buildings; five points for neatness of mowing and mowing cleanup.

• **Plant vigor and appearance—25 points.** 10 points for clearing of dead plants, poorly performing plants and bare areas; five points for proper fertilization; five points for appearance of tree stakes, ties and guys; five points for quality of shrub and tree pruning.

• **Irrigation—15 points.** 10 points for irrigation repair; five points for soil moisture.

• **Plant health—9 points.** Three points for control of insect, snails and slugs; three points for disease control; three points for rodent control.

• **Client relationship—20 points.** Twenty points for handling of customer inquiries, response to inquiries and overall dealing with customer.

LCI

New Nitroform to reduce segregation

WILMINGTON, DEL.—Nitroform Slow Release Nitrogen will be available in a larger particle size for use on large turf areas, the NOR-AM Chemical Co. announced recently. The new product will be on the market by the fall of 1987 fertilizer season.

The larger particle size will reduce segregation problems during fertilizer blending and application. When phosphorus, potassium and nitrogen particles are different sizes, particle segregation often leads to uneven distribution and streaking of turf.

The new granular will be the third size available from NOR-AM as a slow-release, urea formaldehyde material.

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One of the strengths of Team™ is its weeks of control. One application puts an end to crabgrass and goosegrass for up to 20 weeks.

The control's not just longer, it's more effective, too. Research by leading universities shows that Team provides outstanding annual grass control all season long while being gentle to all turf species.

That's because of the way Team works. It stays put on cool season turf. Won't leach out, even in heavy rainfall.

And once activated, forms a vapor zone that keeps weeds from emerging for up to 20 weeks.

That's Team's most impressive strength. Its weeks of weed control.

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There's only one thing more impressive than Team's strengths.

Its weeks.



Customer response card aids customer communication

COMPLAINTS NOT HEARD CAN BE THE MOST COSTLY FOR SERVICE COMPANIES

Do you ever wonder what your customers think of your company's service? If you actively solicit customer feedback, you don't wonder. You know.

Customer feedback enables a manager to know how well his employees are doing their jobs. One way to solicit it is to have customers fill out a customer response card, which can be stapled to each invoice.

A testimonial

"Without this report card, we wouldn't know what our customers were thinking," said Mike Moulten of DIAL ONE Four Seasons Nursery Co. in Dublin, OH, a full service landscape management firm. "If they were upset with the service they just wouldn't bother to call us." He has also discovered that the cards generate new business through referrals.

Moulten is one of several lawn care firms that implemented a customer response card program after joining Dial One International, Inc., a network of independently owned service companies.

Companies that don't solicit complaints often experience a disproportionate amount of "failure feedback;" they mostly hear from dissatisfied customers rather than those who are satisfied.

As a result, employees tend to resist the use of customer response cards, thinking they will invite bad feedback.

In most cases, however, most of the cards have positive responses.

Some surprises

Service complaints often deal with the way in which the job was done rather than the results. This often comes as a surprise to service firms.

For example, the question of promptness in arriving at the customer's home or work site accounts for as many complaints as all others combined.

"The card encourages discussion," said Stephen Krystyan, owner of DIAL ONE Stephen Krystyan, Inc., a landscape management firm in Garden Grove, CA. "Now I follow-up on any complaint immediately and I find that most aren't really problems."

Frank Lesser, owner of DIAL ONE Greenwood Designs in Kenneyville, IL, includes the cards in his monthly billings. "Our customers send them back like clockwork, and we benefit from having a more professional look," he said.

Self-esteem benefits

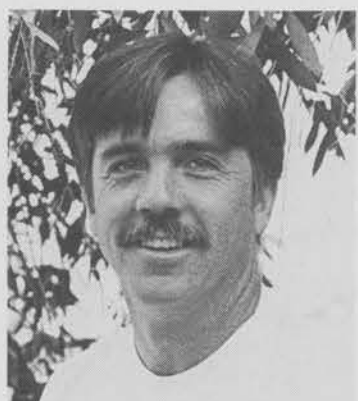
For Ron Stephens of DIAL ONE R.M. Stephens, Inc., a full-service firm in Santa Ana, CA, the most important aspect of the card is that "it



Krystyan: "Now I follow up on any complaint immediately."



Lesser: Customers respond.



Stephens: Builds self-esteem.

builds self-esteem and a certain pride in one's work that creates both quality and longevity for a business."

The card can also improve customers' appreciation of lawn care. The card is personalized, with the name and telephone number of the company and service representative.

The card has other advantages as well. It enables service managers to monitor employee performance, and salespeople can include it with promotions material. **LCI**

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JR-4 Aerifier



VCD-14 Verti-Cut



TM-60 Aerifier



TB-60 Aerifier



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Walk-behind Aerifiers:

The JR-4 was designed especially for the lawn care professional. Self-propelled, fast and maneuverable. Just 34½ inches wide, it cultivates a 23 inch swath, to **aerify 26,000 sq. ft. an hour**, at an easy 3 mph. walk. Holds 40 tines.

The EA-3 is for smaller lawns. Very durable and easy to operate, it is virtually maintenance free. Holds 16 tines.

Verti-Cut De-Thatcher:

The VCD-14 is a proven performer for maintaining a healthy, thatch-free lawn. Also used for renovating or seed bed preparation.

Tractor-drawn Aerifiers:

The TM-140 cultivates a full 6 ft. swath, for the most economical aerification of large turf areas. Attaches to the 3-point hitch of your category "3" tractor or, add a conversion kit and it's a tow-type. Kit includes transport wheels, draw bar and hydraulic lift jack. Fourteen discs, hold 140 tines or blades.

The TM-60, cultivates a 32 inch swath for fast aerification of smaller turf areas. Attaches to the 3-point hitch of your category "0" or "1" tractor (with 500 lbs. lifting capacity). Six discs, hold 60 tines or blades.

The TB-60, a tow-type unit to cultivate a 32 inch swath. Can be easily towed by most small lawn tractors. Utilize the towing vehicle's hydraulics or add Hahn's Pow-R-Pak. Turf protecting tires and six discs to hold 60 tines or blades.

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LCOs urged to stick up for facts in face of fears

BALTIMORE—"Ten Reasons Why You Should Get Out of the Lawn Care Business...Or Accept the Challenge of the 1980's" was a message of moral support from Dr. Elizabeth Whelan to an overflow crowd at the Professional Lawn Care Association of America convention in Baltimore.

Whelan is executive director of the American Council on Science and Health. Her recent book, *Toxic Terror*, takes a critical look at the movement to discredit modern technology in the name of envi-

ronmentalism.

Whelan urged LCOs not to give in to pressures to stop using chemicals. "Stick with scientific facts," she said.

"You in the role as lawn care managers, consumers and taxpayers should demand that public policy be based on scientific facts," she said.

The public has been misled about the risks of technology by a media that panders to fear, Whelan said. However, the fears that the media panders to are fears of things remote—like golf courses sprayed with chemicals.



Whelan: Watch out for your Thanksgiving dinner!

As a result, the public suffers a case of *nosophobia*—the morbid dread of illness.

The greater risks—Whelan mentioned tobacco, AIDS, alcohol, automobiles, unbalanced diets, high blood pressure and poor exercise habits—receive much less attention.

"Americans will not accept the reality that there are basically safe ways of using potentially dangerous chemicals," she said.

Whelan entertained her listeners with a mock Thanksgiving dinner menu she passed

out. It listed all the chemical ingredients of the common Thanksgiving entrees, which contain *natural* carcinogenic compounds.

"Our mushroom soup, for example, contains hydrazines, which are potent animal carcinogens," she said. "The fresh vegetable tray is a display of nitrate (which can convert in the body to nitrosamines, well established animal carcinogens), goitrogens (which impede human absorption of the mineral iodine), and psoralens (human mutagens)." LCI

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Choose a location nearest you. Registration: 9 a.m. Seminar begins: 9:30 a.m. Open to all arborists, city foresters, lawn care firms, landscape architects and contractors, golf superintendents and grounds managers. Let Mauget untie the 'nots' in your tree care problems.

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Almost half do repairs in-house

CLEVELAND—About half of the lawn management firms service their equipment in-house, according to a recent survey by LAWN CARE INDUSTRY. The survey was done on behalf of The Toro Co.

Forty-nine percent of the respondents said they have service technicians on the payroll. Most of the rest said they depend on either commercial service dealers or distributor service departments.

Most of the lawn management firms in the Midwest (54 percent), Southeast (54 percent) and Northeast (48 percent) depend mostly on staff technicians. Those in the Southwest favored commercial service dealers the most (50 percent.).

Other findings were:

- Seventy-one percent of the respondents provide turf cultivation services such as aeration.

- Four of 10 firms mow between 50 and 200 acres of turf per year.

- Training practices in order of popularity were: hands-on demonstrations, lectures, and a review of the owner's manual.

- Cutting season lengths in the different regions were: 7 months in the Northeast, 7 1/2 months in the Midwest; 9 months in the Southeast; and 10 months in the Southwest.

- Thirty-four percent of the companies have daily preventive maintenance programs and recordkeeping; 31 percent have weekly programs; 18 percent have monthly programs; and 17 percent have none.

- Price is not the most important factor in making a purchase; availability of parts is.

LCI



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*Hard-to-control weeds like oxalis, ground ivy, prostrate spurge and wild violet.

Proper pruning means leaving donut undisturbed

By JAMES E. GUYETTE
Associate Editor

Dr. Alex Shigo is a big fan of donuts—not necessarily the kind you eat for breakfast, but the kind you get when a tree branch is properly pruned.

A donut is what Shigo calls the collar of woody mass that appears where branches meet the trunk.

"Do not injure or remove the collars," Shigo said. "The tree's defense system is in the collars. Most cuts should have a nice round donut of callus."

Shigo is opposed to the use of wound dressings on trees. "The tree has its own wound dressing that comes from within the tree."

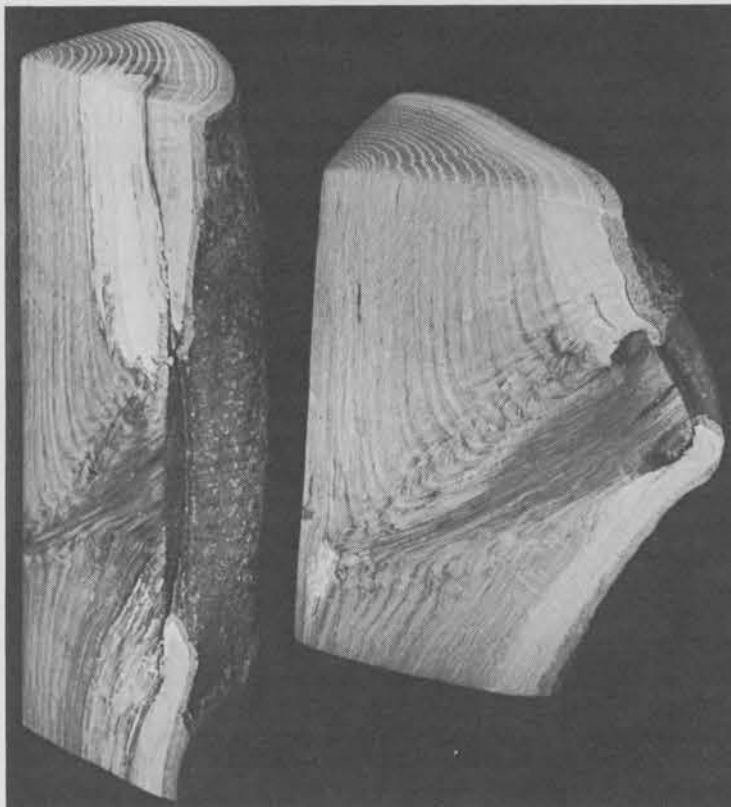
Retired from the U.S. Forest Service, Shigo is a world-renowned expert on trees. He has published two books and written more than 200 papers on the subject. His firm is Shigo and Trees, Associates, Durham, NH.

He acknowledges that some of his views are controversial. Shigo made his remarks before a packed house in Milwaukee at the Green Team Conference and Trade Show, a joint effort



Shigo: Leave a donut.

of the Landscape Management Division of the Associated Landscape Contractors of America and the Professional Grounds Management Society.



Right and rot: On the right is a proper cut. On the left is an incorrect cut. Note the signs of decay on the left, while there is none on the right. Wound dressing is not needed for a correct cut.



See saw? Proper position of saw for pruning.

When pruning a tree, leaving stubs should be avoided because they attract fungi, Shigo said. Flush cuts are another no-no. "Flush cuts lead to large cracks."

Shigo is in the process of publishing a dictionary of tree terms. He said the "sloppy terminology" within the field leads to much confusion. He is



Branching out: The right way. Don't cut behind the branch bark ridge in the crotch, and don't remove the branch collar. Watch your fingers.

particularly annoyed at the "cookbook" approach to guiding tree care. "What we have to do is get away from the cookbook. I want to write a book called *Cookbooks Kill*. I believe it's the basic biology that's missing."

That biology includes letting people know about "boundries." Boundries surround an injured or decayed

part of the tree. "When a tree strains a part it builds a boundry around it. The tree can defend itself by building boundries," Shigo said. "When we make flush cuts, when we put on wound dressing ... it takes away the tree's defense system."

(Boundries take up food storage space within a tree. When there are too many of them the tree dies.)

Fertilizer should be used with care. "I believe that over-fertilization is one of our bigger problems," Shigo said, adding that fertilizer is not tree food, and it will not save a starving tree. "Sugar is tree food!" he said.

"I hope the next time you refer to fertilizer as food that you wash your mouth out with wound dressing—that's a good use for it," Shigo told the laughing conventioners.

Shigo said fertilizer should not be applied to a tree when planting. "Wait until your tree

grows through one cycle before fertilizing." Nitrogen speeds up the tree's growth processes, making the tree use up more energy. When that happens the tree is less resistant to disease, he said.

Shigo pointed out that the worst times to hurt a tree are when its leaves are coming off



Donuts galore: These are done the right way.

or when its leaves are coming on. He also cautioned against over-watering.

Topping-off a tree is not recommended by Shigo. "If you need to cut the top off a tree you need a new tree." The delegates were reminded that trees do not get energy from the soil—that comes from the leaves. The soil provides elements and water. LCI



Rough cut: Removal of dead wood is necessary. Don't leave stubs as shown here, and don't injure ring of living wood at base of dead stub when removing it.

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Donut done: Correct callus one year after proper cut on oak.



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You see, TURFLON II does everything your old standby does, and a whole lot more. Like control those hard-to-control weeds that can emerge early and sneak through your old standby. Weeds like oxalis, ground ivy, prostrate spurge and wild violet. Weeds that keep your phone ringing and your cash register quiet.

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The low volatility of the TURFLON II activated amine formulation gives you less odor to worry about. It has a proven safety record and won't migrate in the soil to the roots of ornamental plants.

So if you're tired of being let down in the broadcast round by your old standby, turn to TURFLON II this year.

TURFLON II

It's your new old standby.



^{*}Trademark of the Dow Chemical Company

NEWSMAKERS

Sharon McGuire is the new executive director of the California Landscape Contractors Association. She succeeds **Michael E. Leeson**, who resigned his position at the Sacramento-based association after 14 years of service.

McGuire, born and reared in Soda Springs, ID, joined the CLCA in September of 1980. She has since held a number of positions in the organization.

The new regional sales manager for the Richdel Turf Irrigation Division is **Seth Tompkins**. His territory covers Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota and Wisconsin.

Tompkins began working for Richdel in 1980 as a field salesman. Before that he was an irrigation contractor.

Richdel, headquartered in Carson City, NV, makes plastic valves, controllers, spray heads and rotors used in commercial and residential irrigation systems.

Jay Glatt is retiring as vice president and general manager at Turf-Seed, Inc., Hubbard, OR, to concentrate on his own business.

Replacing Glatt is **Darcy Loscutt**. She has worked for the company since her high school days and is experienced in all of Turf-Seed's activities.

Tom Stanley is the new sales manager. His duties include the advertising program. He has been at Turf-Seed for five years. Stanley was graduated from Willamette University in 1971.

Lesco, Inc., Rocky River, OH, has named **Bob Coyner** product manager for spreaders and sprayers. Before joining Lesco Coyner was a vice president at Pascoe Equipment Co., Oakdale, PA. He also was a supervisor for the City of



Loscutt



Stanley



Coyner



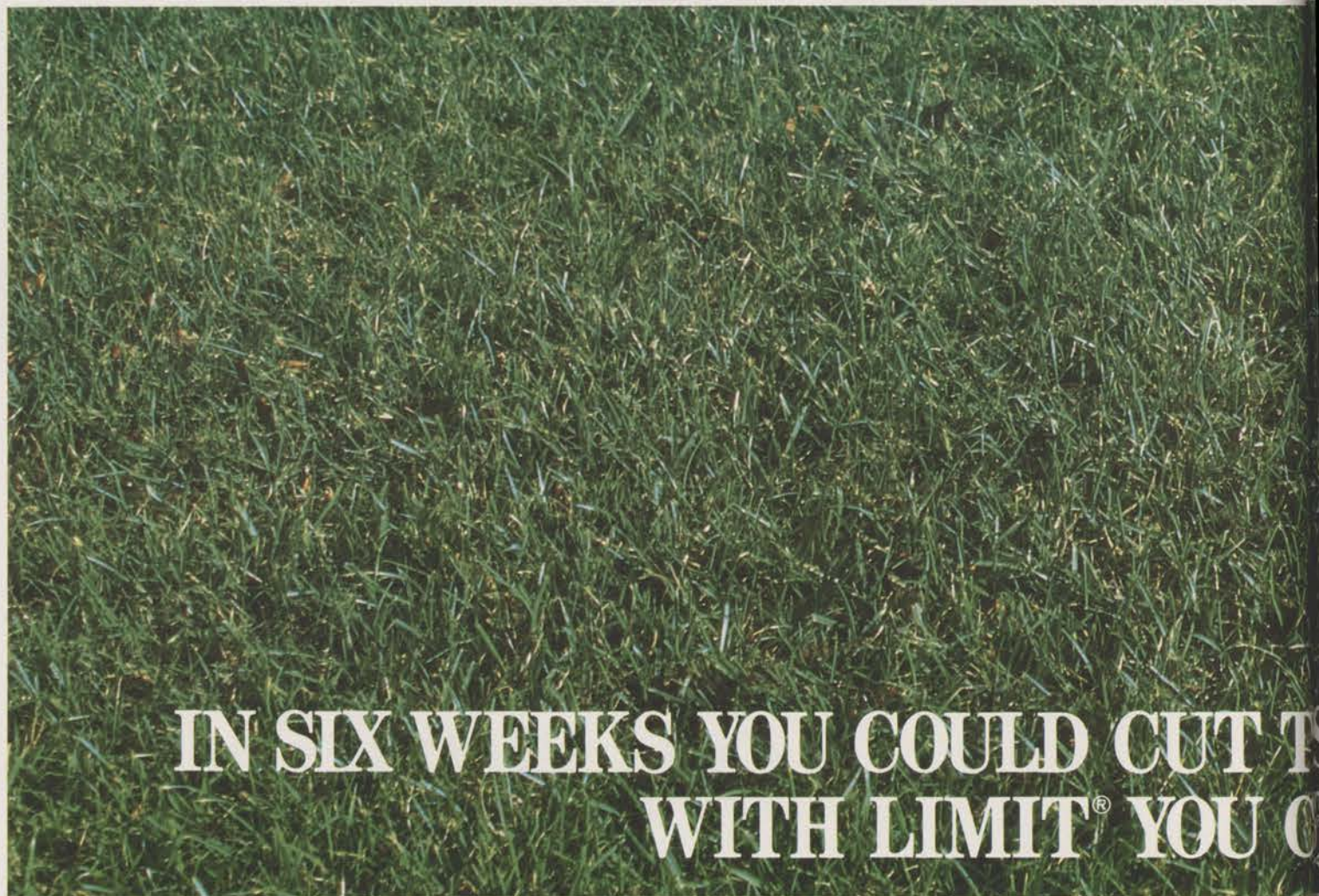
Earl

Pittsburgh Department of Recreation and a foreman for the Davey Tree Expert Co. He attended the University of Pittsburgh and belongs to a

number of organizations, including the Academy of Science and Arts of Pittsburgh. Coyner and his family are moving to the Cleveland area.

The new director of stores for Lesco Service Centers is **Bob Earl**. He will coordinate all merchandising and operations for the service centers.

Formerly director of strategic planning and store conversion for Forest City, Inc., Earl also has been employed at Montgomery Wards, Gold



CUTTING GRASS IS TIME CONSUMING WORK. ESPECIALLY PLACES LIKE HILLSIDES, TERRACED LANDSCAPES AND HIGHWAY ROADSIDES.

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Last year, country clubs, cemeteries, parks, municipalities and lawn care operators across the country applied Limit turf regulator to grass they didn't want to mow. It cut their work in half and it'll do the same for you. Because Limit really works.

Limit dramatically slows grass growth without unsightly yellowing. Because Limit works through the roots, not the foliage. So your grass stays green. Yet needs only half the mowings for the six weeks or more that the treatment lasts. And since you can use it before or after green-up, it always fits your schedule.

It can really help out in the spring when help is in short supply.

USE LIMIT WHEREVER GRASS GROWS AND YOU'D RATHER NOT MOW.

There are a lot of things you'd rather have your ground crews working on instead of cutting grass. And with Limit, they'll have the time.

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*Recommended for ryegrass, bluegrass, tall and fine fescues.

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Circle No. 133 on Reader Inquiry Card

CUTS YOUR GRASSWORK IN HALF



McGuire



Tompkins

Circle and the W.T. Grant Co. He attended the University of Buffalo and the Bryant and Stratton Business Institute. **Charles Baiano** was chosen Grounds Manager of the Year for 1985 by the Professional Grounds Management Society. Baiano is the supervisor of grounds for Sleepy Hollow Restorations in Tarrytown, NY.

Susan A. Harrison joined Rodale Press as advertising sales representative for Rodale's *Organic Gardening* magazine. In this position she will be responsible for the Mid-Atlantic and New Eng-

land territories.

Rex Dixon has been named general manager of Richdel's Turf division, a manufacturer of irrigation systems for residential and commercial installations. Dixon will be located at Richdel's national sales office in Canoga Park, CA where he will be responsible for managing all of the turf division's marketing and sales activities.

Lyle Koontz, vice president of marketing for Great Plains Industries, has been elected first vice president of the Farm Equipment Manu-

facturers Association.

Jerry Curtice has joined Aquatrols Corp. of America as marketing manager. In his new position Curtice will have responsibility for market research, implementing marketing programs, and service to certain house accounts.

Dr. Ellen Henke, America's Plant Doctor, owns and operates Plants-At-A-Glance, a landscape design and garden information business.

Kenneth H. Todd, president of Todd Farm Equipment, Inc., parent company of

Turf & Garden, has announced the appointment of four department managers to serve under the direction of **Jim Carter**, division manager. They include: **Jim Parrish**, manager, turf & ornamentals department; **Kim Jones**, manager, water systems/irrigation department; **Scott Dodson**, manager, golf car department; and **Jim Morrison**, manager, lawn & garden department.

Sue Ann Brown has joined the Specialty Products Group of Mobay Corp. as a sales representative in its central sales region. Brown will

represent Mobay's line of pesticide products to the turfgrass, ornamental, pest control, and other specialty chemical markets. Her sales territory covers Ohio, Michigan, Kentucky, West Virginia, and western Pennsylvania.

Douglas Z. Soper has also joined the Specialty Products Group of Mobay Corp. as a sales trainee in its southeast territory. Soper's territory covers Florida, with his training under **Fred Schmidt**, a Specialty Products Group senior sales specialist.

Dr. Al Turgeon, former vice president of research and technical services for Tru Green Corp., has been appointed professor and head of Pennsylvania State University's Agronomy Department.

Simplicity Manufacturing, Inc., has promoted **Bill McKee** to area sales manager and **Pat Hanlon** to district sales manager. McKee, based in Conyngham, PA, will be responsible for supervising and expanding sales of Simplicity products throughout his western Pennsylvania territory. Hanlon, based in Chicago, will be responsible for expanding and directing sales of Simplicity products through dealers in northern Illinois.

Denyse Arles has been appointed inside sales representative for the Turf Division of Rain Bird Sales, Inc. In her new position, Arles updates Rain Bird turf distributors in the West on product information, including product availability, and new product programs and specials. Her territory covers Arizona, California, Colorado, Hawaii, Nevada, New Mexico, and Southern Wyoming.

Lesco, Inc., Rocky River, OH, has named **James A. Fink** vice president of operations. Fink had worked for LTV Steel Tubular Co. and its predecessor for the past 28 years.

Fred C. Stephens has been named manager of human resources and safety officer for Lesco, Inc., in Rocky River, OH. For the past 20 years Stephens has been associated with Republic Steel and its successor, LTV Steel.

John A. Caputo has joined Seed Research of Oregon as Senior Agronomist. Caputo will be responsible for production of breeder seed on the numerous new turfgrass cultivars being developed by Seed Research. He will also be working closely with the seed growers on existing production fields and in contracting new acreage. **LCI**

Sharpen Your Skills and Barter for Bargains at the Landscape Exposition, March 3-5, O'Hare Exposition Center, Rosemont, IL.

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Limit is recommended for ryegrass, bluegrass, tall and fine fescues. You can apply it with standard spraying equipment. And you don't have to worry about rain wash-off. In fact, you can even use it as a way to keep personnel busy during moderate rain. Plus, Limit can be tank-mixed with both

fertilizers and commonly-used herbicides. So you get one-pass application efficiency on broadcast applications.

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1. Purchase one quart of LIMIT® turf regulator between January 1, 1987 and June 30, 1987.
2. Send this rebate certificate along with an original copy of your invoice showing dealer name, date and purchase of one quart of Limit. Your rebate request must be postmarked no later than July 1, 1987.

3. Monsanto will send you a check for \$5.00. Allow 4-6 weeks for your check to arrive. This offer is limited to one \$5.00 rebate check per customer.

4. Reproduced certificates will not be accepted. Monsanto is not responsible for lost claims or missed deadlines. This certificate has no cash value and is void where licensed, taxed or prohibited by law.



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State: Zip: -
Phone: - -

Mail to: Monsanto Redemption Center, LIMIT Rebate, P.O. Box 4004, Monticello, MN 55362

Limit is registered for non-residential use only (not labeled in California).

A-4

Environmental monitor provides variety of data

The RSS-412 Predictor is an easy-to-use environmental monitor that continuously collects air temperature, humidity, leaf wetness and rainfall data. It takes the information, compares it with the known weather factors causing disease outbreak and calculates the possibility of disease.

Available models include turfgrass anthracnose, apple scab and fire blight, grape black rot, onion leaf blight. Powered by a 6-volt alkaline battery, the Predictor holds the most recent 16 infection



histories in its protective memory.

The Predictor supplies current environmental conditions, the history of infection periods, as well as the proba-

bility of disease occurrence. The information can be retrieved either through the display or with an optional printer. **LCI**

Circle no. 200 on service card.

Spartan hard fescue offers cold tolerance

Spartan hard fescue recently received a plant variety protection certificate, having been developed to improve pest resistance, stress tolerance, attractiveness and turf performance.

Spartan is an advanced generation synthetic cultivar selected from the progenies of 142 parent clones, reported Dr.

Jerry Pepin, director of research for Pickseed West, Inc., Tangent, OR. It is a leafy, persistent, turf-type hard fescue.

The extensive genetic diversity of Spartan is a distinct advantage enabling the variety to adapt to different conditions in regions where hard fescue is used for turf. It is an ideal choice for dry, shady areas and for locations with infertile acidic soils. **LCI**

Circle no. 201 on service card.

Spreader provides smoother granular application

Lesco's gasoline-powered, hydraulic-driven spreader en-



ables the operator to select a constant speed, from zero to four miles per hour. This provides a constant rate of application of product and thereby a cost savings to the customer.

The spreader features an 80-pound capacity polyethylene hopper, corrosion-resistant Delrin 100 gears and third hole on shut-off plate with adjustable metering slide for varying product bulk densities.

The stainless steel frame provides durability and strength; extra-long stainless steel handles allow for easy maneuvering. The durable bumper/handle on the front of the spreader protects the impeller and makes carrying easier. The stainless steel axle, impeller shaft and on/off assembly are durable and corrosion-resistant. **LCI**

Circle No. 202 on service card.



Comfort featured in new riding rotary mower

Middlesworth Engineering and Manufacturing, Inc. has added the Model C54R Commercial Riding Rotary Lawn Mower to its product line. This is an out-front mower with a 54-inch cut, featuring a height adjusting lever with cutting heights of one to four inches.

The unit has hydrostatic transmissions with variable ground speeds from zero to 6 miles per hour and true zero-turning radius. It uses a 16 hp Kohler cast iron engine. The wide track axle, along with the low compact design, provides excellent maneuverability on hills.

The mower is designed to provide a very comfortable operating position. The operator does not straddle the engine or framework. A convenient handrail is provided to assist the operator in getting off and on the machine. It also has a deluxe seat with arm rests. **LCI**

Circle no. 203 on service card.

If you are interested in obtaining any available or additional editorial research or reference materials published in this or previous issues, direct inquiries to Kathleen Maciuszko at 216-826-2839.

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Nourishing your turf with NITROFORM® assures better root development and healthier turf by providing

six important benefits...

- 1** Consistent 38% nitrogen.
- 2** Sustained, predictable release by soil bacteria to provide nitrogen when needed most by roots and vegetative parts.
- 3** Provides organic nitrogen and carbon to enhance bacterial activity, even in sandy soils.
- 4** Non-burning to turf, trees, or ornamentals when used as directed.
- 5** Environmentally sound... resists leaching, even in porous soils.
- 6** Fewer applications a year are required.

For a complete information kit on nourishing and protecting your turf, join the NOR-AM Turf Management program. Write to the Communications Department, NOR-AM Chemical Company, 3509 Silverside Road, P.O. Box 7495, Wilmington, DE 19803.

NITROFORM® is available as BLUE CHIP® or GRAY CHIP™ for dry application, or as POWDER BLUE® or POWDER GRAY™ for liquid application.

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IMPORTANT: Please remember always to read and follow carefully all label directions when applying any chemical.



Low-burn N solution has unique compound

Researchers have discovered a unique nitrogen compound that combines low-burn, stability and controlled availability in one fertilizer solution.

N-Sure nitrogen solution (28-0-0) is the first lawn fertilizer to contain triazone, a completely new form of nitrogen fertilizer that has been developed for commercial manufacture by Arcadian Corp.

Triazone supplies approximately 65 percent of the nitrogen in N-Sure solution. Another 28 to 30 percent comes from urea, and the rest is provided by other complex nitrogen compounds formed during the manufacturing process.

A totally water-soluble product, N-Sure solution can be stored indefinitely at temperatures ranging from zero degrees to 90 degrees Fahrenheit without forming precipitates. N-Sure is labeled for both southern and northern turfgrasses. **LCI**

Circle no. 204 on service card.



Bunton 61 walk-behind handles big jobs

The Bunton 61 walk-behind mower offers the cutting width of a tractor-mounted mower, with the added advantages of affordability and ease of handling normally associated with a mid-sized walk-behind mower.

The mower functions equally well as a self-propelled walk-behind mower or as a riding mower. The one-wheel design of the riding attachment allows the operator to trail the mower for greater comfort and maneuverability.

The engine is a 16 hp Briggs & Stratton with battery start. Standard controls feature a unique safety interlock system that allows the engine to run without the operator present if the blades are disengaged and the traction wheels are in neutral. **LCI**

Circle no. 205 on service card.

New diesel engine introduced for tractor

OMC Lincoln has introduced a new 21.5 hp diesel engine for the Cushman Front Line Tractor. The new three-cylinder diesel engine gives Front Line buyers a choice of three power plants: a 22 hp air-cooled gasoline engine, 17 hp diesel, or the 21.5 hp diesel. All Front Line tractors can be equipped with 60-inch or 72-inch mower decks, as well as other attachments.

The new diesel-powered Front Line features hydraulic



power steering, a new OMC-designed PTO clutch with a new coupling design between the clutch and engine, a Donaldson air cleaner and Stanadyne water separator to protect against fuel contamination.

The engine is rubber-isolated from the frame to minimize vibration, and the engine is cooled by a remote, rubber-

isolated radiator with V-belt driven fan. An overheat warning system will signal the operator if the coolant temperature should ever rise above a safe level. **LCI**

Circle no. 206 on service card.

Parker offers sweeper for commercial clean-up

The Parker Sweeper Co. has made a Conestoga Trail Vac adaptable to the larger commercial front mowing decks. A 12-foot length of 8-inch diameter hose held up by an additional support arm permits a turning radius that maintains a continuous flow through the hose regardless of hard left or

right turns.

The hose is connected to either right- or left-hand discharge decks with the universal quick attaching boot assembly.

The Conestoga line can be furnished with containers for fast, efficient removal of debris.

The floating louvers in the wagon roof close as the wagon fills.

This allows the operator to know when the load should be dumped without the need to shut down the engine to check the fill level. **LCI**

Circle no. 207 on service card.

"I know I saw it in LCI."

Can't find the issue that contained the article you wish you'd clipped and saved but didn't? If you are interested in obtaining a copy of an article you read in a past issue of LCI — or related articles on a certain subject, direct your inquiries to:

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OTHER IMPORTANT FEATURES

- 5.8 m.p.h. (9.4 Km/h) transport speed
- 76 in. width of cut
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NEW PRODUCTS



Measure alcohol in gas with gasohol testing kit
Gasoline containing alcohol can cause major engine prob-

lems, including seizing due to increased temperatures. In many cases engine manufacturers are disallowing warranties on engines that have been run on alcohol-blended gas. Yet most states allow up to 9.9 percent alcohol in gas before it has to be labeled "gasohol."

The One-Mix Gasohol Tester Kit from HMC, Long Beach, CA, allows people to see exactly how much alcohol is in their gas.

The kit requires only a small fuel sample and the test takes five minutes. It sells for \$3.95.

LCI

Circle No. 208 on service card.



New backpack sprayer can hold four gallons

LESCO, Inc., Rocky River, OH, is marketing a new backpack sprayer with a four gallon capacity.

The tank is constructed of

UVL-stabilized polypropylene and is resistant to sun, heat or chemical damage. Working parts are inside the sprayer to prevent harm caused by rough handling.

The sprayer features a low-maintenance diaphragm pump suitable for wettable powders. The metal handle is interchangeable to the right or left side for operator convenience.

The cost of the product is \$69.

LCI

Circle No. 209 on service card.

Dacthal now available in flowable formulation

After two decades of being manufactured as a wettable



powder, Dacthal pre-emergence herbicide is now available in a flowable formulation for sale in 2 1/2 gallon containers and 55 gallon drums.

Dacthal Flowable Herbicide, made by Fermental Plant Protection Co., Painesville, OH, gives LCOs an easier way of controlling crabgrass, spurge and 21 other troublesome annual grasses and broadleaf weeds in established turf and ornamental plantings.

LCI

Circle No. 210 on service card.

GREEN PRO™ SERVICES

800-645-6464

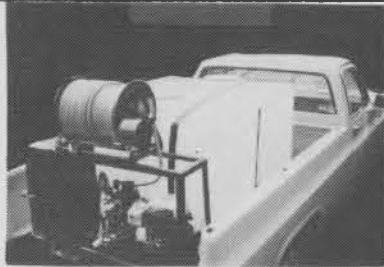
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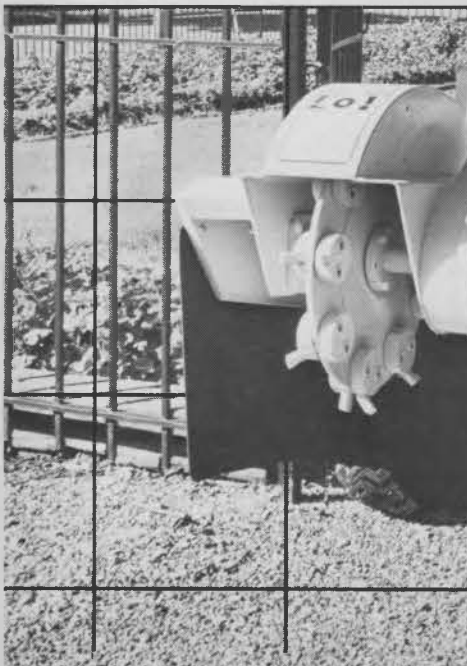
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Organics from Green Pro™ is the natural choice for better quality lawns and shrubs. By choosing the organic approach to lawn care, you will reduce the dependence on pesticides while producing a healthier turf with less disease. This affordable approach will reduce the overall costs to you and your customer.

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Circle No. 121 on Reader Inquiry Card



186 Stump Cutter
Cutting depth, 10-1/2";
Cutting width, 29";
Transport width, 35"

BUDGET CUTTER

Cutting out stumps on a tight-fisted budget? Get your hands on the 186 Stump Cutter. From Vermeer.

Beefy construction. Rugged power. Solid down pressure to cut thru tough stumps. Without arm wrestling for control.

Choose push type. Or self-propelled. Both put easy-to-use swing away controls at your fingertips.

And the "yard gate" compact-ness of the 186 lets it squeeze into tight places...and tight budgets. Perfect rental or commercial machine.

The 186 Stump Cutter from Vermeer. Tough on stumps. Easy on the budget.

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Circle No. 149 on Reader Inquiry Card



Computer designed mower cuts tight places

A new walk-behind mower is the first grass cutting machine to be computer engineered for operator convenience, according to the mower's maker, Exmark Manufacturing Co., Inc., Beatrice, NE.

The 21-inch Exmark has a compact rear deck. It provides optimum maneuverability in tight spots, up hills and on curves, according to the company.

Powered by a 4 hp Briggs and Stratton engine, the mower features variable speed control and differential action for easy turning. The Exmark has no reverse drag, making backing easy, the company said.

LCI

Circle No. 211 on service card.

NEW PRODUCTS



New vacuum pulverizes grass and trash

The high-volume BT-80 vacuum from Billy Goat Industries, Inc., Lee's Summit, MO, will pick up and pulverize everything from grass to trash in one sweep, according to the company.

The industrial size BT-80 features an 8 hp Briggs and Stratton engine. The 10 gauge steel impeller housing and 1/4-inch steel plate impeller shreds the debris before depositing it in the breathable synthetic felt bag.

An optional 5-inch hose kit allows for pickup in hard-to-reach areas. **LCI**

Circle No. 212 on service card.

End bucket pain with new opener

Opening buckets will no longer bring lower back pain as Rose-DiFede, Inc., Hayward, CA, is introducing its Quick Bucket Opener.

The tool is designed to generate maximum opening leverage with little strength exerted. The patented product is made to be used quickly and to effectively reseal lids without damage.

Round and square buckets can be opened. The Model 900 is 21 inches long and can be used on 4-7 gallon buckets. The Model 904 measures 14 inches and fits 1-3 gallon buckets. **LCI**

Circle No. 213 on service card.



12 horses of power in big new Briggs motor

A 12 hp vertical shaft engine is the newest edition to the line of Briggs and Stratton Corp., Milwaukee, WI. The motor is designed for industrial/commercial use or premium consumer products.

It features 465cc displacement, and torque peaks at 2,400 rpm. A new 9-inch diameter fan delivers 75 percent more cubic feet of air flow per

minute, resulting in a 25 to 30-degree drop in engine oil temperature, according to the company.

The engine is quieter and creates less vibration, the company said. **LCI**

Circle No. 214 on service card.

Turf-Truckster vehicle is a versatile work unit

OMC Lincoln offers a full line of time and labor-saving accessories designed to fit both three-wheel and four-wheel models of the Cushman Turf-Truckster vehicles.

With the exclusive Cushman pin-disconnect system, more than a half-dozen

accessory units can be attached or detached quickly without hitches or bolts.

With its full range of accessory units, the Turf-Truckster vehicle becomes an all-around work unit with the capability for aerating, hauling, dumping, spraying, seeding, spreading and top-dressing. Plus, with the unit's optional power converter, the Turf-Truckster vehicle becomes an in-the-field power source for operating hedge trimmers, electric drills, power saws, floodlights and other tools requiring up to 12 amps at 120 volts DC current. **LCI**

Circle No. 215 on service card.



Diesel riding mower has blade up front

The new Kubota Tractor Corp. F2000 front-mount riding mower is equipped with a 20 hp water cooled diesel engine, four-wheel drive, differential lock, rear-wheel steering, hydrostatic trans-

mission and power steering.

The special drive train allows for smoother operation on terrain too steep or slick for conventional two-wheel drive mowers, according to the Compton, CA company.

The front-mounted mower ensures better visibility, Kubota said. It travels up to 9.5 mph and there are two PTO speeds. The standard 60-inch mower (a 72-inch is optional) is lifted hydraulically.

Independent front brakes let the operator achieve zero turning radius, and a safety seat will shut the engine off if the operator leaves it. **LCI**

Circle No. 216 on service card.

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Circle No. 129 on Reader Inquiry Card

SAFETY

from page 25

Avoid using soil to soak up a spill, Darrah said, because that, too, becomes a hazardous waste.

"One of the things you can do to reduce your pesticide

waste is simply good house-keeping," Darrah told delegates at the Ohio Turfgrass Conference and Show in Columbus.

Handling waste

LCOs should have a plan to deal with spills, Darrah said.

"Go through some scenarios" and decide what to do. Ask yourself, "what would happen if this drum broke?" he said.

Working with the equipment is dangerous, too, said Joe Briley, a loss prevention manager with Liberty Mutual. "Material handling is proba-

bly the biggest problem," he said.

For loading and unloading, "obviously a power gate would be ideal, if not (possible), get some assistance—set up a buddy system," Briley said.

Aluminum is the best material for ramps because it doesn't decay like wood, he said. If you must use wood, make sure it's not pine (hardwood is much safer), and be certain that there are no knots in it.

"An individual should never walk on the ramp—do it from the ground," Briley said.

Clean mud and dog-do off mower tires, they're slippery, and don't walk backwards while cutting.

"After you unload the equipment, find a place for the truck," Briley said. There is a "big potential" for a truck to be hit while on the street. Also, "it's a public nuisance," he said, "it's not good PR to have your truck sitting in a lane blocking traffic."

If you must park on the street, use flashers or cones to warn approaching drivers, Briley said.

He offered some other safety tips:

- "Avoid loose fitting clothing that could be caught in machinery."

- Use gloves and wash your face and hands when dealing with chemicals and don't wear the same clothing every day. LCI

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- Measures Gallons Applied
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- Measures Area Covered (Acres)
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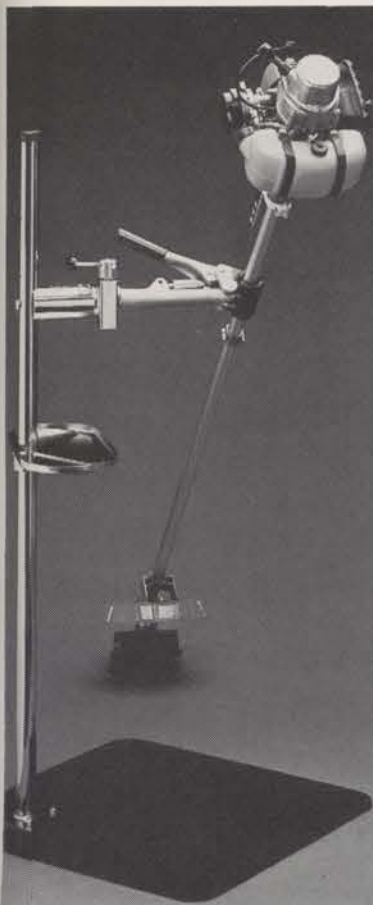


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Circle No. 120 on Reader Inquiry Card

NEW PRODUCTS



Get good grip on repairs with vise for trimmers

No longer will one have to hold their knees together while attempting to service a nylon string trimmer.

Now repairs can be made easier by using a new vise being introduced by the Park Tool Co., St. Paul, MN.

The product, originally designed for servicing bicycles, can be used with a floor-, bench- or wall-mount stand.

LCI

Circle No. 217 on service card.



Portable spreader is new from Maruyama
Maruyama U.S., Inc., Redmond, WA, is introducing a new portable granule spreader.

The Model MG 10 has an 18-foot range and it is designed for uniform distribution.

Its lightweight, chest-carry construction makes it particularly useful on uneven or difficult terrain.

With a 2.6 gallon capacity, it handles seed, fertilizer or any other dry chemicals. The suggested retail price is \$58.

LCI

Circle No. 218 on service card.

Maintain turf with SDI sprayers and tanks

Spraying Devices Inc., Vilalia, CA, is offering a 100 percent warranty on its year 'round

turf spraying equipment.

The 600 D14-5KE model is a 600 gallon skid sprayer with a 14 GPM, 550 PSI piston diaphragm pump powered by an 8 HP Kohler electric start engine.

The model 1000 D14-5KE is a 1,000 gallon sprayer with 14 GPM, 550 PSI piston diaphragm pump powered by an 8 HP Kohler electric start engine.

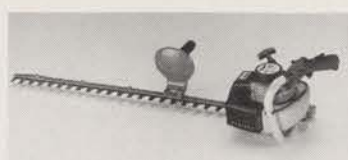
A split tank option is available on the 300, 500, 600 and 1,000-gallon models.

A super spray pump is the easiest to rebuild, just remove 10 nuts. Rebuilding time is about a half hour.

The cost of the kit and valves is a fraction of the piston cup/cylinder liner type pump.

LCI

Circle No. 219 on service card.



New hedgetrimmer packs lots of power

A new 26cc commercial hedgetrimmer is one of the most powerful in the industry, according to its maker, Tanaka Kogyo (U.S.A.) Co., Ltd., Bothell, WA.

The THT-262 can cut through 3/4-inch branches with its 30-inch dual reciprocating blades, the company said.

Weighing 12.7 pounds without fuel, the gas-powered THT-262 has a transistorized electronic ignition, shock-mounted handles and hand grip controls.

LCI

Circle No. 220 on service card.

Make mowers throwers with winter attachments

Excel Industries, Inc., Hesston, KS, is offering winter attachments to give its Hustler out-front mowers year-round productivity.



The available add-ons include a cab and heater, snow thrower, utility scoop, dozer blade, V-blade and rotary broom.

The heavy-duty snow thrower is PTO driven.

The 54-inch utility scoop holds half a cubic yard.

LCI

Circle No. 221 on service card.



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

Fertilizer got your equipment in a jam?

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

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Do you treat your customers like this?

HERE'S WHY SOME QUIT WITHOUT TELLING YOU WHY

By JAMES E. GUYETTE
Associate Editor

I've always wanted tinted windows, but this was ridiculous.

The idea behind this month's *Shoptalk* on truck safety was sparked after my car caught fire. The flames squirted out from under the dash so fast and the car filled up with thick black smoke so quickly that I barely had time to react.

The blaze began during the heart of Cleveland's afternoon rush hour on Chester Avenue. (If you've ever experienced that scene you know why I'm including it here.) Luckily it happened in front of a muffler shop and the employees were able to snuff it out with fire extinguishers in no time.

I drove home. The damage was restricted to some fried-out heater control cables and a bunch of melted wires.

I suspect that my former local mechanic is to blame, since he had installed some gauges for me, but I'm not sure and I don't need the expense and aggravation of getting a high-priced lawyer to go to court over it.

So what I did was fire my mechanic. No, I didn't go up and scream at him and create a scene. I've just quit going. I'm telling all my friends and I won't even buy gas there any more. (I buy about \$10 to \$15 worth a week.)

Big deal, right?

Well, it is a big deal because that station is going to lose business and suffer bad vibes whenever I drive by.

Now I'm sure you're not interested in reading about my hassles with mechanics, but if you bear with me, the experiences I endured can easily be applied to customer relations within the lawn care industry.

Astounding as this may seem, I did not fire my mechanic because he might have made my car turn into a raging inferno. He got the axe because of lousy customer service. If he would have tried to fix things up I'd still be going back.

See, I like my car. It's a 1978 Mercury with a custom mahogany dashboard built by Ray Clarkin of Phoenix, AZ. (That's an extra reason why I didn't enjoy watching those flames start up—could have ruined my dash.) It's got a nice stereo, custom carpet and upholstery, a sunroof and lots of little dials and switches and stuff.

When picking a mechanic I don't want one who is surly, or one who makes me feel like I'm stupid—even if I am. A remark like, "Gee, that sure was smart of you to pull over when your car started on fire," can go a long way toward making me happy. Making me think I'm a nincompoop won't.

So when this pleasant young guy opened his business in the old corner gas station I was pleased. I was looking forward to having him think that he was "my mechanic" and that my car was "his baby."

I should have known what was in store for me when after the first job I noticed that he had tracked a big black grease stain across my custom carpet.

I let it slide, thinking that it was just a mistake. I didn't realize till later that he was simply a slob.

Another big factor as to why I put up with this kind of stuff was because I wanted him to succeed: Nice young guy starting out; support your community businesses. He had a cute little wife, they sent me a Christmas card and he once bought me a brewsky at the neighborhood beer parlor.

Also, it was convenient. I'll put up with a lot of abuse just to be convenient. I liked the place because I could drive the car up there and then walk home to wait—no rent-a-cars, no hassles trying to find someone to drive me.

So what was this fellow's downfall?

He started taking me for granted, and the service became too poor to handle.

I'd tell him to call me when the car was done because I had errands to run. After waiting and waiting I'd call to see what the delay was, or perhaps there was a question about the needed parts for the repair. The conversations usually went like this as the pump jockey would answer the phone:

Me: "Hello, is (the boss) there?"

He: "Just a minute."

He later: "He's too busy to come to the phone, what do you want?"

Me: "Is my car ready yet?"

He: "Duh, I donno." Long pause. "He says, Do you want him to put on the discombobulator or should he get the merfobofting perculator instead?"

Me: "How much does it cost, what's the difference?"

He: "Duh, I donno. I'll go ask ..."

You get the idea. Another thing that drove me nuts was that I'd wait and wait for the call saying that it's done, getting more nervous by the minute. Usually when I'd finally break down and call I'd get, "Duh, oh, come an' get it, it's been done for a while." Thanks for the service, buddy!

The final straw came in the aftermath of the fire. I drove the car up there the next day to get the cause diagnosed and the damage repaired. I had every confidence in the world that he would take care of me if he discovered that his work was at fault.

I waited all day for his call. We're talking stress city the whole time. I finally called.

He: "Duh, he says he didn't have time to get to it yet."

Me: "WHAT?"

He: "Duh, he says he'll do it tomorrow."

The knucklehead still hadn't gotten to it the next day, Saturday, when I called at

6 p.m.

"Duh, he says he'll get to it tomorrow."

Now tomorrow was Sunday, and it happened to be the day that the beloved Cleveland Browns clinched the Central Division Championship. Go Browns! I wouldn't really have blamed him for taking in the game instead of working. But when I finally called at 6 p.m. I got, "Duh, he called and said he can't do it today, but you can take your (unfixed) car home."

Which I did, never to return again. Instead I drove it to work Monday and took it to a place near there.

Now I'd still be going back to the neighborhood guy, getting my car fixed and buying gas, if only he'd taken a personal interest in serving my car and serving me. Even a personal call from him, with profuse apologies, might have kept my business.

As it turned out I sought out a repair shop near my place of work. I have a feeling I got taken to the cleaners there. It looked impressive, alright, it had computers and everything.

Unfortunately, I had expected the work to take three hours of labor. I got billed for 13 and it took them two days to get the job done. The computer man was full of excuses—I was paying for a rental car and coming close to a nervous breakdown.

(Incidentally, this firm charged top dollar.) When I finally got the car back there was a important repair task left undone. So I had to go back the next day and wait. That wasn't a total waste because I got the chance to meet the World's Slowest Mechanic. He was assigned to my car.

I wanted results, and this outfit couldn't cut the mustard—computers and all.

Usually I go the route of seeking out the cheapest price. That is, until I went to buy a new tailpipe.

Best deal in town, right? Tim and Kenny Arendt told me about it.

Sure, the guy said, he can do it right away. Great! I didn't begin to wonder about the service until I noticed the young men working there.

What caught my eye was that every single one of them was using a cutting torch, and not a one was wearing safety glasses. Sparks everywhere. I couldn't bear to watch. Eye injuries are a drag.

In the meantime, does anyone out there know a good mechanic—one who wipes his feet before getting into carpeted cars—who works near where I live?

LCI

James E. Guyette

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MEETING DATES

FEB.

■ National Arborist Association 1987 Annual Meeting,

Feb. 8-12, Marriott Marco Beach Hotel, Marco Island, FL. Contact: The National Arborist Association, 174 Route 101, Bedford, NH 03102; (603) 472-2255.

■ Capital Region Turf and Ornamental School,

Feb. 10-11, Holiday Inn, Exit 28, I-81, Grantville, PA. Contact: James Welshans, Dauphin County Extension Service, 1205 S. 28th St., South Wing, Harrisburg, PA 17111; (717) 564-6956.

■ Northeastern Pennsylvania Turfgrass and Grounds Maintenance School,

Feb. 17-18, Luzerne County Community College, Prospect Street and Middle Road, Nanticoke, PA. Contact: Robert Kotch, Luzerne County Extension Service, 200 Adams Ave.,

Scranton, PA 18503; (717) 825-1701.

■ Ohio State University Cooperative Extension Service Turf Maintenance Seminars,

Feb. 17-18, Lake and Lorain counties. Contact: Lake County Cooperative Extension Service, 99 E. Erie St., Painesville, OH 44077; (216) 357-2582.

■ Western Pennsylvania Turf Conference and Trade Show,

Feb. 24-26, Pittsburgh Expo Mart/Monroeville Marriott Hotel, 101 Mall Blvd.,

Monroeville, PA. Contact: Thomas Watschke, Department of Agronomy, Penn State University, 16 Tyson Bldg., University Park, PA 16802; (814) 863-1613; or, Christine King, Pennsylvania Turfgrass Council, P.O. Box 417, Bellefonte, PA 16823; (814) 355-8010.

■ Peoria Area Horticulturist Seminar,

Feb. 24-25, Heritage House Restaurant, Peoria, IL. Contact: Mary Louise Carlson, Peoria County Extension Service, 1716 University St., Peoria, IL 61604; (309) 686-6033.

MARCH

■ 2nd Annual Landscape Exposition,

March 3-5, O'Hare Expo Center, Rosemont, IL. Contact: Dawn Pratt, HBJ Exposition & Conferences, 50 Washington Street, P.O. Box 5555, Norwalk, CT 06854; (800) 243-2815, (203) 853-4000.

■ 19th Annual Professional Turf and Plant Conference,

March 11, Nassau Memorial Veterans

Coliseum, Uniondale, Long Island, NY. Contact: The Nassau Suffolk Landscape Gardeners Association, 55 Orinoco Drive, Brightwaters, NY 11719; (516) 665-2250.

■ Reinders 8th Turf Conference,

March 18-19, Waukesha Expo Center, Waukesha, WI. Contact: Ed Devinger, Reinders Brothers, Inc., 13400 Watertown Plank Road, Elm Grove, WI 53122; (414) 786-3301. LCI

The Super Show for Superintendents: The Landscape Exposition, March 3-5, Rosemont, IL.



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SPRAY PATTERN INDICATOR

By Milliken Chemical

Take the guesswork out of your spraying!

Folks crabbing over grass

INDIANAPOLIS, IND.—“It has been a bad crabgrass year everywhere,” Doug Halterman told visitors to the Elanco Products Co. lawn care seminar in Indianapolis.

Halterman, of Leisure Lawn, West Carrollton, OH, said his company had 7 to 9 percent of its customers call in with crabgrass problems, as opposed to 4 to 5 percent with complaints during the last three or four years.

“Of course, some customers don't call to complain, they just cancel,” Halterman said.

He also pointed out that there is usually a high incidence of crabgrass next to concrete areas, and that his company's workers have put on extra bands of whatever herbicide they were using at the time—Balan, Betasan, Pendimethalin or Team—along driveways and other concrete areas to fight the crabgrass. The banding usually is done during the second application of the year. LCI



Halterman: Crabgrass galore.



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When you make Blazon® a part of your spray program, you increase the efficiency and accuracy of each application. Whether you are making spot treatments with a backpack sprayer or spot gun, chemical edging applications, or broadcast sprayings...

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Spray Trucks: 1980 GMC - series 6,000 350 V8 4 speed and 2 speed axle. Units are equipped with 1,200 gallon Tuflex fiberglass tanks, mechanical agitation, 10 GPM Bean pump, 50 gallon side tank, 8HP Kohler engine drive, Haney electric hose reel and detachable 1,200 lb. capacity granular fertilizer box. \$10,500. Call Jerry Mykietka, 1-312-932-8668. 2/87

SPRAY TRUCK, Ford F600 Chassis with 73,000 miles, 350 C.I.D. Engine with 4-sp. transmission, 1250 gal. **STAINLESS STEEL** Tank, Bean 2020 Turf Pump (driven by Chelsea P.T.O.), mechanical agitation, 2 hose reels with 1/2" hose, 2 chem lawn guns. Asking \$8295. If interested in this ready to spray unit, please call Dennis or Rick at 215-368-9333. 3/87

For Sale: 1985 Chevy Van (1 ton) includes Lesco Sprayer, radio, air. Direct inquiries to Vitalawn, Inc., Louisville, KY 40299—502-267-1210. 2/87

SPRAY TANKS: Tuflex six- 200 gal., four- 100 gal. \$100 each. Char-Lynn hydraulic motors, \$30. (301) 298-1700. 2/87

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2-Hahn J-R-4 Aerifiers: 1- 1977 Chevy 1 ton truck w/spray unit. 700 gal. cap. in 2 tanks John Bean pump. 2 - Elect. hose reels w/1/2" hose. For more information call 1-402-476-8614, week days. 2/87

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MANAGEMENT: Ever-Green Lawns Corporation, a division of the multi-national Hawley Group, Ltd. interested in discussing management opportunities with lawn care professionals looking for a change. Please respond in writing only to Richard D. Niemann, Corporate Recruiting Manager, Ever-Green Lawns Corporation, 1390 Charlestown Industrial Drive, St. Charles, MO 63303. TF

MANAGEMENT: Midwestern Lawn Care Company poised for growth looking for experienced branch managers and tree-care professionals. If your career isn't "growing like a weed", we would like to hear from you. Our employees know about this ad. Please write to LCI Box 169. TF

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