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Into The 1990s

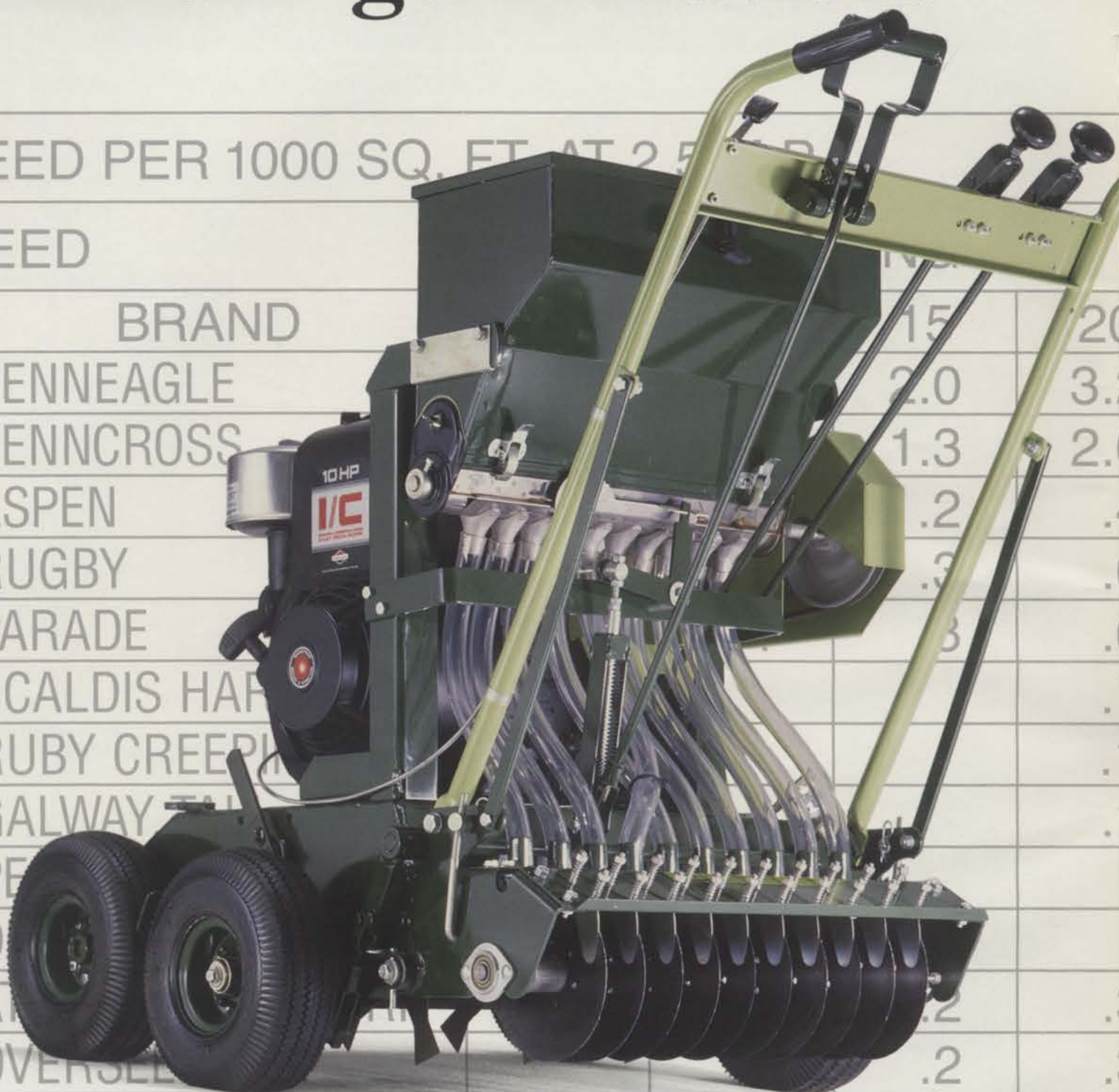


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LAWN CARE INDUSTRY

Serving the needs of the professional lawn care operator

VOLUME 13 NUMBER 10

AN EDGELL PUBLICATION

OCTOBER 1989



PLCAA show dealing in Vegas as it marks 10th anniversary

LAS VEGAS, NEV.—Flashing lights, rolling dice and shuffling cards will be fun-filled sidelights to this year's Professional Lawn Care Association of America Conference and Show.

For a decade now, industry leaders, suppliers and PLCAA members have been checking out the latest equipment and educating themselves in special seminars at these annual

national conventions.

"This is going to be our 10th anniversary show," says James R. Brooks, PLCAA executive vice president.

The upcoming decade will be the main topic of discussion at the Nov. 6-9 event.

"We're going to talk about a lot of issues that will be present in the 1990s," Brooks explains. "Our theme is 'what to expect in the 90s,' even though

there'll be challenges—there'll be opportunities too."

About 1,400 to 1,500 people are expected at Caesars Palace and the Cashman Field Center. About 1,300 attendees were at last year's show in San Antonio, Texas.

"Many people have not been to Las Vegas, and this gives them an opportunity to come," Brooks observes.

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CLASSIFIED

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NEXT MONTH

- Stay on top of the latest developments in peat moss and related products.
- Helpful advice on preparations for the upcoming winter season.

Tree treatments could climb after extra rainfall this year

Opportunities for ornamental and shade tree treatments could increase as additional disease problems have been spotted in areas that were drenched by heavy rainfall.

This year's wet spring and summer caused many foliage and twig diseases to be more severe than usual, according to Craig Weidensaul, forest pathologist at Ohio State University's Agricultural Research and Development Center in Wooster, Ohio.

Diplodia blight is prevalent

on two- and three-needled pines. Apple scab was particularly severe on crabapples.

"Anthracnose and Botryosphaeria canker are the diseases catching peoples' eyes now," Weidensaul says.

Anthracnose affects oak, walnut, sycamore and other trees.

Botryosphaeria canker affects several hardwoods, including oaks—mainly red oaks.

Both got their start during the wet weather, he says.

"Anthracnose can kill almost all the foliage and many twigs on very susceptible trees during outbreaks such as the one this summer," says Weidensaul.

"The severity of disease symptoms varies with the gen-

See **TREES** Page 53



Green Team attendees meeting in St. Louis

ST. LOUIS, MO.—About 600 green industry professionals are expected to meet in St. Louis as the Gateway to the West hosts the third annual Green Team Conference and Show.

Entitled, "Gateway to the 90s," the Nov. 9-12 convention is co-sponsored by the Associated Landscape Contractors of America and the Professional Grounds Man-

agement Society.

More than 50 firms will be displaying their wares at the trade show, and a number of educational programs are on tap.

A featured speaker is Dr. Alex Shigo, one of the world's foremost authorities on trees. Shigo has been working with trees for 30 years and has lectured extensively across the

See **G-TEAM** Page 40

LATE NEWS

Pro. Tree and Turf Equip. is sold

GOLDEN, COLO.—Tru Green Corp. has sold Professional Tree and Turf Equipment for an undisclosed sum.

The new owners of the company, formerly known as Denver Leasing and Manufacturing, are Steven Tangsrud and Dan Sundquist.

Tangsrud was general manager for PTTE since its inception in 1983, and Sundquist was sales manager and past-general manager of Pro-Turf Manufacturing.

The firm had \$1.8 million in sales last year.

"We're going to continue to be aggressive in the industry," said Tangsrud.

An expanded parts inventory is planned.

The company is continuing work on a new electronic chemical injection unit.

"With any luck we'll have it tested and ready for the market by the end of the year," Tangsrud said.

LCI

At age 34, William J. Davids became the youngest-ever president of the Illinois Landscape Contractors Association when he was recently elected.

He is chief operating officer at Clarence Davids & Sons, Inc. in Blue Island, Ill. His father, Clarence, was president in 1970-71 and he helped found the ILCA in 1959.

The RedMax Reciprocator trimmer won the overall Innovative Products Award at the 1989 International Lawn, Garden and Power Equipment Expo in Louisville, Ky.

The device has two reciprocating blades that can trim brush under water and that stop immediately when the engine is switched off. The blades resist throwing things, too.

Speaking of the Expo, it set attendance records this year with an all-time high of 22,361 registrants. Some educational sessions were SRO.

Prize-winning firms included Toro, Kohler, Dorcy, Lawn-Boy, Temco, Exmark, Billy Goat, Honda, Briggs & Stratton and Yamaha.

Bad vibes may be over for

operators of hand-held power tools. Sentinel Products in Hyannis, Mass. is marketing Trauma-Sorb.

The product can be inserted into a glove or used as a tool wrap. It reportedly reduces low frequency vibrations from power tools which can cause chronic nerve and tendon disorders.

Complying with the new immigration law may seem less foreign with a software package from Specialized Software Solutions in Old Hickory, Tenn.

The Immigration Tracking program automates each step of the I-9 procedure. LCI

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LAWN CARE INDUSTRY (ISSN 0160-6042) is published monthly by Edgell Communications, Inc. Corporate and Editorial offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Advertising Offices: 7500 Old Oak Boulevard, Cleveland, Ohio 44130, 111 East Wacker Drive, Chicago, Illinois 60601 and 3475 Lenox Road, N.E. Suite 665 Atlanta, Georgia 30326. Accounting, Advertising Production and Circulation offices: 1 East First Street, Duluth, Minnesota 55802. Subscription rates: \$25 per year in the United States; \$50 per year in Canada. All other countries: \$100 per year. Current issue single copies (pre-paid only): \$2.50 in the U.S.; \$5.00 in Canada; elsewhere \$10.; add \$3.50 for shipping and handling per order. Back issues, if available \$10.; add \$3.50 per order for shipping and handling (pre-paid orders only). Office of publication: Edgell Communications, Inc., 1 East First Street, Duluth, Minnesota 55802. Second class postage paid at Duluth, Minnesota 55806. Copyright © 1989 by Edgell Communications, Inc. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher.

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LAWN CARE INDUSTRY

OCTOBER 1989

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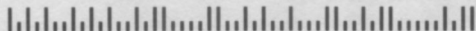
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FACTS



Local input needed to preserve watering

Action at the local level is needed if turf managers want to insure that their clients will have adequate watering opportunities.

Various communities in all regions of the country are faced with water shortages that could have a negative impact on the green industry.

The reasons for these shortages vary.

Some towns have old, leaky water mains that are wasting half of their capacity. Other communities have grown so fast that population levels now exceed the available water resources.

Industrialization has polluted groundwater, while some municipalities are mired in political squabbles that result in water supplies being held hostage.

A few locales in growing areas fight uncontrolled development by restricting water main tie-ins.

Whatever the cause, this problem could be facing you in your home town.

Dr. Jay Lehr of the National Water Well Association is convinced that there is indeed enough water to go around—it just has to be distributed more efficiently.

"I'm a thrower of cold water on a crisis mentality," he says.

Nonetheless, it may be up to turf managers to attend local government meetings to help educate the politicians on prudent water management policies.

"I think the people in the industry need to learn the technology and understand what is important," says Jay.

Once you are educated yourself, then it's time to approach your local officials.

They may be quite qualified at keeping the trash picked up and fiscal matters in order, but their skills at forming water management policies may be seriously lacking.

"I've had calls from members all over the country" who are facing restrictive watering bans, says Bob Sears at the Irrigation Association. Toro's June D. Dobbins reports that "some cities have taken it too far by not looking at the total picture."

Jay echoes that point as he explains that a drying reservoir can recharge itself sooner than most people think.

Still, government officials can call for overly restrictive measures because "they don't have a realistic recognition of what they can count on."

June adds that when it comes to turf managers facing sprinkling bans "we encourage them to get involved" with forming the regulations.

"We are trying to keep abreast of what's going on with the legislation," says June, and "that has an influence on our product development."

Watering plans that permitted sprinkling only every three days resulted in the invention of a controller that can be timed for every three days. "We don't want to waste water—we're all in this together," says June.

Jay calls attention to inefficient "upside down" municipal billing procedures:



JAMES E. GUYETTE

EDITOR

"The more water you use the less you pay."

Dr. Robert N. Carrow of the University of Georgia emphasizes that water policy decisions are made locally, and therefore local people should be heavily involved.

Scientists and outside influences are unlikely to have much influence in a village council chamber. "You can't rely on the university people to help you."

Bob believes that the educational process does not have to be confrontational or unpleasant.

Citing the financial and aesthetic benefits of landscapes can go a long way toward enlightening public officials.

Steve Berta, executive editor of South Coast

Community Newspapers, headquartered in Carpinteria, Calif., observes that more direct political action is not out of reach.

Voters in the parched region are in the process of selecting their water district board members, and "this drought has raised so many issues that these guys have come out of the woodwork to question things," Steve reports.

And once the proper questions are raised, suitable answers can't be far behind.

James E. Guyette

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Circle No. 117 on Reader Inquiry Card

Water management to remain an issue in the 1990s

By JAMES E. GUYETTE
Editor

Water management issues promise to spill on into the 1990s, and turf managers can expect to feel the impact as local governments struggle with water use policies.

"The nation is definitely faced with some important water supply problems," says Dr. Jay Lehr, executive director of the National Water Well Association.

He'll be speaking on the issue at the Professional Lawn Care Association of America convention Nov. 6-9 in Las Vegas, Nev.

"We have a crisis of ignorance," says Lehr as he maintains that there is indeed enough water for everybody—but people are failing to use it correctly.

"This country is by and large blessed with adequate water. We just need to understand how to manage it better."

In the meantime, as local governments in regions throughout the United States struggle with dwindling supplies, the green industry is often the most visible target for mandated cutbacks.

"It's a management problem, and it's going to affect turf irrigation," says Lehr. "The turf people are the first to be hit" with sprinkling bans that can result in dead plant materials and a reduction in customer interest.

In some areas population growth has exceeded the capacity of the water system to the extent that even additional rainfall is still not enough to ease concern over shortages.

"This type of issue is not going to go away," warns Dr. Eliot C. Roberts, director of The Lawn Institute. "From here on in we're going to continue to see pressures on landscapers."

That problem is readily apparent in California's Santa Barbara County, where drought conditions lasting over several years have nearly exhausted local water supplies.

"If something has to go it's going to be landscaping, and the first landscaping to go is lawns," reports Steve Berta,

executive editor of South Coast Community Newspapers, headquartered in Carpinteria, Calif. The award-winning journalist has kept a close eye on the water shortage issue.

Government-mandated water restrictions are a reality.

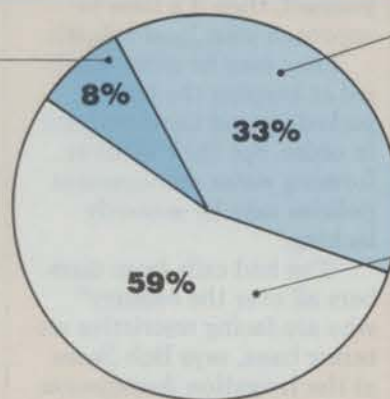
Residents with large turf areas in the upscale region "are immediately hit with a demand to reduce the size of their lawn and replace it with drought-tolerant plants. It's not exactly cacti, but you've seen what they put in there,"

Average American Uses 1,800 Gallons of Water Daily

Direct Personal Use:

160 gallons per day—8% of daily use

- Bath: 30-40 gallons
- Shower: 5 gallons per minute
- Cooking: 8 gallons
- Toilet Flushing: 3 gallons (110 gallons per day for a family of four)
- Lawn Sprinkling: 80 gallons on an 8,000 sq. ft. lawn



Indirect Agricultural Use:

700 gallons per day—33% of daily use

- 1 Egg: 40 gallons
- 1 Ear of Corn: 80 gallons
- 1 Loaf of Bread: 150 gallons
- 1 Gallon of Whiskey: 230 gallons
- 1 Pound of Beef: 2,500 gallons

Indirect Industrial Use:

1,040 gallons per day—59% of daily use

- Sunday Paper: 280 gallons
- One Pound of Aluminum: 1,000 gallons
- One Automobile: 100,000 gallons

Source: Grounds Management Forum

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Berta observes.

"People don't want some dry and forbidding garden—they want to keep their lawns. They want something they can take their shoes off and run around on if they want."

In the town of Montecito, which is home to a number of wealthy entertainers who are household names, the water district is fining heavy water-users by tacking penalties onto their bills. A fine can be as high as eight times the regular water rate.

Berta notes that "80 percent of Montecito's water goes on landscaping," and supplies are running low.

"Montecito's kind of a test

case because the people live for their gardens and lawns," Berta notes.

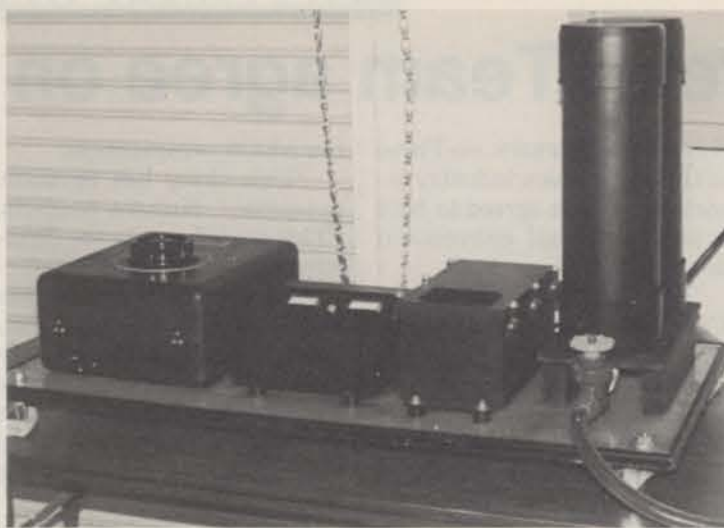
"There are people saying, 'I'm going to buy the water and truck it in,'"

There is a possibility that local government officials will apply flow restrictors to the lines of chronic over-users of the community water supply.

These devices would severely limit the effectiveness of irrigation systems—allowing just one sprinkler head to operate at a time!

Efforts are in the works to legalize the use of "gray water" on landscapes. Gray water is household wastewater.

Atlantic Northern Corp. in



Cleaning up: Atlantic Northern Corp. of Beverly Hills, Calif. is marketing Micropure, which converts raw sewage wastewater into "gray water" suitable for irrigation.

Beverly Hills, Calif. is marketing its new Micropure machine to municipalities seeking a gray water program. The device recycles raw sewage wastewater for irrigation purposes.

A Micropure system suitable for a five-member household would cost about \$6,500, says Craig Rhoades, company president.

"We're trying to get the word out to communities where it would make a difference," says Rhoades.

As Southern California's population continues to explode, even building new reservoirs is virtually impossible, Berta points out, because "all the good spots got used up first" years ago.

Berta says that removal of the salt in ocean water is being considered, but that, too, has drawbacks. Mainly money.

Currently the wholesale price of fresh water is \$25 to \$30 per acre foot. To take salt from seawater would drive that fee up to \$1,500 to \$2,000 per acre foot.

As for now, "They're sinking wells here fast," Berta explains as he describes the latest efforts being undertaken by local municipalities.

"I think we'll see more wells drilled solely for irrigation," predicts Lehr at the Water Well Association.

He's calling for "more intelligent irrigation" techniques to be used.

Irrigation systems in the United States are only 40 percent efficient, while those in Israel have an 85 percent efficiency rate, says Lehr.

Irrigation programs should be adjusted to match plant growth cycles, weather, soil moisture and time of day.

Turf managers need to educate themselves on the specific aspects of irrigation, adds Lehr, who is promoting green industry attendance at next year's Conserve '90 convention Aug. 11-14 in Phoenix, Ariz. (The event is scheduled to be a national clearinghouse on water issues.)

"You need to be responsible" when programming irrigation systems, says June D. Dobbins, district sales and specification manager for the Toro Co.

"Just being cautious and observing what's on your job-site can go a long way toward saving water," Dobbins points out.

Journalist Berta notes that residents in his community become annoyed at neighbors who waste such a valuable resource by "watering their driveways" or irrigating during a rainstorm.

A number of firms are marketing devices that meter the amount of moisture in the soil for more accurate sprinkling.

Toro's new Soil Moisture Control System reportedly reduces water consumption by

See **WATER** Page 14

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PLCAA, Green Team agree on joint show next year



Kujawa: United front needed.

NASHVILLE, TENN.—Three of the larger green industry associations have agreed to hold a joint national convention next year.

The Professional Lawn Care Association of America, the Associated Landscape Contractors of America and the Professional Grounds Management Society will unite to sponsor the 1990 Green Industry Expo in Nashville.

"I think this is a real milestone in the industry," says Ron Kujawa, president of

the ALCA organization.

"This thing has fantastic potential," Kujawa predicts. "This could become the definitive show in the industry."

Kujawa recalls that he has been pushing the joint convention idea for close to a decade. "It's so obvious that we should cooperate on a trade show. It's a real milestone in the industry as far as getting people together."

Exhibitors are likely to appreciate the idea, because so often the vendors are "beaten up" by having to attend so

many conventions in the late fall.

"Over the years there have been lots of demands placed on the suppliers," says David Fuller, a PLCAA director. "They have to make some hard choices about which shows to attend. Hopefully, with the consolidation, they can all be in one place."

"Consolidation is the best solution," comments Earl Wilson of PGMS. "Exhibitors have so much demand on their time from various organizations that it is impossible from

a time and expense standpoint to attend or exhibit at all shows."

Each of the participating organizations will be presenting their own educational programs at the Expo. "The only thing we're really cooperating on is the trade exposition," says Kujawa, to insure that each association retains its own identity.

"We're just better off working together," Kujawa adds.

"In our industry there's a lot of smaller organizations," and perhaps the trade show can be a springboard for a united front to tackle pesticide legislation and other issues facing turf managers, he explains.

"The only way we're going to get any clout is to work together on certain things," says Kujawa.

The newly-formed Green Industry Exposition Board has hired PLCAA to manage the Expo for two years, after which there will be a review of the situation, Kujawa says.

Other organizations in the industry are welcome to join the effort by contacting the groups involved.

"They should start to talk to us now," Kujawa says.

Each year's event is expected to be held in a city within "America's Heartland."

The sites are expected to contain reasonably priced hotels and suitable convention facilities, Kujawa says. LCI



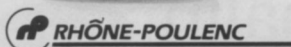
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Circle No. 135 on Reader Inquiry Card



Meyer: Heading the OSTA.

Turf-Seed's Meyer elected to industry post

BEND, ORE.—Dr. William A. Meyer, vice president of research for Turf-Seed, Inc. in Hubbard, Ore., has been elected president of the Oregon Seed Trade Association.

The OSTA is an alliance of Oregon seed companies working to improve standards and promote the state's grass seed industry.

A noted turfgrass breeder, Meyer has patented more than 55 varieties.

He has been a featured speaker at numerous turfgrass conferences. LCI

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year 'round. Choose a 3 or 4 wheel design with 60- or 72-inch side or rear discharge mower deck. Or add the exclusive Cushman Grass Caddy™ system, which lets you cut, catch, and hydraulically dump 16 bushels of clippings without leaving the seat.

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INDUSTRY NEWS

Ransomes buys Cushman, Brouwer, Salsco lines

JOHNSON CREEK, WIS.—Ransomes America is increasing its investment in the North American green industry with the purchase of Cushman, Ryan, Brouwer Turf Equipment, Ltd. and a portion of Salsco.

Ransomes America, a division of Ransomes plc, of Ipswich, England, paid Outboard Marine Corp. \$150 million for the Cushman Group.

The Cushman Group includes Cushman turf vehicles and mowers; Ryan aerators and sod cutters; and Brouwer

mowers, vacuums and sod harvesting equipment.

It will remain a separate entity under Ransomes America.

"Cushman will operate as before," said Helmut Adam, president of Ransomes America. "It is a well-run company with a good name. We are not going to change something that runs as well as Cushman."

Manufacturing and marketing of Cushman products will continue to be based in Lincoln, Neb.

Stuart Rafos, president of Cushman, said the sale aligns

Cushman with a business partner that is close to its core business.

Rafos also said Ransomes has the worldwide marketing expertise and organization to substantially extend Cushman's growing international business and enhance its position in the domestic market.

The partnership now offers the most complete product line in the turf equipment industry, according to Rafos.

Rafos also said Cushman's sales growth plan will quicken. The company estimates its

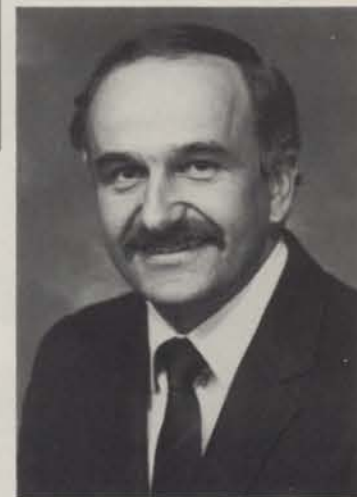
annual sales of \$100 million will double in the near future, and it is already making plans for increased production facilities.

In August Ransomes America bought a portion of Salsco, located in Cheshire, Conn., for an undisclosed sum.

The Salsco turf line includes walk-behind, tow and riding core aerators; a slicer/seeder; a walk-behind dethatcher; self-propelled drop spreaders; tailgate and towed truck loaders and a walk-behind leaf blower.

Adam said the turf renovation line will enable the company to better serve its green industry customers.

Sal Rizzo, Salsco's president, said the company will be introducing new products at the November Professional Lawn Care Association of America convention in Las Vegas, Nev. LCI



Adam: Cushman to remain.

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Consistent 38% nitrogen

Nitrogen released slowly for sustained turf feeding during active growth periods

Nonburning and nonleaching

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Circle No. 126 on Reader Inquiry Card

ALCA looks to replace Dir. Peters

FALLS CHURCH, VA.—The Associated Landscape Contractors of America is seeking a new executive director to head the organization.

Terry Peters has left to join the Society for Marketing Professional Services.

"He got a very nice job offer," said Ron Kujawa, ALCA president.

"It was an amiable parting," he added.

ALCA, which has 1,200 member companies, is looking for someone with good interpersonal skills and experience in sales and marketing.

A background in the green industry would be helpful, but not mandatory, Kujawa said.

"Our search will be wide open," he said.

The replacement effort will last for as long as it takes to find the right candidate.

"We have an extremely competent staff. They're going to run everything without interruption," Kujawa said. LCI



Peters: Accepts new job.

When Lawn Doctor franchises move up to TURFLON, broadleaf weeds take a fall.



"TURFLON is more effective on the broadleaves that the competition is missing."—

Russ Frith, president
Lawn Doctor,
Matawan, NJ

If "easy" weeds were the only ones cropping up in customers' lawns, 2,4-D would handle the job. But that's not the case. You need a tough product to keep tough weeds down. Maybe that's why you should move up to TURFLON* herbicide.

The real problem with lawn care.

"Weed control is the most important problem," explains Russ Frith. And as president of one of the nation's most successful lawn care franchisers, he ought to know. In explaining how TURFLON has worked for Lawn Doctor, Russ says, "It does a better job on the tough to control weeds."

Prove it for yourself.

How do franchisers who use it justify broadcast spraying TURFLON at about \$9.50 per acre? "Reduced callbacks," Russ says. He adds that independent Lawn Doctor operators select their own products. Most are skeptical of TURFLON until they prove for themselves that it does a better job of controlling tough weeds. "Many who use it full service started with spot (spraying)."

Finally, Russ says one word describes the experience Lawn Doctor franchises have had using TURFLON: "Excellent."

Isn't it time you moved up to a better herbicide for better weed control? Call us to find out more. 1-800-373-4DOW (4369).

Move up to TURFLON



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Circle No. 110 on Reader Inquiry Card

SPECIAL REPORT

Xeriscapes seen as alternative for ornamental plots

By JAMES E. GUYETTE
Editor

Xeriscapes should no longer strike fear into the hearts of turf managers concerned that the use of water-efficient ornamentals will eliminate interest in lawns.

Contrary to what people might think, a homeowner who saves water by installing a xeriscaped garden will have more resources left over to maintain a turf plot, according to J. Randall Ismay, owner of

Landscape and Water Management Consultants in Los Angeles, Calif.

Also, a business owner who does tree and shrub care should see plenty of opportunities for offering additional service.

Smaller lawns may be on tap for drought-stricken areas, but people will not give them up completely, says Ismay.

And clients still want their lawns to look green and be weed-free, he adds.

Ismay believes that warm season grasses should be used

as far north as possible because of their water-saving properties.

Customers who object to the annual winter brown-out associated with such grasses can be sold overseeding services, applications of green dye, or, perhaps, they can be convinced that a brown lawn supplies a winter-like feel to a yard.

The last option is particularly appropriate for a transplanted client in a warm climate who expresses nostalgia for the snowy win-

ters that he or she left behind.

The use of xeriscape plant materials continues to gather increased interest as a viable alternative in drought-stressed areas.

For many people, though, a xeriscape carries a negative connotation of rocks and cacti.

Ismay prefers using the term "water-thrifty" when describing the plantings. A water-thrifty plant will make the most use of the water it's given.

Certain materials, then,



Ismay: Water-thrifty saves turf.

will thrive in drier areas, while wet spots can be planted with other selections.

Ismay believes that any type of plant can be applied in a xeriscape situation.

Turf managers need not fear the concept as something that may threaten to put them out of business, says Ismay, because a water-thrifty garden

WATER

from Page 9

30 to 70 percent. A sensor automatically adjusts to climate changes.

"In actual practice, we've found that controllers are seldom adjusted because many managers lack the personnel or expertise to reprogram them to follow precise changes in plant water use," says Steve Swenerton, Toro director of sales and customer satisfaction.

"In most cases the tendency is to over-irrigate since green industry managers are judged more on plant appearance than water savings," Swenerton adds. "Our system will change this wasteful habit."

According to Dobbins, "These types of water management tools are sometimes able to pay for themselves in one year. They really pay for themselves in a hurry."

Proper programming of irrigation systems could help stem the tide of requests to reduce turf areas in favor of drought-tolerant plants.

"There are ways that people can save water and still maintain the landscapes that they have," says Bob Sears, executive vice president of the Irrigation Association.

Irrigation-conscious turf managers can gain extra income (and better stands of grass) if they can program their customers' controllers.

"It ought to be a \$5 to \$10 a month service to add on," says Sears.

But, Sears warns, a turf manager attempting such a move should be properly educated.

"The average lawn care contractor needs to know a lot more information than he (or she) can get out of a brochure," he urges.

LCI

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Tall Fescues
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Thoroughly tested beauty, quality and performance, yet economical—Finelawn 1 is the choice when you demand the best in home and professional turfgrass!



Top Rated

Finelawn 1
Turf-Type Tall Fescue

Turf Quality

NATIONAL TURFGRASS
EVALUATION PROGRAM
COLUMBIA, MO 1988-89

VARIETY	AVG. SCORE
Finelawn 1	6.1
Apache	5.5
Rebel	5.5
Bonanza	5.3
Mustang	4.9
Jaguar	4.6

Rated 1-9; 9 = Best

Spring Greenup

NATIONAL TURFGRASS
EVALUATION PROGRAM
1984-87

VARIETY	AVG. SCORE
Finelawn 1	5.7
Bonanza	5.6
Apache	5.6
Rebel	5.5
Arid	5.5
Jaguar	5.1

Rated 1-9; 9 = Best

Fall Density

NATIONAL TURFGRASS
EVALUATION PROGRAM
1984-87

VARIETY	AVG. SCORE
Finelawn 1	7.1
Mustang	7.0
Rebel	7.0
Olympic	6.8
Falcon	6.7

Rated 1-9; 9 = Best

Shade Performance

NATIONAL TURFGRASS
EVALUATION PROGRAM
1984-87

VARIETY	AVG. SCORE
Finelawn 1	5.4
Apache	5.3
Jaguar	5.0
Mustang	5.0
Bonanza	4.8
Rebel	4.8
Falcon	4.6

Rated 1-9; 9 = Best



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Another quality product from...

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When Jim Gourley moved up to TURFLON, callbacks in Kenosha went down, way down.



"Our resprays have decreased by almost 50%."—

**Jim Gourley, owner
Lawn Masters,
Kenosha, WI**

If you're like most LCOs using standard three-way herbicides, there are days when you wish the phone wouldn't ring again. Callbacks and cancellations can really get you down. Well, maybe it's time you moved up to TURFLON® herbicide.

One good reason to switch.

"We switched to TURFLON because we were having too many resprays," explains Jim Gourley. And after 22 years in the business, he's happy with the results: "Our records show that we do have much better weed control and many fewer resprays this year than we've ever had."

You'll save money in the long run.

"Yes, we pay more for TURFLON," Jim says. "But when I figure how much it costs us per respray, it's saving us lots of money. And that justifies the extra cost."

Jim adds that there's another reason he can't afford to make too many callbacks. "When you have to go out and do a respray, you're taking a chance on losing that customer."

Isn't it time you moved up to a better herbicide for better weed control? Call us to find out more. 1-800-373-4DOW (4369).

Move up to TURFLON



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Circle No. 111 on Reader Inquiry Card



Xeriscape: A water-thrifty garden sets an example for water conservation in Montecito, Calif.

will free up water resources that can then be applied to the lawn.

And advances in grass plant breeding are expected to result in varieties that use even less water.

"The evapotranspiration losses of turfgrasses are almost twice as great in the blues, bents, ryes and tall fescue when compared to buffalograss under the same conditions," says Consultant Dr. Douglas T. Hawes of Plano, Texas.

"The bermudas, zoysias and centipede have almost as low a water loss as the buffalo," he adds.

"Researchers are finding up to a 20 percent difference be-

tween cultivars of any one species, which suggests considerable improvements can be expected from the numerous turfgrass breeding projects projects across the country," according to Hawes, who authors the *Turfcomms* newsletter.

Shortages of ornamentals—water-thrifty or otherwise—are another offshoot of drought conditions.

Lack of available xeriscape materials has been cited as a concern in the Southwest, and the Great Drought of 1988 resulted in ornamental shortages elsewhere.

Business operators seeking to replace dead materials for



Davids: Plantings are scarce.

their customers found that there was a reduced supply.

"While the landscape industry has been on the fast track for growth for better than five years now, the drought's visible impact on our lawns, shrubs and trees has placed demands on the landscape profession that are challenging, to say the least," comments Clarence Davids, Sr., president of Clarence Davids & Sons, Inc. in Blue Island, Ill.

"In recent discussions with many colleagues within the landscape industry, all agree that there is a sharp demand for replacement plants and turf restoration due to drought damage," Davids reports.

Business operators seeking to replace dead materials for their customers found that there was a reduced supply.

"As nurserymen were also affected by the drought, there are shortages of quality plant material, especially common shrubs, such as burning bush and evergreen yaws. Quality ornamental and shade trees between three-inch and six-inch caliper are also difficult to locate," he adds.

There also are difficulties finding quality employees and dealing with municipal watering bans.

"The combined result of these factors and the release of pent-up demand from 1988 has many companies experiencing production backlogs of up to two or three times the industry standards," Davids explains.

Not surprisingly, those who supply ornamentals to the industry are also concerned over water management.

The Florida Nurserymen and Growers Association is discussing the water shortage at a November meeting.

"This issue will not go away, and if growers don't take a positive 'show me' attitude today, they may not be in business tomorrow," maintains Jim Knox, chairman of the FNGA's bedding plant division.

Growers must become better educated so they may provide vital information to the parties setting water use policy, he says. **LCL**

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Last year, revenues for the lawn care industry as a whole grew 15%.

Revenues for ServiceMaster LawnCare grew a whopping 77%! Over five times the industry rate.

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For one thing, ServiceMaster is one of the few lawn care companies able to provide truly customized treatment to every customer.

We specially design our own trucks and equipment so you can individually tailor your treatment to each lawn.

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questions. Year-round marketing support that will help you get business even in winter.

Over 90% of our ServiceMaster franchises are still going strong after three years. This year, in fact, *Fortune* magazine named us No. 1

Partners in the ServiceMaster Quality Service Network.

ServiceMaster. TERMINIX. merry maids.

for return on equity in their ratings of the 500 top service companies in America.

So if you're looking for the right opportunity to start your own lawn care business, you simply can't find a company with a more consistent record for success.

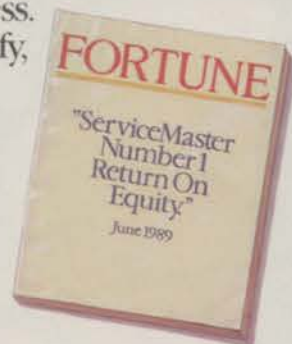
If you qualify, you could get started in a ServiceMaster LawnCare franchise for as little as \$7,000 plus additional working capital.

You can start out while still keeping your regular job if you wish.

For more information, call Stan Guy toll-free at 1-800-635-SERVE.



Revenues for ServiceMaster LawnCare grew over five times the industry rate.



**ServiceMaster.
LawnCare**

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Circle No. 137 on Reader Inquiry Card

For the cost of a candy bar, Bob Kapp made the sweet move up to TURFLON.



"Our customers expect and demand quality —and we deliver. If it costs an extra 50¢ a lawn to keep customers, it's well worth it."—

Bob Kapp, President and CEO
Kapp's Green Lawn
Munster, IN

How much is customer satisfaction worth? For Bob Kapp of Kapp's Green Lawn, it's worth the performance difference that TURFLON® herbicide can provide.

What price customer satisfaction?

"We switched to TURFLON two years ago because we weren't pleased with our previous herbicide," says Bob Kapp. "Cost has never been a deciding factor in the products we use. The extra 50¢ per lawn for a treatment with TURFLON herbicide doesn't make a bit of difference. In this day and age, you simply have to retain customers—it costs too much money and time to replace them."

Its rewards.

"TURFLON did a much better job, particularly on our problem weeds like wild violets, ground ivy and spurge," Bob continues. "Since switching to TURFLON, we've reduced our weed related callbacks and service cancellations by 50% from a year ago." With performance like that, you'll be able to add some sweetness to your bottom line. Call us to find out more. 1-800-373-2DOW (2369).

Move up to TURFLON



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Circle No. 112 on Reader Inquiry Card

Treatments on dormant lawns do not hurt turfgrass

By Nick Christians

During the 1988 season, the midwest suffered one of the worst droughts in memory.

In areas where nonirrigated Kentucky bluegrass generally spends short periods in summer dormancy, lawns went into dormancy in May and remained brown until late August.

The drought presented serious problems for lawn care specialists. Customers who normally received four or five treatments per season were cancelling second and third rounds, cutting deeply into lawn care profits.

A question that was often raised during the drought concerned the effect of lawn care treatments on dormant lawns.

Lawn care operators understandably wanted to make treatments during this period to maintain cash flow. Customers were hesitant to accept treatment during dormancy and many expressed the opinion that these treatments would be the cause of turf damage.

To determine to effect of fertilizer and herbicide treatments on dormant Kentucky bluegrass turf, a demonstration and a replicated research trial were established at the horticulture research station at Iowa State University during the summer of 1988.

The demonstration was established on July 8, 1988, with the help of the All American Turf Beauty Co. of Winterset, Iowa.

The treatments involved the company's standard second round application which included 0.52 pounds of nitrogen from methylene urea (Powder Blue) per 1,000 sq. ft., 0.42 pounds of nitrogen per 1,000 sq. ft. from urea, 1.2 pounds pendimethalin (Pre-M 60 DG) per acre, and 1.5 quarts of Mecamine-D per acre applied with water in a total volume of 3 gallons per 1,000 sq. ft.

This treatment was applied



Field test: Dan Peterson of the All American Turf Beauty Co. applies treatments to an irrigated plot of Kentucky bluegrass during the Iowa Turfgrass Research Field Day in July.

Table 1. Fertilizer and herbicide applications on dormant Kentucky bluegrass turf in the 1988 replicated trial.

Treatment	Rate
1. Control	---
2. Urea	0.5 lb. N/1000 sq. ft.
3. Urea	1.0 lb. N/1000 sq. ft.
4. Sulfur-Coated Urea	0.5 lb. N/1000 sq. ft.
5. Urea + Pendimethalin	0.5 lb. N/1000 sq. ft. + 1.5 lb. ai/A
6. Urea + Dacthal 75 wp	0.5 lb. N/1000 sq. ft. + 10.5 lb. ai/A
7. Urea + Trimec	0.5 lb. N/1000 sq. ft. + 3.5 pt./A
8. Urea + Pend. + trimec	0.5 lb. N/1000 sq. ft. + 1.5 lb. ai/A + 3.5 pt./A

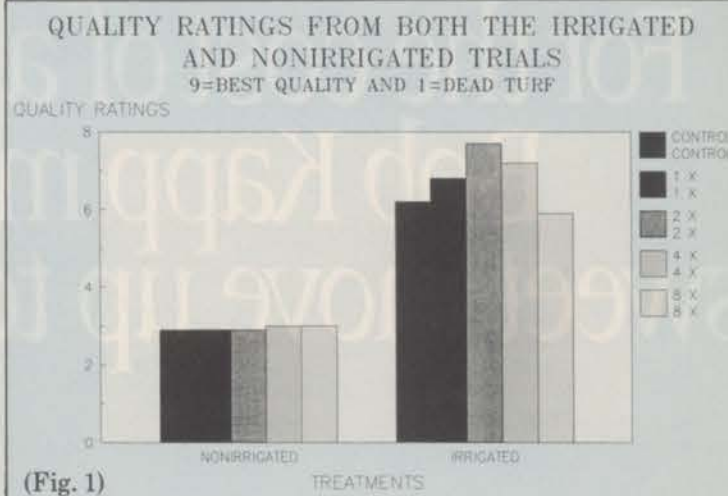
Taken from the 1989 Iowa Turfgrass Research Report PG-456 p.49.

to 10 ft. by 10 ft. plots of dormant Park Kentucky bluegrass at a single application (1 X), two (2 X), four (4 X), six (6 X), and ten (10 X) times the single application rate. An untreated control was also included.

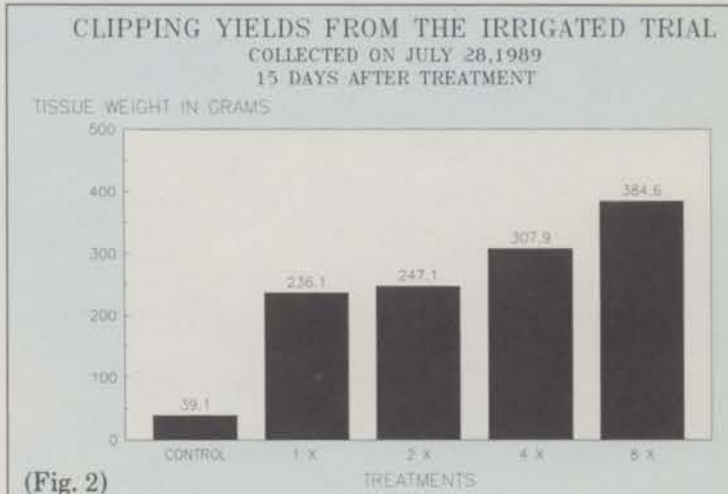
The treatments were al-

lowed to remain on the surface of the turf for seven days at temperatures in the upper 90s to the lower 100s.

The area was then watered to bring it out of dormancy. The fertilizer and herbicide treatments did not significantly damage the turf.



(Fig. 1)



(Fig. 2)

Even at the 10 X rate, which was chosen as an excessively high rate that would be expected to do significant turf damage, there was only minor thinning.

Turf treated with the 1 and 2 X rates emerged from dormancy in better condition than the untreated control.

In the replicated trial, which was established on a ad-

jacent area of dormant Ram-I Kentucky bluegrass on July 8, 1988, the treatments listed in Table 1 were applied in 3 replications. This area was treated in the same way as the demonstration.

When the Ram-I emerged from dormancy, no detrimental effects were observed on any of the treated plots.

See **SPRAY** Page 22



About the Author

Dr. Nick Christians is a professor of horticulture at Iowa State University.



Your old fertilizer formula may get the job done.

Most distributors can only offer you stock answers. You have to choose from the product line they have in-stock.

But DOTS offers you something uniquely different.

Your DOTS distributor will provide custom-blended formulas to match your particular soil needs, climate and grass conditions.

We then offer personalized service

SPECIAL REPORT

LCOs getting their feet wet in irrigation techniques

By HOWARD M. PIDDUCK

Obtaining a working knowledge of irrigation systems can aid turf managers as they deal with clients, their lawns, and water conservation issues.

The best irrigation plans begin with an on-site study of all soils, their percolation rates and a complete topographical map.

Next comes a plan survey including all trees, shrubs, flower beds and turfgrass.

Each has a specific and different water requirement.

Now we must look at the source of the water. Is it a public supply? Is it from a ground well, stream or pond?

The source of water is important but will it be adequate to meet the needs?

The horticulturalist and agronomist in the South, Southwest and Far West understands these principles and lives with them.

In the Northeast, the problems are more acute.

Older systems meet only marginal needs, and many try to extend and add to them in order to meet an emergency or reach a new area.

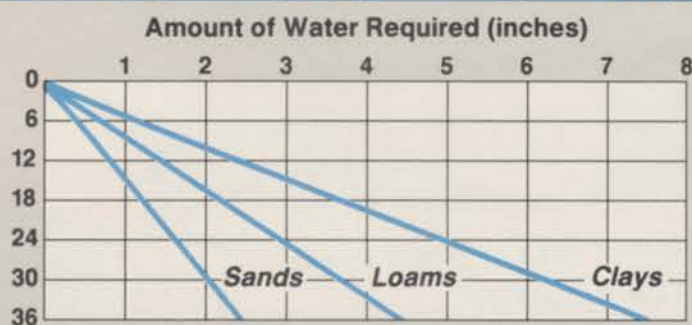
There is little thought about flow rate, pressure loss, requirements of the head or sprinkler, or what will happen if they are operating when other parts of the system are also running.

The galvanized pipe system that is most frequently expected to accept additional demands may be 20 years old or



Irrigation grows: As the use of built-in sprinklers expands, knowledge of them is becoming important to LCOs. (The information in these charts was provided by The Lawn Institute.)

Relative inches of water required to wet soils to given depths (assuming no runoff)



Note that it takes less water to wet sandy soils than loam soils and the most water is required to wet clay soils.

older.

Water and soil conditions have corroded, weakened and reduced its capacity to supply adequate volume, just when we want it to do more.

Pressure builds

In an effort to boost supply,

some mistakenly increase pressure. This can only add to the problem as the increased load can seek out the weak areas and then burst at the most inopportune time.

The older galvanized system may have a 50 percent reduction in supply and a signif-

icant loss of pressure as well.

The movement of water through a carrier system, be it galvanized pipe, copper, concrete or plastic, is expressed in FPS (feet per second).

The slower the movement of water through the transmission system, the lower the pressure loss will be while still delivering the required amount of water.

The slower speed of the water translates into considerable savings of money for such things as repair costs and energy savings through more efficient use of pumps.

Keep the velocity below five feet per second, or better still, three feet per second.

This slower velocity reduces wear from surges and water hammer, thus reducing pipe fatigue—which leads to premature breakage.

Each of the manufacturers of irrigation equipment supply information on velocity and pressure loss in their respective catalogs.

For larger turf areas, looping main lines will increase the overall capacity without stressing the system.

This is because of another principle of hydraulics—half of the demand will be supplied from each leg of the looped system.

Before expanding a system by this method, make sure that the pipe is of a type and in a condition to warrant the extra cost.

It will also be necessary to upgrade using valve per head or valve in head sprinklers to take advantage of the increased delivery.

The new electronic computerized clocks offer more stop and start times with a greater flexibility in length of run times.

Flexible risers, the newer

Influence of Soil Type on Water-Holding Capacity and Water Use

SOIL TYPE	WATER-HOLDING CAPACITY inches of water per foot of soil		DAYS TO USE AVAILABLE WATER*
	TOTAL	AVAILABLE	
SAND	0.6-1.8	0.4-1.0	2-5
LOAM	2.7-4.0	1.3-2.0	6-10
CLAY	4.5-4.9	1.8-1.9	9-10

*Assuming an evapotranspiration rate of 0.2 inches per day and a 12 in. deep root zone. Shorter root systems would take less time to use available water.

Note that as the soil contains less sand and more clay, the amount of water held in the root zone increases, and the number of days available to use the water increases.

Effect of soil texture on water retention

Air 30%	Air 25%	Air 10%
Water 15%	Water 25%	Water 45%
Solids 55%	Solids 50%	Solids 45%
Coarse-textured soil	Medium-textured soil	Fine-textured soil

Because of differences in pore size distribution, air porosity and water retention are affected by soil texture.

Note that fine textured soils contain less air and more water than coarse textured soils.



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About the Author

Howard M. Pidduck is a research support specialist at the New York State College of Agriculture at Cornell University.

gasketed swing risers, are excellent for making better placement of the head in the landscape.

When placing heads, make sure that no stone or debris is in the soil being used for backfill.

The soil should be loose and friable if it is to be used as backfill, otherwise use sand.

It is also necessary that the soil be firmed in the trench and hole in layers as it is placed around the head.

Take as much care of head placement as you would to plant a tree or shrub.

Do not fill to grade, expecting to tramp it firmly: Air pockets still exist, and as the soil settles to fill the void, the head can move or become exposed and vulnerable to mechanical damage.

Placement of lines in common trenches is an excellent means of labor savings, but if insufficient space is allowed between lines future repairs may become a nightmare.

Electric lines need to be placed well to one side and marked to avoid accidental damage while digging for repairs or expansion.

Control wires should be coiled to have an extra one to two feet at each solenoid to allow replacement or repair of the parts as they require.

Every step during construction should be taken to provide for easier repair access. No mechanical system is immune from this need.

Potential repair costs need to be understood. I know of no formula to estimate them, but I do know that they will be a part of a system's cost throughout its lifetime.

Every step taken to recognize problem areas—and reduce them during construction—will save repair costs later.

Sprinkler head spacing

Manufacturers provide radius or diameter figures based on a calm, no wind situation.

Breezy conditions or winds 4-5 mph mandate head spacings no greater than 50 percent of the diameter.

The water leaving one head must be able to reach all adjacent heads.

Seldom will conditions remain constant, wind will vary in speed and direction.

Irrigation design is a matter of compromises that give us desired results.

It is not generally recommended that irrigation systems run when the winds are above 10 mph.

Therefore, we must look for a time when irrigation can be done with minimal wind disturbances. In most areas we can count on an early morning calm.

The period between 5 and 10 a.m. is about average. If more time is needed, start slightly earlier.

Extend the irrigation times after 10 a.m. to areas not af-

ected by wind currents, and to non-use areas such as shrubs and flower beds or to groves of trees not used as picnic areas.

Sandy, well-drained areas present more serious problems.

Closer spacing of heads by as much as 20 percent against the prevailing wind direction can help insure that moisture reaches the adjacent head in high wind conditions.

Winds above 10 mph should negate the use of an automated system. Sprinkler patterns become too erratic—and more water is wasted than reaches the intended target area.

When determining the number of heads for a given

area, never extend their reach.

All heads should be arranged so as not to permit watering of sides of buildings, parking lots or sidewalks.

The designs of the newer generation of rotary and impact sprinklers permit this to be accomplished rather easily.

The part-circle heads that allow this should be valved separately unless the manufacturer's specifications suggest models of matched precipitation rates.

(Example: With a full-circle head using 10 GPM, the half circle head should deliver 5 GPM and a quarter circle head 2.5 GPM.)

Stressing or extending any

one part of the system effects all other parts of the group.

Extensions to any system must then be added to the running time and not to the volume of water being supplied.

When discussing pumping systems, it is best to seek the advice of pump specialists.

Precipitation rate

Knowledge of calculating the precipitation rate for the area covered is important in adjusting run times so that water is not wasted by having the system operate for excessive lengths of time.

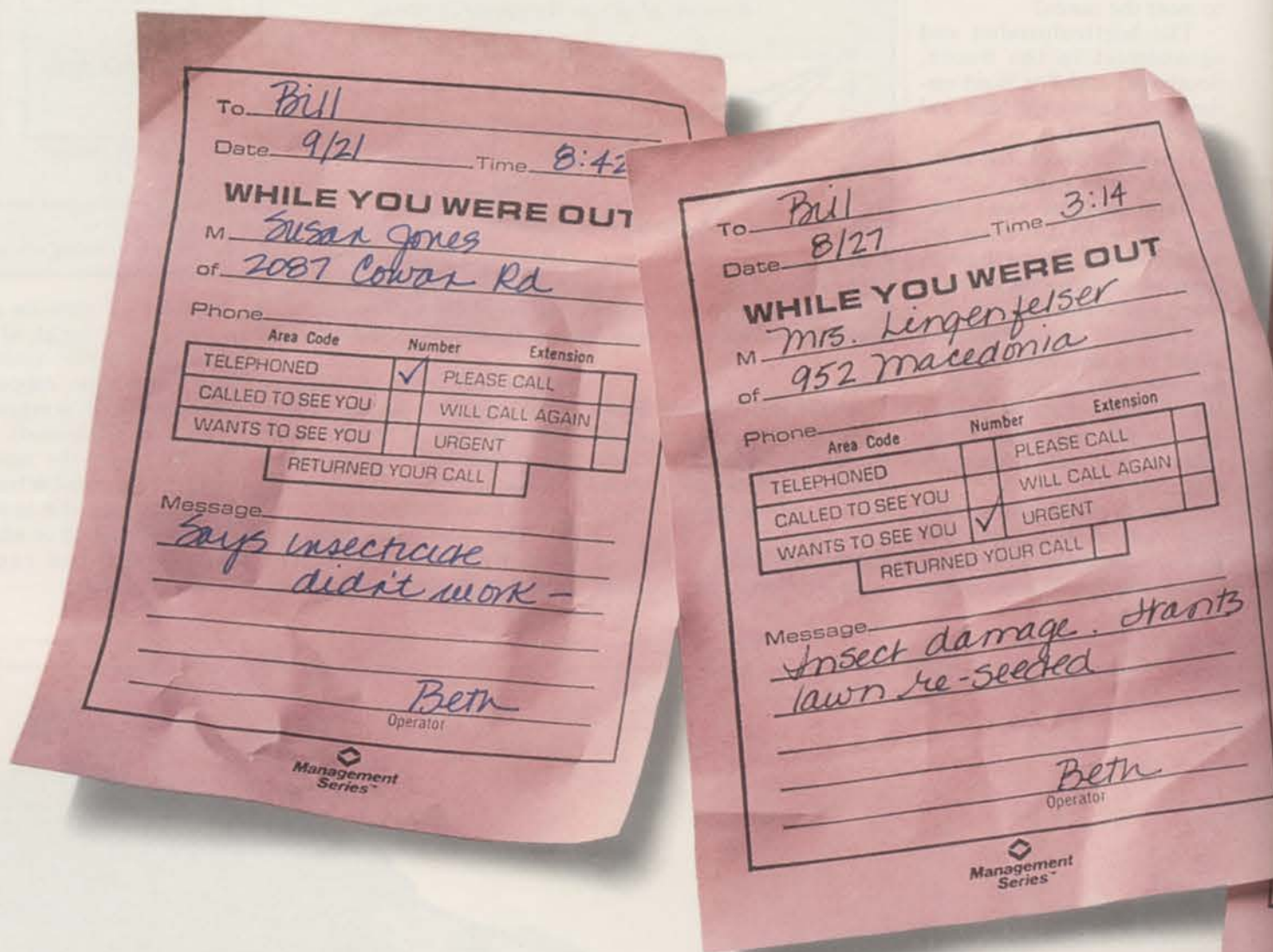
Based on plant requirements, precipitation rates and days available for watering

time, it is then possible to calculate the run times necessary to apply the water.

For example, three watering times spaced apart on the same day of 25 min., 10 min. and 7 min. allow for soaking in between cycles and no runoff or puddling of the water, yet the total amount of water applied will be the same as a 42 min. application.

The reduction of run time during each cycle accounts for the surface being moistened and not being able to accept as much water during the second or third cycles.

Some controllers may need equal 14 min. operating times due to the setting method. LCI



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at controlling problem turf pests, including white grubs and mole crickets.

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Lawn chemical runoff unlikely to pollute water table

By JAMES E. GUYETTE
Editor

Groundwater supplies are unlikely to be polluted by runoff from turf treated with lawn care chemicals, according to university research.

In fact, a nice lawn may actually help filter any water running through it.

"The impact of well-managed turfgrass on water quality appears to be positive in nature," says Dr. Thomas L. Watschke of Penn State Uni-

versity.

After studying the issue "the results indicate that dense, high-quality turfgrass stands, regardless of establishment method, affect the overland flow process to such a degree that runoff is insignificant," Watschke maintains.

"The threat toward groundwater supplies should be neutral or none," says Dr. A. Martin Petrovic of Cornell University.

Both men have studied water runoff issues.

Any effort by a local gov-

ernment to restrict the use of lawn care chemicals in the hopes of preventing groundwater pollution would appear to be misguided.

"The No. 1 culprit is failing septic tanks," says Watschke.

Also, instead of being worried about lawn care chemicals, "a bigger concern is stormwater runoff," he observes.

Heavy metals, lead, petrochemicals and asbestos from automobile brake linings are some of the nasty substances that drain from streets

during a rain, Watschke reports.

Leaves piled in gutters can generate harmful organic wastes.

Anti-lawn care activists and others may seek to exploit the water runoff issue through the news media, rather than appreciate the purifying properties of a well-tended lawn.

"They're so caught up in the notion that something's wrong that they don't think about what's right," Watschke



Watschke: Road waste worse.

maintains. "If you're disappointed in good news then you're probably not looking for it."

While there have been concerns with chemical runoff from farm lands, lawn care is in a different category.

Watschke and Ralph O. Mumma address the issue in the introduction to a Penn State study for the U.S. Department of the Interior Geological Survey: "Hydrological models for urban-suburban watersheds currently use information acquired from pasture research as a source of data for runoff from lawn areas. Use of such information may be misleading and inappropriate because dense, thatchy, well-managed lawns are not analogous to pastures."

(The 64-page report, entitled, *The Effect of Nutrients and Pesticides Applied to Turf on the Quality of Runoff and Percolating Water*, (ER 8904) is available from the university.)

According to Petrovic at Cornell, any leaching of fertilizers and pesticides can be controlled by using good turfgrass management techniques.

His nitrogen studies have determined that a fertilization program in the late fall should be avoided.

On Long Island's sandy soils, 70 percent of the groundwater leaves the surface between November and April.

A too-cold soil temperature is likely to reduce effectiveness.

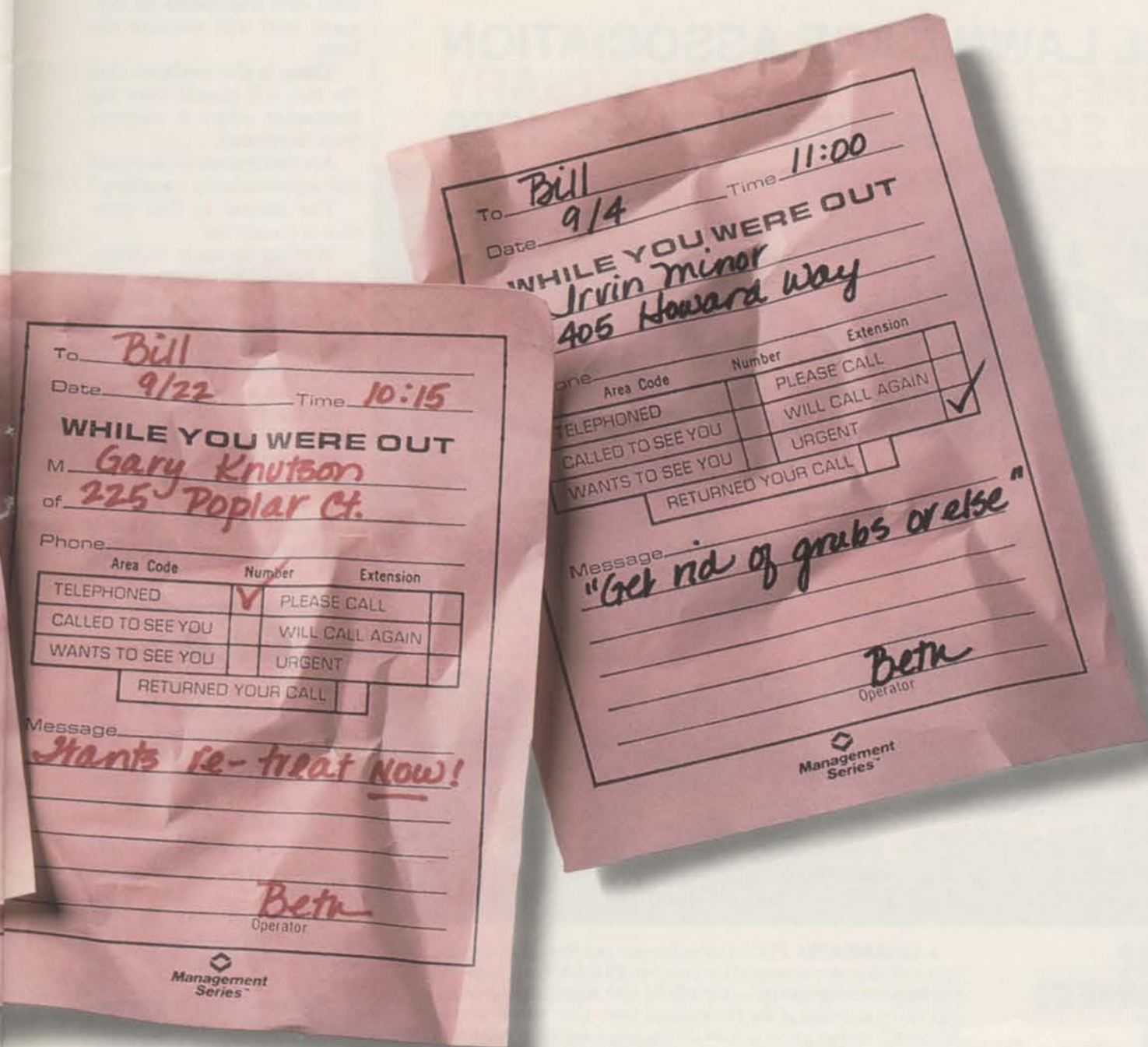
An early fall fertilization program is fine, but if the material is applied too late there is less chance of plant uptake of nitrogen, less chance of organisms picking up nitrogen, and less chance for denitrification and ammonium volatilization.

The reactions tend to vary according to the brands and application rates being used on the lawn.

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Petrovic: Apply early.



st turf pests, including these.

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your clients.

Just that they'll more often be the green, negotiable variety.



sale to and use only by certified applicators or persons under their direct supervision, and only for those uses covered by the applicator certification.

SPRAY

from Page 18

The quality of the turf on treated plots did not exceed that of the untreated control in this study.

The results of these two studies indicated that fertilizer and herbicide treatments on dormant lawns were unlikely to cause damage to the turf, and may even be beneficial as the turf emerges from dormancy.

As is usually the case in research, however, more questions were raised than were answered.

What would the effect of these treatments be on irri-

gated turf?

Would the beneficial effects of the lower application rates observed in the demonstration occur on turf that has been dormant for a shorter period of time?

Could the results be duplicated in more extensive trials?

On July 13, 1989, at the Iowa State University Turfgrass Research Field Day, another more extensive trial was established to observe the effects of summer lawn care treatments on both irrigated and nonirrigated Kentucky bluegrass.

All American Turf Beauty again supplied the equipment and materials.

The single application

treatment included 0.95 lbs. nitrogen per 1,000 sq. ft. (0.54 lbs. N from Powder Blue and 0.41 lbs. N from urea), 3 pts. Mecamine D per acre, 1.3 lbs. Pendimethalin per acre, 0.15 lbs. K per acre (K₂S₄), and 1.7 oz of iron celate per 1,000 sq. ft.

As before, the treatment was applied in 3 gal. total solution per 1,000 sq. ft.

The treatments, which were replicated three times, included a control (no treatment), 1 X, 2 X, 4 X, and 8 X.

The study was established on a dormant Vantage Kentucky bluegrass and in an adjacent area on an irrigated, 4-cultivar blend of Kentucky

bluegrass.

As would be expected, the excessively high treatments burned the irrigated turf (Figure 1), although the effects of the highest treatments were not as serious as might be expected given the high rates of fertilizer and herbicides that were applied at these rates.

By the fifteenth day after treatment, most of the visible damage had subsided and the grass had begun to respond to the nitrogen (Figure 2).

The nonirrigated area remained dormant through July and most of August.

At no time did any of the treatments have any visible detrimental effect on any of

the treated plots.

As the area began to emerge from dormancy following rains in August, it became apparent that the grass was benefiting from the nitrogen on the treated areas.

I am by no means advocating the use of any of these fertilizers or herbicides above those included in the 1 X treatment.

The higher rates were included only to determine the margin of safety that exists when these products are used.

All of the work that has been conducted in the last two years on dormant Kentucky bluegrass indicates that there is a significant margin of safety, and that there is no reason to believe that standard lawn care treatments on dormant turf will damage the lawn.

There is also evidence that the turf will benefit from the treatment when it emerges from dormancy.

Are treatments on dormant turf agronomically necessary?

The answer to that question is clearly no.

Waiting to apply fertilizer and herbicide treatments to Kentucky bluegrass at the end of a drought as it emerges from dormancy would still be the recommended procedure.

But for a company with a large number of customers that must make treatments over a several-week period, these applications may be an economic necessity.

In that situation, there is nothing wrong with the practice.

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Watch your mail in early summer for registration information, or call PLCAA for information 1-800-458-3466, and mark your calendar for a trip to Las Vegas! Circle No. 133 on Reader Inquiry Card



PLCAA

from Page 1

It's a sure bet that PLCAA members will be gaining some valuable business knowledge amid the glitz, glamour and excitement of the Gambling Capital of the World.

"They're going to get a very good conference," Brooks promises.

"This industry is constantly changing, and we're going to be talking about these changes," he adds.

"Water will be a primary issue," Brooks reports. Other topics will address government regulations, pesticide safety and business management concerns.

"We've scoured the country for top faculty so you can hear their ideas."

Don Aslett, "the nation's top janitor," will give a motivational presentation. Dr. Jay Lehr of the National Water Well Association will address water conservation issues, as will irrigation expert Larry Keelson.

Dr. Larry Kokkelenberg will be on hand to deliver tips on how to better operate a business enterprise.

Management Consultant Al Calibria will discuss corpo-

See PLCAA Page 50

SPECIAL REPORT

Turfgrass survives stress when properly prepared

By MICHAEL L. AGNEW

The drought of 1988 brought with it damaged lawns and discouraged customers for the professional lawn care industry.

Turfgrass areas that were once thought to be able to survive prolonged periods of dormancy were damaged by the lack of rainfall coupled with excessively high temperatures.

In addition, many lawns were damaged because watering bans were implemented without warning.

These situations, plus poor soil conditions, improper mowing practices and a lack of stress conditioning, cost thousands of dollars in damage repair.

As reported in the August LAWN CARE INDUSTRY, much of the country successfully escaped the grasp of the drought with adequate rainfall in 1989.

Unfortunately, these rains have not occurred in much of the Great Plains.

While 1989 temperatures were not as high as those recorded in 1988, a lack of subsoil moisture has prevented turfgrass plants from sending their root systems downward.

In most cases, cooler springtime temperatures and timely rains have kept most crowns and rhizomes alive, thus plant survival has been greater in 1989.

Lawns have not totally escaped the summer of 1989 unscathed. Insect injury due to sod webworm and bluegrass billbug is reported to be more severe than in past years.

Annual weeds, such as prostrate spurge and crabgrass, have become more abundant, especially where no lawn care treatments were given this spring.

When reflecting back on the past two years of drought, it is important to first understand the politics involved with community watering systems.

Then it is important to change management practices

to develop stress tolerant turfgrasses.

Water restrictions

The continuing drought created numerous situations in the form of rationing and bans.

In the Great Plains, municipal watering systems were not created with lawn watering in mind.

In many cases, the water supply facilities are more than 20 years old. Thus, it was not surprising to see water rationing or bans issued by municipi-

palities. The purpose of most water restrictions were to retain adequate water for drinking and for emergencies such as fighting fires.

Urban watering bans can be described as the complete cut-off of water for lawn irrigation. Often stiff fines are imposed for people caught irrigating lawns. This has occurred frequently in rural communities where the water supply has not been recharged with rains.

For example, in south central Iowa, the city of Lamoni, with a population of 2,700, had



Broadleaf invasion: Weeds have sprouted on this dormant lawn.



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About the Author

Dr. Michael L. Agnew is an extension turfgrass specialist at Iowa State University in Ames.

to ban any use of water for lawn irrigation because the city water source had gone dry. Now in the third straight year of drought, Lamoni has to haul water 30 miles to provide for drinking and bathing water.

In situations like this, no one gives their lawn a second thought.

Urban water rationing is the selective cutback of water use when adequate water exists. It occurs when more water is needed than the storage supply can handle.

As long as the water source is adequate, lawn watering is allowed on a limited basis.

In eastern Iowa, the city of Cedar Rapids, with a popula-

tion of 110,000, implemented a water restriction program in 1988. A water shortage had occurred because a developing housing industry plus an undersized water storage facility were taxing the city water supply.

In 1988, Cedar Rapids imposed a total watering ban to avoid a water shortage. After several months of discussions, Cedar Rapids then implemented an odd/even method of rationing the watering of lawns. Houses with odd street numbers watered on odd dates, while houses with even street numbers irrigated on even dates.

A good water rationing pro-

gram should begin with water conservation. Municipalities are less likely to completely cut off all lawn irrigation if homeowners cut back their consumption.

It is important to remember that the primary purpose of irrigation during a drought is to insure survival of the turfgrass, not to have a lush, dark green lawn.

Thus water conservation should begin with less frequent irrigation.

Stress tolerance

During periods of extended environmental stress, it is important to develop lawns that are properly acclimated to the

adverse situation.

Lawns that are prepared for stress can withstand a wide variety of stresses better than lawns that are not prepared.

When properly prepared, the turfgrass plant will have a deep, extensive root system, low water content in the plant tissue and more carbohydrates within the plant.

This acclimation process can be accomplished through proper irrigation, mowing and fertilization.

Proper irrigation can develop a deep, extensive root system. This is accomplished by allowing the turfgrass plant to show signs of wilting before irrigation is

applied. The key is to apply enough water to rewet the soil in the rootzone.

Subsequent irrigations should be withheld until the next signs of wilt.

Research has shown that Kentucky bluegrass plants that are allowed to wilt between irrigations show less signs of stress than plants that are allowed to grow in a well-watered situation when water is withheld.

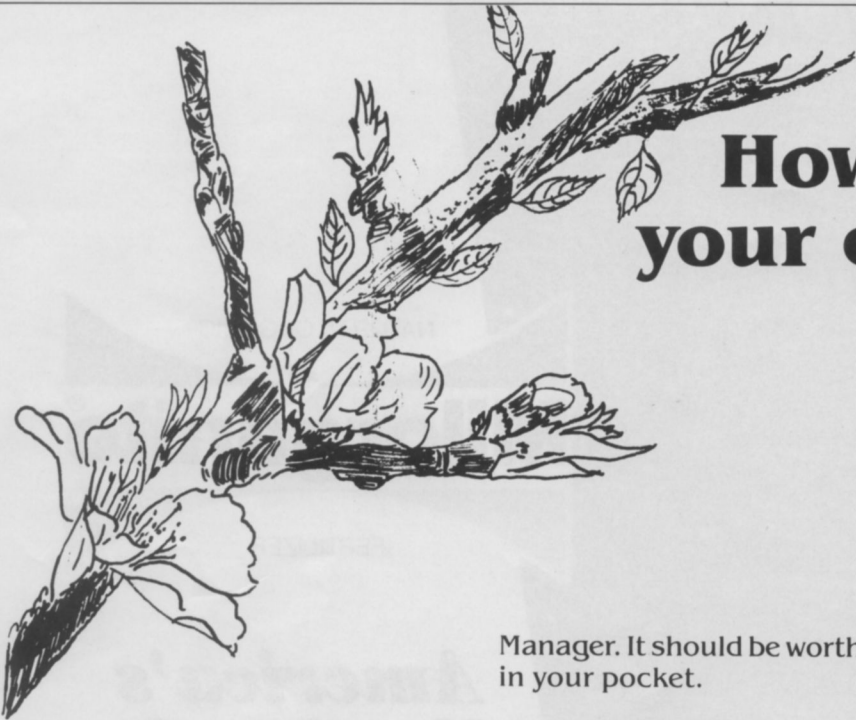
Proper mowing practices can also help develop a deeper root system and cooler temperatures near the crown of the plant.

It is important to raise the mowing height prior to the onset of high temperatures. A higher mowing height not only leads to a deeper root system, but the increased leaf tissue helps in the production of carbohydrates and provides insulation to keep the crown of the plant cool.

The addition of potassium fertilizers, especially on sandy soils, can help promote stress tolerance in turfgrass plants.

Potassium is utilized by the plant to increase root growth and to provide thicker cell walls. Both conditions promote better stress tolerance.

Many lessons have been learned from 1988 and 1989, and it is important not to forget them. Turfgrass can survive adverse conditions if it is properly prepared for the situation. LCI



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ALCA will meet in Mexico

FALLS CHURCH, VA.—The Associated Landscape Contractors of America will hold its 1990 convention in Puerto Vallarta, Mexico, Feb. 4-7. The convention will be held at the Krystal Vallarta Hotel.

Michael Gerber, author of *The E. Myth: Why Most Businesses Don't Work and What to do about it*, will be keynote speaker. Gerber is founder and chief executive officer of the Michael Thomas Corp.

Gerber offers consulting to small businesses, the development of which are the focus of his studies.

Bruce Wilkinson, president of Workplace Consultants, Inc., Gretna, La., will speak on drug abuse in the workplace.

Frank Ross, co-founder of Ross-Payne Associates, Inc., will give a presentation on the recent *ALCA Operating Cost Study*.

The study offers a comprehensive collection of financial data on the landscape industry.

For information, contact ALCA at 405 N. Washington St., Suite 104, Falls Church, Va. 22046. The phone number is: (703) 241-4004. LCI

SPECIAL REPORT

Polymers allow lawn to survive on 300 gal. a week

By JAMES E. GUYETTE
Editor

CARPINTERIA, CALIF.—With proper preparation, a 2,000 square-foot lawn can be kept green with just 300 gallons of water a week, according to a contractor in drought-stricken Santa Barbara County, Calif.

A combination of old-time farming practices and space-age technology does the trick, says Dr. Walter S. Barrows, Sr. He owns Landscapes by Barrows in Carpinteria, and is "Dr. Dirt" on a local radio gardening show.

By using a technique that includes water-absorbing polymers, Barrows maintains that indeed a 2,000 square-foot lawn can be kept green with just 300 gallons of water a week. That equals the waste water generated by three loads in his wife's Speed Queen washer.

First, Barrows aerates the property and rakes up the cores. A mixture of mulch and polymers is broadcasted and spread into the aeration holes so that "the water that gets in there stays in there."

The yard is dragged with a piece of chain link fence or the back of a rake. It is then covered with a half-inch layer of clean plaster sand topdressing.

"It acts as an insulating barrier to keep the moisture in underneath it," Barrows explains.

The raking process is crucial with the polymers. "If you don't spread it evenly you get these gel pockets. All they're doing is holding water, but they (other polymer users) don't realize they're going to get into disease problems and fertilizer burn problems."

The polymers are applied with a mixture of sewer sludge products and other ingredients to keep out bad bacteria, control thatch, add good fungi and insure a suitable organic content. Barrows has invented a word for his turf mixture: "We inoculate it with these *humectum* acids."

He backs off with the fertilizer and uses deep, infrequent, watering. The light fertilization of the turf involves "keeping it on a cheap drunk" while avoiding "a crop of hay."

With his preparation process "you've cut your water requirements by at least 30 to 50 percent."

The aeration and raking harkens back to harrowing, which is basically shallow plowing with those big-wheeled clawed devices that are often seen at rural roadside yard sales.

"The guy that harrowed his land had moisture all year round," Barrows recalls.

The space-age angle is sup-

plied by the polymers. Barrows uses MATSCI MS-5, which is a corn starch-based product made by Material Science in Santa Barbara.

(A polymer is a general term meaning a chain of molecules.)

Polymers expand as they absorb moisture for future use.

"As the plant dehydrates it sucks up that water," explains Rich Records, branch manager at Target Specialty Products in Cerritos, Calif.

Dr. W.M. Doan of the United States Department of Agriculture is generally cred-

ited with inventing the corn starch-based polymer in 1974. Thinking of a roast might help someone understand the idea. "Have you ever eaten gravy?" Doan asks.

Polymers are targeted for use in bandages, breast implants, foot powder and cat box filler.

The use of polymers on turf remains in the early stages, but it could mean gravy for many a turf manager in drought-plagued areas.

"It's just emerging. We're just at the beginning of this

thing," says George Blumel, chairman of the board at JRM Holdings in Cleveland, Ohio. The company makes Soil Moist, which is a "crosslinked modified acrylic polymer" similar to the material used in contact lenses.

Soil Moist is being used at some golf courses, and it is expected to spread to residential lawns. "We've got to educate," says Blumel.

"A lot of people are going to spend the extra money—it's an investment in the home,"

See **GRAVY** Page 26



Barrows: Rake them in.

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Improved hard fescue	Aurora
Improved Chewings fescue	Shadow
Improved Sheeps fescue	Bighorn
Improved creeping fescue	Flyer Fortress Shademaster
Improved tall fescue	Apache Bonanza Eldorado Monarch Murietta Olympic Silverado Triathalawn blend
Improved creeping bentgrass	Penncross Penneagle PennLinks
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Industry taps resources to inform citizens, officials

Green industry organizations throughout the United States are taking a more active role in formulating government water management policies on the state and federal levels.

The American Association of Nurserymen notes that it assisted in the preparation of the U.S. Senate version of the Municipal and Industrial Water Conservation Act of 1989.

Written to respond to the "water crisis of the 1980s and beyond by making wiser use of our water resources," the bill

proposes establishment of the Office of Water Conservation with the U.S. Environmental Protection Agency.

Included in the bill's language is emphasis on the water-efficiency of landscaping and vegetative cover.

Says AAN official Ben Bolusky, "This is one more step toward recognition of the nursery industry as an advocate of prudent water use in the U.S."

He also observes, "This legislation will send an important message to the American people: That landscaping is a vital

Included in the bill's language is emphasis on the water-efficiency of landscaping and vegetative cover.

way to participate in water conservation activities, over and above the fact that it adds beauty and value to one's property."

A coalition of groups in California is busy educating citizens and state officials as the Golden State wrestles with serious water shortages in some areas.

The California Landscape Contractors Association has pitched in with a cooperative advertising campaign for the print media.

Entitled, "Water is a Growing Concern," the ad emphasizes the importance of saving water and it urges readers to hire an association member to construct a water-efficient

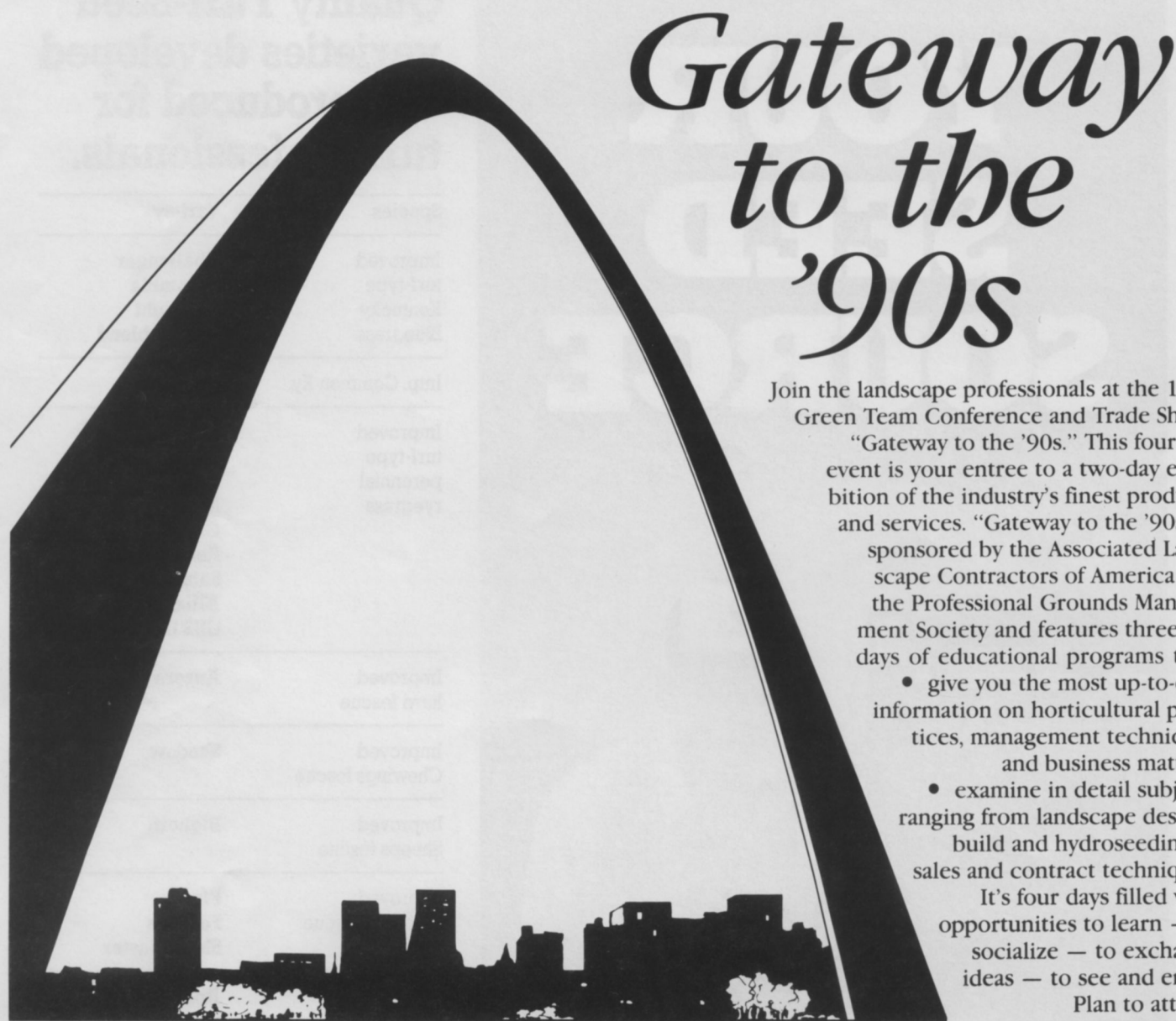
landscape.

The Desert Turfgrass/Landscape Conference Committee is seeking nominations for the first-ever Southwest Regional Award.

"The award will recognize an individual or group of individuals who have made significant contributions to the turfgrass or landscape industries in the desert Southwestern United States," says Linn Mills, a Nevada extension agent.

The winner will be announced at the group's Dec. 13-15 convention in Las Vegas, Nev.

Other organizations are recognizing the need for water education programs, and options are being discussed. LCI



Gateway to the '90s

Join the landscape professionals at the 1989 Green Team Conference and Trade Show, "Gateway to the '90s." This four-day event is your entree to a two-day exhibition of the industry's finest products and services. "Gateway to the '90s" is sponsored by the Associated Landscape Contractors of America and the Professional Grounds Management Society and features three full days of educational programs that:

- give you the most up-to-date information on horticultural practices, management techniques and business matters.
- examine in detail subjects ranging from landscape design/build and hydroseeding to sales and contract techniques.

It's four days filled with opportunities to learn — to socialize — to exchange ideas — to see and enjoy. Plan to attend.

Green Team Conference and Trade Show

November 9-12, 1989 ■ St. Louis, Missouri
St. Louis Sheraton and Cervantes Convention Center

Need more information on the 1989 Green Team Conference and Trade Show?

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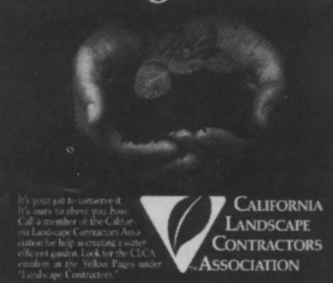


Professional Grounds Management Society
Suite 1E, 12 Galloway Avenue
Cockeysville, Maryland 21030
(301) 667-1833

See You In St. Louis!

Circle No. 118 on Reader Inquiry Card

Water is a Growing Concern.



Ad campaign: Members of the California Landscape Contractors Association are being urged to run this ad in the consumer media.

GRAVY

from Page 25

adds Dave Czehut, vice president at JRM Chemical.

"There's a great move toward the use of polymers in the turf industry," agrees Richard Dean Culbertson, president of RainSaver, Inc. in Walla Walla, Wash.

The new RainSaver devices inject polymers and other materials below the grass surface.

"We can go out with our machines and do lawns and hardly disturb the turf," Culbertson says.

He believes that an LCO could charge a customer \$100 to \$150 for an annual treatment using Polysorb polymers on a 5,000 square-foot lawn.

"It's the first machine that will treat a mature (grass) crop at the root level," says James C. Marshall II, chief executive officer at Polysorb, Inc. in Smelterville, Idaho.

He sees a great future in the two products for areas under drought pressure. "If you want green grass you're going to have to go to polymer injections on the lawns," Marshall says.

Polymers can be slippery when applied to the surface of the turf, he adds. "All a polymer does is create an underground reservoir." LCI

^T1 ^H9 ^E9 0 ^S



DECADE

OF

THE

ENVIRONMENT



3 Decade of increased regulations

Industry experts discuss key issues and how they're being dealt with.

6 Learning from the past

Looking at 2,4-D's case history prepares us for future issues.

7 Two approaches to an important task

The issues-management style of two Ohio LCOs provides valuable insight.

8 Products for the 1990s

The Dow Chemical Company creates new products, redesigns existing ones and offers support with the environment in mind.

11 Supplying ammunition to our allies

Dow Public Affairs is an ally LCOs can depend on now and in the future.

I N T R O D U C T I O N

As another decade comes to an end, the "me" generation of the 1980s is shifting its attention to the environment. A number of events illustrate this trend—Alar on apples, the annual "attack" on lawn care products, concern about 2,4-D, groundwater and pesticide residue on our food supply.

On the following pages we address some of the key issues facing the lawn care industry. As a leader in the industry, The Dow Chemical Company is

strongly committed to the responsible and effective use of chemicals and the protection of our environment.

Awareness of environmental issues and concerns dictates our development of new products and the enhancement of existing ones. Our products for the 1990s will further reflect that awareness and concern.

We realize issues management is a serious task for lawn care firms, that's why our staff—from the sales and technical specialists to the government and public affairs department—is there to assist you. Dow is a good friend to have during a time of increased legislation and regulation. Consider us a resource when it comes to issues management.

To prepare you for the coming years, read *"The 1990s: Decade of the Environment"* for valuable insight on the issues, and the products and resources

Dow has to offer. We're committed to the lawn care industry and you'll see that commitment expand during the next decade.



Rob Peterson
Product Marketing Manager
Turf & Ornamental Products
The Dow Chemical Company

"We're committed to the lawn care industry and you'll see that commitment expand during the next decade."



Decade of increased regulations

Lawn care operators today must not only possess lawn care skills and business savvy, but also must be aware of the issues facing their industry.

"You can't be in the industry without being aware of the forces acting upon it," says Mike Shannon, president of ChemLawn. And those forces include issues that will only intensify in the oh-so-near next decade.

"A good manager plans for the future," says Bob Parmley, president of the Professional Lawn Care

Association of America (PLCAA). "You have to be aware of the issues, whether they be environmental or legislative. No matter what size of company you have, you will be affected."

As much as the 1990s will be the decade of the environment, for LCOs it could also be called the decade of increased regulations. "There's a trend toward more regulations on

local, state and federal levels," Parmley says.

"Media attention towards pesticide-fear issues has grown greater this year. This attention has a direct relation to the legislative and regulatory issues facing our industry," points out Joe Winland, group vice president of support for Tru Green.

Tom Delaney, PLCAA state regulatory affairs specialist, says the regulatory climate is one of change. "Everything is in turmoil right now. The only certainty is that LCOs who don't know what's happening will be left behind."

Here, according to industry experts, are some of the key issues facing the lawn care industry and how they're being dealt with.

Posting and Prenotification

Signs cautioning customers and passersby of a pesticide application are popping up on lawns all around the country.

Posting is the law in Maryland, Massachusetts, Illinois, Maine, New Jersey, New York, Ohio and Rhode Island. Florida and Connecticut will require it in the very near future, and Washington, Indiana, Oregon, Colorado and Georgia are currently discussing the issue.

A couple of states make notifying pesticide-sensitive people easier for LCOs. Pennsylvania and Maryland have a central registry system which lists such individuals.

A registry was created in Pennsylvania after the 17-member Pesticide Advisory Board heard from citizens who claimed to have experienced allergic reactions to pesticide applications made in compliance.

The list, which now totals 175, is kept on a data base, updated on a regular basis and sent to commercial and public applicators in the state. Applicators provide advance notification to individuals when spraying within 500 feet of their homes.

Right now, notification in Pennsylvania is voluntary. Next year, it could be a regulation as it is in Maryland. "If a Maryland applicator doesn't notify individuals on the list he will first be warned. After

"You have to be aware of the

issues, whether they be

environmental or legislative."

- Bob Parmley



Posting: More states are making it the law.



An LCO's only worry used to be making a lawn green and weed-free. Today, issues affect the business.

that there's a possible revocation of his license and a fine of \$25 - \$1000," explains Dennis Howard, of the Maryland Department of Agriculture Pest Regulation Section. There have only been a couple of incidences of applicators not contacting the individuals since its inception in February.

Training

As training becomes more regulated, LCOs are asking, "How do I find the time to give my employees documentable training?"

Richard Jalette has come up with an answer. Once an LCO himself, Jalette is now co-owner and director of a correspondent training program he helped found almost a year ago.

The program is designed specifically for lawn care companies. "LCOs don't have time to research the material, write quizzes and then document the training. We do the preparation, background research, typing, copying of all materials, and documentation. All the company needs to do is get

the employees together and present the material," explains Jalette.

New York, Maryland and California have regulations requiring verifiable training for employees. Similar requirements are pending in Pennsylvania, Massachusetts, Rhode Island and Missouri.

"As regulations clamp down on us, LCOs will

have to go to training programs like this," says Jim Smith, general manager of Hydro Lawn, one of 17 companies using the program. "It's good because we end up with better-trained technicians doing a better job, and that leads to more business."

Groundwater

The key to this issue and the regulations that will be formulated depend on research that's being done. Some studies are finding that under certain circumstances, healthy turf may actually protect groundwater.

"Groundwater is a big issue. Questions are easy to ask, but not easy to answer," says Marty Petrovic, associate professor of Turfgrass Science at Cornell University.

Groundwater research being done by Petrovic and his colleagues includes evaluating pesticide leaching models. Existing models that predict movement and leaching into groundwater focus more on the soil and its condition, and not on the thatch layers and above-ground part of the plant, and how this turf ecosystem interacts with the pesticide.

At the University of Rhode Island, the Department of Plant Sciences is conducting research on turf, home lawn care and water quality. Professor Michael Sullivan says he and his colleagues haven't studied groundwater, but rather the water quality just above the saturated zone.

"We've looked at the quality of water that ran off the surface and through the root zone and determined the pathways and losses of turfgrass products," he says.

"Our basic conclusion was that turf managers have far more control than we thought. A predominant factor lies in how attentive they are to watering practices," Sullivan explains.

"Unless you overwater, you don't see the potential for great movement of pesticides and nutrients. This means LCOs need to better educate their clients on watering practices," he advises.

Worker Safety

"When it comes to worker safety regulations, California is one of the toughest," says Dave Hanson, manager of technical support for Environmental Care



Rubber boots and gloves are required wear. Goggles, respirators and protective pants could be next.



Communicating with customers is an important first step LCOs should take toward handling the issues.

"Groundwater is a big issue.

Questions are easy to ask, but not
easy to answer."

- Marty Petrovic



Inc. The firm specializes in all phases of lawn and landscape maintenance, has branch offices in California and five other states and employs 1,125.

At one time, only the California Department of Food and Agriculture (CDFA) regulated pesticide use and storage in the lawn care industry. No longer, says Hanson. "We're at the point where so many agencies are involved that there needs to be a clearinghouse that lets us know the regulations. Right now most LCOs are learning by being cited."

Hanson briefly outlines some of California's worker safety regulations and how his company adheres to them:

Protective clothing - Firms are required to provide any employee who makes chemical applications with a disposable suit such as Tyvek™, or a uniform which is laundered after it's worn. Branch offices of Environmental Care Inc. do both.

Protective gear - All safety equipment must be provided by the company. Goggles, boots, face shields and respirators are given to all spray operators.

Training - All employees must go through yearly, documentable training on work hazards, safety procedures, clothing and equipment requirements, and the application laws and labels for each product, etc.

Chemical storage - An enclosed area, separate from offices and warehouses, is required. The area must be posted, ventilated, lighted, and fenced in. Some fire departments require a one-hour fire wall.

Container labels - Everything must be labeled—from the tank and backpack sprayers to the handcans and tip and pour containers.

Pesticide Usage Reports - Monthly pesticide usage reports are submitted to county agriculture commissioners documenting the product and amount used.

Those are just a few of the compliances Environmental Care Inc. must adhere to in California. "It all adds to the cost of doing business," Hanson says. "On the horizon, we see costs escalating even more with increased regulations."

Pesticide Disposal

Disposing of outdated or unusable pesticides can be a big hassle. But in Connecticut, environmentalists, pesticide applicators and state agencies worked together to solve the disposal problem and set a precedent in cooperation.

A 1987 bill appropriating state funds for the disposal of old or unwanted pesticides was spearheaded by the Professional Pesticide Users of Connecticut (PPUC), a group representing all commercial pesticide applicators in the state. PPUC worked with the Clean Water Coalition; the Connecticut Department of Environmental Protection (DEP); the Agricultural Extension Service; and Farm Bureau.

DEP sent out surveys to five of the state's eight counties to discover what and where the pesticides were and condition of the containers they were in.

DEP arranged for the collection and disposal of the pesticides in two counties thus far and paid 50 - 100 percent of the disposal costs.

Over 50 people brought in a total of 737 gallons of liquid and 4,564 pounds of solid material for disposal.

As for the future, Don Kiley, PPUC executive director, believes, "This is a disappearing program. We'll hopefully dispose of all the outdated pesticides in the state over the next few years." He adds that the cooperative spirit that began with the program has grown into a positive relationship between the industry and the environmental community. The result has been a number of innovative solutions to pesticide issues. ■

In a survey conducted by *Lawn Care Industry Magazine*, LCOs were asked, "What issues are of greatest concern to you?" Here's their reply:

- 1 Health risks/product safety
- 2 Application restrictions
- 3 Pollution problems, especially groundwater contamination

How to Handle These Issues

Jim Wilkinson, director of the Pesticide Public Policy Foundation offers advice on how to best be prepared to handle the issues:

- Train your applicators. Many of the issues facing the industry could've been easily avoided if the applicator had been properly trained.
- Communicate with your customers. Provide them with information about the products you use.
- Involve yourself in associations, coalitions and the political process. The fight for reasonable pesticide public policy must be won through the combined efforts of all applicators.

Learning from the past

Looking at how the 2,4-D issue has evolved can tell us a lot. As we move into the next decade, we will likely witness additional scrutiny of 2,4-D and other compounds.

"2,4-D has a long history going back to the mid-1940s," explains Wendell Mullison, a consultant who has over 40 years of experience in agricultural science—32 of which were at Dow.

When the environmental movement blossomed during the '60s and '70s and some of the safest, most useful chemicals were attacked, 2,4-D wasn't spared.

In 1980, EPA announced that studies of 2,4-D in the scientific data files didn't meet current toxicology standards. Although most of the studies were valid and showed the use of 2,4-D didn't pose unreasonable risk, EPA felt new data were needed.

Dow was the first to lead in 2,4-D's defense by forming an Industry Task Force on 2,4-D Research Data. Still active today, the Task Force, consisting of companies that manufacture and sell 2,4-D, developed the requested data.

In 1986, 2,4-D received widespread attention when a National Cancer Institute (NCI) study claimed to link Kansas farm workers using 2,4-D with non-Hodgkin's lymphoma. In the following months, a number of independent reviews found that the study had overstated its case and no link between 2,4-D and cancer had been found.

Controversy was resurrected last summer when the primary author of the Kansas study presented preliminary data from a Nebraska farm workers study claiming findings supported earlier work. Many believe the data are equivocal and could equally suggest the risks posed by 2,4-D are considerably less than those reported by the Kansas study and are said to be statistically insignificant.

Political ramifications concerning 2,4-D still exist. Dow and the 2,4-D Task Force will continue to address the issue and disseminate scientific evidence which the media may otherwise ignore.

The current status of 2,4-D could be considered a positive one—for now the hype has died down.

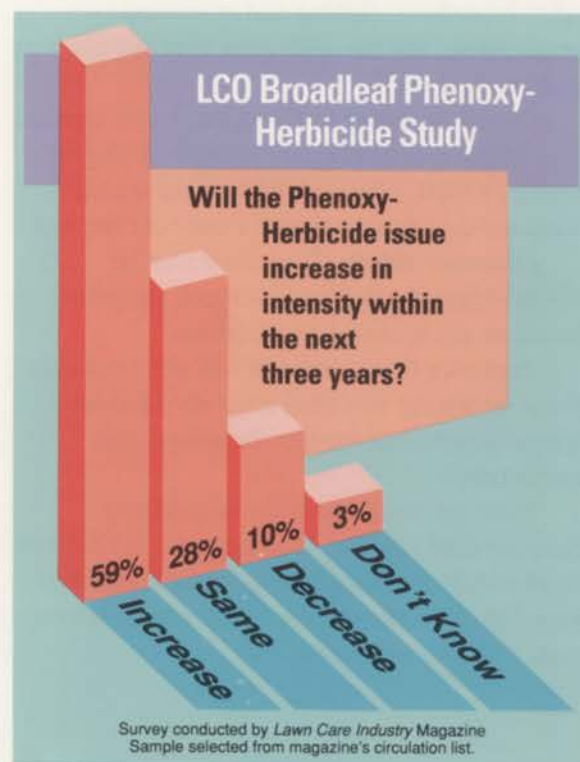
However, trouble still looms on the horizon.

The graph on this page shows the response to a survey gauging the feelings of LCOs on the use of phenoxy herbicides, such as 2,4-D. Fifty-nine percent feel the intensity of this issue will increase.

Manufacturers have begun to look at alternative products for broadleaf weed control in turf. Dow has developed and registered a new chemistry—a combination of triclopyr amine and clopyralid—called CONFRONT® herbicide. Even though 2,4-D is on solid ground, Dow wants to provide the industry with a choice.

Customers may think that because Dow has developed a product alternative, it no longer supports 2,4-D. That's not true; Dow has been the mainstay in supporting phenoxy herbicides, and will continue to support them.

Issues like this could arise again, zeroing in on a different compound. It's important to learn from this example and be prepared for what could be ahead. ■





Two approaches to an important task

Issues management is a skill that needs to be added to the job description of an LCO. There are several ways to approach the important task. Two Ohio LCOs are issues management-oriented and their approaches offer insight.

Rick Steinau, president, Greenlon Inc.

Steinau describes his approach to issues management as proactive. "You need to take the bull by the horns. There's a huge zero-risk contingency that wants to see no pesticides," he cautions.

Because of his proactive efforts, Steinau is bringing attention to his industry. Legislators and regulators listen to him through his involvement in the Ohio Pesticide Applicators for Responsible Regulation (OPARR), a coalition of pesticide users who support responsible regulations.

He says, "Dealing with the media is the toughest



Well-trained employees can enhance an LCO's issues management program, says Rick Steinau, right, with a Greenlon employee.

thing I do." He's a reliable source to local reporters, writes his own press releases and a monthly, 500-word editorial for the *Cincinnati Business Courier*.

As chairman of PLCAA's public relations committee, Steinau helped set up a nationwide network of media contacts. Sixty LCOs send out PLCAA press releases that address various lawn care issues.

He educates his customers on products and practices by sending a newsletter five times a year. To fight "chemophobia," he utilizes pamphlets available through PLCAA and manufacturers, and speaks to community groups.

He believes, "These days you have to stay well-read and caught up on the issues and act upon them."

Doug Halterman, vice president, Leisure Lawn

Halterman, too, mentions the word "proactive" when discussing issues management but says his approach is one of "cautious concern".

Issues management at Leisure Lawn begins with the employees. "They need to understand our policies and safety precautions concerning the environment," says Halterman. "When approached by a homeowner, they can answer questions with confidence and dispel fear."

The company becomes cautious when dealing with the media. "In prior years we were receptive. Recently, we've been less open because we're being misquoted." He believes LCOs need to find a way to get the point across in a short, precise fashion that won't be taken out of context.

Halterman, a past president of the Ohio Turfgrass Foundation (OTF), helped initiate a Legislative Breakfast which gives members of OTF, OPARR and the Ohio Nurserymen Association a chance to meet with state legislators.

He's also a PLCAA committee member on the Council for Lawn Care Information which studies issues facing the industry.

"If LCOs are on the leading edge of formulating policy and guiding the issues, it's easier and less costly to do business," he says. ■



Doug Halterman approaches issues with caution.

"If LCOs are on the leading edge of formulating policy and guiding the issues, it's easier and less costly to do business." — Doug Halterman

Products of the 1990s

The Dow Chemical Company is committed to the responsible use of chemicals and chemical products designed to improve the quality of life everywhere."

That mission statement reflects the company's strong belief in product stewardship, firm commitment to end-user customers and consumers alike, and thoughtful awareness of current environmental and industry issues.

As it pursues its growth objectives for the 1990s — The Decade of the Environment — Dow works hard to support its basic chemical lawn care business. By developing specialty products and enhancing process improvements, Dow strives to build its industry leadership potential.

"To achieve this leadership status, we continuously evaluate industry trends and needs, in addition to the many aspects of our products and services," says Marketing Manager Ken Ablard.

He says these facets include customer and applicator safety, packaging, container disposal, accurate dosage, ease of application, environmental impact, reduced rates of application, reduced odor, and training efforts.

R&D Program

Dow's extensive R & D program endeavors to create and improve high quality insecticides and herbicides. The company's Formulations Group has cited safety and outstanding efficacy as two important goals; others include long-term residuality and low-odor products.

"We look at worker, consumer and environmental safety as top priorities," says Kevin Burns, formulations research chemist. He explains that the company is becoming a leader in dry solid formulation technology to minimize chemical exposure to applicators,

their customers and the environment.

"We've been studying this for about four years," says Malcolm Jones, development director for R & D. The Dow team includes five formulations and analytical chemists and chemical engineers, each with about twenty years of experience with Dow.

Dry Formulations

"Dry technology was responsible for the development of DURSABAN® 50W in water soluble packets, which has been on the market for about three years, and may move us to other formulations which are easy on sensitive plants, and easier to use and clean up than solvent-based insecticides," he says. "Dry formulations can also be put into dose packs and can take the form of water-dispersable granules, which can be dust-free and volumetrically measured," says Jones.

Because solvents are not included in dry formulations, they could significantly reduce the possibility of phytotoxicity to ornamental plants, reduce the possibility of odor problems and eliminate flash point and combustibility potential.

Fran Hamburg, project leader in the Formulations Group, says that the move away from



Turf and ornamental products for the 1990s from the Dow Chemical Company.



aromatic solvents is the "wave of the future."

"A significant number of our odor complaints aren't due to active ingredients, but to the odor of the solvents that are part of our liquid formulations.

"There are two methods of reducing odor," she

says, "and removing the solvents is one. The other involves cleaning up the active ingredient—for example to make chlorpyrifos (the active ingredient in DURBAN, and EMPIRE* 20 insecticides) as pure as possible, minute impurities which are the main causes of odor are eliminated.

We've been working

very hard on that at our production plant."

Hamburg says that this has required developing analytical techniques for measuring the impurities present at extremely low levels. "You can have a 99 percent pure technical ingredient and have an extraordinary odor because all you need is a few parts per million of an odor body in order for the smell to be noticeable," she explains.

Water Soluble Packets

Another non-solvent insecticide, DURSBA 50W in water soluble packaging, is an idea whose time has come, according to Peterson. "And industry acceptance over the past few years has been remarkable."

This type of packaging helps reduce applicator exposure, provides an easy and accurate way to measure dosage and helps solve container disposal problems.

Here is how it works: A measured, plastic pouch containing chlorpyrifos in wettable powder form is added to a spray tank. About 15 seconds later, the pouch begins to disintegrate and releases the formulation, which then disperses into the water. After about a minute, the pouch completely dissolves.



Water Soluble Packaging in action. No container disposal problems or tricky measuring.

Confront Herbicide

Dr. Mike Shaw, Dow's product technical manager for turf, describes one of the new formulations that the company has been developing—CONFRONT herbicide. The product was recently registered by the EPA.

"It's an example of state of the art broadleaf herbicide chemistry. CONFRONT is an amine solution composed of one part clopyralid to three parts of triclopyr per gallon." Triclopyr is an active ingredient in TURFLON* herbicides, while clopyralid is a new molecule to the turf market.

This product has significant advantages over current three-way mixes on the market. Shaw says, "CONFRONT uses substantially less active ingredient per acre to provide control over broadleaf weeds in cool season grasses than presently used products on the market. It has excellent clover knockdown ability, and superior efficacy on hard-to-control weeds."

Dr. Joseph Neal, associate professor of Weed Science at Cornell University has studied CONFRONT in test trials for three years. "CONFRONT herbicide has performed equally to standard herbicides on the three major weeds: dandelion, clovers and broadleaf plantain," he says. "In fact, CONFRONT is the only non-phenoxy herbicide that has controlled broadleaf plantain in our trials."

Shaw says Dow is aware of an industry need for a granular grubicide that doesn't leach, present avian problems, nor require high application rates and possesses reduced microbial degradation properties.

"Dursban 50W in water soluble

packaging is an idea

whose time has come."

—Rob Peterson



All Dow products go through extensive testing in the Mam-malian & Environmental Toxicology Research Laboratory.

"We're currently studying technology that should give us a clay granular material optimized for activity as a soil insecticide," Shaw reports.

Doug Halterman, vice president of Leisure Lawn in Dayton, Ohio, says the most significant problem his company has with current grubicides are microorganisms in the soil that breakdown the product. "This gets worse the more you use the product and retreats become costly," he says. Another concern to Halterman, are current grubicides' toxicity to birds. "We have to make sure the product is properly watered-in so there's no potential for avian exposure," he adds.

Complementing the work of the Formulation Group, the Packaging Group at Dow works to improve how the company's pesticide products are packaged for sale and use.

Dolores Garrett, packaging designer, says that among the group's achievements are several dose packaging and portion control devices which have reduced the need for measuring and handling, and the chance for spillage and waste.

"We've made great strides by developing water soluble packages, child-resistant packaging improvements for some of our products, and most recently a sturdy, leak-resistant, plastic dose container."

Delivery Systems

Within the Packaging Group, a Delivery Systems Group has been established. "It's dedicated to improving our delivery systems and packaging, and works closely with our Formulations Group as we come up with new, complete systems that will take product from storage to final application. We see this as an integrated system."

According to Garrett, Dow is currently designing small volume returnable containers (SVRs) that will help solve waste disposal problems and facilitate the "totally enclosed transfer of chemicals" as another way of reducing chemical exposure to LCOs.

"We're looking at small, stainless steel containers of seven, 15 or 30 gallons. The LCO, after applying the pesticide, would return the empty SVR to us for

re-filling," says Dow Research Leader Dave Valcore.

Garrett says Dow is committed to enhancing the safety of all active ingredients by changing their physical and chemical properties, if necessary, so that groundwater and other environmental properties won't be adversely affected.

"Our technology has made great strides over the past few years to meet and even surpass the needs of LCOs and PCOs," she says.

TS&D Specialists

In addition to the Formulations, Packaging, Delivery Systems and Laboratory groups and technical managers who work so diligently to develop and strengthen pesticide products at Dow, the company employs 10 Technical Service and Development (TS&D) specialists around the country. Most have earned advanced degrees, including Ph.D.s, in entomology and pest management.

These people provide research and application advice to customers in addition to conducting continuing studies on Dow products and how they work in actual field conditions. They relay the findings of their research to the industry and also provide an important two-way link between company headquarters and its field personnel. They are also experts on insects and weeds, and are well versed in integrated pest management.

TS&D specialists work closely with Dow field sellers, reflecting the company's commitment to provide pertinent information to the industry. ■

"Dow is designing small volume

returnable containers (SVRs) that

will help solve waste disposal

problems..." -Dolores Garrett



LCOs and Dow field sellers examine Confront test plots during a recent turf tour.



Supplying ammunition to our allies

As a decade that's sure to bring increased public policy and regulations quickly approaches, The Dow Chemical Company Government and Public Affairs Department is a good ally to have on your side.



Emery Conyers, (left) Fred Langley and Sam Barrick are part of the Dow Public Affairs team ready to assist lawn care operators with public policy and issues management.

Sam Barrick, Dow Public Affairs specialist, says the easiest way to describe what his department does is: "We supply ammunition to our allies."

"The main message we're trying to get across is that the benefits of using our products far outweigh the risks," Barrick says. "We need to communicate those benefits to customers, homeowners, the media, legislators and regulators in terms they can easily understand."

One way Dow helps the industry is through its legislative efforts. "We've been active in the public policy debate over the use of chemicals for the last 10 years," says Emery Conyers, director of Dow Government & Public Affairs. His staff of nine works with U.S. Congress and state legislatures in all 50 states.

Tracking legislation that impacts the industry and alerting LCOs of that legislation is the job of Fred Langley, issues manager for Industrial Specialties.

Because he can't impact public policy alone, one of his key responsibilities is building coalitions that can. "LCOs aren't alone in the issues facing them. We help them get together with other key groups in their state," Langley says.

Dow supports and works alongside PLCCA, serving the needs and best interests of the industry. Dow Turf Products Marketing Manager Rob Peterson, recently relinquished his seat on the PLCAA Board of Directors. He served as an associate director for two years.

Through donations which thus far total \$35,000, Dow actively supports PLCAA's public affairs efforts.

Dow's state involvement includes work with the Ohio Pesticide Applicators for Responsible Regulations (OPARR). Dow Account Manager George Gossett, is one of nine founding members on the OPARR board.

Dow's issues management involvement also benefits LCOs on a personal level. Training is offered on how to deal with issues impacting business and how to develop a strategy. For LCOs who need to face news reporters, Dow provides media training.

A few of the other ways Dow indirectly helps LCOs is by publishing the *The Bottom Line*, a newsletter which addresses public issues of importance to the agrichemical business. It's a source of scientific facts and information about pesticides and their benefits that's sent to persons who influence the use of pesticides.

In cooperation with PLCAA, Dow is developing brochures which address the many benefits of lawn care to homeowners. Entitled, "A Professional Cares...", each will list ways a professional LCO cares about your lawn, environment, family and community. They'll be made available to LCOs through PLCAA.

As "issues management" becomes the industry buzzword of 1990s, Dow Public Affairs is an ally LCOs can depend on now and in the future. ■

As "issues management" becomes

the industry buzzword of the 1990s,

Dow Public Affairs is an ally

LCOs can depend on...

Supplying Entertainment to the Masses

A



For more information
on Dow Turf Products
contact your local
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CONVENTION REPORT

Weird hours and hot temps mark Vegas lawn care

LAS VEGAS, NEV.—An LCO in Las Vegas needs to be on the job before the crack of dawn when serving lawn care clients.

In the Gambling Capital of the World, local residents have unusual work hours, and beastly hot temperatures make afternoons a good time to stay inside—or out on the golf course.

"We go to work early and we quit early," says Paul Moore, owner of Lawn Green, Inc.

His seven employees begin their work day at 5 a.m., and "we try to have them out of here by 11:30."

The heat makes afternoon hours unacceptable. "In June, July and August we average 107 degrees," Moore reports.

During the day, customers are likely to be sleeping or running errands.

"Our whole town is basically built around the gaming industry," Moore explains. "Our major shift in town is the graveyard shift."

There's even a high school in Vegas where classes start in the evening and continue into the wee hours of the morning.

"There's so many families working at that time. Most of them go to bed at six o'clock in the morning. The town's pretty active at 5 a.m."

Moore's been in business for close to a decade, and he notes that he's yet to have a complaint about his crews being noisy enough to disturb anyone's sleep.

The work force is stable. "We've had all our employees for three or four years," says Moore as he chuckles, "I like to think it's because I'm a good boss."

The salaried workers "make better than the industry as a whole. The guys make \$400 to \$500 a week and they get little bonuses and stuff. They have a route—and they get it done—and we don't worry much about the hours."

During a year's time the sun is shining on 85 percent of the days. In January you can go snow skiing in the morning at Mount Charleston, about 35 miles away, come back to Las Vegas for lunch, and then during the afternoon go water skiing on Lake Mead, about 30 miles away in the opposite direction. Winter daytime temperatures are a balmy 60 degrees.

The average yearly rainfall in Las Vegas is 3.65 inches spread over 19 days. (Compare that with St. Louis, which has 35.89 inches of rain over 112 days, plus 19.5 inches of snow.)

Built-in sprinkling systems are the rule in Las Vegas. "Everything is 100 percent irrigation," Moore points out, noting that "it takes a lot of water, and water's expensive

here."

A household with 5,000 square feet of land is likely to spend \$200 a month for water, which includes maintaining a swimming pool. And just about everyone has a pool.

The desert climate means that a lot of water is required to keep a lawn green. At Moore's own house "the water's running on the place for 18 hours a day."

Lawn care "is really not that big in Las Vegas" because the properties are not as large as what might be found in

other cities.

"The lot sizes are very small in this town," says Moore, "75 percent of the homes have a swimming pool, so that takes care of the back yards."

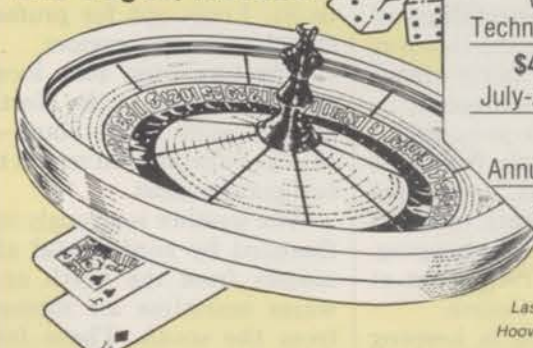
Customers often have just 1,500 square feet of grass.

Lawn Green does a good amount of subcontracting. As for turfgrass selection, "most of it is cool season grasses." About 80 percent of the yards are planted with bluegrasses or fescues, and the remaining 20 percent are bermudagrass, he says.

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CONVENTION REPORT

St. Louis turf managers meeting challenges galore

ST. LOUIS, MO.—Varying soil conditions, a tricky transition zone climate, summer heat, outbreaks of fungi and high customer expectations all combine to make the Gateway to the West a “fairly crazy” market for turf managers.

“It’s scratch-your-head-time in St. Louis from one week to the next,” according to Keith Hasenfratz, owner of KMH Turf and Landscaping. He also is superintendent at Tower Tee Golf Course.

“The problem is keeping customers happy. They expect

a lot for the money they’re spending.”

Hasenfratz estimates that 15 to 20 percent of the people in St. Louis opt for professional landscape services.

The transition zone location—not quite in the North and not quite in the South—creates difficulties in regard to turf management.

The weather is strongly influenced by continental air masses from the north and warm maritime air masses from the south. These frequently converge near St.

Louis.

Summer heat and humidity are particularly nasty culprits.

“I think the fungi is the big thing,” Hasenfratz observes. “You can spend hundreds of dollars on fungicides trying to control it.”

Soil conditions play a role, too. “Some people have really good topsoil and their neighbor could have clay.”

Temperatures of 90 degrees or above occur about 35 to 40 days a year, and extremely hot days of more than 100 degrees happen about five days a year.

Hasenfratz notes that “bluegrass doesn’t like that.”

He adds that “some bluegrasses across the street do fine and some are dying and there’s nothing the lawn care company can do with it.”

Planting Southern grasses is not the ideal solution either, according to Hasenfratz.

“I tell everyone to grow bermuda if they want a good lawn,” he says. “The problem is that it turns brown in the winter and a great amount of people don’t like it.”

About 10 percent of the St.

Louis lawns consist of zoysia or bermuda, says John Loyet, president of Greenscape Lawns, Inc.

He points out that “being in the transition zone it’s hard to get a lawn that stays green all year. A lot of times people go with the warm season grasses because of the fungal problems with the cool season grasses.”

“We never recommend that anyone plant warm season grasses,” Loyet maintains. “We can have better stands of grass with cool season than warm season.”

Loyet says he urges customers to plant tall fescue varieties.

The drought hit hard in 1988. “Last year it was terrible. This year we’re paying the price with these problems.”

Loyet adds that there was plenty of renovation work available, and “we probably got more questions on irrigation than we’ve ever had before.”

About 5 to 10 percent of the lawns are irrigated.

A number of residents, when faced with drought conditions, prefer to just let the lawns go dormant.

Some St. Louis lawns still harbor the results of a situation three years ago when a firm—which was up for sale—dropped its fees to boost its customer list.

Loyet declines to discuss the issue, except to note that “we lost a sizeable amount of customers because of the low prices.”

He adds that people soon realized that “you get what you pay for” when it comes to bargain turf care rates. “In the long run the lawns suffered. In the short run they didn’t.”

The price war in St. Louis “never bothered me,” says Hasenfratz at KMH, because “most of my jobs I get from referrals” and the rates are based on costs—not on the competition. LCI

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Circle No. 138 on Reader Inquiry Card

G-TEAM

from Page 1

United States, Canada, Europe and Australia.

Recently retired from the U.S. Forest Service, he is an internationally recognized researcher credited with the development of expanded interpretations of decay based on new concepts of compartmentalization and microbial succession.

Shigo's research includes more than 15,000 tree dissections and is referenced in more than 15 textbooks used at universities throughout the globe. He recently published a book entitled *Tree Pruning: A Worldwide Photo Guide*.

Dr. Dayna Waitley, a nominee to the President's Council

See **G-TEAM** Page 55

CONVENTION REPORT

Individual service is the key in Rocky Mtn. region

By MEGAN HARDING

The rugged pioneer spirit that tamed the American West is still evident in the way LCOs do business in the Rocky Mountain region.

Lawn care customers in western states such as Nevada, Idaho, Wyoming, Utah and Nebraska are more likely to choose a small, locally-run LCO than a large chain, says Cindy Potter, who runs Year-round Landscapes with her husband in Cheyenne, Wyo.

"People like to know who they're dealing with," Potter says.

For example, two years ago when the Potters began using an Iowa-based billing service, their customers had to be assured that the company hadn't been bought out by an outsider.

And when they converted their Nitro-Green franchise to an independent firm, people kept asking, "Is this Bruce Potter's company?"

"They want to look the guy in the eye," Zeke Zebroski says of his customers in Gillette, Wyo.

People often insist on meeting the man who will come out to work on their property, Zebroski says, so he schedules crews to work evening hours when they go out and do estimates for Zeke's Yard & Garden Service.

"They expect a certain amount of one-on-one," he says.

Potter agrees that it's important to stop and talk with the individuals on their route.

"They like to visit, and that generates a lot of extra jobs for us, too."

About 60 percent of her customers are senior citizens, many of whom will deal only in cash.

People know the truck is in town when the crew makes a trip 60 miles east to Kimbell, Neb.—they're even stopped occasionally for a roadside consultation. It's all in a day's work for the Potters' 16 employees.

When the Potters began the business in 1984, they knew the industry standard: Each truck sprays 30 lawns per day.

They soon realized the standards weren't devised for their area, where the population is relatively sparse.

As Zebroski puts it, "It's a hundred miles to anywhere."

When he gets a call from a far-flung area, he first has to decide whether it's worth

going out there.

"A lot of them don't have addresses," Potter explained.

Difficult climactic conditions are another factor that makes western lawn care so challenging.

Michael King of the Lawn-Magic division of Reno Green says lawn sprinkling was limited to two days a week last summer in Reno, Nev.

Crews had to be carefully scheduled to visit homes that could use water on that particular day; citations would be

given out for illegal watering.

During the Great Drought of 1988, watering was limited to one day a week. "There were a lot of people who skipped the service for a while," King says.

Potter still finds it hard to believe there are places where a lawn will grow without daily watering.

"In the East, they don't water their lawns, period. That's so foreign to us."

In keeping with the independent spirit of the West, Potter says, there are a lot of do-it-yourselfers in Cheyenne.

However, even the most resourceful people give up and call a professional lawn care company when their yards become infested with the weed seeds that blow in from the open prairie.

"Most people that call us do it because they can't keep the weeds under control. It's not because the lawn isn't green," she says.

Zebroski says the town of Gillette roughly tripled its population during a coal boom in the 1970s.

See **ROCKIES** Page 50



King: Dry clients cancelled.



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About the Author

Megan Harding is a freelance journalist who lives in Shaker Heights, Ohio. She recently returned from a camping trip to Idaho and Utah.



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Circle No. 101 on Reader Inquiry Card

Monsanto introduces Expedite to lawn care market



By JAMES E. GUYETTE
Editor

ST. LOUIS, MO.—A self-contained backpack spraying system is expected to reduce employee pesticide exposure and increase application efficiency.

The Monsanto Agricultural Co. is marketing the Expedite system, which features design improvements to the former Nomix system previously demonstrated by the firm at several trade shows.

"We're sure that (lawn

care) professionals will be excited about the advanced features and benefits of Expedite," says Dave Ducan, director of Monsanto's greens business.

The product consists of premixed pesticides and a "user friendly" applicating wand.

Operators can "program" precise low-volume spray accuracy through built-in controls on the lance. A pacing beeper helps avoid errors and waste by telling the employee how fast to walk.

"We can take those workers and make them a lot more productive," says Jerry Steiner, a Monsanto district manager.

"We're going to be spraying a lot faster—we can make that worker a lot more efficient. You spend a lot more time spraying," Steiner says.

Expedite has a closed system with ready-to-apply formulations that are packaged to fit directly into the backpack. It is designed to reduce contact with the pesticides during mixing and handling.

"It's simpler and there's less exposure," Steiner points out.

A nonselective grass and weed killer containing the same active ingredient as Roundup and a selective broadleaf weed killer are available with the kit.

According to the company, one 5-liter pack of Expedite pesticide covers up to one acre—the equivalent of refilling a 3-gallon backpack sprayer 28 times.

"Because Expedite requires no mixing, measuring, pumping or water hauling, downtime is substantially reduced, thus reducing application costs."

Steiner notes that measuring cups are usually not found on the jobsite, and therefore workers often approach mixing by thinking, "Let's see—it's four glugs to a gallon. . ."

He adds: "You can waste a lot of material that way."

Expedite is not supposed to replace the application guns used for large areas or boom sprayers, but it can be more effective for smaller jobs and for trimming and edging, according to the company.

Monsanto maintains that it is better than using string trimmers because the control lasts longer, it's more labor-efficient, it provides more cost-effective vegetation management, and it is just as easy to operate and to train the workers.

The no-pumping aspect allows workers to be trained quicker and it is easier for the person to get started on the job at hand, plus the need for refills is significantly reduced, according to the company.

The balanced lance weighs six pounds and the backpack weighs 13.

The lance-backpack setup costs about \$260, the weed and grass killer is priced at about \$125, and the broadleaf weed control runs about \$70. They cover 30,000 to 45,000 square feet.

A package of cleaning solution costs \$30. LCI



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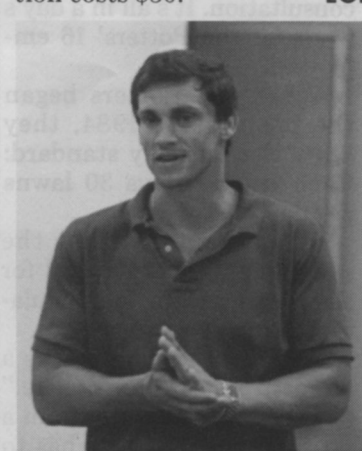
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Converting your business to a franchise

By RUDD MCGARY

Every year at we talk to people at the conventions who are interested in the possibility of going into a franchisee relationship in order to expand their business.

There is no easy answer to the question of whether this is a good idea for you, but perhaps if you consider some of the following you can be helped in making your decision.

Most often, the reasons for exploring the possibility of becoming a franchisee are business ones, not ones linked with the technical operations of a lawn care company.

The owner/operator usually has some idea about agronomic plans and some idea of vehicular care and usage, but often the idea of doing a budget or putting together an advertising plan is something that isn't comfortable for the LCO.

It simply isn't in the background of many of the LCOs, and because of this the idea of franchising has some appeal.

Here are some of the considerations that you need to take in order to make intelligent decisions concerning your company and franchise conversion:

1. Why are you even considering franchising? Do you have current problems that can be solved over time? Are you under immediate stress and making decisions in this condition that aren't the best ones for the future?

If you haven't thought of this type of question, pause for a few minutes and think it over. Sometimes stress causes us to make choices that are unwise.

2. What is the cost of becoming a franchisee? Besides a start-up cost, a fixed sum of money, there is almost always a royalty fee of some sort. This generally ranges from 5 to 10 percent and may change from year to year or as you reach a certain revenue level.

For example, some companies think that charging less in the first few years is better for the franchisee. Other fran-

chising companies feel that a higher percentage should be charged the first years with less being charged as more revenue is obtained.

Be sure you understand not only the lump sum payment but also clearly understand the royalty structure.

3. What does the royalty structure do to your projected profitability?

Many people think about converting to a franchise operation because they are losing money.

What will happen if you

have to give another 5 to 10 percent of your money to the franchisor? Not only will you have to make up your current shortfall, you will have to make up the extra 5 to 10 percent you have to pay the franchisor.

Can you show a projection where this scenario makes money? If not, don't do it.

4. What are you really going to get?

Remember, we are talking about existing companies, not ones that are just starting out. This means you have at least

one season's work completed.

Can you define what you need to be successful? Let's look at some of the options in this area:

A. Advertising help. Be sure you understand what this means. In fast food it can mean national exposure on the Super Bowl. In lawn care it means some help with brochures and mailing lists at the least—or sophisticated and with a true segmented marketing plan at the most.

People aren't going to flock to you because you converted

into a franchise, there simply isn't any franchise now available that already has a national name.

When ChemLawn was franchising the name was valuable because of their national ad campaigns. Aside from that you're not receiving national exposure.

Could you work with a local ad agency and get results that would be at least as good as going with a franchise situation?

Remember, you have some experience. If you did a good job you must have some satisfied customers. Becoming a converted franchise won't

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About the Author

Dr. Rudd McGary is a senior partner with All Green Management Associates in Columbus, Ohio.

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makes these customers think any better of you.

B. Financial controls. Accounts receivable, accounts payable, customer lists, inventory, etc. All of these things need to be controlled. If you're going to become a franchise, be sure your going to get help in these areas.

And also be sure in what form. Will you get these areas of control on a computer, in written form, verbally? How are you going to learn to do these things so you can control your company?

C. Operations. Do they have people who can help you with operations issues? With vehicular rental vs. buy issues.

With preventive maintenance plans. With expectations on equipment usage. With equipment purchases.

All of these are areas you need to examine when thinking about converting.

5. Do you really want to be a part of another organization? This question is often overlooked, and then frustrating results occur.

You are in business for yourself because you didn't want others to tell you what to do. Franchising isn't truly working for someone else, but the good franchisors are certainly going to have standards they expect to be met and ways of operating they believe to be

good.

Are you prepared to work with others on a partnership basis? If you aren't, don't become a franchise.

6. What are your expectations? Many people have unrealistic expectations when considering converting.

If your company is completely out of control and you are a horrible manager, maybe you ought to consider something other than lawn care.

Certainly franchising isn't going to make you better if you have little or no talent for this type of work.

Don't expect that becoming a franchisee will mean that your problems will all melt

away. You need to understand that you will be working just as hard—probably harder—only you might be working smarter at the same time.

7. How do you know that the franchisor with whom you're talking is competent at all? You *must* talk with others who have been franchisees of this particular franchisor.

Don't just talk to one of the other franchisees, they may be the only one who was successful. You need to talk with several, and make sure you have your list of questions about what to expect ready before you start talking.

Just because someone presents themselves as competent

doesn't mean that they are. Beware before you leap.

8. How well does the franchisor respond to problems of the franchisee? Many companies say they will respond well, and always within a few hours, but this isn't always so.

In talking to both the franchisor, and to other franchisees that this company has helped, you need to find out just what to expect when you've got problems.

Somebody who gives you good advice three weeks after you need it isn't a big help.

9. Finally, how are they going to help educate you in areas that you need? Do they have formal classes that you can attend? What types of classes? Are they all technical? Are there business classes?

Are the needs that you have, reasons you're considering converting to a franchise, taken care of by some formal plan? If you're going to be a franchisee you need to understand how the shortcomings you currently have are going to be attended to by the franchisor.

If the franchisor can't tell you how your needs are going to be cared for, don't bother franchising.

Conversion franchising is different from start-up franchising in some respects, and much the same in others.

The big difference is that you are bringing some experience to the table. It may be a bad experience, but it's experience nonetheless.

The question you need to ask is that classic: "What's in this for me?"

The key is to understand what the potential profitability is, and then to make sure that the franchise fee and the royalty don't destroy any chance for you to make money.

You don't have to be a rocket scientist to understand that if the royalty fee means very reduced profitability, or even loss, then franchising isn't for you.

If the franchisor takes care of what you now lack, if advertising, administration and operational issues are going to be handled better by the franchisor, and if you will be able to make money even with the fees involved, consider franchise conversion.

Make sure you ask a lot of important questions before you do. LCI



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EDITOR'S NOTE—The Lawn Care Co., Inc. of South Dennis, Mass. was incorrectly identified as a ChemLawn franchise in this year's "1989 Million Dollar Lawn Care List."

The firm is independently owned and operated.

LAWN CARE INDUSTRY regrets the error. LCI

MAINTENANCE METHODS

Selection of proper equipment important

By PHILIP D. CHRISTIAN III

Increasing the productivity of your mobile crews—by improving the management of production equipment—has a quality connection. High quality and high production go hand-in-hand, and in some cases they are inseparable.

For example, a sharp, balanced mower blade turning at the correct speed produces opportunities for high production and high quality.

If you are mowing on schedule at the specified height, quality becomes a part of the production process.

Although the selection, maintenance and operation of production equipment is complicated by the need to maintain high quality residential and commercial landscapes, the correct selection, maintenance and operation of landscape maintenance equipment offers the greatest opportunity to increase productivity.

Landscape maintenance equipment is generally divided into homeowner and commercial models. Commercial models may be further divided into light commercial, which are actually heavy duty homeowner models, and heavy duty commercial equipment. Heavy duty equipment works best for mobile crews.

The equipment must be functional. If you maintain commercial properties, the equipment must be capable of climbing a six-inch curb without suffering damage to the tool, landscape or the operator.

The equipment should be easy and safe to load and unload onto trucks and trailers.

Fuel tanks should be large enough to run four hours between fuel stops. The motors, suspension, deck and drive train must be durable enough to withstand eight hours of non-stop operation with no reduction in efficiency.

Rear discharge mulching decks are preferred because there is seldom a real need to collect or windrow grass clippings.

Mower blades should turn at an optimum speed for high production mowing. They should be accessible for the daily chore of changing blades.

The maintenance equipment you select should come with a complete owner's manual—including sections on operation, maintenance, safety—and parts lists with drawings.

Figure 1 Production cost table

1	2	3	4	5	6	7
EQUIP	ACTIVITY	EQUIP \$/HR	LABOR \$/HR	TOTAL \$/HR	PRODUCTION IN 1000'S	TOTAL \$/1000 SF/LF
1. NC TRIM	TRIMMING IN SF	2.58	6.00	8.58	1.0	8.58/1000SF
2. PUSH MOWER 21"	MOWING IN SF	1.28	6.00	7.28	10.0	.73/1000SF
3. WALK BEHIND 36" DECK	MOWING IN SF	2.24	6.00	8.24	20.0	.41/1000SF
4. RIDE MOWER 60" DECK	MOWING IN SF	4.50	6.00	10.50	32.0	.33/1000SF
5. EDGER	EDGING IN LF	2.58	6.00	8.58	1.0	8.50/1000LF

Once the basic requirements have been met, the selection process comes down to cost, equipment availability and your personal preference.

Cost is the most complicated because it must be divided into capital, or initial purchase price cost, and into maintenance and operation cost, or the cost of operating and maintaining the equipment over a period of time.

Both the initial cost and the operational cost must be compared to the equipment's potential productivity before a purchasing decision can be made.

Look at figure 1. The pro-

"Be a partner" with Special Olympians

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Under a bright winter sun, an icy breeze brings roses to cheeks as skiers move along a trail, some smoothly, others struggling. It could be any cross-country skiing event.

But soon differences appear. As the athletes cross the finish line, they are greeted with cheers of encouragement and congratulations—and hugs for every skier.

The contest is a winter event of the Special Olympics, patterned on the traditional Olympic games and conducted for athletes of all ages who have mental retardation. And while their movements may not be those of polished athletes, there is no mistaking the intensity of their effort, or the joy of their achievement, wherever they finish.

Dow and Industry to Sponsor. In 1989, Dow and the lawn care industry, through PLCAA and state associations, are Official Bronze Medal sponsors of the International Winter Special Olympics Games, by contributing more than \$100,000. To be held

in April 1989 at Lake Tahoe, the games will attract more than 1400 athletes from around the world. Events will include Alpine and Nordic skiing, speed skating, figure skating and floor hockey.

Special Olympics: a Special Program. The Special Olympics program, founded in the 1960s, is run by more than 600,000 volunteers. It provides year-round sports training and athletic competition for more than one million people with mental retardation.

For many of these participants, the program is their only opportunity to take part in activities which most of us take for granted. To say that Special Olympics are a bright spot in their lives is an understatement.

Special Volunteers. All types of volunteer helpers, from coaches and managers to trainers to fund raisers, pitch in to keep the program going.

One unique group of volunteers are the "huggers." They see to it that all participants at every event get warm personal recognition—regardless of where they finish. Competition is intense, but the medals won are less important than the effort put forth. The huggers have the rewarding job of rewarding the effort. And they love it.

If you'd like to be a hugger, or help some other way, contact your nearest Special Olympics office. Or see your Dow rep for lists of Special Olympics officials in your state, and ways you can support the year-round program in your area.

The Partnership makes it possible. Dow's contribution, in the name of the lawn care industry, is made possible by a program called The Partnership, Dow's commitment to you.

The Partnership brings together all the things Dow offers you. It includes not only the products you use, but many other pluses: industry-leading research and development, training for your technicians, business management seminars, legislative lobbying and assistance at national, state and local levels, and industry-wide public relations programs.

Dow's underwriting of industry support for the 1989 International Winter Special

Olympics is one way of encouraging others to become involved in worthwhile local activities.

"Let me win, but if I cannot win, let me be brave in the attempt."
—Special Olympics credo

the Partnership
DOW'S COMMITMENT TO YOU



About the Author

Philip D. Christian III of Alpharetta, Ga. is a consultant with All-Green Management Associates in Columbus, Ohio.



duction cost table is an example of a theoretical cost calculation designed to illustrate the process.

The costs in column 3 are taken from the annual equipment cost chart as shown in figure 2.

Column 6 is the production factor, or the number of square feet that one person can produce in one hour under normal conditions. The only way to get the information in column 6 is by running your own test.

Line 3 of figure 1 shows that a 36-inch walk-behind front deck mower costs \$2.24 per hour for the equipment, plus \$6 per hour labor. This equals a total cost of \$8.24 per hour.

Column 6 is the production factor in thousands of feet, and the cost per thousand in column 7 is calculated by dividing column 5 by column 6.

In the case of our 36-inch walk-behind, the total cost to mow 1,000 square feet of turf is 41 cents per 1,000 square feet.

For a production test, select an average landscape in your market that is about 45,000 square feet in size, or a little over one acre. This test plot will allow you to test all of your production equipment on one property.

Mow and edge the property and carefully note the square

Figure 2 Annual Equipment Cost

1 Description:	2 Size	3 Type	4 Capital Cost	5 Usable Life In Hrs	6 Capital Cost Per Hour	7 Operation Cost Per Hr	8 Total Cost Per Hr.	9 Est Hrs Use Per Year	10 Annual Cost	11 Expected Life In Years
Push Mower	21"	Rotary 2 Cycle	420	1,200	0.35	0.93	1.28	800	788	2.00
Front Deck	36"	Rotary 4 Cycle	2,600	2,500	1.04	1.20	2.24	750	1,680	3.33
Walk Behind Riding Mower	60"	Rotary Hydrostatic Drive	6,000	3,000	2.00	2.50	4.50	750	3,375	4.00
Backpack Blower	Commercial Model	2 Cycle	350	800	0.44	1.12	1.56	400	623	2.00
Nylon Cord Trimmer	Commercial Model	2 Cycle	325	300	1.08	1.50	2.58	300	775	1.00
Edger	Commercial Model	4 Cycle	380	500	0.76	1.82	2.58	300	774	1.67
Equipment Trailer	8" X 16"	Open w/Brakes	2,600	4,800	0.54	0.21	0.75	1,200	902	4.00
Truck	3/4 Ton Pickup		10,000	2,000	5	6.12	11.12	500	5,560	4.00
									14,457	

feet of area produced by each piece of equipment, and the time required to produce it.

Most people prefer to run the test several times to establish correct production factors

for your business.

Look back at figure 1, col- See **COST** Page 43

FLAGS

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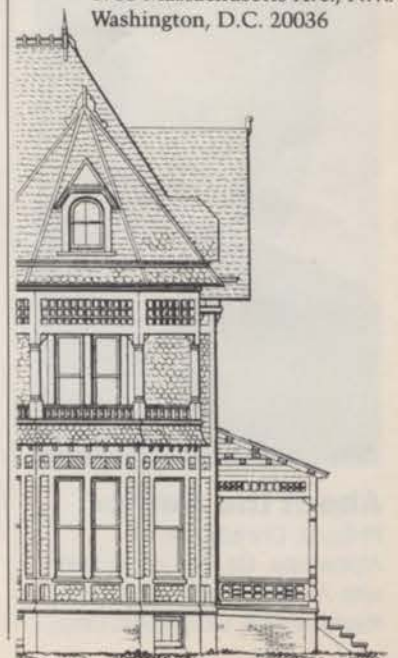
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Expert aid available for forming state organizations

By JAMES E. GUYETTE
Editor

Nuts and bolts advice is available for LCOs who are trying to form state associations.

The Monsanto Co. and the Professional Lawn Care Association of America have combined to spearhead organizational efforts in individual states seeking such help.

Robert E. Andrews, president of the successful Indiana State Lawn Care Association, has signed on as a consultant to tackle the project.

He'll be speaking to interested attendees at the November PLCAA national convention in Las Vegas, Nev., and later there will be a Dec. 12-13 workshop in Indianapolis, Ind.

Other advice sessions will follow at specific locations.

"We're ready and willing to meet with people on a state basis," says James R. Altemus, Monsanto's public relations manager. (Monsanto is underwriting the program.)

"We're putting together a lot of generic details that do the legwork" involved in forming an association.

"You can get some organizations off and running fairly fast," Altemus explains, adding that "we want to see as much unity within the (lawn care) market as possible."

He points out that "we're willing to come to your state and address local issues."

Andrews observes that "the regulatory problems that are facing the industry today are at the local level, and the only organizations that can react to that are the state organizations."

Altemus and Andrews note that many "Mom and Pop" lawn care companies are unable to afford the dues for PLCAA, yet they are willing to

take on important issues.

"There are a lot of companies in the industry that are small firms that will play an active role at the state level," says Andrews.

These organizations have the option of maintaining an affiliation with PLCAA, or they can become full-fledged PLCAA chapters.

"If these organizations want to become chapters, that's okay with us," Andrews says. "We just want to get them organized in the first place."

For LCOs wishing to form regular state PLCAA chapters,

PLCAA itself is offering similar organizational services.

"The program," says Dave Murphy, chairman of PLCAA's membership committee, "is designed to make the job of starting a local association much easier."

Murphy, president of the Professional Lawn Care Association of Mid-America in Missouri (the largest state chapter), says "PLCAA's program includes assistance in locating like minded leaders in each state who might be interested in forming a chapter. Once the local movers and

shakers are ready, PLCAA can provide mail lists and other paper goods to help announce the first organizational meeting."

Additional mailing lists and labels are available for the development of promotional newsletters and flyers.

Some chapters may wish to use PLCAA's standard set of chapter by-laws verbatim, or in part, to make the preparation for a chapter's incorporation much easier, Murphy says.

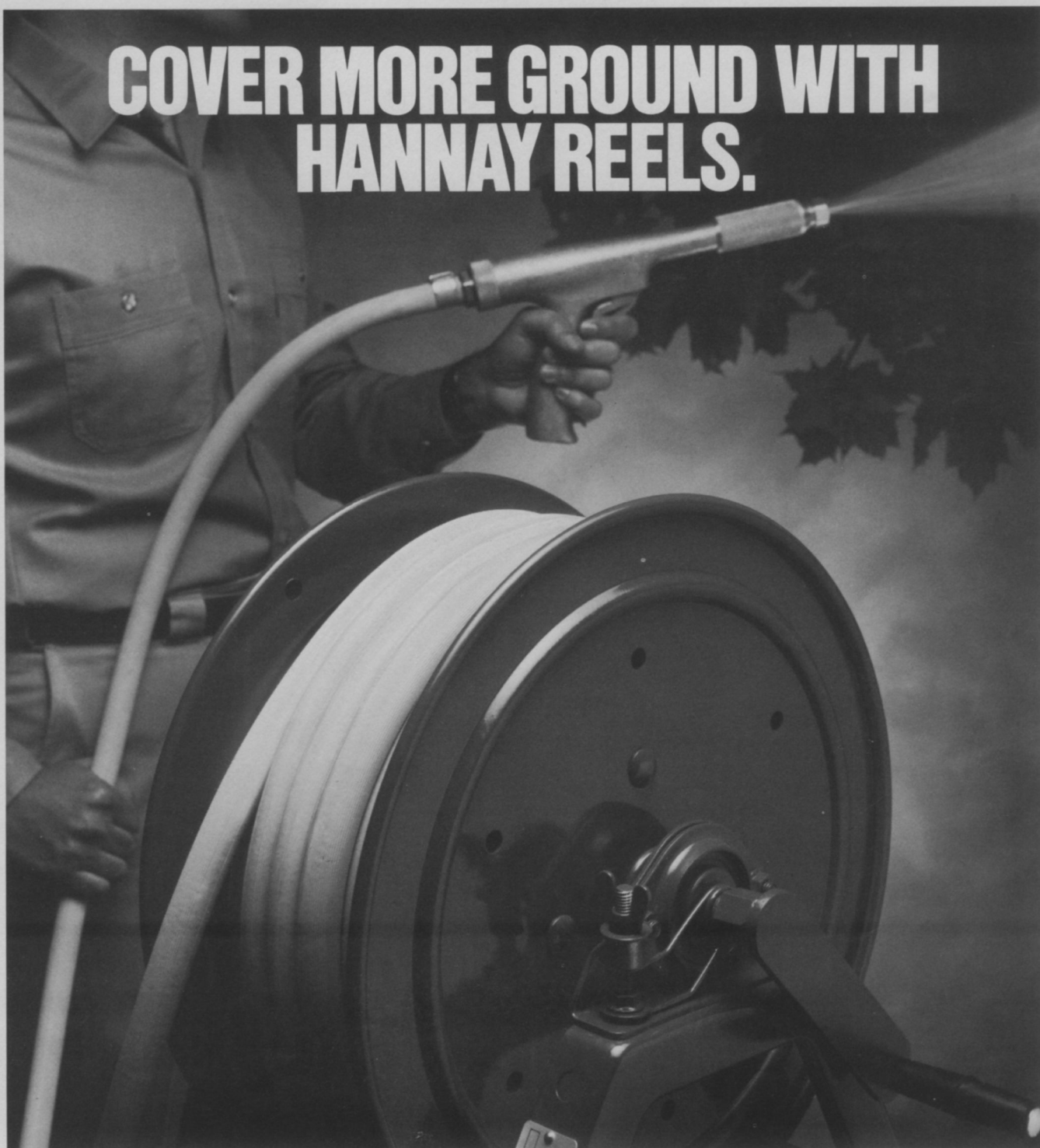
"On request, PLCAA may be able to assist in the prepara-



Andrews: Get organized.

tion of a chapter's first news letters, helping to create an exciting, professional image," Murphy explains. **LCI**

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COST

from Page 46

umn 3, line 3. The cost to own and operate the 36-inch walk-behind is \$2.24 per hour. By purchasing a more expensive mower that would last longer—and have lower maintenance costs—you could reduce your total cost per 1,000 square feet.

If you choose to pay a higher price for a mower that would produce more than 20,000 square feet per hour, you could lower the cost per square feet.

Don't be confused by the manufacturer's published production factors. They are usually theoretical acres per day based on the ground speed of the equipment and the width of the cut. Test the equipment under your own conditions, using your own people. **LCI**

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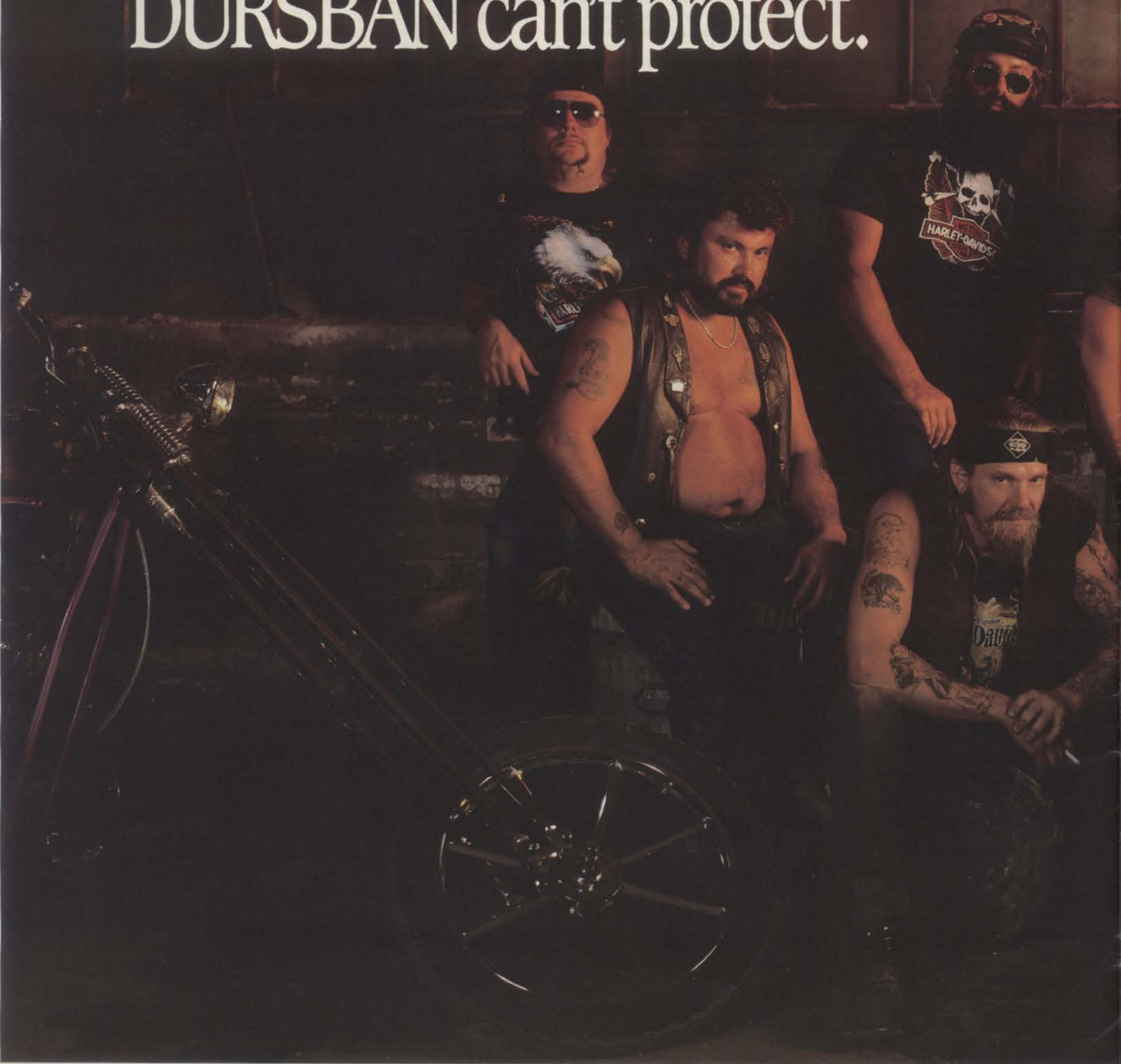
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ROCKIES

from Page 41

Many newcomers had no idea what to do with the heavy, clay soil of northeastern Wyoming, where the pH can be as high as 8 or 9.

Some of the transplants actually apply lime to soil desperately in need of sulphur.

"That's exactly why I'm able to maintain a business in a sparsely populated area," Zebroski says.

A number of LCOs report that because of the short turf season, they rely on such services as snow removal to get them through the long winters.

Tim Gregg's Nitro-Green of Las Vegas is able to work on lawns year round. But his three-man crew has a different type of problem: He can't spray herbicides for weed control when the temperature is above 90 degrees—about four solid months of the year.

He also loses four to five days per month due to high winds.

In a close-knit community, favorable word-of-mouth is the best kind of advertising, so maintaining customer satisfaction is especially crucial.

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Wyoming lives on their reputation. Because everyone knows you, you're not going to be able to duck under a bad job," Zebroski says.

The way Potter sees it, "When you have someone from a large company spray your lawn, you don't get that kind of personal attention. All it is to them is a plot of grass to spray. In a small area, you can't have that attitude or you won't be in business." **LCI**

PLCAA

from Page 22

rate strategy, planning and implementation, and industry consultant Philip D. Christian III will offer fine-tuned advice.

Robert L. Crudup has played a large role in minimizing the impact of California's drought on the green industry, and he will share his experiences.

Dr. Roger C. Funk of the Davey Tree Expert Co. is actively involved in reducing Davey's use of traditional pesticides, and Dr. John R. Hall III of Virginia Tech will also make some points.

Dr. Dave Hanson has extensive experience in lawn care application systems and

turf management, and Dr. Robert C. Shearman has built a nationally recognized turf program in Nebraska.

Pesticide issues remain a concern, and Paul Skorupa of the Pesticide Public Policy Foundation will be bringing PLCAA members up to date with the latest information.

Purdue's Jeff Lefton will be sharing some of his turfgrass knowledge, as will Dr. Harry Niemczyk, an entomologist at Ohio State University.

Dr. A. Martin Petrovic of Cornell University is director of PLCAA's Education and Research Foundation, and Dr. Paul Lees-Haley is an expert in worker's compensation cases.

Edwin D. McGuire of the Lawn Co. in South Dennis, Mass. will tell about the device they use to collect and reuse wash water from their trucks.

Other scheduled speakers include Steven Davis, Phil Flood, Judy F. Lanier, Dr. John T. Law, Richard I. Lehr, Denis Liggins, Linn Mills, Glenn Patch, Perry Peterson and Frank J. Reynolds, Jr. **LCI**

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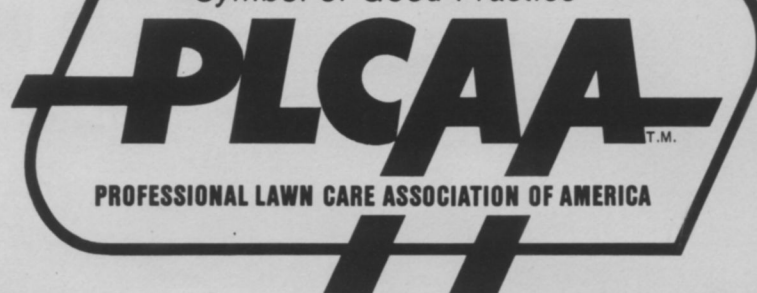
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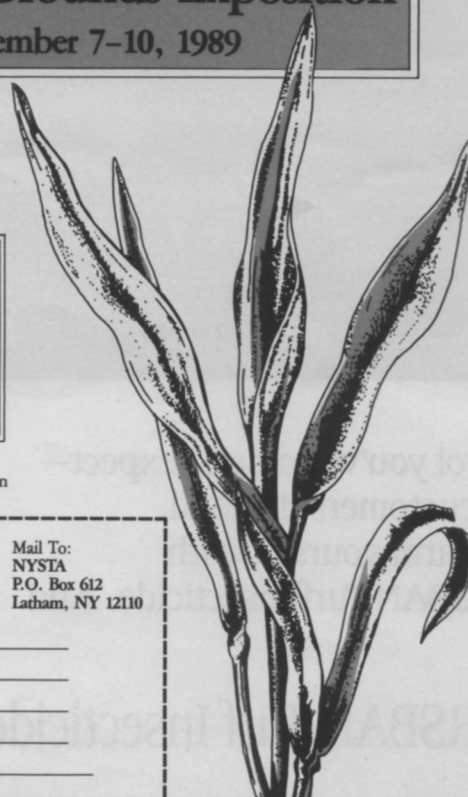
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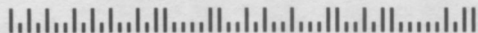
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Plan pruning operations in fall

Late fall pruning may reduce insect and disease problems, according to Fred Widmoyer, retired extension horticulturist at New Mexico State University.

Cooler temperatures mean fewer pests to invade fresh pruning wounds, he says.

The cuts have a chance to heal and seal as they dry out.

Conifers that require major branch removal gain from fall

pruning, says Widmoyer. Not only do they enjoy the benefits of better healing, but they also suffer less from winter drying.

Their needles retain more water because of the reduced leaf surface area.

Pines have less chance of being infected by beetles if they are pruned during colder fall and early winter, he says.

If there are problems that have developed, winter pruning may be beneficial, he says. By reducing the top growth, health and stress problems can be minimized.

Begin planning the pruning

process when the leaves fall.

"With the leaves gone, you can observe the tree structure and any problems that exist, such as rubbing, broken branches, diseases and insect damage," Widmoyer says.

With flowering trees, the objectives are different.

"Since you are looking for a display of colorful flowers, it doesn't make much sense to prune the branches in the fall or winter," he explains.

"By so doing, you remove the flower buds which were produced the previous summer."

LCI



Autumn cuts: Danny Akers of the Davey Tree Expert Co.

TREES

from Page 1

eral tree condition, weather and the stage of plant development at the time of infection."

Symptoms of anthracnose are small brown to black spots that become larger and coalesce to form larger blotches.

The blotches tend to follow the veins or midrib, often killing all the leaf tissue on one side of a midrib or major vein.

Twig infections and dieback can occur—but since twigs die before buds open in the spring, it's hard to detect the disease early in the season.

"Anthracnose would be a rather unimportant disease except that the fungus produces spores that infect the leaves," Weidensaul says.

Trees can be protected by fungicidal sprays applied when leaves unfurl in the spring followed by sprays when leaves reach full size and two weeks later, he says.

A second and more striking disease is Botryosphaeria canker and dieback of oaks.

Weidensaul says the fungus infects twigs, although dying and dead bunches of leaves attract the most attention.

Wilting and browned leaves identify diseased twigs. Diseased bark on twigs turns black, shrivels, and later cracks.

Weidensaul says the fungus usually is confined to twigs and small branches.

Occasionally it grows downward for more than one year and can cause progressive dieback of larger twigs.

But even so, he says that Botryosphaeria seldom kills trees.

It tends to have obvious outbreaks, but usually goes away in a year or two.

Chemical control of the disease is seldom justified or effective, he maintains.

People confronting these ailments should educate themselves before suggesting spraying, tree removal and other unnecessary or ineffective control measures for tree diseases, he urges.

If you suspect problems with anthracnose or Botryosphaeria canker, information and assistance can be obtained from the Cooperative Extension Service.

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(Required by 39 U.S.C. 3685)

1A. Title of Publication: LAWN CARE INDUSTRY

1B. Publication Number: 01606042

2. Date of Filing: August 24, 1989

3. Frequency of Issue: Monthly

3A. Number of Issues Published Annually: 12

3B. Annual Subscription Price: \$25.00

4. Complete Mailing Address of the Known Office of Publication: 1 East First Street, Duluth, St. Louis County, Minnesota 55802-2067

5. Complete Mailing Address of the Headquarters of General Business Offices of the Publisher: 7500 Old Oak Boulevard, Cleveland, Ohio 44130

6. Full Name and Complete Mailing Address of Publisher: Robert Earley, 7500 Old Oak Boulevard, Ohio 44130
Editor: James E. Guyette, 7500 Old Oak Boulevard, Cleveland, Ohio 44130
Managing Editor: James E. Guyette, 7500 Old Oak Boulevard, Cleveland, Ohio 44130

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9. Does Not Apply

10. Extent and Nature of Circulation

	Average For Each Issue During the Preceding 12 Months	Actual For the Single Issues Published Nearest to Filing Date
A. Total Number of Copies (Net Press Run)	15,130	13,805
B. Paid and/or Request Circulation		
1. Sales through dealers and carriers, street vendors	None	None
2. Mail Subscriptions	13,698	12,753
C. Total Paid and/or Requested Circulation	13,698	12,753
D. Free Distribution by Mail, Carrier or Other Means, Samples, Complimentary, and Other Free Copies	722	731
E. Total Distribution	14,420	13,484
F. Copies not Distributed:		
1. Office use, left over, unaccounted, spoiled after printing	710	321
2. Returns from news agents	None	None
G. Total	15,130	13,805

I certify that the statements made by me above are correct and complete.
Signed: Joe Bilderbach, Vice President/Circulation

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G-TEAM

from Page 40

as Woman of the Year, will also address the delegates.

Waitley has traveled internationally with her father, Dr. Denis Waitley, conducting seminars and workshops on high-level personal and professional development.

Green Team officials promise a "dazzling parade of new products and services and a full array of educational sessions that cover the most up-to-date information on horticultural practices, business management techniques and other technical services."

The trade show will be in

the Cervantes Convention Center from 2 p.m. to 7 p.m. on Saturday, Nov. 11, with a reception beginning at 5:30 p.m. On Sunday, Nov. 12, the hours will be from 9 a.m. to 2:30 p.m. All educational sessions will be at the Cervantes Center and all social functions will be at the St. Louis Sheraton.

A 6 p.m. welcome reception on Thursday, Nov. 9 kicks off the event.

On Fri., Nov. 10 Waitley will deliver the keynote address, "The Winner's Edge and the Goal Mind."

Shigo will give a presentation that afternoon from 1:30 to 2:50 on "Trees—Energy Systems and Phenology."

Other Green Team speakers include: Jack Dirksing, Dr.

Robert Bowden, Kyle Glenn, Tom Garber, Rick Doesburg, Joe Skelton, Kip Lankenau, Tom Kessler, Phyllis Jackson, Greg Pacini, Ken Miller, Frank Ross, John Michalko, Richard Lambert, Peggy Simonsen and Thomas Hoogheem.

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Shigo: Talking on trees.



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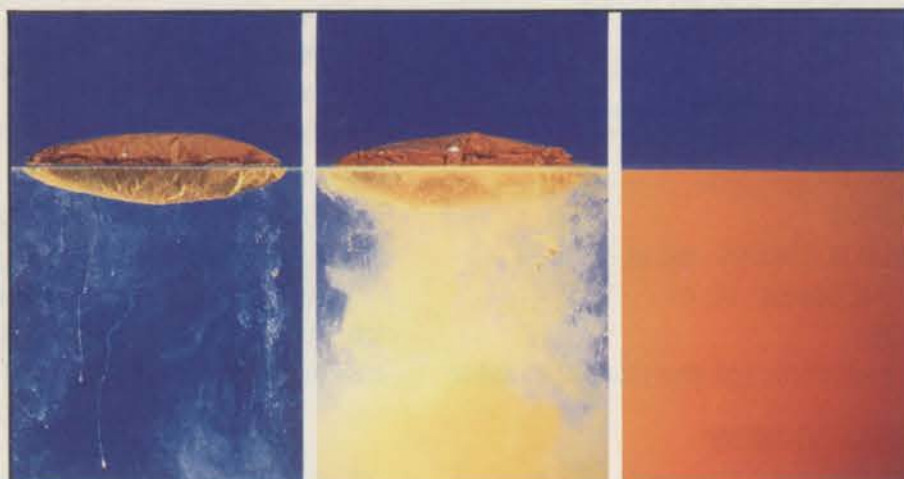
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