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LCI survey:

Most businesses employ from 3 to 10 people

Most lawn care companies employ three to 10 full-time workers, both during the peak season and yearround, according to a survey done by LAWN CARE INDUSTRY magazine last year.

During the peak season, fully one-third (33.9 percent) of the lawn care companies responding to the survey employed from five to ten workers. That figure compares with just 22.0 percent of the companies responding which employ five to 10 workers yearround.

Normally, about one-fourth (27.0 percent) of the lawn care companies employ just one person year-round while a comparable total (24.5 percent) employ 11 or more workers during the busiest seasons.

Statistics were obtained for the 1982 "State of the Industry" report published last summer. The 1983 "State of the Industry" report for which research is now being completed, will be published in two months in the June edition.

APRIL 1983

Volume 7, Number 4

care

Serving lawn maintenance and chemical lawn Problems, problems, problems Sounding off on ethics

Judging by the responses in a recent informal LAWN CARE IN-DUSTRY poll, problems among lawn care businessmen with unethical practices by their competitors seem more rampant in larger metropolitan areas where naturally - competition is stiffer.

Vince Flecker of Shur-Spray in Indianapolis says that the problem of ethics in the industry has a direct correlation with the lack of governmental (or self-imposed) regulations.

"In Indiana, one fellow has been spraying without a license for six or seven years," Flecker said, "because the state has no policing power. The state chemist's office should really have some power to stop illegal actions, or to take tank samples. Then you'd really clean up the act.

"In this state, you could legally get away with putting down a 0-0-0 fertilizer when the customer didn't know the difference, as long as you had registered it correctly.

Low-balling

The No. 1 problem, it appears, is low-balling — known by a myriad of other terms, including shortsticking and under-cutting.

Marty Turner of Custom Lawns in North Olmsted, Ohio (a suburb

Nevt month.

COLLEGE

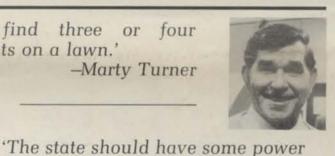
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'You can find three or four measurements on a lawn.' -Marty Turner



to stop illegal actions.' -Vince Flecker

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of Cleveland) addressed the problem

"You can find three or four measurements on a lawn," Turner said. "Even on perfectly rectangular lawns.

"I've seen it from everybody. It's not a company policy - more, perhaps, the result of some of the individual men who might be selling on a commission. As long as the companies give incentive to people going out to get a job, you're going to run into that problem.'

Drew Tomlinson of Lawnscape in Petersburg, Pa., Thomas Mauer of Mountain View Lawn Care in Holvoke, Mass, and Bill Shearman of Chem-Trol in Florida, N.Y. are three men who have not had any major problems of this nature.

lers

"I'm fairly friendly with a number of people in the area whose work is similar to mine, and who have been helpful," Tomlinson said. "I don't have any complaints at all."

Mauer also said, "I've heard things - stories - but I don't really know that they're anything more than rumors."

Recognize

me?

to page 10

New status Landscape managers big news

professionals

"The biggest news is the establishment of the Landscape Management Division," said Ray Gustin, outgoing president of the Associated Landscape Contractors of America, at a press conference during the annual convention in Miami, Fla., three months ago.

"The Landscape Management Division — the LMD — is like the Interior Landscape Division was 10 years ago. There's a tremendous amount of enthusiasm, and already they're starting to go through growing pains," Gustin added.

Gustin passed the gavel to Dave Pincus at ALCA's 21st birthday celebration that honored 17 guests of the European Landscape Contractors Association.

"We have some tremendous challenges," Pincus said in his to page 12

> I'm the little varmint that gives you so many problems. Find out how to get rid of me in next month's LCI.



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UPFRONT

The other day, former editor Bob Earley (now LAWN CARE IN-DUSTRY's publisher) walked into my office and dropped a large loose-leaf binder on the desk.

"Here are all the old 'Editor's Information Cards' we have on file," he told me. "They're interesting reading, and might be of some help to you."

If you've been reading this magazine for any length of time, you know that the "Editor's Information Cards" were those little postcards you were asked to fill out a few years back which contained blanks for listing your favorite features and topics.

Well, the times have changed . . . but they haven't changed that much. If those old, dog-eared cards were any indication, the topics that intrigued LAWN CARE IN-DUSTRY's readers in the first months of its existence are still on your minds. Subjects like fertilizers, how to get started in the lawn care business, collections, insect and disease control, and on and on.

One of the really great impressions that came from reading those cards was that you readers have something — something important — to say to your peers. And with that little tidbit in mind, we decided to alter the format of this page.

With this issue, we are shaving this "Upfront" column down to a more workable length. In past months, it has been extremely difficult to fill a complete page with the idle wanderings of one person's mind. This month, we're asking you, the reader, to help fill this page.

Henceforth, this page will feature the shortened "Upfront" column, along with special features geared to present the reader's side of the story: "Letters" and/or a column written by readers and industry experts entitled "My Side." Occasionally, you will also see another feature called "Looking Back" — a reminiscent overview of the growing lawn care industry's short history — on this page too.

The "Letters" column will be unsolicited opinions on any topic of interest to the general readership. Simply put: you write us a letter; it's good; we print it.

"My Side" is the same nature as

LOOKING BACK

Five years ago

A spring, 1978 issue of LAWN CARE INDUSTRY carried a lead story about a special lawn care technical session sponsored at the annual Associated Landscape Contractors of America meeting.

Ronald A. Ahlman of Chicago was named to be the 16th president of ALCA while Bill Thornton Jr. of Cincinnati was voted to the position of president-elect.

Dr. James Beard of Texas A&M University received a Meritorious Service Award from the Michigan Turfgrass Foundation, according to another LCI story that month. Beard was formerly a professor at Michigan State University.

One year ago

A front-page LCI story noted that Diamond Shamrock's Greens Bayou Dacthal plant in Houston was running on schedule. At that time, reconstruction was scheduled to be completed in October.

Finally, Dr. Jack D. Early, president of the National Agricultural Chemicals Association said before the House Judiciary Subcommittee on Courts, Civil Liberties and the Administration of Justice that "the chemicals industry cannot continue to undertake the massive research necessary for new pesticides without adequate patent protection."



"Letters." Lacking letters to fill this page, we will call upon one of you and ask that you spill your guts out for two double-spaced, typewritten pages. (Knowing, of course, that each and every one of you has some pet peeve or topical subject that tugs at your craw everytime you hear about it.)

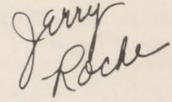
On the other hand, there are things we'll NOT be changing, and those are evident with this issue: our "Departments" and an editorial core that includes stories of interest to everyone in the industry.

Which means, of course, that we go full circle back to the "Editor's Information Cards" mentioned at the top of this article when the time comes to choose stories for each month — never an easy task. For instance:

This month, we've got a story on Subchapter "S" that might not help you meet this year's IRS deadline of April 15th, but might help next year.

There's an interesting piece on "computer horror stories" to let you know that all is not roses and lollipops in the land of transistors and diodes.

And, there are technical pieces by Charles Calhoun and Dr. Philip Larsen on fertilizer terminology and disease control, respectively. Enjoy.



LAWN CARE INDUSTRY

JERRY ROCHE,

Editor

ROBERT EARLEY, Group Publisher JOAN HOLMES, Production Manager MARILYN MacDONALD, Production Supervisor MARIO ROSSETTI, Graphic Design JOAN SMITH, Circulation Supervisor GAIL KESSLER, Reader Service Manager LINDA WINICK, Promotion Manager

MARKETING/SALES Midwest Office:

ROBERT EARLEY (216) 243-8100 7500 Old Oak Blvd.

Cleveland, OH 44130 Southern Office:

JIM BROOKS, National Sales Manager RON KEMPNER (404) 233-1817

3091 Maple Dr., Atlanta, GA 30305

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This is in reference to an article published in your August issue on page 15, "Businessman Fines Those Who Quibble After the Contract."

I am a lawn care professional, specializing in townhome and condominium lawn maintenance. Currently, my company maintains approximately 3,000 units at 17 different locations. My employees and myself have very rarely ever been harassed by homeowners. In fact, my employees have been complimented and even thanked for the fine job that they are doing.

That is why I take exception to

this misleading article. I feel this is just one more bit of uneducated information which misleads the lawn care industry. Although many points are well taken, the concept of fines is a joke.

LETTERS

If the communication between the contractor and the homeowners exists as stated in this article and everything in the contract specifications is well-defined, then there would, in fact, be no need for a fine.

Let's face it: when a contractor is being harassed by the number of homeowners as stated in this article, the homeowners shouldn't be fined. The contractor should be let

go.

Michael Cavaliere Vice-President, Best Lawns Medinah, Ill.

Letters to the editor should be kept brief and to the point. They should be tastefully written and bear a signature and address or telephone number for verification purposes. The staff of LAWN CARE INDUSTRY reserves the right to edit all letters for length and grammar. Inquiries serviced for 90 days from date of issue. For those countries outside the U.S., please apply appropriate postage before mailing.

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Ongoing program

2,4-D Coalition seeks high goals

Highly restricted because of lack of financial support, the National Coalition for a Reasonable 2,4-D Policy nonetheless intends to change its defensive posture in the coming months, according to Chairman Robert W. Miller.

"So far, most of what we have done has been in a defensive mode, which is only effective in putting out brush fires," Dr. Miller wrote in a recent newsletter. "An offensive posture is necessary to win the war."

2,4-D is a commercial pesticide that has been under recent attack

by environmental groups, despite the fact that its danger has never been proven.

"We are aware of several states which are thinking about pesticide legislation," Dr. Miller told LAWN CARE INDUSTRY. "We expect an upswing in activity as soon as new state legislative sessions begin again."

Achievements

The list of the 2,4-D Coalition's achievements is already long, despite its small bankroll. Not only has the group printed a brochure to assist other pro-pesticide groups, but it also sent Dr. Wendell Mullison, a well-known retired scientist, on a "media tour" to inform various newspaper editors and radio and television personnel about the chemical.

"We're not going to be able to do as much pro-active work like that this year," Dr. Miller said, "but we certainly will be able to react to any bills that are put forth, and to present our side of the story."

Miller said that 2,4-D Coalition membership numbers approximately 200, but that finances are largely generated by just 15 supporting companies.

There is a chance that the face of the organization will change in the future.

"The pesticide problem will not go away soon," Dr. Miller concluded. "So, at some point — if we can get the support — we will turn the 2,4-D Coalition into a Pesticide Coalition. 2,4-D is not the only pesticide to come under attack, you know."

Individuals can become members of the 2,4-D Coalition by sending a menbership fee of \$25 or more to the National Coalition for a Reasonable 2,4-D Policy, 435 North Michigan Avenue, Suite 1717, Chicago, IL 60611. Sustaining memberships are a minimum of \$1,000 while supporting memberships are a minimum of \$100.

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-PICAA

INDUSTRY NEWS

PLCAA contracts collection agency

The Professional Lawn Care Association of America has contracted one of the speakers at its 1982 convention to provide specialized collection services.

Attorney L. James Martin of Kent, Ohio, will handle collections for PLCAA members who request his services, under the banner of the Professional Lawn Care Credit Association of Anerica.

Participating members of the PLCAA may join, at no additional cost, the PLCCAA (note extra "C"). Then, if desired, they can use Martin's collection service for a charge of 30 percent of all collections made. Ten percent of that fee goes into a special PLCAA fund for seminars, educational endeavors, etc. while the remaining 20 percent is retained by Martin as attorney's fees.

The PLCCAA was formed at an organizational meeting in January of this year. J. Martin Erbaugh of Lawnmark Associates, Peninsula, Ohio, was elected president while Jim Marria of Perma-a-Green Lawn Company in Boise, Idaho was elected vice-president and Bill Fischer of Spring Green Lawn Care based in Naperville, Ill. was elected secretary-treasurer.

According to a recent newsletter, the PLCAA hopes that members take advantage of the new service.

"It is hoped that PLCAA members will utilize these services so that their consolidated accounts, which frequently are too small for local representation, can receive a thorough collection approach," the newsletter stated. "Hopefully,

Report on '82 PLCAA meeting

Three hundred and eighty-five people were registered for the 1982 Professional Lawn Care Association of America convention and trade show held last November in Indianapolis, a decrease of 12.1 percent from the 1981 attendance.

However, 109 firms took up 170 booth spaces at the trade show, according to a report by exhibit and meeting manager Al Van Horn III, increases of 22 and 18 percent, respectively.

Van Horn said that the 1982 convention realized a surplus of approximately \$11,000. And he pointed to the positive response of attendees via questionnaires that were filed at the time.

In future years, the convention and trade show will be held in the cities of Indianapolis (1983), Louisville (1984), Cincinnati (1985), Nashville (1986) and Columbus, Ohio (1987).

This year's convention and trade show will be held from Nov. 8 to Nov. 10. active member participation and successful results will combine to benefit members of the PLCAA."

Martin has geared his practice toward personal injury and collection cases, and welcomes the new affiliation with the PLCAA.

"Collection is sort of considered the black sheep of the legal practice, but it's a reasonably good money-maker and a very timeeffective practice," Martin said recently.

"Fifty to seventy percent of the

time I'm successful with a 20-cent stamp," Martin continued, "and the other times it's a matter of beating overdue accounts into submission."

Martin said that the first PLCAA member to require his services had 82 overdue accounts. "He was in and out of the office in one day, and we're in the process of looking at them now."

PLCAA members who wish to become members in the PLCCAA can do so by contacting Martin at L. James Martin



138 South Water St., Kent, Ohio 44240. His telephone number is (216) 688-8206.

<text>

Diamond-Shamrock group for sale

Following a cut in administrative and research staff by more than 150, the Diamond Shamrock Corporation's specialty chemicals group, headquartered in Cleveland, Ohio, was rumored for sale.

Both actions are related to the lack of improvement forecast for the chemicals business this year.

The cutbacks are part of a total reduction of approximately 500 throughout the Dallas-based company. About 225 of them are in the chemicals units.

Diamond's specialty chemicals business had a sales of \$523 million last year and an operating profit of about \$55 million.

Company spokesmen, however,

said that the firm was not considering selling its industrial chemicals business.

Power equipment outlook is good

"A year of opportunity" is the way C. James Brown typically described the sales outlook for portable outdoor power equipment in 1983. Brown, marketing vice president for the Homelite Division of Textron, Inc., spoke at the Winter National Hardware & Home Center Show in Las Vegas earlier this year.

Brown said that gas string trimmer sales should grow 10-15 percent and that sales of lawn mowers, riders, tractors and snow throwers should also gain. In addition, Homelite is predicting a 1.4 percent increase in walk-behind mower sales and a 3.1 percent rise for rear engine riders.

Brown expects the increase in walk-behind mowers despite "confusion in the marketplace" over new safety requirements mandated by the Consumer Product Safety Commission.

N.Y. Turfgrass studies fertility

The New York State Turfgrass Association is supporting a soil fertility research project at Cornell University under the direction of Dr. A. Martin Petrovic by funding a graduate student for the year.

The purpose of Dr. Petrovic's

now there's OFTANOL. Heh-heh-heh.



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fective control of mole crickets of any product presently registered, but such use is limited to states which have issued Special Local Need registrations. Check with your state extension office. Ask your turf chemicals distributor for OFTANOL.



Mobay Chemical Corporation Agricultural Chemicals Division Specialty Products Group Box 4913, Kansas City, MO 64120 research is to develop a turfgrass fertilization program based on soil testing research results. Dr. Petrovic hopes to make specific recommendations for optimum fertilizer use on golf courses, athletic fields, sod farms, industrial sites and home lawns.

Jacklin to merge

The Vaughan-Jacklin Corp. has agreed in principle to merge with a corporation which will be formed by John Vaughan and Byron Dickes and certain other directors. The present shares of common stock of the Vaughan-Jacklin Corp. will be entitled to cash payment of \$11.50 per share in subordinated debentures, to be issued at the rate of \$1.50 per share.

Duane Jacklin, general manager of the Jacklin Division, said the purchase would not affect the Jacklin operation, plans or personnel in any way. Jacklin Seed is one of the world's largest producers and worldwide marketers of Kentucky bluegrasses, perennial ryegrasses, fescues, reclamation and environmental grasses and pasture seeds.

Housing starts climb steadily

Housing starts in the United States in 1982 were just 1.06 million, the lowest total since 1946, but industry analysts expect starts to reach a respectable 1.4 to 1.5 million in 1983.

According to a survey by Chicago Title Insurance Co., the national average of new residential units (including condominiums and rentals) to existing households was 1.33.

Houston was the most active new-start market in the country with a ratio of 5.93, followed by Austin, Tex., 4.45; Fort Myers, Fla., 4.36; Las Vegas, 3.81; Dallas-Fort Worth, 3.74; San Antonio, Tex., 3.70; Orlando, Fla., 3.43; Oklahoma City, Okla., 3.29 and Atlanta, 3.09.

Cleveland, Ohio, was the lowest among major metropolitan areas with a 0.24 ratio as about half of the new units built in 1982 were constructed in 16 Southern states.

Green Care and Davids winners

Clarence Davids and Sons, Inc. and Green Care, Inc. were big winners of 1982 Associated Landscape Contractors of America Environmental Improvement Awards, presented at ALCA's annual meeting recently.

Davids and Sons, Blue Island, Ill., won the Region IV Commercial Landscape Maintenance award for its job on Bell Laboratories. Green Care won for Residential Landscape Maintenance in Region VII, entering the L. S. Hartzog residence.

The awards were presented by American Society of Landscape Architects president Ted Wirth at a luncheon ceremony honoring those and other award-winners.

NEWSMAKERS

Business cards are handy

Something as sinple as a business card can be an advertising medium that is low in cost, but very high in effectiveness, if used properly.

Your business card gets to the person who should know you are in the lawn care business the person who is likely to spend money with you. Often, your business card will be the only advertising that will be seen by a prospective client.

It is true that a lot of cards you give out will be wasted; people will lose them or throw them away. But many other prospective clients will put your business card in their billfold or purse. Then when they need your services, they know right where to go.

Because your telephone number if one of the most important items on the card, consider using type that is rather large, prominent and easy to read.

A good business card should include the following information:

• the name of your company and company logo, if possible;

any slogans your company uses;

• your business address and telephone number; and

• a home address and telephone number, if pertinent.

Terrific performer in Sun and Shade.

Why go with a beauty that's only talented in the sun? Go with Glade for the double performance in Sun and Shade — up to 60% shade. Beautiful, low growing, lower cost, and lower maintenance needs.

Glade — from your local wholesale seed distributor.



Sounding off about ethics

from page 1

Shearman is another who has heard some rumors:

"I'm in kind of an isolated area: mainly rural, developing very fast into residential. But we don't have any hard competition yet.

"I know unethical practices have existed in the past because there were people in the industry who did not know the industry. The main reason for any problems was their lack of knowledge, but over the past few years (as the lawn care industry has grown and worked toward professionalisn), this has cleaned up."

Shearman thinks that the low start-up cost, especially in the mowing/maintenance end, has been a factor in creating the impression among would-be entrepreneurs that lawn care is a good way to make a quick buck.

In Florida, where competition is heavy, Mark Yahn of Ground Control Landscaping, Winter Park, must put up with problems he doesn't believe he should have.

"There's a contractor in Orlando who gives written critiques of lawns being cared for by other contractors, and then makes the owner his own offer. He has gone 40 to 50 percent under us by coming in with man/hour rates that we can't even live with," Yahn said.

"People like this are coming in and destroying what it's taken us years to build. These guys are going to learn a lesson, but meanwhile the more reputable people are losing customers.

"Even people who have stayed with me have their doubts when this happens. It really puts us on the defensive."

Still an infant

What must be considered is that the lawn care industry is still an infant, and that infants eventually — with the proper direction — can grow into responsible adults. The key, of course, is "proper direction," something which must be a continuous goal.

In a recent interview with LAWN CARE INDUSTRY, PLCAA president Don Burton said that the organization was indeed working to weed out undesirables.

"The PLCAA is a new association," Burton said, "and I think it is in our best interests to try and get disputing parties to amicably resolve their differences.

"Other than the most clear and flagrant violations to our code, the PLCAA might consider assisting conflicting parties to establish local mediation. In the future, I suppose we are going to have to set up machinery to formalize an approach to help solve member differences."

Is there a definite answer to the problem of ethics in the lawn care industry? Probably not. But there may be some alternative which can help cut down the complaints, and that is a start.

Circle No. 110 on Reader Inquiry Card

10

PROXOL® KILLS GRUBS AND SURFACE FEEDERS. FAST!

There's no need to wait over a month for a grub control to work. Economical Proxol 80SP insecticide readily penetrates thatch to work fast for an effective broad spectrum kill, including grubs and surface feeding sod webworms, armyworms, and cutworms. You apply Proxol with the liquid application equipment you already have. So there's no need to haul spreaders and bulky packages on your rig, put up with package breakage and waste, or carry them in inventory. Proxol's convenient 2- and 5-lb. packages make measurement easy. Eliminates waste. You can even mix Proxol with other nonalkaline chemicals.

And you can rest easy with Proxol. Customer's children and pets are not exposed to





Kalamazog, Michigan 49001

a granular residue left on the turf. Proxol is easy on the environment, too. No unpleasant odor to offend customers. No long-term residual buildup in the soil.

Proxol kills grubs and surface feeders. Fast! Over 150 U.S. distributors and 8 regional TUCO Distribution Centers assure convenient product availability. These same sources also have Acti-dione; a TUCO broad spectrum fungicide, long used by golf course superintendents, to stop turf disease problems before they start.

For more information, call toll-free: Outside Michigan-800-253-8600 Inside Michigan (collect) -616-385-6613



COST CUTTINGS

Uniforms: to buy or to rent?

Studies have shown that personal appearance is one of the prime factors in creating a lasting impression on prospective consumers. In the lawn care business, that means uniforms. So, does your company want to rent or to purchase uniforms?

Renting uniforms offers three advantages: no cleaning or repairing necessary; no initial investment; and no wasted investment if an employee terminates soon after his hiring. Buying uniforms, on the other hand, offers uniqueness, advertisement, proper fit and lower cost in the long run.

In either case, remember to (1) define your image; (2) examine a wide range of styles, colors, etc.; (3) select a program consistent with work policies and philosophies; and (4) make the uniform an intricate part of the employee's role with the company.

> with the full line of Stihl grass and weed trimmers as well as brushcutters. And meet your lawn care problems head on. For sales and service, see the Yellow Pages under "saws." For your local deal-er's name call toll-free 1-800-528-6050,

THE STIHL FS 90AVE MEETS WEEDS, BRUSH AND THE COMPETITION HEAD ON.

Dave Pincus (left) accepts a handshake and congratulations from Ray Gustin upon his inauguration as president of the Associated Landscape Contractors of America earlier this year. Pincus hails from Dallas where he does both interior and exterior landscape maintenance and design. Gustin will assume the duties of immediate past president this year.

'83 ALCA meeting is a success from page 1

inaugural address. "The time is approaching when we must become united as an industry. So what we need more than anything else is increased membership involvement in our programs.

"If you don't think of yourselves as high caliber, you should, because ALCA represents the mainstream of our industry.'

Pincus continued:

"It looks like 1983 is a year of promise, not only for ALCA, but also for our economy. It's the beginning of an economic recovery, one which we need to encourage through creativity, competition and pride."

The eight-day convention and trade show drew 463 attendees. The trade show, which teamed with the Tropical Plant Industry Exhibition for the final three days, had 460 booths.

Wednesday, Jan. 19 was "Maintenance Day," which was of special interest to members of the new LMD. Featured were speaker Joe Marsh of J. M. Landscape Maintenance Consulting, along with concurrent sessions on exterior landscape contracting which were moderated by Gary Thornton and H. Bruce Phillips.

"If anyone walks out of this room and he hasn't paid for his trip, he'd better go into another business," warned Marsh at the beginning of his presentation.

"Since interest rates have come down a little, business will pick up, but from now until the end of 1985, landscape contracting will be in a bad way. We want to put together a plan for landscape maintenance contractors who are hurting."

And that's what Marsh did, using slides he has accumulated to page 13

Circle No. 126 on Reader Inquiry Card

12

1983

It takes a tough tool to do a tough cutting job. Weed after weed. Job after job. Year after year.

Good reasons for getting the Stihl FS 90AVE. It's dependable. Built with famous Stihl durability. And with six optional cutting attachments, including Stihl's exclusive Polycut® head, it's every tool you're ever likely to need.

The FS 90 is also precision balanced and lightweight. So it's easy on you while it's tough on everything else. See it at your Stihl dealer's now, along





MONEYWISE

Computer-tax booklet

Will the federal government allow you to deduct part of the cost of your microcomputer on your income tax return? Better yet, could you get the government to actually pay the entire cost of your personal computer with various tax breaks and tax credits?

According to Vernon K. Jacobs, a Kansas City certified public accountant and editor of "Tax Angles," a monthly tax planning newsletter, there are a number of ways that buyers of the new desktop-size computers can justify a substantial tax recovery for their computer.

He explains how in a concise, 11-page, single-spaced report called "Let the Government Pay for Your Computer." However, the answer is not simple. It takes all 11 pages to explain the possibilities and limitations.

Briefly, Jacobs says, "Business owners may deduct or depreciate the cost of their computer. So may investors who use their computer to manage their investments or to keep investment records. In some cases, an employee might be allowed to deduct part or all of the cost of the computer as an employee business expense."

The report is available for \$6 from Research Press, Inc., Box 8137-P, Prairie Village, KS 66208.

DATES

University of Florida Turfgrass Field Day, April 6, Ft. Lauderdale, Fla. Contact: Dr. Bruce Augustine, University of Florida, 3205 SW College Ave., Ft. Lauderdale, Fla. 33314. (305) 475-8990

Surface Irrigation Management Short Course, April 12-14, Phoenix, Ariz. Contact: Thomas J. Schiltz, The Irrigation Association, 13975 Connecticut Ave., Silver Spring, Md. 20906. (301) 871-1200.

Southeastern Turfgrass Conference, April 11-12, Tifton, Ga. Contact: Dr. Glenn W. Burton, University of Georgia Coastal Plain, Experiment Station, Tifton, Ga. 31793. (912) 386-3353.

Arizona Turfgrass Conference, May 5-6, Tucson, Ariz. Contact: Dr. William R. Kneebone, University of Arizona, Tucson, Ariz. 85721. (602) 626-5323.

ALCA from page 12

over the years since his retirement from landscape maintenance.

"You can make a lot of money in this business," Marsh said, "IF you think.

"Ours is a growing industry. The recession shouldn't slow you down — it just makes you hustle a little bit more."

Joe Marsh



Later that afternoon, LMD chairman Ron Kujawa of Kujawa Enterprises in Cudahey, Wisc. revealed the results of election of regional directors:

Region I — Bruce McCormick of Blue Ribbon Landscape Maintenance, Bothell, Wash. and David Marsh of Industrial Landscape Services, Cupertino, Cal.

Region II — Don Anderson of Green Scheme Inc., Arvada, Col. and Tom Garber of Colorado Landscape Enterprises, Wheat Ridge, Col.

Region III — Dave Buttecali of Cityscape, Houston, Texas and Jim Lewis of Landscapes by Jim Lewis, Dallas, Texas.

Region IV — Bob Koca of Lieve's Nursery, Sussex, Wisc. and Bill Davids of Clarence Davids and Sons, Blue Island, Ill.

Region V — Pat Cullin of Gustin Gardens, Gaithersburg, Md. and Stewart Rom of Chapel Valley Landscape Co. in Woodbine, Md.

Region VI — Edwin Helmke of Edwin Helmke & Co., Spring Valley, N.Y. and Brian Koribanick of Landscape Techniques, Nutley, N.J.

Region VII — George Morrell of Clark Morrell Inc., Lithonia, Ga. and K. C. Fisher of Landscape Industries Inc., Tampa, Fla.

It was also announced that the 1984 ALCA conference will be Feb. 8-12 at the Phoenix, Ariz. Hyatt Regency and that the 1985 conference will be in Hawaii.

Circle No. 121 on Reader Inquiry Card____



NIPPOND-NS0

Heat up your business this year with small engine spark plugs from the world's leader in advanced spark plug technology—Nippondenso.

These ND plugs are made to fit all the major small engine applications: tractors, chain saws, tillers, leaf blowers, lawn mowers and more. Yet they have all the terrific features of the larger ND automotive and motorcycle plugs—the same spark plugs which come as Standard Factory-Installed Equipment in millions of Toyota, Honda, Mazda, Subaru and Mitsubishi cars, and Honda, Yamaha, Kawasaki and Suzuki motorcycles.

And there's another feature guaranteed to make them one of the most popular items in your inventory: some of the best pricing programs in the business! In addition, you'll benefit from an aggressive, high-profile national advertising campaign designed to maximize consumer awareness and demand.

So if small engines are a big part of your business, call your Distributor* today—and get the spark you need to heat up your profits this summer.



The Fastest Growing Spark Plug in America. APRIL.

*If your Distributor is out of ND plugs, call us toll-free at 800-421-1400. In California, at 800-421-6821. Ask for ext. 263. We'll put you in touch with America's fastest growing spark plug.

How Dyclomec[®] helps turn problem areas

With this unique herbicide you can do much more than temporarily kill vegetation along fence rows, in woody ornamental beds, around tree trunks, etc. You can actually turn these areas into cosmetic highlights.

Dyclomec is surely the most exciting herbicide ever offered to the professional groundskeeper who is dedicated to manicured landscaping but has to live within a hard-nosed budget.

Obviously, there is no way you can live with a lot of unsightly plant residue growing along fences, in ornamental beds, etc. So you've probably been using a quick-acting contact herbicide, since mowing or hand trimming is out of the question.

But this has to be frustrating for you, because it leaves a lot of ugly, dead vegetation; futhermore, new seeds germinate and the vegetation grows right back. And, to add insult to injury, the cost of a contact herbicide is nothing short of exotic. Dyclomec can make these aggravations ancient history.

Dyclomec enables you to turn these eyesores into sharply defined highlights that are absolutely beautiful because they will be absolutely blank ... just pure mother earth in all her natural, naked splendor.

... And you'll do it economically and efficiently because one application of Dyclomec gives season-long control.

But wait! To truly maximize the effectiveness and efficiency of Dyclomec as a tool to achieve the manicured look, you need to thoroughly understand what it is; how it works; and how to apply it. Dyclomec is a professional product and requires professional treatment.



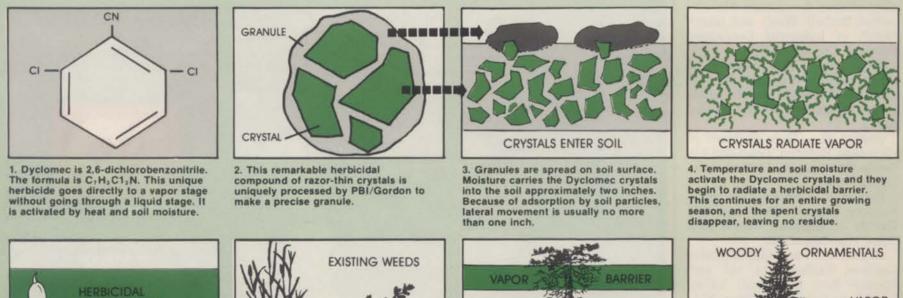
What is Dyclomec?

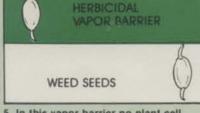
Dyclomec is 2,6-dichlorobenzonitrile. The formula is C₇H₃C1₂N. The one word that best describes this unique herbicide is *sublimation*. The material goes to a vapor stage without going through a liquid stage. It is activated by heat in combination with soil moisture, and is virtually insoluble.

This remarkable compound is milled into razor-thin crystals which are uniquely processed by PBI/Gordon to make a precise granule.

How Dyclomec Works:

Dyclomec granules are spread on the surface. Moisture carries the Dyclomec crystals from the granule into





5. In this vapor barrier no plant cell division can occur. Seeds trying to germinate in the barrier will die. Sprouts below this zone will be killed as they try to penetrate the barrier.



6. Existing vegetation such as shallow rooted grasses and annual weeds having root structures in this barrier will likewise be affected and die after two to three weeks.



7. Certain perennial weeds coming out of dormancy and attempting new growth within the Dyclomec barrier will run into the same dead end: they will be killed by the vapor.



8. Dyclomec, when used as directed, does not affect woody ornamentals, shrubs and trees that have deep roots extending well below the herbicidal vapor zone.

the turf professional into beauty spots...

the soil to a depth of approximately two inches. Because of their insolubility and adsorption by soil particles, they tend to remain in this upper soil level under most conditions. Lateral movement is limited to approximately one inch.

Temperature and moisture activate the Dyclomec crystals, and they radiate a vapor that creates a herbicidal barrier. This radiation continues throughout the growing season, and then the crystals become totally spent.

... In this Dyclomec herbicidal vapor barrier no plant cell division can occur. Any vegetation such as grasses or shallow-rooted annual weeds which have their root structures within this barrier will die.

Furthermore, as weed seeds in this zone attempt to germinate, they are killed. In addition, sprouts developing below this zone will be killed as they try to penetrate the barrier. A number of perennial weeds coming out of dormancy run into this same dead end.

On the other hand, plants such as woody ornamentals, shrubs and trees are not affected by Dyclomec since their root structure is below this herbicidal vapor zone.

Call our Technical Service Department

If you have any questions about where and how to use Dyclomec,* we invite you to call our Technical Service Department.

TOLL-FREE 1-800-821-7925 In Missouri 1-800-892-7281



A handy way to apply Dyclomec

Uniform distribution is the most important factor in Dyclomec's effectiveness, so PBI/Gordon offers a patented, gravity-flow applicator called *Acme Spred-Rite®* G that is ideal for applying Dyclomec in tightly circumscribed, manicured areas.

Tilt the applicator down and granules tumble into a series of stubby, deflector spikes in the head. Some granules slip through the spikes, others bounce off; the result is a predictable pattern of granules.

Hold the Spred-Rite three feet above ground to get the widest swath, 30 to 36 inches. Hold the head closer to the ground to get a narrower swath. Turn the head sideways for a sharply delineated edge. Remove the Spred-Rite head to get the finest line of vegetation control.

Two interchangeable orifice disks, included, regulate the flow of granules through the tube and further sharpen the precision with which the Spred-Rite performs.

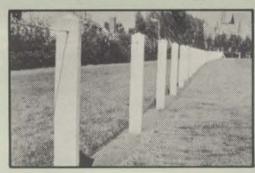
Where are you going to use Dyclomec?

Spred-Rite* is a registered trademark of PBI/Gordon.



Has no moving parts.

- No metal parts to corrode
 or rust.
- Lightweight: 6 oz. empty;
- 6 pounds full. • Can be used to spread
- granular herbicides, fungicides, insecticides,
- fertilizers.







TM

LANDSCAPING HERBICIDE 557-383

⁶ Fertilizers

A beginner's fertilizer glossary

by Charles Calhoun

There is a great deal of confusion and misunderstanding in terminology of fertilizers and plant nutrients. Much of this dates a century or more into the past. Tradition and the problem of gaining acceptance in making positive changes present many difficulties. Newer developments in nitrogenous fertilizers have also brought up many new questions.

Without doubt, the most confusion emanates fron writing and speaking on the subject of phosphorus and potassium. The labeling system, dictated by government regulations, is a flagrant example. The word phosphorus is often used in conjunction with phosphate, phosphoric acid, P_2O_s , available phosphorus and the like. Potassium is used in conjunction with potash, soluble potash and K₂O.

Perhaps this review of the subject will lead to better use of the language relative to plant nutrients. Clarification can then be of tremendous benefit to students and other "learners" or laymen.

and other "learners" or laymen. Inasmuch as nitrogen, phosphorus and potassium are the principal elements of current concern, this article will be limited accordingly.

Content is key

Authorities on fertilizer rightly speak of the pounds of nitrogen, phosphorus or potassium needed for a plant to grow properly. Or they may say a plant removes a certain amount of nitrogen, phosphorus or potassium from the soil. The problem appears when fertilizer content is discussed in terms of available phosphate, available phosphoric acid or P₂O₅, water soluble potash and similar words or symbols.

Furthermore, potassium and potash, and phosphorus and phosphate are sometimes used interchangeably when discussing fertilizers and plant nutrition. No doubt many of these expressions are a result of traditional fertilizer terminology dating back many decades. The fertilizer industry derived the terminology from the various chemical reactions and materials involved in the manufacture of fertilizers. This then was carried over into the literature.

Some common quotations are shown here for comment and clarification:

Quote No. 1: "Fertilizer with 3-1-2 (N-P-K) ratio is best for most (fertilizer) programs . . . Such fertilizers as 12-4-8, 27-9-18 and 18-6-12 are 3-1-2 ratio fertilizers." COMMENT: The problem is that the fertilizer ratios mentioned are not N-P-K ratios as shown. Instead the P and K symbols for phosphorus and potassium are interchanged with P_2O_5 equivalent and with K_2O equivalents in the sample ratios.

Quote No. 2: "These nutrients are nitrogen, phosphorus and potassium and are often referred to as "N," "P" and "K" . . . a fertilizer claiming a 12-4-8 analysis would consist of 12 percent nitrogen, 4 percent phosphorus and 8 percent potassium." COMMENT: The 12-4-8 fertilizer would actually contain 12 percent nitrogen, 1.76 percent phosphorus (4×0.44) and 6.64 percent potassium (8×0.83) . Please see the conversion factors for reference in the supplement.

Quote No. 3: "Potassium or potash, is the third nutrient required in a complete fertilizer." COMMENT: Potassium and potash are used interchangeably and can add to the confusion. Potash is an incorrect word here.

Quote No. 4: "Printed on all fertilizer containers is a statement showing the amount of available nutrients in the contents, such as 12-5-7. This means that there is 12 percent nitrogen, 5 percent phosphorus and 7 percent potassium as available nutrients." COMMENT: The fertilizer contains 12 percent nitrogen, 2.2 percent phosphorus and 5.8 percent potassium.

Quote No. 5: "A fertilizer containing three or four times as much nitrogen as phosphorus or potash is the most desirable. The phosphorus and potassium content should be about equal." COM-

Jacobsen's versatile Turfcat II System introduces three new Jacobsen Turfcats.

Introducing the GA 180, the DW 220 and the GA 200. All come with hydrostatic drive which keeps the cutter speed independent of the ground speed. Offering single pedal forward and reverse control to eliminate clutching. All feature a two-speed transaxle and a foot operated hydraulic implement lift system for easy transport. And all give you a wide range of implements. Implements to match the job to the season. A system to match your budget.

The New GA 180

Our 18 h.p., twin-cylinder, air-cooled, gasdriven GA 180 is an easy match for your seasonal jobs. With its large 8.5 gallon tank and a separate hydraulic reservoir for cooler operation, the GA 180 is ready to go a long way and last a long time. 50" side discharge mechanical rotary 48" mechanical snow thrower 60" mechanical broom 54" plow <u>Grass pick-up R.O.P.S. Cab/</u>Wiper and lights

The New DW 220

The only rotary on the market with hydraulic drive to the decks. Offering a 22 h.p. diesel engine completely ducted and screened for longer engine life. Plus hydraulic drive to the decks for less vibration and fewer alignment problems from shock or impact and easier maintenance. 60" side or rear discharge hydraulic rotaries 72" side discharge hydraulic rotary 60" hydraulic flail 48" hydraulic snow thrower 60" hydraulic broom 54" plow R.O.P.S. Cab/Wiper and lights.

The New GA 200

Our twin cylinder, 20 h.p. gas driven air cooled workhorse. Featuring a completely ducted and screened cooling system and full pressure lubrication for longer engine life. All of the implements listed below are quickly mounted via a simple three pin system.

- NEW GA 200
 - 60" side and rear discharge mechanical rotaries
 - 48" mechanical snow thrower 60" mechanical broom
 - 54" plow

Grass pick-up, R.O.P.S. Cab/Wiper and lights.

APRIL 1983

LAWN CARE INDUSTRY

MENT: Potash and potassium are used interchangeably. They are not the same. Potash is an incorrect word here; potassium should be used.

Quote No. 6: "... A 40-pound bag of 10-6-4 contains four pounds of nitrogen ... 2.4 pounds of available phosphate ... and 1.6 pounds of water soluble potash ... COMMENT: The fertilizer contains four pounds of nitrogen, 1.14 pounds of phosphorus and 2.76 pounds of potassium. It contains no potash.

Fertilizer Labeling

The American Society of Agronomy made an attempt to refine the fertilizer labeling laws back during the mid-60s. Following are some excerpts from a fact sheet prepared by the ASA staff.

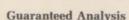
"Fertilizer Labeling. Currently, fertilizer is labeled as required by law in each state. All states require manufacturers to print a guaranteed analysis or chemical composition on the fertilizer bag and/or attached tag. The analysis of complete fertilizers is expressed in percentages (by weight) of N-P₂O₅-K₂O.

We say that plants remove so many pounds of N-P-K and then recommend adding as many pounds of N-P₂O₅-K₂O to replace the elements. This is confusing. Norway, New Zealand and South America are ahead of us in eliminating this confusion.

Inaccuracies of Present Form. Nitrogen is legally expressed on the elemental basis as total nitrogen (N). Phosphorus is expressed on the oxide basis as available phosphoric acid. This term designates the available phosphorus pentoxide (P_2O_s). Potassium is expressed as soluble potash or potassium oxide (K_2O).

But in reality, there is no P_2O_5 or K_2O in fertilizers. Phosphorus exists most commonly as monocalcium phosphate, but also as other calcium or ammonium phosphates. Potassium is ordinarily in the form of potassium chloride or sulfate. Furthermore, P_2O_5 and K_2O are not involved in plant nutrition. Plant roots absorb most of their phosphorus in the form of orthophosphate ion, H_2PO_4 and most of their potassium as the potassium ion K+."

To point out the short-comings of current labeling, pertinent parts of two labels are shown:



Fertilizer No. 1. Total nitrogen 14.00 percent Available Phosphoric

Acid 1P₂O⁵) 4.00 percent Soluble Potash (K₂O) 9.00 percent Fertilizer No. 2

Nitrogen (N)28 percentAvailable Phosphoric Acid 5 percentSoluble Potash (Muriate)8 percent

In fertilizer No. 2 above, the manufacturer has extended "extra service" by replacing the word "Muriate" in parenthesis which tells you the potassium is derived from Muriate of potash, a manto page 39

to page 39

Glossary Fertilizer terminology

Amnoniacal nitrogen Fertilizer fraction derived from ammonium products.

CRN SCU — fertilizer granules that are protected from water entry to the urea.

CRSUN — Controlled release soluble urea nitrogen. Usually SCU.

CWIN or WIN — Cold water insoluble nitrogen or water insoluble nitrogen.

CWSN or WSN — Cold water soluble nitrogen or water soluble nitrogen.

HWIN — Hot water insoluble nitrogen.

IBDU — Isobutyledene - diurea, a slow release nitrogen fertilizer.

KCl — Potassium chloride or muriate of potash, a common source of potassium.

K₂SO₄ — Potassium sulfate or sulfate of potash, a "safer" source of potassium.

K₂O or potash — Outdated connotation representing percentage of potassium equivalent.

K₂O equivalent — The percentage of "imaginary" K₂O needed to represent the true percentage of potassium in a fertilizer (a legal requirement). Methylene urea — Urea-form nitrogen products made from urea and formaldehyde.

Natural organic fertilizer — Derived from natural organic materials.

P₂O₅, phosphate or phosphoric acid — Outdated connotation representing percentage of phosphorus equivalent.

P₂O₅ equivalent — The percentage of "imaginary" P₂O₅ needed to represent the true percentage of phosphorus in a fertilizer (a legal requirement). SCU — Sulfur coated urea, treated to prevent entry of water to the urea granule.

Conversion Factors for Phosphorus and Potassium:

To convert P to P_2O_5 multiple P \times 2.29 and K to K₂O multiply K \times 1.20

To convert P_2O_5 to P multiply $P_2O_5 \times 0.44$ and K_2O to K multiply $K_2O \times 0.83$



Circle No. 112 on Reader Inquiry Card

LAWN CARE INDUSTRY

APRIL 1983

LAWN CARE INDUSTRY

Scholarship

J. C. Wildmon, a senior in turfgrass management science at the University of Florida, received the TUCO turf scholarship for 1982 at the recent Florida Turfgrass Conference and Show in Orlando, Fla. The annual scholarship is sponsored by TUCO, Division of the Upjohn Company, to assist turfgrass students and is awarded for scholastic ability, per-sonal integrity and professed carreer interest in turfgrass management.



Phone book How to be nice on the phone

One of the most important ways of conveying the image of your company is over the telephone, both in casual conversation and in telephone solicitation.

Helpful tips to ensure that your employees are conveying a good image can be found in a new illustrated booklet from Southwestern Bell. Its name is "Telephone Manners—A Guide for Using the Telephone."

Copies are available at no charge by writing Telephone Manners, 1010 Pine, Room 1229, St. Louis, MO 63101.

Participating Distributors

Agricultural Chemicals of Dallas Agway, Inc. American Fertilizer & Chemical Co. American Fluoride/Superior Chemical div. of Sou. Mill Creek Products The Andersons Arizona Agrochemicals Atlantic Fertilizer & Chemical Co. **Balcom Special Products** B & G Chemical & Equipment Co. Brayton Chemical, Inc. **Brewer Chemical** Cessco, Inc. **Crown Chemical** Dettelbach Pesticides Corp. Equipment Sales & Service Co., Inc. Elco Manufacturing **Estes Chemical** Fords Chemical & Service Forshaw Chemicals, Inc. **High Point Mills Holder Pest Products** Island Golf & Turf Inc. J.C. Ehrlich Chemical Co. Lakeshore Equipment & Supply Lebanon Chemical Corp. Mercury Chemical Metro Milorganite **Miracle Chemical** Old Fox Chemical, Inc. **Oldham Chemical Pest Control Supplies** Pest Fog Sales Corp. **Redwood Chemical** Residex Corp. Rhodes Chemical Co. Rockland Chemical Co., Inc. Seacoast Laboratories Inc.-**Twinlight Products** Southern Mill Creek Products of Ohio Southern Mill Creek Products-Tampa **Stephenson Chemical** Steve Regan Co. Summit Chemical Co. Sunniland Corp. Target Chemical Terminix International, Inc. **Thompson Hayward Chemical** In-Cal Inc. (VIKANE only) U.S.S. Agrichemical Co., Inc. Van Waters & Rogers Veatch Chemical Wagner Seed Co. Wilbur Ellis Co. Woodbury Chemical Co. York Chemical Co./Cornell Chemical & Equipment/Sherwood Chemical

JIRSBAN IIST KEEPS ON DELIVERING.

It's here again for 1983-bigger and better than ever! The "DURSBAN* Delivers The Goods" incentive program. Last year pest control and lawn care operators earned thousands of dollars worth of merchandise just for using DURSBAN insecticides. They stocked up on equipment that's used on the job every day, office furnishings, color televisions, video recorders and valuable choices that filled a catalog.

And we're delivering the goods again. The program is scheduled to run from March 1 through October 31, 1983. During this time you can earn credits for buying our goods: DURSBAN 2E, DURSBAN 4E, DURSBAN L.O.

and DURSBAN TC. Plus, we've expanded the program to include VIKANE* gas fumigant and formulated (private brand) DURSBAN products.

In turn, we'll send you award credit checks which you can use to "purchase" the merchandise of your choice. The more credits you earn, the more valuable your choices become. And this year's catalog contains over 100 valuable items for your work or pleasure.

There's another change for this year. You can only enroll in the program through a participating distributor. If your distributor is not listed here as a participant you may enroll and purchase your products through any listed distributor.

So contact a participating distributor for your free catalog of over 100 award items, enrollment form, rules and award claim

forms. The sooner you enroll in the "DURSBAN Delivers The Goods" program the sooner you start earning credits.





Circle No. 105 on Reader Inquiry Card

Dow

Truck logos

Decals, lawn care go hand-in-hand

"Fleet identification is a tool of marketing communication," says Dennis Grady of Dice Decal Corp., Middlebranch, Ohio.

"Fleet identification," in this case means the time and effort it takes to make sure your trucks either spray tanks or vans — are easily identifiable to the public. In most instances, large decals of the type offered by Dice Decal will do the trick.

"Most entrepreneurs and small businessmen look at logos as something that's nice if you can afford it, and if you ever get around to it," Grady says. "But, particularly in the lawn care business, you are what you are perceived as. Your image is extremely important."

Dice Decal and other commercial decal companies around the country offer specialized service to customers, including screening and die-cutting large logos for the sides of trucks and, if requested, the designing of logos.

"The key in our business — and one of the problems we have in lawn care — is the numbers," Grady continues. "You cannot cost-effectively decal one truck. We're talking a minimum of six trucks as a reasonable guideline."

Dennis Grady



The cost? "Generally speaking, in quantities of 10 to 15, about \$200 to \$300 per truck for a complete set," Grady estimates.

"You should always remember to design your logos to fit a truck," Grady recommends. "Lots of designs work well on stationery, but not on trucks because of size and width specifications."

After their order, production time of a set of decals is approximately four weeks. Careful attention is paid to using the right materials and right processing techniques, Grady says.

Dice Decal exhibited at last winter's Professional Lawn Care Association of America trade show, at which many business contacts were made. Of special interest to the PLCAA attendees, Grady notes, was the process of designing logos for trucks.

"We really need some sort of input when we start designing," Grady says. "We design as part of our service, but we need a business card or letterhead to work from. In that way, we can use your truck to communicate a specialized message.

"Most lawn care professionals

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LAWN CARE INDUSTRY

APRIL 198:

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INSIDE THE INDUSTRY

Good results

Lawn care president praises new computer

Bob Cohen, president of The Green Scene in Tarzana, Cal., has nothing but praise for his computerbased management system which was installed last year.

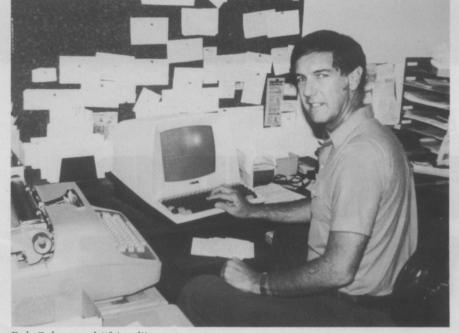
The CALMS (Customer Account Landscape Management System) simplifies the real-time day-to-day operations of the lawn care industry, Cohen says, adding that the system can be licensed for use outside California.

"Use of the system can literally program your firm's top technical intelligence into all your customer communications and work processing."

The CALMS system allows Green Scene to program service for three different varieties of turf and up to six different forms of landscape plantings for each customer.

"Lawn care is the foundation of our business," Cohen says, "but our market demands that we offer seasonal options for the care of ornamental plantings, rose gardens, groundcover and hillside areas, as well as tree-feeding and spraying.

"Furthermore, these various lawn and landscape varieties can be located anywhere on the customer's property and he may (or may not) wish service on specific elements in specific seasons."



Bob Cohen and "friend"...

With CALMS, a service program can be specified at the initial service, and thereafter:

• The customer receives a letter prior to each service cycle stating (a) the general materials to be applied; (b) specific suggestions on weekly mowing and watering requirements for each of his lawn types; and (c) a summary invoice documenting the "regular," "seasonal" and "optional" services to be done on his property.

• The office gets a summary listing of his account and others to be serviced for his route.

• A work order is printed for each service with his customer identification (name, phone, map-code, address), specific instructions to the technician for that season's service and a tag to be left at the customer's house as evidence of service and charges.

A few of the other features are: (1) any customer account can be brought to the screen in a fraction of a second, called by last name, phone number or cross-reference name; (2) the route-management system has a capacity for 10 offices, running 10 trucks each; (3) customer accounts are updated and charges entered by the office staff when the complete work order is returned by the service department; (4) accounts are automatically credited when payment by check, voucher (cash, credits) or bank card is deposited; and (5) a permanent transactions journal of each customer entry is held in memory for account history summaries and future sales analysis.

Cohen reports savings in executive time and office-clerical costs when computer-efficiencies are applied this way. His firm operates two offices, generating \$500,000 income annually with seven service employees, one salesmanforeman, himself and an accounting clerk.

His one office worker handles billing, accounts payable, service scheduling and notices, mailing to page 23

'Horror stories' **Everything not cozy in computer-land**

Before you get the impression that owning a computer is all roses and lollipops, perhaps the voices of a few lawn care businessmen should be heard:

• "I've been on tranquilizers and aspirin ever since I got into this headache. My son laughs at me. My wife says I'm unbearable. I hate to look at myself when I shave." (Dick Ziskind, Green Thumb Spray, Hempstead, N.Y.)

• "I've got my computer file right next to my jokes, and they should probably be in the same file. There are some shysters capitalizing on lawn care businessmen, most of whom – unfortunately – don't know beans about computers." (Ron Zwiebel, Green Care Lawn Service, Birmingham, Ala.)

• "I really get upset when I talk about it, so why spoil my day and week? I was personally swindled out of \$5,700, not to mention \$2,500 I lost by dumping my equipment that wouldn't work." (Dale Blanchard, Blanchard Tree & Shrub, Toledo, Ohio)

• "It's a nightmare, and I'm personally embarrassed. I got taken to the cleaners, and that hurts not only in my pocketbook, but also my pride." (Tom Jessen, Perma-Green Supreme, Merrillville, Ind.)

• "It's a funny way to do business. When we bought the computer and program about a year ago, we found out almost the entire program didn't work." (Bob Ottley, One Step Lawncare, Rochester, N.Y.)

So go the computer horror stories of various small businessmen who might be tops in their field of keeping a nice lawn, but have experienced less success trying to start an organized computer system.

Fred Haverley of Continental Software Systems in Jamestown, N.Y., which exhibited at the 1981 Professional Lawn Care Association of America trade show, is one of the executives who handles complaints from lawn care businessmen.

"In most cases, people are looking at the computer as a panacea for all the ills of a business," he said recently. "A number of the complaints we have received have been rather irrational, to page 23

Avoiding the hornswoggle:

You want to avoid being hornswoggled by computer software companies? "Those in the know," those who have suffered through computer horror, recommend the following tips on installing an effective computer systen:

• Make sure your programmer is competent. "A programmer not only has to understand what you say, but also what you think you mean," says Dick Ziskind of Green Thumb Spray in Hempstead, N.Y.

• "Spend the money to investigate it," says Ron Zwiebel of Green Care Lawn Service in Birmingham, Ala.

• Have a firm contract. "It should contain what to expect from the software program, in writing," says Dale Blanchard of Blanchard Tree & Shrub in Toledo, Ohio. "The contract should also stipulate how the program will be paid for."

• Don't try to install a system during the busy season. "He should get into it in August or September," offers Ziskind, "when he's got a few months — to make all the mistakes in the world."

• Make sure you get a proven system. "Go with a proven working package," notes Blanchard. "And there are plenty of them around now."

• Check references. "We called the references, but everybody had legitimate excuses for not being on line," observes Zwiebel. "They hadn't had time to feel the heat from the burn they were about to experience."

• "Don't pay for it before it's completed," adds Blanchard. Make sure the program is working to your satisfaction before you pay off the programmer.

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'It can be like buying an expensive car when you don't know how to drive.'

HORROR from page 22

ones that could be corrected easily with a minor investment."

Ottley has been dealing with Continental Software, and has conquered the initial problems he encountered.

"He (Haverley) has been able to send his man right out to work with us, probably because we're so close to them geographically,' Ottley said. "I think he's using us mainly as a test and once our program is operating, I believe he'll go to others with the new program."

Ottley is happy with the computer program provided by Continental, which can handle routes, statements, billing, payroll, accounts payable, invoicing and special analysis. The only thing that doesn't work which he hoped would, is the general ledger.

"A software package can provide perhaps 80 percent of a company's needs," Haverley contends. "Our programs are designed for the industry, and not for particular individuals. Problems vary on a case-by-case basis. I urge people with problems to communicate them to us, but we ask them for specifics and sometimes that turns into a pointless conversation.

Identify problems

"You have to identify specific problems, and given that, we can solve them within a certain time frame.'

Yet, that "certain time frame" was too lengthy for the likes of Ziskind (who originally approached LAWN CARE INDUS-TRY with his problem via a letter last December), Zwiebel, Blanchard and Jessen.

"We had a few words on the phone, and it became obvious to me that they wouldn't get the program running," Jessen said of his relationship to one software company. Jessen said that he and others were planning on instigating legal proceedings, but that "the preliminary investigation showed the company wasn't solvent enough to go after.'

Ziskind likened the small business computer market to that of automobile repair.

"It's like this poor little guy who knows nothing about cars and has his fixed. But he doesn't know how to check if it's fixed until he's tinkered around a little," Ziskind said. "Or it can be like buying an expensive car when you don't know how to drive.'

Of the five people quoted at the beginning of this article, all have their systems operating now, except for Jessen. But Ziskind, Zweibel and Blanchard have gone to alternative programmers to solve their particular problems.

"We're in the process of getting

a local guy, minimizing our losses and going from there," said Zweibel.

No, all is not roses and lollipops. The best thing to do, according to Ziskind, is to find a reputable program with a history of success or you'll end up like him:

"I feel that, eventually, I have to come out ahead, simply because I don't know when to give up. But what I'm going through physically and mentally is discouraging.'

COHEN from page 22

and filing. Cohen estimates that 65 percent of that person's time is spent on these functions, the remainder handling phone inquiries. Cohen himself spends 25 percent of his time programming accounts and writing new landscape-installation work orders and the remainder on sales and management functions.

"CALMS is so advanced," Cohen says, "that significant security and legal precautions have been taken to keep it out of the hands of local competitors.' License for the use of CALMS is limited to service areas outside of California.

"Magic-Wand" textand processing programs will run on smaller, less expensive systems using CP/M or OASIS operating systems.

License for use of the CALMS system can be arranged by contacting Carter Cole at (213) 884-7169. Fees are charged for the initial installation, training and transportation, plus an average annual license fee of \$5 per lawnservice customer. Licensees also receive the CALMS club publication every four months, regular program updates, formatted sample letters and management tips.

For samples of CALMSgenerated paperwork, interested lawn care professionals should



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LAWN CARE INDUSTRY



Cool season turf **Prevent diseases before they strike**

by Dr. Philip O. Larsen, Department of Plant Pathology, The Ohio State University

The best turfgrass control strategy is one that prevents disease from ever occurring.

In general, a turf management program which provides for a healthy vigorously growing plant is one that is most suitable for prevention of turfgrass diseases. Application of a fungicide for turf disease control should be the last alternative considered in control of turf diseases. Unfortunately, there are instances when a funigicide may have to be applied, even though proper management practices have been followed.

Let's consider some management practices that need to be examined that have a bearing on the incidence of turfgrass diseases.

Fertility. Apply fertilizer based on soil test recommendations for the particular location and turf species that is being grown. You must recognize that the amount and timing of application of fertilizer can have various effects on turfgrass diseases.

The diseases brown patch, Fusarium blight, and melting out are examples of diseases that are worse when excessive nitrogen is applied to a turf area. The diseases dollar spot and red thread are known to thrive under conditions where insufficient nitrogen has been applied. Space does not permit a thorough discussion of the effects of various plant nutrients on all turfgrass diseases but it is important that the turf manager become aware of these effects.

Thatch management. Thatch levels in excess of 1/2" are generally considered to be excessive. A

thatch removal program to prevent thatch levels from exceeding 1/2" should be regularly practiced.

Thatch influences disease in various ways. First, disease causing fungi survive in the thatch layer and serve as a source of inoculum when weather conditions become favorable for disease. Secondly, an excessive thatch layer causes a condition where the majority of turfgrass roots are based in the thatch which inhibits uptake of sufficient water and minerals. This weakens the plants and causes them to be more susceptible to disease.

Irrigation. Irrigation practices will vary depending on the turf species, soil type, amount of rainfall and other weather factors.

Dr. Philip O. Larsen is a professor of plant pathology at The Ohio State University in Columbus, Ohio. He is a professor in charge of the Plant Protection Program, and is co-editor of the popular Harcourt Brace Jovanovich book "Advances in Turfgrass Pathology" with Dr. Bobby Joyner.



Excessive watering will lead to water logged soils that will restrict root growth and weaken plants which predisposes them to turf diseases. However, enough water should be supplied to thoroughly wet the root zone area to provide adequate water for good plant growth.

With respect to disease, one needs to remember that diseases which attack the foliage of plants in particular, require the presence of water on the leaf surfaces for such processes as spore germination and spore formation. Light, frequent watering which would tend to leave a residue of moisture on leaf surfaces for prolonged periods of time encourages disease causing microorganisms. Therefore, watering at times when evaporation of water from leaf surfaces is most rapid, as for example from mid-morning to early afternoon, would be most advantageous for disease prevention.

Mowing. There is much evidence that mowing turf at heights lower than those considered to be optimal for good plant growth will increase disease severity.

On Kentucky bluegrass, for instance, severity of melting out, Fusarium blight, and dollar spot to page 28



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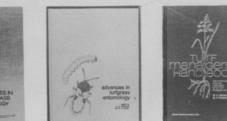
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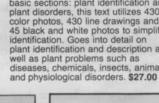
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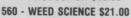
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NEWSMAKERS



Peter Connelly



Mary-Beth Clark

Peter Connelly of Hydro-Lawn Spray, Salem, Va. was elected vice-president of the Virginia Turfgrass Council at the organization's annual meeting earlier this vear.

Jon Loft, president of Lofts Seed Inc., has announced the appointment of Mary-Beth Clark to the position of specialty marketing assistant. Clark has moved to Lofts' main office in Bound Brook, N.J. She is a graduate of Rutgers University where she received her bachelor's degree in plant science. In her new position, she will aid and complement the activities at the Bound Brook and Martinsville locations.

Paul Murk has joined the National Fertilizer Solutions Association as manager of education and technical services. Murk holds a Bachelor of Science degree from California Polytechnic State University in soil science, and a master's degree from Purdue in agronomy.

Kerry Anderson has been appointed sales representative for the upper Midwest territory by the Lebanon Chemical Corp. Roger Bechle has also joined Lebanon as sales representative for the north-

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ern New Jersey and Hudson Valley territory. Both men will be representing the company's expanding line of fertilizers and chemicals.

Neil Camin has been named regional sales manager for Simpson Extruded Plastics Co., which manufactures PVC pipe for irrigation and water works projects. Camin will cover central California and Nevada, working out of Fresno, Calif.

Lyle Fridlund has joined the sales department of Power Quip, a manufacturer of lawn and garden equipment. Fridlund will be responsible for the sales floor and customer assistance.

John Anders has become the second Certified Grounds Manager in the Professional Grounds Management Society. Anders is the grounds maintenance supervisor at Allergan Pharmaceuticals in Irvine, Calif. He received his certification at the PGMS awards banquet last November in San Diego.

The Grounds Managers Certification program was begun in April, 1980. About 50 other grounds managers are in various stages of the certification process.

R. David Wick is president of Guardian's Wonderlawn Systems, Division of Guardian Pest Control, Inc., Duluth, Minn. The pest control company is going into lawn care with **Richard Bloomquist** as its service supervisor.

Peter Galantie is owner of Lawn Medic of Cherry Hill, Westville, N.J. The company offers both liquid and granular chemical lawn care, and is a franchise of the Lawn Medic chain based in Bergen, N.Y.

C. P. Industries in White Plains, N.Y. has named **Stephen S. Brown** its vice president and general manager of the Agricultural Products Division.

Brown was previously employed by the Tru Green Corp. in East Lansing, Mich. as director of support services and corporate agronomist.

J. C. Wildmon, a senior in turfgrass management science at the University of Florida received the TUCO Turf Scholarship for 1982 recently. The scholarship is sponsored by TUCO, Division of the Upjohn Company, to assist turfgrass students in meeting their educational needs.

Alex C. Scarborough, a student at Texas Tech, has won a \$500 scholarship from Weather-matic, a division of Telsco Industries which manufactures lawn and turf irrigation products. Scarborough, a native of Lubbock, Texas, is a senior majoring in landscape architecture.

Richard Hurley, Lofts Seed vice president and director of research, has recently completed the requirements for his doctorate in soils and crops at Rutgers University under the direction of Dr. C. Reed Funk.

Dr. Hurley is a certified professional agronomist who received

GET TOUGH

on Fungus, Insects, Weeds, Off-Color Turf and Dry Spots

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Alex C. Scarborough

Richard Hurley

his B.S. and M.S. degrees from the University of Rhode Island. He joined Lofts in 1977.

Art Wick, a product manager at Lakeshore Equipment & Supply Co. in Elyria, Ohio, recently was mentioned in a story in the Cleveland Plain Dealer.

The PD quoted from a story Wick wrote on Lesco's "Lakeshore News" dealing with tall fescues and their future impact on the turfgrass market. "The future of grass breeding lies in the development of varieties which prove healthy, attractive turf for the least amount of money," Wick was quoted as saying by Irma Bartell, PD garden editor.

The New York State Turfgrass Association has presented its highest honor, the Citation of Merit, to Robert A. Russell, vice president of J&L Adikes, Jamaica, N.Y.

Russell has been active in the organization's Board of Directors,

Art Bruneau has accepted an extension position at **North Carolina State University** in Raleigh, N.C. Bruneau, co-editor of the Nebraska Turfgrass Bulletin, has been in charge of the pilot Nebraska Integrated Pest Management Program since early 1979. At the University of Nebraska, Bruneau wrote insect and disease guides, turf Nebguides and slides and video tapes.

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APRIL 1983

LAWN CARE INDUSTRY

PRODUCTS

Sweep-a-Lawn has improved features



Circle no. 150 on Reader Inquiry Card

Parker Sweeper Company's redesigned Sweep-a-Lawn has a new look and improved features which include extended brush height adjustment and clip-on wind apron, for additional versatility.

The instrument also has improved handle-basket frame assembly, a heavy-gauge steel hood, rubber tires on stamped steel wheels and sintered iron pinions. The Sweep-a-Lawn, with a 4.4-

cubic foot capacity, is a good push or trailing sweeper (with optional hitch) for small to medium size lawns.

Pole pruner has exclusive action

Tree branches up to two inches thick are easily cut with American Standard's RL 201-6 pole pruner. Optional extenders to 14 feet permit reaching high branches.

The pruner has exclusive Ratchet Cut action that does the brute work as handles are opened and compressed, opened and compressed by using the rope.

Teflon-coated hardened steel blades and a choice of wood or fiberglass handles are offered.

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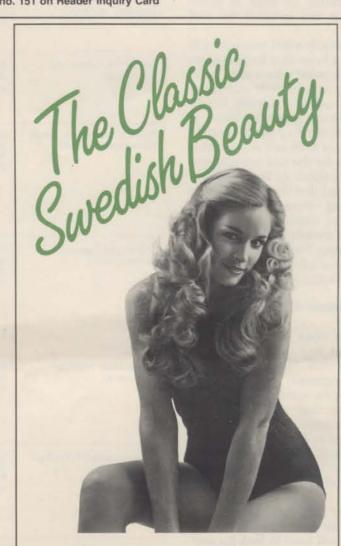
Utility mini-truck is unveiled for 1983

Turf Vac Corp. has just introduced the Sandancer line of gas-powered mini-trucks. With 10 models to choose from, this is the broadest line of utility vehicles introduced by a manufacturer at one time.

Sandancer payload capacity is 1500 pounds, and a wide variety of options are offered to match different work requirements. Its recommended ground speed is 18 mph.

Circle no. 152 on Reader Inquiry Card





S he came from Sweden. Made a hit as the Fylking Kentucky bluegrass beauty. Is a favorite with those who plant and care for sod, parks, golf courses, homes and recrea-

tion areas. Even costs less. Ask anyone who makes his living in legal grass.





27 | LAWN CARE INDUSTRY

Circle No. 111 on Reader Inquiry Card

28

Stopping diseases of lawns

are all known to be increased at lower than optimal mowing heights. The cutting height employed will depend on the turf species, cultivar, use pattern, and aesthetic preference, but whenever possible the cutting height should be kept at those levels that are optimal for turf growth.

Occasionally a turf manager will take over a lawn that has deteriorated to the point where even good cultural practices will not bring the lawn back to a suitable condition. In those instances there is often no alternative but to reestablish the area with sod or seed that is suitable for the turf use planned for that location. At these times it is important that the turf manager give strong consideration to the selection of disease resistant cultivars that are adapted to that area. Consult your local turf extension specialist for a list of cultivars that would be suitable.

Disease diagnosis

Keep an open mind. The best advice that one can give in approaching the diagnosis of a turfgrass damage problem is to keep an open mind. Consider all the factors that are capable of causing damage to turfgrass such as pesticide or fertilizer misapplication, drought, vandalism, nutrient deficiencies, in addition to the possibility of insect and/or diseases.

Look for patterns. When you arrive at the site of the damaged lawn you first need to look for any patterns in damage. For instance, is the severity worse in sunny areas or in the shade? Does the damage stop at property boundaries suggesting differences in management practices or turf species? Does the damage follow mowing or chemical application patterns? Does it follow water drainage patterns? The answers to these questions will usually give you some valuable clues to possible causes of the damage.

Examine individual plants. Once you have surveyed the overall appearance of the turf area affected, then it is time to examine individual turf plants.

Are there discolorations, distortions, or lesions on the leaves that would be characteristic of herbicide or fertilizer burn or certain disease or insect problems? Examine the roots of individual plants. Are they discolored or stunted? These latter symptoms might lead you to consider the possibility that root infecting fungi may be attacking the plants or that the soil may be water

Diagnosis and control of common diseases of cool-season turfgrasses

Disease (pathogen)	Susceptible turfgrasses	Season and air temp.	Cultural control	Fungicidal control 1,2
leafspot (Bipolaris sorokíniana), melting-out (Drechslera poae)	Ky. bluegrasses ryegrasses tall fescues bentgrasses	April-June, SeptOct. 55-75°	1-raise cutting height 2-avoid light; water fre- quently	Actidione RZ Dyrene Tersan LSR Daconil 2787 Chipco 26019 Fore
Fusarium blight (Fusarium roseum, F. tricinctum)	bluegrasses	July-August 77-95°	1-water lightly, frequently during dry periods to re- duce heat stress	Bayleton Tersan 1991 Rubigan Fungo Cleary 3336 thoroughly water tur areas before and im mediately after applica tion
powdery mildew (Erysiphe graminis)	bluegrasses fescues	July-Sept. 65-70°	1-reduce shade 2-increase air circulation by removing surrounding vegetation	Fungo Actidione TGF
red thread (Corticium fuciforme)	fescues bluegrasses, ryegrasses	May-June, SeptOct. 50-60°	1-follow balanced fertili- zation program	Caddy Cadminate Daconil 2787 Cleary 3336 Fungo Bayleton
Rhizoctonia brown patch (Rhizoctonia solani)	bentgrasses bluegrasses fescues ryegrasses	July-August 80-85°	1-avoid high-nitrogen fer- tilizers 2-increase air circulation by removing surrounding vegetation	Dyrene Daconil 3787 Rubigan Tersan 1991 Terraclor Tersan 75 Fungo Cleary 3336 Chipco 26019 Bayleton
dollar spot (Sclerotinia homoeocarpa)	bentgrasses bluegrasses ryegrasses fescues	late June-Oct. 70-80°	1-follow balanced fertili- zation program 2-remove dew	Daconil 2787 Cadminate Caddy Rubigan Bayleton Tersan 1991 Dyrene Chipco 26019 Cleary 3336 Vorlan
stripe smut (ustilago striiformis)	bluegrasses bentgrasses ryegrasses	April-June, August-Sept. 50-60°		Bayleton Tersan 1991 Fungo Cleary 3336 apply in late fall or earl spring; water before an immediately after appl cation
gray snow mold (Typhula spp.)	bentgrasses bluegrasses fescues ryegrasses	NovApril 32-55°	1-avoid late fall fertiliza- tion 2-rake leaves, cut short 3-control drifting snow	Bayleton Tersan SP Rubigan Dyrene Galo-clor Tersan 75 apply prior to first snow fall
pink snow mold (Fusarium nivale)	bluegrasses bentgrasses fescues ryegrasses	NovApril 32-55°	1-avoid late fall fertiliza- tion 2-rake leaves, cut short 3-control drifting snow	Bayleton Tersan 1991 Rubigan Calo-clor Tersan 75 Vorlan apply prior to first snow fall

¹Products containing more than one fungicide combined together are offered by many companies to increase the number of diseases controlled by the use of a single product. See appropriate catalogs for availability and usefulness.

logged as a result of excessive irrigation.

You should also look for the presence of insects on the foliage and in and under thatch layers. Most disease and insect problems have a characteristic appearance that you will need to learn by taking advantage of whatever educational resources are available to you. Having access to a 10-20X hand lens will be invaluable at this stage in the diagnostic process.

Time of year and weather conditions. In diagnosis of turfgrass diseases, it is particularly important that you are aware of the time of year and weather conditions under which certain diseases are known to occur. For example, melting out is a spring disease which only occurs under cool, moist conditions. Fusarium blight is normally only seen under hot, dry summer conditions. Knowing when a disease is apt to occur and what weather conditions favor its occurrence is extremely important to accurate diagnosis.

Know disease host range. You should know which diseases are most likely to occur on various turf species and cultivars. For instance, red thread can be extremely severe on perennial ryegrass but is not as damaging to Kentucky bluegrass. Conversely, Fusarium blight can be very severe on Kentucky bluegrass but is not a problem on perennial ryegrass.

A thorough understanding of the seasonal occurrence, plant host range, weather factors that favor disease, and symptoms are all crucial to correctly diagnosing turfgrass diseases. Once a diagnosis has been achieved, hopefully, a control procedure can be initiated that will be effective in remedving the disease problem. The following table and accompanying photographs are included to provide you with essential information that will assist you in correct diagnosis and control of most commonly encountered turfgrass diseases.

New fertilization gun hits market

Arbor-Nomics Inc. has introduced a new tree and shrub fertilization gun, tested on more than one million square feet all over the United States.



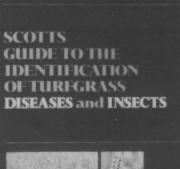
The O. M. Scott & Sons Co. is publishing a new "Guide to the Identification of Turfgrass Dis-eases and Insects," priced at \$7.50.

New guide to insects, diseases by Scott's

The 100-page book describes 25 common turfgrass diseases and 35 common turfgrass insects with more than 120 full-color photographs and illustrations.

Each disease is detailed by its host grasses, symptoms of injury, regions of adaptation and life cycle states. The insects are broken down into turf-damaging or nuisance-type. Each insect is described by its physical appearance, life cycle, type of damage or discomfort, regional adaptation and preferred host grasses, if any.

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Four chemicals are spotlighted

Four products being supplied by the Mobay Chemical Corp. are highlighted in informational publications. The products are Sencor 75 Turf Herbicide, Bayleton 25% Wettable Powder systemic fungicide, Nemacur 15% Granular systemic insecticide-nematicide and Ofthanol 5% Granular insecticide.

Semcor 75 is discussed in a brochure, Bayleton in two brochures, Nemacur in a pamphlet and Ofthanol in a folder with doorhanger.

Each full color publication outlines the benefits of each product and summarizes recommended application procedures.

Circle No. 157 on Reader Inquiry Card

The gun is effective to 500 psi, repairable and rustproof. It comes with a rubber shield to keep fertilizer off the operator and measures 47 inches. Output is four gallons per minute. Shipping weight is 41/2 pounds.

Circle no. 153 on Reader Inquiry Card

Spot sprayer has pressure switch

A pressure switch on the Broyhill 12/12 (12 gallon/12-volt D.C.) pumping system eliminates the pump's operating time to your liquid spraying requirements. It automatically turns the pump on and off, letting the operator concentrate on spraying and driving needs.



The sprayer is completely selfcontained with a poly tank, trigger grip spray gun with adjustable nozzle and 15 feet of hose. The electric diaphragm pump is rated at 45 psi and up to 2.8 gpm. The sprayer itself delivers a straight stream up to 25 feet.

The 12/12 pumping system can be used to spot-spray weeds and fence rows, and with the addition of a boom can be used on lawns.

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Three brochures describe equipment

Three free, illustrated brochures describe Cushman Front Line tractors, Ryan's line of turf care equipment and the Cushman turf care vehicles.

The Front Line tractor-mower is powered by the standard 18 horsepower gasoline engine or an optional diesel. That and the other Cushman vehicles can serve a variety of grounds maintenance functions. The Ryan equipment is used for aeration, sod-cutting and other turf maintenance functions.

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PC200 gallon spray unit shown here through rear door of van.

On the move. PEST CONTROL SPRAY UNITS BUILT FOR YOUR PICK-UP OR VAN.

The experts at Tuflex are on the move to stay a step ahead of your pest control problems. Tuflex is the only manufacturer to specialize in seamless fiberglass spray tanks built specifically for the pest control and lawn care industry.

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PC20810 200 gallon spray tank with Bean Piston Pump Sprayer (10 GPM 500 PSI). Also available as a 300 gallon sprayer and 200 gallon or 300 gallon split unit.

Tuflex Manufacturing Company 1406 S.W. 8th Street • Pompano Beach, FL 33060

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AWN CARE INDUSTRY

Turf-Seed offers 30 four turfgrasses

Olympic tall fescue, Shadow chewings fescue, Columbia Kentucky bluegrass and Manhattan II are available to professional lawn care people through Turf-Seed Inc.

Olympic is a new, leafy, moderately low-growing variety of tall fescue with a dark green color and a proven resistance to Helminthosporium dityoides leaf spot. Shadow is similar to Jamestown and Banner, except that it is resistant to powdery mildew and rust.

Columbia, which has been registered by the Crop Science Society of America, is suited wherever Kentucky bluegrass is adapted, with exceptionally attractive early spring color. In addition, its resistance to Fusariun extend its usage a

Manhattan II, developed through hybridization and gram by Dr. C. Purdue Universit liam A. Meyer of Pure Seed Testing able for fall del greater density, da and improved Rhizoctonia brov rust, crown rust, thread.

Circle No. 158 on Re

Catalog conta useful drawi

The Safe-T-Lawn fering a sprinkler that is easy to re featuring useful c ings.

Safe-T-Lawn is catalogs free of cl and distributors.

Safe-T-Lawn, Miami, Fort Wo Fresno (Calif.) leading supplier products.

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Return this coupon

YES! Please send m PATHOLOGY.

Name _ Address . City . Phone

Soil treatment improves turfgrass health

A new soil treatment that improves permeability and aeration for lawns is now available from



Four Star Agricultural Services Inc.

Pene-Turf Soil Treatment, formulated especially for use by pro turf managers, can speed water percolation through any type of soil, thus helping to eliminate isolated wet and dry spots, aiding the establishment of better rooting and helping to reduce soil erosion problems.

Pene-Turf makes thatch and compacted soil more permeable and can actually aid chemical incorporation. It is non-toxic and biodegradable and is safe to use near lakes and streams.

An annual application at a cost of about \$8 per acre is recommended.

Circle No. 160 on Reader Inquiry Card

Ryegrass tolerant to heat and drought

Palmer Perennial Ryegrass, developed by the Lofts Seed Company from breeding material ob-tained from Dr. C. R. Funk of Rutgers University, has displayed excellent tolerance to heat and drought stress at turfgrass trials across the country. In addition, Palmer has shown good resistance to crown rust and brown patch, and has demonstrated good winter hardiness and quick germination.

Palmer, according to Lofts personnel, performs particularly well for tees, greens and fairways in the southern United States where overseeding dormant bermudagrass is practiced.

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 American duration ordering those and constrained by the relation of the relations of the product (R13.0° ex) and is of the relation of the r	rea. which has been than extensive I selection pro- Reed Funk of y and Dr. Wil- f Turf-Seed and g, will be avail- livery. It offers arker green color resistance to vn patch, stem eaf spot and red ader Inquiry Card ains ngs Company is of- system catalog ead and follow,	A MANAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	BOOK I and 18.95* paperback ook covers: •pests and controls •uses of turf •serving turf needs •AND MORE ANDBOOK is an easy ming, purchasing, hiring, oction. These 424 pages		Y F B N A	OURSELF OR THE USY AONTHS HEAD
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1983

New tax rules

Is Subchapter 'S' for you?

Congress has once again changed the rules governing Subchapter "S" corporations, good news for the thousands of lawn care service people who do business as small business or Subchapter "S" corporations, as well as for those who have merely been thinking about taking advantage of the many tax benefits this unique status offers. But others may not know what Subchapter "S" is.

For tax purposes, a corporation is treated as a separate entity apart from its shareholders. In other words, income earned by the corporation is taxed to it, and distributions from the corporation are also taxed to the shareholder. A partnership, on the other hand, is not treated as a taxable entity for income tax purposes. Instead, the income of the partnership (whether actually distributed or not) is taxed to the partners while distributions by the partnership are generally tax-free.

In many instances, lawn care and landscaping businesses may wish to incorporate for business reasons (to obtain limited liability, for instance) but would prefer not to have corporate tax treatment. The noncorporate tax treatment may be preferred where the owners wish to have corporate losses pass through to their individual tax returns. Or, it may be that income would be taxed at individual rates which are lower than the applicable corporate tax rate.

Currently, lawn care maintenance operations with 25 or fewer shareholders may incorporate. By choosing Subchapter "S" status,

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Body Fashions/Intimate		LP/Gas	14,684
Apparel	10,162	Lawn Care Industry	12,310
Candy & Snack Industry	3,500	Neurology	13,069
Dairy Field	18,134	Paperboard Packaging	12,111
Dental Laboratory Review	17,297	Paper Sales	12,592
Dental Management	100,005	Pest Control	14,684
Drug & Cosmetic Industry	9,929	Professional Remodeling	36,627
Flooring	22,241	Quick Frozen Foods	20,785
Food & Drug Packaging	54,853	Rent All	11,139
Food Management	50,077	Roofing/Siding/Insulation	18,310
Hearing Instruments	17,095	Snack Food	9,138
Home & Auto	22,228	Toys Hobbies & Crafts	13,982
Hotel & Motel Management	36,061	Weeds Trees & Turf	43,041
Housewares	12,863		

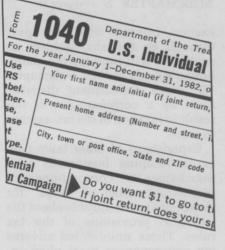
Don't forget that classified advertising works just as effectively in locating employees as it does if you are looking for a position, have a line, machinery or a business to sell, are seeking representatives or wish to buy a specific item. Let it go to work for you!

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these corporations can avoid having income taxed or losses deducted to the corporation. Instead, each shareholder reports a share of the Subchapter "S" corporation's income or loss each year in proportion to his or her ownership interest.

Until now, our tax laws required these hybrid business entities to conduct certain aspects of their operations as corporations rather than as partnerships. The new tax law, however, will permit Subchapter "S" corporations to treat many of these pass-through items more as a partnership than as a corporation. For example:

Capital gains and losses — Gain or losses from the sale of capital assets will pass through to the shareholders as capital gains or losses. No longer will net capital gains be offset by ordinary losses at the corporate level.

Section 1231 gains and losses — The gains and losses on certain property used in your lawn care operations will be passed through separately, and will be aggregated with the individual shareholder's other Section 1231 gains and losses.

Charitable contributions — The corporate 10-percent limitation will no longer apply to contributions by the Subchapter "S" corporation. As in the case with with partnerships, the contributions will pass through to the shareholders.

Credits — Again, as with partnerships, items involved in the determination of credits, such as the basis of property qualifying for investment tax credits, will pass through to shareholders.

Other items - Limitations on the used property investment tax credit and the expensing or immediate write-off of up to \$5,000 in qualifying depreciable business assets will apply at both the corporate level and at the shareholder level, as in the case of partnerships. Thus, the Subchapter "S" corporation may choose to expense \$5,000 of newly acquired assets and pass along a pro rata amount of this deduction to the shareholder based on his ownership interests. The shareholder then adds his pro rate share to other expensed property or equipment resulting from partnerships, other Subchapter "S" ventures or sole proprietorships. This total at the shareholder level cannot exceed the \$5,000 Section 179 limit for any one year.

Tax-exempt interest — Taxto page 32

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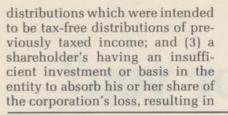
LAWN CARE INDUSTRY

32 SUBCHAPTER 'S' from page 31

LAWN CARE INDUSTRY

exempt interest will now pass through to the shareholders as such, and will increase the shareholder's basis in their Subchapter "S" stock. Subsequent distributions by a corporation will not result in taxation of the tax-exempt income.

Experiences of other lawn care or landscaping businesses with Subchapter "S" corporations also reveals a number of "traps" for those not knowledgeable about the technical provisions of the tax rules. These unintended adverse tax consequences most often involve (1) unintentional violation of the continuing eligibility rules, resulting in many retroactive terminations of Subchapter "S" status; (2) the making of taxable



the personal income of the shareholders.

-A Subchapter "S" can be used as an effective method of splitting business income with children or other relatives for tax purposes, without taking money out of the

There are a number of traps for those not knowledgeable about the technical provisions

the permanent disallowance of that part of the loss.

On the other hand, a few of the benefits that can result from a Subchapter "S" election are:

-Corporate losses are taken as ordinary losses, thereby reducing business and without encountering the problem of double taxation.

-Income already earned by a Subchapter "S" corporation can be shifted by a gift of stock to another person even though the gift is

Surflan[®] and Roundup[®]. A powerful combination with When you combine the dependable residual con-trol of Surflan[®] with the

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With Roundup, you can have weed and grass kill right away. Then Surflan follows up with six to eight months of dependable residual control, the real key to a solid, long lasting weed control program. A preemergrass, fall panicum, pig-weed, johnsongrass, foxtall, and many others head-on,

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By being a weed's worst enemy, an effective tank-mix is the best friend flowers, trees, plants, or shrubs can have. And that's the real beauty of Surflan and Roundup. For Surflan, see your Elanco distributor. ELANCO

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made near the very end of the corporation's tax year.

-By setting up a Subchapter "S" corporation with a taxable year which differs from that of its shareholders, it is possible to spread the corporation's income so that it is divided and taxed directly to the shareholder in two of his or her taxable years.

-An unincorporated lawn care business can get a big one-shot deferment by incorporating, electing to be treated as a Subchapter "S" and then using a fiscal year.

-The profits of a Subchapter "S" corporation are not subject to double-taxation: profits are not taxed to the corporation when earned and to the shareholder when paid out in the form of dividends.

-Proprietors and partners who prefer to operate as corporations, but don't because of the higher cost, can switch to the corporate form and continue paying the same tax as in their unincorporated form.

Qualifications

In order to qualify initially (and to continue to qualify), the following rules must be adhered to:

1) The entity must have only one class of stock:

2) It must be a domestic corporation;

3) It cannot be a member of an affiliated group eligible to file a consolidated tax return;

4) The shareholders must be individuals, estates or certain kinds of trusts;

5) None of the shareholders can be a non-resident alien;

6) It must make a proper election, which simply involves filing the proper form within the required time period;

7) As already mentioned, no more than 25 percent of the entity's gross receipts nay be "passive" income; and

8) The corporation cannot have more than 35 shareholders with husbands and wives counting as one

All in all, nothing could be easier than choosing Subchapter "S" status for your landscaping corporation. Of course, if you are not presently operating as a corporation, you will need a lawyer to create a legal corporation - one that will qualify as a Subchapter "S." And, even though anyone can complete and mail the simple form required to elect Subchapter "S" status, seeking the advice of a competent tax specialist might be in order particularly since it is difficult to determine whether operating a Subchapter "S" would really benefit you or your business. -Mark E. Battersby

Mark E. Battersby is a freelance writer for business publications whose office is in Ardmore, Pa. Battersby, who wrote the Subchapter 'S' story, is also a tax and financial advisor. His stories appear in 150 magazines each year, and he has 10 regular columns in other publications, plus a syndicated column appearing in more than 40 magazines.

Circle No. 106 on Reader Inquiry Card

Changing engines

National Mower Co. has altered its Model 68 reel mower so it now uses, as standard equipment, a Briggs & Stratton eight horsepower engine.



National Mowers offers two triplex mowers with cutting widths of 68 and 84 inches, a five-gang which cuts an 11½-foot swath and its newest model JTS-180 front line mower with a 71inch cut.

Circle No. 162 on Reader Inquiry Card

Microchip unit tests soluble salts

The Kelway SST is a new low cost professional quality salinity tester which uses microchip technology.



Designed for the grower, the Kelway SST quickly helps solve the increasingly common problem of soluble salts content. The instructions include a chart which defines soil salinity conditions, so the grower knows when to leach and it acts as his guide to fertilizer input.

The SST, which retails for under \$90, is lightweight and portable.

Circle No. 163 on Reader Inquiry Card

Mulch blower can blow all grades

Bowie Industries has added a compact mulch blower to its line of hydro-mulchers called a Bowie Aero-Mulcher. It is capable of blowing all grades of baled hay and straw, wet or dry.

The Aero-Mulcher is powered by a turbo-charged John Deere Series 300 diesel engine and produces air velocity of 180 mph. The unit can distribute 17 tons per hour at distances up to 90 feet using a 30-inch, six-blade fan which is tuned for handling up to 11,500 cfm.

The discharge gun rotates 355 degrees and has 60-degree vertical travel.

Circle No. 164 on Reader Inquiry Card

Get a better handle on leafspot, dollar spot and brown patch ontrol.

Get Daconil 2787[®] fungicide, and you've got yourself the most effective control money can buy.

Because nothing matches Daconil 2787 performance when it comes to fighting leafspot, dollar spot and brown patch. Plus six other destructive turf diseases including red thread and stem rust.

The fact of the matter is, Daconil 2787 gives you the broadest spectrum of disease control on the market today.

What's more, Daconil 2787 resists wash-off. So it keeps on working during heavy rains or watering for maximum disease protection.

And it's just as effective against common diseases on 45 ornamentals. So this season, get a better grip on disease control. Get Daconil 2787 from Diamond Shamrock. Also available in wettable powder.



Diamond Shamrock

Agricultural Chemicals Division Diamond Shamrock Corporation 1100 Superior Avenue Cleveland, Ohio 44114

Always follow label directions carefully when using turf chemicals.

Circle No. 103 on Reader Inquiry Card

34 Storage unit is perfect for outside

Arrow Group Industries' new Storette has been designed to meet the continued demand for compact, economical storage space. It is perfect for outdoor use.

The unit is made completely of galvanized steel with some reinforcement and a Perma-Plate XL2 weather-resistant finish. Door and lid latches make it lockable.

20-page full color catalog published

Bunton Company has released a new 20-page full color catalog showing its complete line of heavy duty commercial mowers for 1983. Included are 71-inch and 61-inch

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at an economical price. Effective turfgrass management doesn't have to be expensive. With Balan at work, both weedgrasses and your expenses tend to stop growing.

cutting width turf tractors and optional attachments, selfpropelled gang mowers, small self-propelled mowers and more.

A handy four-page comparative specification insert simplifies the process of selecting the right mower for each application.

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Lines of motorless sprayers expanded

The Broyhill Co. has expanded its line of motorless sprayers with the introduction of a 12-gallon motorless, designed to be towed behind a garden vehicle.

A five-inch fill opening on the container provides easy access, and two FloodJet flat spray tips provide a wide flat spray pattern up to six-foot spray coverage. New modular plastic nozzles allow inspection and installation of spray tips with a quarter-turn motion. The plastic nozzle cap can be color-coded for various nozzle sizes.

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'Cozy cabs' handy

Yanmar tractor owners get a big comfort and safety boost with two new Custom 300 Cozy Cabs.

The all-weather cab enclosures fit Yanmar 220, 226, 276 and 336 tractors, and do not interfere with operation of loader, mower, blade or snowblower accessories. Both cags are ROPS-tested to OSHA standards.

Tinted glass, tractor-matched colors and all-steel construction are standard; heater and wipers are optional.

Circle No. 168 on Reader Inquiry Card

Retardant helps seed production

Oregon State University crop scientists have discovered a way to cause some grasses to produce about twice as many seeds: a growth retardant.

According to Dave Chilcote, Harold Youngberg and other researchers, the chemical compound keeps plants from growing but

does not interfere with seed development. The retardant has increased seed yields in grasses such as tall fescue, fine fescue and perennial ryegrass, an article in Oregon's Agricultural Progress said.

Drawbacks might be cost and government clearance, both of which might be worked out when the research is completed. Such a retardant might be available to growers by 1984 or 1985.

Retarding stem growth may encourage grasses to channel more energy into their seed-producing sites, researchers say.

Circle No. 169 on Reader Inquiry Card

Use soil testing as marketing tool

Setting up a soil testing service can be used as both a marketing tool and as a money-maker with Green Pro Cooperative Services' 14-point Soil Analysis.

Green Pro will provide a soil analysis service that is especially designed to give lawn care professionals the same advantage that farmers and golf course superintendents have had for decades. It is a test that all customers can read and appreciate because it is clear. The initial charge is \$50, and

each test costs \$12. Circle No. 170 on Reader Inquiry Card

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LAWN CARE INDUSTRY

1983

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GET MORE FACTS

Lehr on labor

Checking applicant's credit

by Richard I. Lehr

We are frequently asked by lawn care employers when they may ask an applicant for employment about his credit history and the limits to such inquiries. Generally, employers who use an outside agency to check an applicant's credit history are subject to the Fair Credit Reporting Act. This act requires disclosure by an employer to the applicant of reports that have been the subject of evaluation by the employer.

The employer must meet the following conditions for obtaining a credit report:

1) Within three days after the employer requests a report, he must disclose to the applicant in writing that such request has been made.

2) The applicant must be informed by the employer that the applicant has the right to request in writing for a conplete disclosure of the nature and scope of the investigation requested by the employer from the agency.

3) Should the applicant make such a request, the employer must supply the individual with information regarding the scope and nature of the credit investigation. The employer must respond no later than five days after the individual makes the request or after the credit report is requested, whichever is later. At this point, it then becomes the responsibility of the credit agency to give the applicant the information from its files.

Practical procedures

Because we want lawn care employers to remain free of violations of this law, the following procedures should be of practical use when a lawn care employer deems that a credit check is necessary

1) Lawn care employers should request credit reports only when the position applied for involves such responsibility or access to financial or confidential matters that a report would be relevant. In most cases, it probably would not apply to technicians, unless perhaps the technicians were paid on a commission basis.

2) Write a letter to the applicant the same day a credit report is requested, stating to the applicant that "in accordance with the provisions of the Federal Fair Credit Reporting Act, Public Law 91-508, we are informing you that a report may be made as to your character, general reputation, personal characteristics or mode of living. The nature and scope of this request will be disclosed to you upon your written request."

3) In the event employment is denied on the basis of a credit report, a letter should be sent to the applicant disclosing that decision and telling the applicant the deci-

Circle No. 124 on Reader Inquiry Card-

sion was based on a consumer report made by the particular agency. Include the mailing address of that agency, so that the individual may contact the credit agency

Another approach to informing the applicant that a credit report may be used is to disclose this on the employment application. For example:

As part of considering your request for employment, we are notifying you according to the

Federal Fair Credit Reporting Act, Public Law 91-508, that we may request from a consumer reporting agency a credit report for the purpose of obtaining independent information about you. This is to inform you that upon written request by you within a reasonable time after acknowledging this authorization, the employer will make a full disclosure to you of the nature and scope of the credit investigation requested. Such disclosure shall be made in writing delivered or mailed to you within

five days after the disclosure is requested.

Remember that a credit disclosure request is permissible. The law is concerned about disclosing to the applicant the information which the agency provides to the employer. The employer has a right to rely on that information; should a problem develop because of that information, the agency would be the only one primarily responsible.

However, as mentioned earlier in this column, there is really no reason for a lawn care employer to seek a credit check unless the individual is applying for a position where the lawn care employer determines such a credit check would be necessary to evaluate the individual's overall suitability.

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CHIPCO 26019 is easy to use wherever lawn diseases crop up. It will improve your reputation with customers and help you generate more profit.

For details on CHIPCO 26019...and on "The Right Approach" incentives program...contact the dealer who carries the CHIPCO line of turt care products or call us at (201) 297-0100.

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KELWAY® SST., new professional SALINITY TESTER using microchip technology, retails under \$90.00. Eliminates soluble salts problems by telling when to leach or fertilize. Available from distributors. Brochure from KEL INSTRUMENTS CO., INC., P.O. Box 1869, Clifton, N.J. 07015, (201)-471-3954.

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Midwest lawn spray and maintenance company, including equipment and accounts. Year round cash flow. Office and warehouse also available. Established business for turnkey operation. Must sell, \$70,000. Write LCI Box 84. 4/83

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CLOSEOUT SPECIAL! Save your back issues of LAWN CARE INDUSTRY and save money at the same time. We're closing out our line of permanent binders at the special low price of two for only \$7.50! (This is a \$7.00 savings over our regular price plus postage and handling.) Orders will be filled as long as our supply lasts — quantities are limited. Order your binders today from: Book Sales, HBJ PUBLI-CATIONS, One East First Street, Duluth, MN

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Used Finn lawn feeder, 800 gal. w/hose, reel & spray gun. \$5000.00 (502) 782-2730, 1:00 pm ---4/83 4:30 pm.

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Lawn-Care MANAGEMENT SYSTEM Software for Lawn-Care winn AGEMENT STSTEM Software to multi-user CPM or OASIS systems with 5mb, Hard-Disk, "RASCAL" in use since Dec. '81, \$2500 + license, set-up, training. The Green Scene, 5842 Tampa Ave., Tarzana, CA 91356, (213) 705-6388.

Going out of business sale, 1978 GMC Sierra 6000, with 1200 gallon Tufflex tank, has 50 gallon saddle tank. FMC 10 gpm. pump, Haney electric hose reel, with 400 ft. ½ in. id. hose, also detachable side mount boxes for dry applications. Two FMC Royalette 1010 series sprayers, Scott RX rotary spreaders, spray guns, pumps, hand cans, much other misc. all equipment in excellent condition. Call Greg for info. 312-293-1036. 4/83

FOR SALE: Out of business, must sell unopened 55 gal. drum of Dursban. Various other chemicals and supplies. Will sell cheap or trade. 216-357-8400. 4/83

For Sale - Tractor-Lawn Combine units (2) #129 IH Hydrostatic Tractors w/10 gal tank on tractor Combines are stainless steel with aerators, 4 granular bins, and 20 gal spray tank. Good operating equipment. \$3,500/unit. Call 315-637-6001 or 315-492-3217. 4/83

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ACCOUNTS WANTED - National chemical lawn care company seeks accounts to acquire. Selling price open for negotiation. If interested, send name, address, phone number and number of accounts available to LCI Box 86. 4/83

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General Manager position open for chemical lawn and shrub division of established landscaping company in the sunbelt area. Tremendous opportunity for an aggressive individual having experience with a national or regional lawn care company. We are looking for a BUSINESSMAN — the very BEST!! Knowledge of turf grass, ornamental plants, and marketing needed. The right person will enjoy excellent salary, benefits, and opportunity for equity participation with unlimited earnings potential. Send complete resume including education, experience, and salary history. All replies will be kept confiden-5/83 tial, Write LCI Box 85.

Seeking experienced manager to develop new lawn care business in metropolitan Boston, MA area. Must know lawn care field. Excellent opportunity. Send resume in confidence to Ronald Yerardi Co. Inc., 30 Sun Street, Waltham, MA 02154. 4/83

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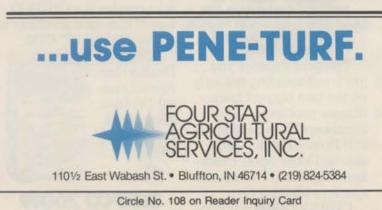
Economical

No other product can give you the results and still cut soil management costs like PENE-TURF Soil Treatment. PENE-TURF costs only about \$8 an acre to apply...you can treat twice the acreage at less than half the cost of similar products!

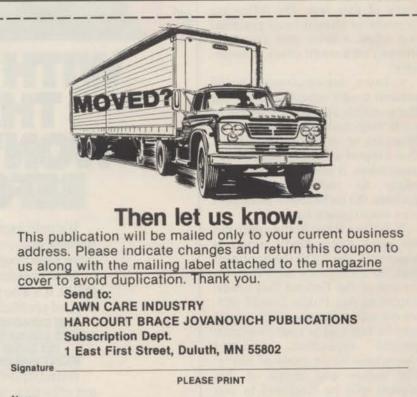
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Find out for yourself...write or call today for FREE information about PENE-TURF...the best solution for soil management.

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turf managers across the nation proves aeration...helps establish better rooting...eliminates wet and dry spots...helps curb erosion...and so much more.

Guide to fertilizers from page 17

ufacturer's term for potassium chloride (KCl). It is a true chemical term and a common source of potassium. COMMENT: For the two fertilizers above the nitrogen, percentage is correctly represented. However the fertilizers contain no phosphoric acid, phosphoric pentoxide or P2O5. Nor do the fertilizers contain any soluble potash or K₂O. Labeling laws require use of the antiquated terms for phosphorus and potassium as shown. The percentages of P2O5 and K₂O as shown legally reflects the true phosphorus and potassium content disguised in terms of P2O5 and K2O equivalents.

The Nitrogen Dilemma

A myriad of fertilizer mixtures based on controlled release nitrogen products has been introduced in the last 15 years. These have been a valuable addition to the list of management materials for growing turfgrass. At the same time, it requires an advanced degree of learning to understand them. The nitrogen labeling is reasonably good. The main problem is knowing what the descriptive terms really mean. The three newer controlled release nitrogen fertilizers are the ureaforms, IBDU and sulfur-coated urea. Alone they are easier to understand. When mixed into many kinds and brands of fertilizers they become a menagerie to many turf people!

A composite list of nitrogen components is shown below. These will give some insight as to what the label terminology means.

Water soluble N (WSN) Quick release with high "burn' potential

Water soluble N (WSN) Release after seven days and up. Lower "burn" potential

"Shorter"

(SCU)

units

Ammoniacal nitrogen

Urea

nitrogen

Methylene ureas Nitroform 11 (non-coated)

Pro-turf 10 units Fluff, Formalene

Water insoluble N (WIN) Longer chain, longer term U-F compounds. Very safe. Nitroform 25 units

Pro-turf 10 units IBDU 27.5 units **Coated slow** release urea N (CSRUN) or

Steps in the Right Direction

There are a number of possibilities in labeling and expression that can lead to better understanding on the subject of fertilizer and plant nutrient terminology.

Dual or extended labeling. Fertilizer manufacturers could list the amount of actual element for phosphorus and potassium and still fulfill legal requirements. Another service could involve listing the source of each nutrient element. Such service would provide valuable information to the user and result in better usage.

Some manufacturers have the foresight to do extra labeling that better describes their products. Some also provide supplementary educational materials and services. These are credible achievements and deserve recognition and acclamation. An example of such a label is shown below:

10%

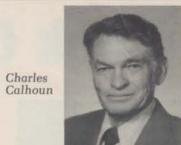
- **Total nitrogen** Ammonical nitrogen 5.78% units Nitrate nitrogen
- 4.22% units
- Available phosphorus 1.76% from Di-ammonium phosphate 4%
- Listed as P₂O₅ equivalent Available potassium
- 4.98% from potassium chloride Listed as K₂O equivalent 6%

Use of proper words and terminology. The language used in

oral presentations and written material should avoid use of inappropriate words and terms. The elemental expression should be used whenever possible.

Extended education on terminology. Orientation sessions and written materials could be provided at the adult level (conferences, seminars, etc.). College and university curricula could have a small unit of time devoted to fertilizer terminology as applicable.

The interests of all agriculturists will be better served through efforts to improve fertilizer labeling and terminology. There is a definite need to remove the confusion in this area. Students will learn as they should and will be better able to pass along information to others.



Charles Calhoun is a popular speaker on the subject of fertilizers whose residence is in Ames, Iowa. The turfgrass specialist is a graduate of Iowa State University, where he earned a master's degree. a member of the American Society of Agronomy and the Soil Science Society of America.

Using DYRENE for fungus disease control is the smartest thing you've always done.



You know ®DYRENE Turf Fungicide gives you effective control of the various species of Helminthosporium which cause diseases known as melting-out, going-out, and leaf spot.

You know DYRENE also controls dollar spot, copper spot, snow mold (typhula), and rust.

You know DYRENE can be mixed and applied easily with standard equipment, plus it's compatible with other turf fungicides.

You know using DYRENE for fungus disease control is smart. That's why you've always used it. DYRENE Turf Fungicide.



Mobay Chemical Corporation Agricultural Chemicals Division Specialty Products Group Box 4913, Kansas City, MO 64120

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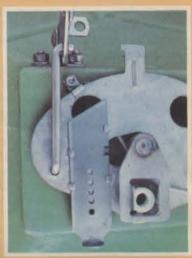


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Best Things About The NEW LESCO SPREADER



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LESCO's "third hole" in metering assembly allows you to adjust spreader for varying product bulk densities.



Chip-resistant powder coat epoxy paint is baked on for longer lasting finish.

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