# Fertilization: Know your N-P-K

by Dr. Joseph M. Vargas Jr.

The main purpose of fertility—at least in the eye of the homeowner—is to provide a dense, attractive-appearing turf. He basically could care less about what each individual element in the fertilizer contributes to the well-being of each individual grass plant.

And what's more, perhaps he should not. Isn't that why he hired you in the first place to

treat his lawn?

But do you know what each nutrient in a complete fertilizer contributes to the development of the individual grass? If you don't, you should. Would you want a doctor prescribing medicine for you that he "really wasn't quite sure what it did, but he knew it was good for you." It

PESTICIDES

# Scott product registered for control of Ataenius

The ProTurf Division of O. M. Scott & Sons, Marysville, Ohio recently announced that ProTurf Nematicide/Insecticide is now nationally registered for control of Ataenius spretulus larvae, the destructive beetle grub damaging turf in many parts of the nation.

The product is a dry applied granular product that controls a wide variety of nematodes and insects, the company told LAWN CARE INDUSTRY. The active ingredient is ethoprop. When watered into turf after spreading, it goes directly to the zone most vulnerable to grub attack—the roots.

The product can be applied any time grasses are actively growing and insect activity is noted. The product is not for uses on bentgrasses, fine fescues or ryegrasses, the company said. should be no different when you recommend fertilizer for your customer. You should be aware of what each nutrient is doing.

There are three major nutrients required for plant growth. They are nitrogen (N), potassium (K, also referred to as potash and K<sup>2</sup>O), and phosphorus (P, also referred to as phosphate or P<sub>2</sub>O<sub>5</sub>).

The plant requires all three of them for proper growth development with the requirement for nitrogen being the greatest. This is followed in order by the need for potassium and phosphorus. Figure 1 will show how the percentage of each can be found on a fertilizer bag.

### Nitrogen

Let us discuss nitrogen first, since it is the nutrient required most by the plant.

Nitrogen, depending on the

COMPANIES

# Sears eyes expansion

With a smashingly successful debut in the tough Chicago lawn care market under its belt, Sears Lawn & Leaf is in the planning stages of moving into other midwestern cities for the start of the 1979 lawn care season.

The company entered into the lawn care business last year signing up an initial 7,000 customers from March to May. John Craigie, vice president of sales and marketing estimates that the company will have almost tripled that figure by the end of the 1978 lawn care season.

"We are going to expand," Craigie recently told LAWN CARE INDUSTRY. He said Lawn & Leaf works through the national concessions manager at Sears headquarters in the Sears Tower in downtown Chicago. Any move of the company into another lawn care market has to be approved by the national and regional concessions managers, Craigie said.

But since Lawn & Leaf did so well last year and is doing well this year in the Chicago market, Craigie feels that the regional concession managers will likely approve any expansion because "we're moneymakers for them."

Several lawn care businessmen in the Midwest have expressed concern to LAWN CARE INDUSTRY about any expansion by Sears Lawn & Leaf. One St. Louis businessman recently said:

"Obviously, we are concerned about their awesome marketing capability. But the prevailing attitude around here seems to be that there is enough business for everybody, so let them come."

Craigie said that one of the benefits his company gets from its affiliation with Sears is what he calls "credit inserts" for free or a small sum, in various ongoing Sears' mailings, including billing.

COMPANIES

# Louisville's Green-Lawn to move into South, West

Green-Lawn, Inc., a Louisville, Kentucky-based company serving 50,000 lawn care customers in seven markets, plans to expand into several new markets in the coming year.

"We see our largest potential to the South and West," Vernon L. Shallcross, Jr., newly appointed executive vice president, said. "By dividing duties between the Louisville and Tulsa offices, we will operate more efficiently and be able to respond faster to opportunities in both old and new markets." The company operates in Louisville and Lexington, Ken.; Evansville, Ind.; Nashville and Memphis, Tenn.; and Tulsa and Oklahoma City, Okla. It franchised its first market this year in Jackson, Tenn.

# LAWN ARE Serving lawn maintenance and chemical lawn care professionals. INDUSTRY JULY 1978 • VOL. 2, NO. 7 • A Harvest Publication

MANAGEMENT

# Cholinesterase testing is important for employe safety

Cholinesterase testing should be an integral part of the safety program of every lawn care company that uses organophosphate insecticides.

So says Dr. Robert W. Miller, vice president of research and development for ChemLawn Corp., Columbus, Ohio. The com-

pany began a formal blood testing program in 1975 which has greatly increased the awareness of safety by ChemLawn employes who handle organophosphate insecticides, Dr. Miller told LAWN CARE INDUSTRY recently.

Organophosphate insecticides such as Dursban, Diazinon, Dylox, Proxol and Aspon can induce cholinesterase inhibition in the body. Dursban is marketed by Dow Chemical Co., Midland, Mich.; Diazinon is marketed by Ciba-Geigy Corp., Greensboro, N.C.; Dylox is marketed by Chemagro, Kansas

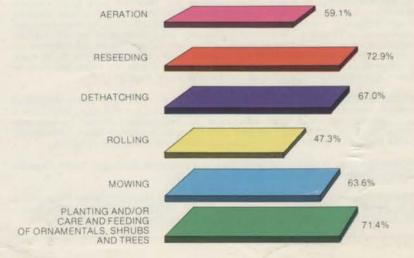
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# **QUICK STARTS**

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Davey Lawnscape's GM on "first-users" page 10
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MEMOS

EAST LANSING MI 48824 DR PAUL SIEKE UNIV lustry in Denver, see tinuing series of inlawn care business potential lawn care ere and how they go

# Do you perform any of these jobs?



# Lakeshore's SCU plant is nearing completion

Ag Industries Mfg. Corp. (AIM), Columbia, Ala. announces that equipment installation at its sulfur-coated urea fertilizer plant is nearing com-

Newly named plant manager Richard L. Colman told LAWN CARE INDUSTRY full-scale production is scheduled to begin this summer. The company is affiliated with Lakeshore Equipment & Supply Co., Elyria, Ohio.

The AIM plant is located on a Chattahoochee River front tract leased from the Alabama State Docks and will manufacture sultur-coated fertilizers using methods developed by the Tennessee Valley Authority at its National Fertilizer Development Center in Muscle Shoals, Ala. This will be the first such commercial plant in the United States and only the second in the world.

SEED

# Lofts sets up new proprietary division

Lofts Pedigreed Seed, Bound Brook, N.J. has established a Proprietary Turf Division to cater to the special needs of sod grow-

Company president Peter Loft

said the new division will handle every available proprietary grass seed and blend, regardless of the producer, from its distribution points across the Unit-

The Division will be staffed by: Bill Young, handling the Pacific Coast; Kent Reierson, Far West; Larry Humphreys and Egon Herrmann, Midwest; William Richey, New England; Ray Bently, upstate New York; and John Morrissey, mid-Atlantic states.

**VARIETIES** 

# Banner chewings fescue receives U.S. certificate

The Agricultural Marketing Service, United States Department of Agriculture, has awarded U.S. Plant Variety Protection Certificate No. 7500043 to Banner chewings fescue.

The announcement was made recently by Bob Peterson, vice president of E. F. Burlingham & Sons, Forest Grove, Ore. The company holds exclusive worldwide production and marketing rights for the variety.

The company said the variety develops a dense, moderately low growing turf that is highly competitive under low maintenance management. The variety was developed at Rutgers University in New Jersey. The company markets it for areas that receive heavy use and minimum maintenance.



Don Hector, (right) Corvallis, Oregon-area seed grower and secretary-treasurer of the Manhattan Ryegrass Growers Association, recently presented a check for \$1,500 to Paul Koch, regional director of the Salem, Ore. Parks Department, to begin a special fund for creation of a playground park for the developmentally disabled. Francine Liming, who promoted the special project assists with the presentation.

The Toro Co., Minneapolis, recently won a Wisconsin Governor's new product award for 1978 for its family front-engine riders, manufactured in Tomah, Wis. Governor Martin J. Schrieber is seated on a Toro rider as he presents a certificate of award to representatives of the company. From left, Dr. Chester Brisley, master of ceremonies; Richard Busiahn, manufacturing engineering manager at the Tomah plant; Robert Witt, chief design engineer for the mowers; and James Bruha, general manager of the plant.



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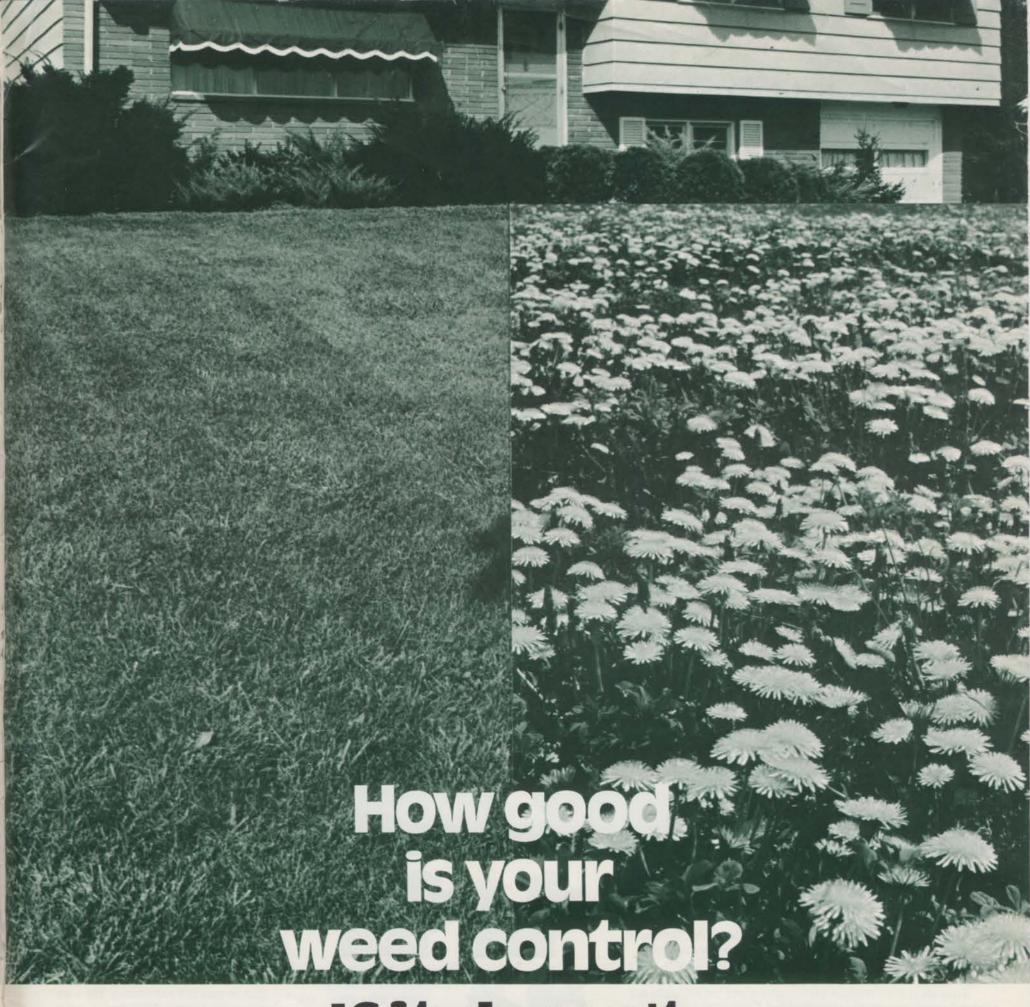
# **MEMOS**

Pump market to grow: The metering and proportioning pumps market, with associated controls, will expand 52 percent between 1977 and 1982, rising from sales of \$107 million in 1977 to \$162 million in 1982, predicts a Frost & Sullivan analysis of the market. The report, entitled, "Metering and Proportioning Pumps and Associated Controls," projects an 11 to 12 percent annual growth rate for the overall metering pump market into the 1980's. The 229-page study observes that, at present, the metering pump industry is highly fragmented and diversified, with most companies producing a custom pump-design for a selected market, such as the lawn care industry. Although market fragmentation exists, consolidation is underway through elimination of sub-marginal producers, and acquisitions and mergers. The product outlook for the 1980's is for metering pump users to stress standardization, less customizing and modular design that can easily be adapted after installation.

Lawn care industry in the news: Two recent stories in the Washington Post newspaper and The Kiplinger Washington Letter put the lawn care industry under the national micro-

In the May 29 issue of the Post, the story was entitled "An Industry Grows Up: Lawn Care Takes a Professional Turn." Reporter Bob Meyers stressed the professionalism of the industry in recent years, and quoted such industry people as Joe Stout, president of Complete Lawn Service in Washington; Anthony Giordano, president of the Wickatunck, New Jersey-based Lawn Doctor franchises; William N. Vorn Holt, vice president ChemLawn Corp., Columbus, Ohio; Dr. Charles H. Darrah, University of Maryland turf specialist; and others.

In the June 2 issue of the widely read Kiplinger newsletter, it said in part, in its distinctive newsletter style. "Lawn care business is extra good ... growing about 25 percent a year ... applying fertilizer and pesticides, seeding, dethatching, aerating, etc. We expect this phenomenal growth to continue at least a few more years, even though there are flyby-nighters giving the industry a black eye. As for the impact on retail fertilizer and lawn care product business, hurts some. But the big suppliers are selling to the service firms too



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# Selling residential irrigation

When Jack Luce and Pete Levy go out to sell a residential irrigation installation job - even though they operate half a continent away from each other their pitches are pretty much the

They tell their customers to view automatic irrigation as an insurance policy for expensive lawns and landscaping. They stress the savings in water and convenience of not having to worry about watering a lawn. And they point out that the home owner will get the investment back when he sells the home anyway.

"When you have already spent \$85,000 to \$100,000 for a nice home, what is another \$2,000 to keep your yard in top shape?" Levy asks. "Anymore, residential irrigation systems are viewed the same as finishing a basement into a recreation room, installing a pool or adding aluminum siding. It is an investment in the home. At least that is what I tell my customers.'

Levy, a 24-year-old University of Kansas graduate, is vice president of Line-Mai Construction Co., Kansas City, Kan. Luce, 43, is president of J-Z Irrigation, Tacoma, Wash.

In interviews with LAWN CARE INDUSTRY recently, they stressed getting the proper training, working as closely with irrigation manufacturers as possible, working hard to streamline installation operations to make money, keeping current on recent government rulings, and projecting a stable image when "you are selling an expensive item," Levy says, "The customer will not buy it from just anybody. You have to let them know that you are going to be around next year if they have any problems.

Luce has been in the nursery

and landscape business for 12 years. About eight years ago, he added irrigation installation to his services. Now this part of the business represents about \$150,-000 a year, or 70 percent of his business. He says that 80 percent of his irrigation business is residential, installing about 40 jobs a year.

He says that his average installation is for about 10,000 square feet of lawn and shrubs. The number of heads varies for each job, depending on need and layout of the landscape, but that his average charge for installation is between \$2,000 and \$2,-400, a figure he calls average for the Pacific Northwest.

"The prices in California are a little cheaper, probably because there is more competition there," Luce said. On the other hand, prices in the Midwest and East are a little more expensive.

He said that the people in his area with homes in the \$40,000 to \$100,000 range, more than 50 percent have an automatic irrigation system. This is contrasted with the fact that more than 80 percent of the homes in southern California have irrigation systems, and a much, much lower percentage in the Midwest and East.

"My main selling point is that an irrigation system is an insurance policy," he said. "After you have invested the money in good sod and plant materials, you need an irrigation system to hold the landscape together. And it saves you money because you only use just as much water as is necessary. I tell my customers that 15 minutes every other day at each station will keep their yard green."

Luce also sells his customers on the idea of the convenience of an irrigation system. "They can come and go as they please, and not have to worry about watering their lawn," he said. And it goes double for vacations and weekend trips.

Luce recently gave a \$2,600 quote to a customer for an irrigation installation job.

"This guy was getting ready to sell his home and wanted to fix it up," he said. "But he thought that \$2,600 was too expensive. He was going to spend \$500 for a new dishwasher and some other things too. I told him that with these additions, he could just about name his price when he sold the home. He called me back a few days later and I got the job."

Luce runs a four-man crew most of the year, and six during the heavy season. He keeps a three-man crew year-round.

His advice to a lawn care businessman or landscaper thinking about branching out into residential irrigation contracting is first to get the proper training.

"Even though you might have a designer to lay the plan out, when you get on the job site there are usually many field changes that you have to make," he said. "You have to know engineering facts, government standards and a lot more. When you are planting shrubs, you can make changes. But it is a lot harder when you are pulling pipe. It

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# **MARKETING IDEA FILE**

# How to market landscape maintenance

Bill Kessloff, president of Programmed Landscape Maintenance in Stanton, Calif., gives selling and marketing

top priority in his operation.

"Nothing happens until the sale is made," he told LAWN CARE INDUSTRY recently, "but before we proceed to make that sale we must do marketing." He describes marketing as the determination of supply and demand. A lawn care businessman must determine what size and type of jobs he presently has the capability of performing.

Next, according to Kessloff, he must determine what size geographic area he can economically cover. "It for example would be difficult to do a small industrial park 50 miles away if that is the only job you have in that area," he said, "but maybe you can afford to do a large industrial park 50 miles

away with a large crew one day a week."

Next he recommends driving around in the immediate area and checking out available jobs. "Are there townhomes, industrial parks, slopes?" he said. "What is there out there that I can handle? And look for jobs that are not presently

being maintained well."

He says that you must sell continuously to survive in commercial landscape maintenance. "The competition is always on the line communicating with your client," he said. "Landscape maintenance requires selling and re-selling." He also says that selling a service is much more difficult than selling a tangible product, and recommends selling the benefits of the maintenance work. "Be different," he said. "Know what you do well and convert those job functions into customer benefits.'

How to generate new business? Kessloff first develops a prospect list from his marketing work including property management companies, developers, landscape architects, parks and recreation directors, school board officials, indus-

trial facilities and others. 'Then you need to go out and talk to people," he said. "A telephone is a real asset after the sale has been made, but is a weak tool for opening doors. If your time is limited, use the

phone only to set up an appointment."

Develop a letter of introduction that is brief, he says. The letter should whet the prospect's appetite. Do not wait for him to respond. Call him approximately two days after he has received the letter and set up an appointment. If you have a brochure, enclose it with a one-page cover letter. He feels that a brochure portrays a professional image, stability in the industry and can be a very effective tool in promoting a company image. He says that most lawn maintenance companies are not using them. He says a simple black-and-white brochure can be produced for \$500.

In personal contact with the client, Kessloff strongly

recommends to be prepared.

"Remember the reason you are there," he said. "Be familiar with his maintenance problems and be prepared to tell him how your system of operation will solve them. Your interest in his problems will create the opportunity you need to bid.'

Kessloff carries a bidding kit with him at all times. It includes a color brochure, job references, a background information sheet, a standard maintenance contract, pictures of the prospect's problems, a sheet titled "How To Qualify a Maintenance Contractor," and various pictures of his crew in action.

He feels that selling existing clients are an area of future sales that is too often overlooked and forgotten. It is much easier to maximize sales from an existing client than it is to sell new ones. He said usually an existing customer manages

or owns more than one property.

"Selling a client on a price increase requires nerve and caution," Kessloff said. "Timing is extremely important, particularly on larger jobs. Be aware of your client's budget requirements and when he plans his budget so that your price increase will be included.'

Prior to a requested price increase, be sure you are prepared with facts and figures that will qualify the amount, he said. Review all costs for the upcoming year such as insurance, wages and materials, and be able to pro-rate the cost for

the entire year and for each job.

"Also, be prepared to negotiate sincerely in case a price increase is not possible due to a budget restriction," he said. "Have some feel for what the traffic will bear and what value you place on that client. And don't leave profit dollars on the table. Know your bottom line numbers with the thought that each job should produce a definite financial advantage."

CHOLINESTERASE from page 1

City, Mo.; Proxol is marketed by TUCO Div., Upjohn Co., Kalamazoo, Mich.; and Aspon is marketed by Stauffer Chemical Co., Westport, Conn.

The enzyme cholinesterase is essential for the nervous system to function properly. In the normal transmission of nerve impulses, a compound known as acetylcholine is required.

After the nerve impulse has been transmitted, the acetylcholine is immediately hydrolized by cholinesterase. Over exposure to organophosphates will inhibit cholinesterase production; thus acetylcholine will not be hydrolyzed.

Removal of the source of exposure will allow the cholinesterase levels to return to an accepted level. If exposure continues and the cholinesterase continues to be inhibited, symptoms and signs of organophosphate poisoning may occur.

Organophosphates can enter the body by three routes: ingestion, inhalation and skin absorption. The major route of entry for lawn care operators is by skin absorption, either during the mixing process or during insecticide applications. The risk of over exposure to organophosphates is increased if the operator has dermititis or a break in the skin. Also, the absorption of liquid formulations tends to be greater because of the possibility of more complete surface contact. However, absorption of dry formulations can occur, especially if contacted on skin wet with perspiration.

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# **MONEYWISE**

# Investigate before investing

Whether you are involved in management of a lawn care franchising operation, hold a franchise for a lawn care business or are thinking about going into either end of the business, a new booklet published by the International Franchise Association is must reading.

Entitled "Investigate Before Investing," the 36-page booklet was written by Jerome L. Fels and Lewis G. Rudnick, legal

consultants to the Association.

It provides basic discussion of franchising, gives warning signals to watch our for, tells a prospective franchisee how to evaluate an offer, discusses qualifications of franchisees, discusses various products and services offered through franchises, explains how to evaluate a franchisor, discusses trademarks and copyrights, management, litigation, profit projections, franchise costs, training and start-up aids, locations and territories, competition with the franchisor, franchise laws

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CHOLINESTERASE from page 5

Basically, overexposure to organophosphates can be prevented if operators use good safety procedures and practice good personal hygiene. Dow recommends that gloves and foot coverings be worn. It is also recommended that a shower be taken at the end of each work day and that contaminated clothes not be washed with uncontaminated clothes. After handling insecticides, operators should always wash their hands, especially before eating or smok-

A practical, simple way to insure that an operator is not being overexposed to organophosphates is by testing the cholinesterase level in the blood plasma and in the red blood cells. Blood can be conveniently drawn from a vein or a finger and can be readily assayed. It is recommended that a baseline (preexposure) cholinesterase level be determined whenever possible, due to the fact that cholinesterase levels of individuals vary greatly.

In addition to this, a small percentage of the population has abnormally low cholinesterase levels without any exposure to insecticides. These people should therefore not be placed in contact with insecticides. To do so, could be dangerous for those individuals. The establishment of cholinesterase testing program would reveal anyone who already has an abnormally low level.

Dow spokesmen say that monitoring the blood cholinesterase activity of individuals who have the potential for prolonged or repeated exposure is recommended as an excellent tool for determining whether proper procedures and precautions are being observed and for preventing over exposures.

Dow also recommends that blood testing be done once every two weeks at the beginning of the spraying season until confidence in safe handling practices has been established; then once a month should be sufficient to



ChemLawn's Robinson: "We test each individual every two weeks when insecticides are in use in the hope that the warning system is never necessary."

verify that operators are not being over exposed and that good work practices are being followed.

Robert C. Robinson, director of agronomy for ChemLawn, says that the company requires blood tests "for the same reason a homeowner installs a fire alarm. He puts it in in the hope that it will never be needed. Our testing program is similar. We test each individual every two weeks when insecticides are in use with the hope that the warning system is never necessary."
In order for a blood monitor-

ing program to be successful, a lawn care company may need the services of a competent laboratory which will not only produce accurate results, but will be able to help interpret the results. Robert Coury, lab manager of CLC Laboratories, a division of ChemLawn in Columbus, Ohio, suggests three main points to consider in selecting a laboratory to do cholinesterase assays.

Coury said, "In selecting a lab to test operators' blood who handle organophosphate materials, it is important to select a lab which uses Michel Methodology. This is the method being used by Dow at their Midland Medical Facility and interpretations of results are based on this method.

A lab should also be able to help interpret the results for the lawn company, said Coury.

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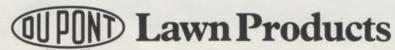
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Other\_

# What happens when we run out of 'first users'?

In the next few years, the consumer demand for professional lawn services will level off and profit margins will thin out for lawn care companies.

Looking further into the future, the major task that will confront the successful lawn care company will be deciding the segment of the potential market that it wants to reach.

That is the way Marty Erbaugh sees it. And the 29-year-old general manager of Davey Lawnscape who is given to button-down collars and boxy foreign cars also has some very definite thoughts on analyzing the potential of a lawn care market, the "first-user" aspect of the market and promotional strategies.

Davey is based in Kent, Ohio and presently has eight branch operations, mostly in the Midwest. It is a division of Davey

Tree Expert Co.

"At this point in the development of the industry," he told LAWN CARE INDUSTRY recently, "The demand for our type of service is growing rapidly, and all of us are participating in the growth. Some of us can say that we wish we had been in this business years ago, but we can all nevertheless be optimistic about the future because of the growth that is taking place."

Although there are different philosophies in analyzing a potential lawn care market, Erbaugh outlines five steps he feels important. He says there is much information available from government sources as to the number of single-family dwelling units and median home values in any given area.

After this information is obtained, the next job is to break the city into basic areas by zip code numbers, then go back to the original data and determine which are the prime zip code

areas

The second step is to determine the level of lawn care activity being done. Although it often can be a substantial part of the business to be reckoned with, Erbaugh says that "we don't look at the landscapers, just the lawn spray guys. This gives us a handle on the first-user potential, and also a penetration figure of how many people are receiving our type of lawn services."

The third step is a pricing analysis — "at what price are the lead companies selling a service," he said. The fourth step is determining the technical chaacteristics of the market in question, including turf considerations, ease of traveling

around town, etc.

"After these steps, you throw caution to the wind and give it a try," he says in a joking manner. But you also get the impression that this step is indeed part of the process.

Erbaugh has plenty to say about the "first-user" aspect of the lawn care industry — a phrase he coined in a speech in

1977 at the Ohio Turfgrass Conference that has been picked up by many in the industry.

The first-user market, simply stated, is that part of any potential lawn care market that "has never utilized a chemical lawn care service of our type."

"The object is to go into an area and get the most first-users," he said. "You gear your advertising and promotion to these potential first-users, and if you can become the company with the most first-users, you are going to solidly establish yourself in that market."

Erbaugh says that it is important to distinguish between going

after the first-user market and going after people who are already receiving a lawn care service.

"In the first case you are educating the customer," he says, "and in the second case you are differentiating between you and your competition." He does say that in any given market, a lawn care company should try to get a certain percentage of both types of customers.

He says that in a competitive situation, it is important to stress your price to impress upon the potential customer that you are "in the ballpark" with the competition, but that you also have to take the differentiation further.

"You have to come up with a different approach, a different tone for your promotional strategy," he said. Differentiation is achieved by extras added on to your service, free in some cases. It is done through literature and brochures stress-

ing the training you give your employes, the credibility of the service that you offer. He also says that part of the differentiation is also achieved through the image the "guy that goes out to give the estimate projects for the company. This is the 'selling the sizzle' part of the whole thing, and many lawn care companies I have seen are doing an excellent job of it."

After the promotional strategy is defined, it is then important to determine how often it will be portrayed to the potential customers; when; who to; through what vehicle; in one big campaign, or spaced out over a period of time. "A lot of this is based simply on gut reactions,"

Erbaugh said.

"The question of when will the lawn care industry not be in a first-user situation varies from market to market," he said. "When the statistics show that perhaps 50 percent of potential





Davey Lawnscape's Erbaugh

homes are being serviced, then it may be time for some companies to diversify and introduce highmargin add-ons to their basic service."

From a planning standpoint, there are also other implications of the diminishing "first-user" market, Erbaugh says. To discuss the implications, he uses the Akron-Canton, Ohio market area, where Davey got its start. Davey defines the size of the market area by number of "market units." A market unit is a single-family dwelling unit valued in excess of \$50,000 in which there is an effective buying income of \$20,000 or more a year.

Erbaugh says that in 1974 there were 79,000 market units in Akron-Canton. The company assumes that each of the market units is average in size in terms of its lawn area and that the average lawn at today's pricing is capable of generating \$130 over the course of the year. Therefore, the market size in dollars in Akron-Canton is \$10.4 million. And he says that in 1974 there was about \$130,000 being achieved in the chemical lawn care business, with over \$10 million yet to be tapped.

Last year, with new home developments, the size of the Akron-Canton market increased to 86,500 market units. Erbaugh estimated that about \$2.6 million worth of lawn care business was done.

"You can see that the market penetration is occurring at a faster rate than the growth in the number of market units," he said. "By 1980 we estimate that the rate of penetration will grow faster than this rate of growth. Assuming the same rate of growth that occurred in the three years from 1974 to 1977, we estimate that there will be about six to seven million dollars being done by lawn care service companies in 1980."

Erbaugh said that in the period between 1974 and 1980 — six years — the market in terms of dollars will have increased 23 percent. But at the same time, new companies entering the market along with those already in the market results in an actual shrinkage in the total dollars

remaining to be tapped in this market area.

He says the leveling-off process is already beginning to occur in Akron-Canton.

"You can make your own analysis of when your company will start to feel this," he said. "There are some definite implications which follow that all of us in this industry should be considering.

"Because of the relative newness of our type of service and the demand, we are able to price our service such that we can generate a good return on both our sales dollar and our investment," he said. "As competition increases, and our materials, equipment, labor and general operating costs increase, the question becomes — will we be able to offset these increases with a higher price that will enable us to generate the same margin that we are able to achieve today?"

He says there are ways to affect profitability other than price. This can be done essentially through areas which can be designated as areas of "production efficiency," such as new materials, better materials, more effective materials, different means of application, different types of equipment, different compensation systems, etc.

Erbaugh stresses that competition and penetration occurring at a faster rate than the growth of the market will affect price. He also says that this is an important thing for lawn care businessmen to take into consideration for planning purposes, and points out some areas he feels should be explored and planned for two years in advance.

- Define goals in terms of the rate of competition in conjunction with existing penetration
- If you are considering expanding to new market areas, carefully analyze the market prior to entry. Are there advantages for your company to go into areas which are relatively competitive as opposed to uncompetitive?
- Consider what position in the market you eventually want to have. Will you want to provide a minimum-maintenance, low-price service as your position or do you want to offer additional services at a higher price? As the marketplace becomes more crowded, it will be important for a company to determine where it wants to be.
- All lawn care companies should be considering the application of technologies from other industries as they relate to the efficiency of individual company operations. He gives modern data processing as an example.
- The lawn care industry should work together to make universities aware of the growth that is taking place in the industry so that curriculum can be developed to meet the needs of the industry.
- The lawn care industry should be organized so as to be able to effectively respond to proposed government legislation that will affect the industry.

# How to buy the right tractor.

It's easy to buy a tractor. You go to a dealer. Pay him some money. He gives you a tractor.

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# LAWN CARE INDUSTRY Marketplace

The big news for Denver lawn care businessmen is not on the top of their newspapers' front pages.

Rather than leading off a radio or television news broadcast the lawn care big story is a short item at the end of the newscast.

To find lawn care's big story, you can check page three of the Rocky Mountain News, Denver's

morning paper.

You have to look hard. It's at the bottom of the page, overshadowed by international stories about President Carter's tough talk about the USSR's intrusions into Africa.

It doesn't have a big headline filled with sensationalism. All the headline says is "Water

Day.'

Since last year Denver metropolitan residents, served by the Denver Water Department, have been restricted to watering their lawns every third day. Daily newspapers and radio and television stations regularly present information about whose turn it is to water.

Watering days are based on the last two digits of a property's number, 00 to 30 on one day, 31 to 60 the next and 61 to 99 the next.

The watering day schedule is a conservation step taken because of a drought and the city's limited capacity to treat water.

Last year's conservation measurers limited residents to watering for only three hours every third day because of the drought. Although there is not a drought this year, residents' watering is still restricted because the city's plants cannot treat enough water for daily watering by all customers.

However, this year residents can water all day as opposed to last year's three-hour limit.

Until the city completes an additional treatment plant, in mid-1981, Denver water customers can expect water problems. So far conservation measures have been successful and water usage was cut 20 percent last year, according to a water department spokesman.

For lawn care businessmen, the water problems have created additional headaches for caring for grass in an area which is anything but the perfect place to

grow grass.

Lawn care businessmen blamed the loss of customers and increases of diseases and insects on the water deficiencies.

One lawn care businessman says his accounts receivable increased because of the water shortage. "When a customer's lawn burns out, he just says, 'I ain't going to pay.' Even if it is his fault that the lawn burned out."

Although the lack of water created problems, customers could overcome many difficulties with proper watering. "Educating the customer to water correctly is very hard," says Harold Williams, manager of **ChemLawn**, Denver. "Many people are transplants from the Midwest and East and don't know that the same watering

# Denver



techniques that they used back home will not work here."

The 10 lawn care businessmen interviewed for this article advised their customers to water between one to two inches weekly during the summer. To help customers measure properly Don Forbes, Lawn-A-Mat, Arvada, provided his customers with cups.

ChemLawn suggested to its accounts that they sprinkle until the water runs off and then move the sprinkler to another area. Then after 30 minutes return the sprinkler to the original spot.

ChemLawn's a d v i c e points out another problem, which makes Denver a difficult place to grow lawns. The runoff is in part due to Denver's hard clay soil, which does not allow water to penetrate.

The clay soil in Boulder is so hard that it is used to repair cracks in small dams, says Bill Carter, Valley Gardens, Boulder.

Most of the metropolitan area is built on the hard clay soil. However, Denver's southern and eastern area near Aurora is on a silty, sand soil, which does not hold water well.

Besides the problems with the soil's composition, the ground is highly alkaline which means many lawn care businessmen apply iron or sulfur.

Another problem is the climate. Water that is not absor-



bed into the ground and does not run off is very likely to become vapor in the hot, low humidity summers. The area averages 14 to 15 inches of rain annually.

. Although the acts of creation low water supplies and bad soil are against Denver lawn care businessmen, lawn headaches could more easily be cured with proper soil preparation.

A common complaint of lawn care in the area is aired by Carter, "I think the principal problem we have here is not lack of water but poor soil preparation. If a lawn is prepared correctly with six to 12 inches of soil preparation, then you will not have water problems."

Wally SaBell, SaBells, Inc., Lakewood, says he put 12 inches of soil preparation on his yard and only waters once a week in the summer. It would be very costly for every customer to have lawns with 12 inches of preparation, but better soil preparation would reduce the problems, he says

SaBell and Carter say the root of Denver's lawn care problems is in the roots of the grass or, more accurately, the lack of

Without deep soil preparation, with peat, fertilizer and sand, turf grass roots are stopped short of the needed length. Grass with short roots is more susceptible to disease and insects and will suffer more because of lack of water.

"I had one customer who told me, 'It looked as if they (sod installers) put on the top soil with a salt shaker,' " he says.

Another lawn care businessman says sod companies have hurt lawn care by not stressing soil preparation enough. "The sod companies say, 'You can grow turf on sidewalks,' but they don't tell you how much it will cost to maintain it," says one lawn care man.

Nearly all of Denver's yards have sod, mostly Kentucky bluegrass, including Merion, Windsor, Baron and more lately bluegrass blends. The area's common insects are the billbug grub, the armyworm, the cutworm and the sod webworm, and common diseases are melting out, dollar spot, Fusarium blight and fairy

Denver's common weeds are dandelions, thistles and spurge.

Lawn care businessmen usually provided the same types of chemical services: Fertilizing, weed control, insect control, fungus control, iron and sulfur enrichment. Programs varied from three to five applications with a per application charge ranging from \$22.80 to \$26 for the average lawn, 5,500 square feet.

Besides the chemical control, several lawn care companies offer spring power raking and aeration to help water to penetrate. They also all recommend winter watering of one inch per month; this is needed because Denver's winters are mild with little snow to provide moisture.

Lawn problems aside, Denver is a wonderful place to live. "Denver is a good growing city but a hard place to raise grass,' says Dick Miller, Evergreen Lawns, Denver.

No question about it Denver is a growing city. The six-county Denver area has grown by 385,-000 persons since 1970 according to statistics of the Denver Regional Council of Governments. Last year 21,400 persons moved to the region.

Many of the city's new inhabitants came for a reason that often comes up in a conversation with a Denverite. "Well, if the city ever gets to be too much, you can always look to the mountains," they say pointing westward towards the snowcapped Rockies.

The Rockies are in some ways like Shangri-La, the mythical country in the novel Lost Horizon; both have marvelous scenery, cool mountain streams and clear starry nights.

In early June, Rocky Mountain National Park's Bear Lake region looked like a scene from Lost Horizon. The temperature was 75°, but Bear Lake was partially frozen and there were still knee-high snow drifts on the

Tourists, many wearing Tshirts, simply looked at the lake with wide eyes and said, "God, I've never seen anything like this before. It is just unbelievable."

Unlike the traveler in Lost Horizon, who went to Shangri-La to find truth, people come to Denver are just looking for that Rocky Mountain high.

The influx of the city's population is attested to by Cliff Fagan, Lawn Green, Aurora. "I've interviewed guys for a job. When I ask them how long they've been in Denver, they look at their watches."

People who decide to stay in Denver have an increasing number of single-family homes to choose from.

Reports on building permits for 1977 show that of the 23,565 permits taken out, 20,052 are for single-family homes; the rest are for multi-family dwellings. The permits for single-family homes increased in 1977 from 1976's 12,-024 permits. The permits are for the six-county region including Adams, Arapahoe, Boulder, Denver, Jefferson and Douglas coun-

The figures, supplied by the Home Builders Association of Metropolitan Denver, clearly show a trend where the building will be taking place. The top cities and counties with permits for single-family homes are: Aurora, 3,950; Jefferson, 3,886; Arapahoe, 2,934; Boulder County, 2,360 and Westminster, 1,646.

The housing patterns seem to be shifting from Denver and Denver county, which has 1,197 permits, to the suburbs, particularly to the east, where Aurora is located.

Despite the growth, lawn care businessmen find the Denver market is not an easy one to crack. Four businessmen, who are with national companies, say area residents are not receptive to Midwestern and Eastern mass media campaigns.

Mark Long and Bob Thompson, Barefoot Grass, Denver, say television spots used in Midwestern cities were not effective in Denver. ChemLawn's Williams says a 1975 television was not successful.

Forbes of Lawn-A-Mat says he nearly went broke his first year because the company advised him to use a mass media program with doornob hangers, direct mail and radio spots.

Lawn-A-Mat's mass media campaign, which cost him \$2,500, was a dud. But it had been successful in other places, he

Besides being a hard market to break into with mass media, ChemLawn, which uses all liquids in most cities, offers some granular fertilizing treatments because the concept of granular and liquid is easier to market, says Williams.

Lawn care businessmen attribute the marketing problem

lack of customer acceptance of a new service.

- customer resistance to lawn care because of bad experiences years ago with poor quality companies.

- natural problems that make lawn care difficult, water, soil and lack of soil preparation.

- customers' desire to do it

themselves.

However, all agreed that the market is opening up and business is good. Particularly, since ChemLawn and Evergreen opened branches in 1975. The high-visibility of these companies through mass media and number of trucks has made the service easier to sell.

Although Denver recently has become a chic place to live, as one lawn careman says, "Everyone wants to be John Denver,'



The city's skyline (on opposite page) is set against the beautiful Rocky Mountains. Another scenic view (above) is from Wayne Nuzum's nursery in Boulder which is in the foothills of the Rockies, at the gateway to "God's country."



"Denver is a good growing city but a hard place to raise one lawn care business came here before it was the in place to be. For Wayne Nuzum, 65, Nuzum Nursery, coming to Boulder was a matter of survival.

"I came here, when I was 21, because the doctors suggested it was a good place to come. I had asthma and Colorado is a good place to come because of the climate," the former Iowa resident says.

Shortly after coming to Boulder, Nuzum opened a nursery and a lawn care service. Even after 44 years of hard outdoor work, Nuzum walks steady and strong and his handshake is firm as a young football player's.

Since 1934 Nuzum has seen the city and business change quite a bit, "When I came here there were only 13,000 people and two other nurseries, which did lawn care. Today there are 85,000 people here, and I couldn't tell you how many other lawn care companies," he says.

Not only did Nuzum lose his asthma when he came here, he Keilt to Denver. "I love to take winter vacations, and I love to ski." What better place?

Currently, Keilt has 1,500 customers taking his five-application program. He attributes most of his success to quick response to customer calls.

Since his area is just Lakewood, he has a short driving time and can see the customer the same day or the day after a call.

The other ex-New Jerseyian is Cliff Fagan, who worked in the New Jersey Treasury Department.

Like Keilt, Fagan got into the lawn care business partly because of job dissatisfaction. He was faced with the unpleasant prospect of going to work behind a desk in the state capital. Instead, he followed a tip about starting a lawn care business.

Fagan, 46, opened a business nine years ago in New Jersey and then moved to Denver in 1973, where he has 1,000 accounts. He bases his Aurora Lawn Green operations in his Douglas County home.

While Fagan and Keilt came into lawn care, after other job

joined this year by Long. Both are from southern Ohio; their southern Ohio twangs are still apparent, particularly when they pronounce Ohio "Ahia."

This year the company has started to expand into untapped areas in Northern suburbs and have tripled their accounts to between 500 to 1,000. Both 20-year-olds work on trucks, they employ an office worker and another serviceman.

Three other veterans of the lawn care business stress the same points as Long and Thompson — professionalism.

Don Forbes, Lawn-A-Mat, Arvada, says, "I was in the greenhouse business, raising carnations and watched that go down the drain because some shysters got into the business. I don't want the same things to happen to this business."

The Denver lawn care businessman needs an association to draft regulations and code of ethics so the group can police itself, he says. However, Forbes has tried to form an association but without much success.

He is critical of lawn care

companies which purposely overestimate or underestimate a lawn. "If I make a honest mistake that doesn't mean I'm unprofessional it just means that I'm human. However, if you do something wrong intentionally that is unprofessional," he says.

He started his lawn care business five years ago and today has 375 customers, whose lawns are serviced by himself and a worker.

Besides his lawn care business, Forbes sells real estate. Through the lawn business, he often gets tips on who is going to sell their home. By providing real estate service, he sells four or five houses a year.

Chuck Ferdig, 39, Keesen Enterprises, Sheridan, is another employer who stresses professionalism and pride in work. He was in the electrical business before the lawn care field and also enjoys landscaping and gardening as a hobby.

Today his hobby is a fulltime job and he is in charge of a 45-man grounds maintenance crew which services five million square feet of grass. He esti-



Bob Thompson and Mark Long



Harold Williams



Don Forbes

found a location for a business which can only be described as "the gateway to God's country." His nursery is at the base of the Rocky Mountains foothills. "Yes, they (the foothills) are quite a sight," he says with pride.

A more recent Midwest transplant is ChemLawn's Harold Williams, who previously worked in the company's Indianapolis office. A southern Indiana native, Williams studied agriculture education at Purdue University, West Lafayette, Ind.

After graduation, he taught agriculture in an Indiana high school but got tired of "baby-sitting." Leaving education he went to work for ChemLawn in 1971 and was transferred to Denver in 1975. He was named manager last November.

The Denver branch services the entire Denver area.

Besides Midwest transplants, New Jersey has two lawn care businessmen now in the Mile-High City area.

Dick Keilt, 40, came to Lakewood, a Denver suburb, to open a **Lawn Doctor** franchise. After six years here, he still has a noticeable but pleasant Jersey accent.

"I had worked as a quality control man and had taken enough corporate nonsense. I'm an opiniated guy and in the position I was in I felt I couldn't speak my mind," he says.

However, it was more than job dissatisfaction that lured

experience, Wally SaBell, 48, SaBells Inc., Lakewood, has made lawn care his only career.

When asked why he entered the business, SaBell says, "I like eating." SaBell literally started his business pushing a wheelbarrow and today has 150 employes.

SaBells offers these services: landscaping, grounds maintenance, irrigation, design and retail and wholesale plant sales. Even though SaBell heads a corporation with many services and many employes, he still gets his hands dirty.

"I leave most of the office work to my son, Sam. I trouble-shoot and run some jobs," he says. Wally SaBell's work clothes and rough hands show that he is still doing what he likes most — working outside and making things grow.

When SaBell started his business, the two partners of Barefoot Grass, Denver, were not yet born.

Mark Long, 22, and Bob Thompson, 24, both admit it is a gamble to put their money into a lawn care business, but they reason, "You can always afford to go broke when you're 25, but you can't when you're 35 and have a wife and kids. We figured we will either get cut down or grow. I think lately we've been growing."

Thompson came to Denver last summer to take over the Barefoot franchise and was

# Ways to ease worker problems: Profit sharing to vacations

"You know what my biggest problem is: Finding and keeping good workers. That's the trouble with people today, they don't want to work."

It could be a quote from any lawn care businessman, anywhere.

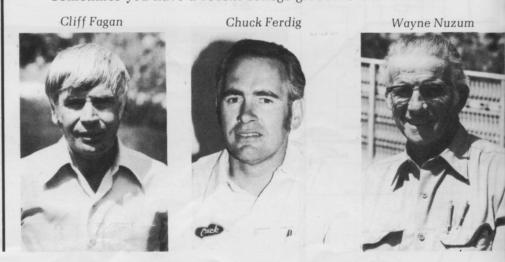
On the other hand, the lawn care man can be understanding of why it is hard to manage and keep employes.

"We can't pay as much as factories. The work is hard, it's seasonal. And how do you motivate a guy when he's cutting the same blade of grass every week."

Faced with these problems and at the same time trying to provide good services with well-trained and motivated workers, Denver lawn care businessmen offered a few tips on what has helped them. The suggestions vary from profit sharing to a summer vacation.

When it comes to selecting men for a job, Cliff Fagan, Lawn Green, Aurora, looks for two types, one who is going to stay on as a manager and the other who will leave at the end of one or two summers.

"Sometimes you have a recent college graduate who wants to



mates the company has 30 accounts which range in size from 40 acres to 3,000 square feet. Keesen provides a total lawn maintenance service from fertilizing to mowing.

Although Ferdig devotes a lot of time to his job, gardening is still his hobby. "At my house I've planted things that are not supposed to grow in this climate, but they do," he says with a smile of satisfaction.

When Bill Carter, Valley Gardens, Boulder, had a choice of leaving the mountains for an office job in the east, he took the Rockies.

Prior to entering the lawn care business, the crisp-talking, pipe-smoking Carter was a pesticide salesman. Eventually, he would have had to leave his western sales area for New Jersey.

Since entering the field 11 years ago, Carter has formed strong opinions of what is wrong with it.

"We've undersold our technology. Rather than stressing that we are professional and have expertise, we've sold ourselves short and are not getting paid what we deserve and our employes are not getting what they deserve," he says.

To his 200 to 300 customers, of whom 80 percent are residential, Carter stresses that he does quality work and has trained workers. He says this enhances the image of professionalism.

Other lawn care companies in the area include: Ned's Lawn and Garden Service, Boulder; Keesen and Sons, Inc., Denver; Swigle Inc., Denver; Garramone Brothers Lawn Service, Golden; Meyering Landscaping, Denver; Basically Organic Landscaping, Denver.

# Beating the deadbeats

Don Forbes, Lawn-A-Mat, Arvada, had two customers last year who were similar to customers all lawn care businessmen have at one time or another.

They were deadbeats. They took Forbes' full service and never paid. "Maybe I'm too trusting. I always think someone is going to pay, and they usually do. But these guys never paid," he says.

Forbes went the full route of trying to collect. He sent them letters, called them and then went to a collection agency. The manager of the collection agency told Forbes that he was wasting his time. The two outstanding accounts were not going to pay; the collection manager had tried to get money from them before for other outstanding bills.

"I've taken some accounts to small claims court. But that doesn't work either. You get a favorable judgment, but you still have to collect, so you're right back where you started from," he

Forbes' problems are the same that other companies have faced at one time or another. When customers don't pay on time, cash drys up, and it is harder to make purchases and run the business.

To avoid collection problems, Dick Keilt, Lawn Doctor, Lakewood, requires a payment in advance and then divides the rest of the payments over a six-month plan. If a person falls behind, he gets a call from Keilt's wife.

:"My wife has a good telephone voice; it doesn't sound as if we're trying to intimidate them. Everybody falls behind in their bills at one time," he says.

Often times the call about a late payment is related to a service problem. Keilt says if the lawn has not been correctly serviced, he wants to hear about it and respond quickly.

If a customer falls too far behind, Keilt cuts off their service. He says his system has worked well. "I've only gotten two bad checks in six years."

With his monthly payment plan and demand for 25 percent down, Keilt has a regular money supply which helps him to more orderly step up his financial affairs.

Other Denver companies terminate a service after one or two applications or services have not been paid for. They figure that if the person has not paid, it is better to cut their losses early.

To insure payment, Bill Carter, Valley Gardens, Boulder, requires money down and charges a 10 percent penalty if the full amount is not paid on time. "Why shouldn't we do this, other types of businesses do." He feels his program has worked well. However, he admits it may have scared off some prospects, but they would have been the ones, who would have not paid anyways.

Denver businessmen pegged their outstanding accounts at between 3 to 10 percent of sales.



Don Forbes



Dick Keilt



Bill Carter

ski during the winter and will work a summer. A person like him will fit into the second category," he says.

When Fagan finds a good worker who wants to stay on, he has offered the person a share of the business and given them a territory. He has done this with two employes this year and so far it has worked well.

Fagan also hires for voids in his operation. For example he will be hiring persons skilled in mechanics and chemical applications to fill a need.

Furthermore, he is trying something this summer which is pretty revolutionary for the business — a summer vacation.

The vacation will be for workers between mid-July and mid-August. Each worker will get one week off, and the other workers will take on his work while he's gone.

The program is predicated on getting a lot of work done before the vacation time. "It will mean some night and Saturday work, but everybody seems to be for it, even the boss," Fagan says. He says the vacation plan is a good motivational factor.

Another motivational approach is offered by Chuck Ferdig, Keesen Enterprises, Sheridan, who says, "I just ask a worker what he likes to do. Maybe you have a guy on a mower, and he'd love to be on a power rake."

To solve difficulties with employes and equipment, Keseen assigned workers equipment. "We even painted guys names on their trucks." Ferdig says equipment did not break down as often because the workers took better care of their equipment.

Above all Ferdig says the best motivational factor is appreciation for a job well done, which managers overlook too often.

"Even just a, 'You did a good job,' will pay off," he says.

When approaching a job or assignment, the choice of words can be all important, says Wayne Nuzum, Nuzum Nursery, Boulder.

"I say to them this is what 'we' meaning myself and the worker want to do," he says. It makes the worker feel he is part of a team with a common goal, Nuzum says.

During his 44 years in the lawn care business, Nuzum has found that two types of backgrounds mold good workers. "I used to just select farm kids, but they are getting harder to find. I've found that athletes make good workers.

"They are interested and ready to work hard and build themselves up. Also, they are used to being bawled out by the coach so they are likely to take it when a customer unloads on them."

Once an employe is on the job, Don Forbes, Lawn-A-Mat, Arvada, has found a way to insure that the worker does good work.

"I pay hourly and offer incentive for every job done. But if I have to go and rework the job, he did, I charge him the amount of the incentive. It stops the worker from just rushing through a job," he says.

Another approach, using ego building to get the job done right, is offered by Bill Carter, Valley Gardens, Boulder.

"If you train an employe about lawn care and make him feel like a professional, he can answer customer questions. When he does this, it gives him a feeling of being someone," he says.

After all the motivational steps are taken and money has been paid, employers still face problems.

"We've tried everything: Profit sharing plans, trips, elk hunting outings and vacations, and we still lose employes," says Wally SaBell, SaBells Inc., Lakewood.

He offers these benefits to his foremen and superintendents but still loses some of them.

Under his profit-sharing plan, key workers are given an amount of money based on the profit percentage and their base salaries. They can take the money or reinvest it in the company for 81/4 percent interest.

Of his 150 workers 30 to 35 are fulltime, year-round workers; these are the employes who are eligible for the companies full benefits, including health insurance, pension plan, one to three week vacations and profit sharing.

To get 150 workers, most of whom are laborers, SaBell hires 350 to 400, many leave shortly after being hired. About 50 to 120 of his seasonal workers return each year.

To retain its workers, ChemLawn employs them all year and pays them a weekly salary. This cuts down turn over. During the winter, workers repair equipment and attend training sessions.

Denver lawn care businessmen gave this range, \$2.65 to \$5 an hour, for the average laborer's wage. Foremen and superintendents salaries range from \$9,600 to \$21,000.

# **NEWSMAKERS**

Paul Kovak and Dan Mills have joined **Perma-Green**, Chesterland, Ohio, as assistants, according to Rick Jesse, company president.

Barbara Hudec is office manager for Lawn Doctor of Plano, Texas, according to company president Dennis Jones. New lawn technicians who joined the company this lawn care season are Mike Riley and Glenn Moore.

Paul Kampe, president of Lawnrite Corp., Bohemia, N.Y. has announced a number of appointments: Vincent Tirolo, formerly operations manager, has been named vice president; Paul Wolkiewicz has been named director of operations; Robert Crygier and Phillip Lynch have been named branch managers; Edward Schneider and

Joseph Laurento have been named division managers; Edward Graham has been named supervisor for fleet maintenance for the company's Maintenance Division; and Rosemary Oliverio has been named customer services manager.





err Gardner

Cecil Kerr has joined Mallinckrodt, Inc., St. Louis, as an executive sales representative for its Specialty Agricultural Products Department. Kerr will work out of Kalamazoo, Mich. and will have sales responsibility for the north central states. Kerr was formerly with J. J. Dill Co., Kalamazoo.

Rich Gardner has joined Lakeshore Equipment & Supply Co., Elyria, Ohio as sales representative for the west Florida region. He will live in the Sarasota/Bradenton area.

Vernon L. Shallcross, Jr. has been named executive vice president of Green-Lawn, Inc., Louisville, Ken. He will be responsible for administration and will operate out of the company's Tulsa office. He was formerly southeastern regional manager for Tube Turns Division, Allegheny Ludlum Metals Group of Allegheny Ludlum Industries, Inc., with offices in Atlanta.

Tim K. Brown has been named advertising manager for the Outdoor Power Equipment Division of **FMC Corp.**, Port Washington, Wis. He will direct





Brown

Nickell

the national and regional media advertising and promotion efforts for **Bolens** lawn and garden equipment. He was formerly an account executive with the Milwaukee office of Bozell & Jacobs advertising agency.

Dr. Louis G. Nickell has joined Velsicol Chemical Corp., Chicago, as vice president of research and development.

Mark Warren, of A-Perm-o-Green Lawns, Inc., Little Rock, Ark., has received state pesticide applicator licenses in the ornamental, tree and turf pest control and weed control classifications.

Turf-Aid Distributing Co., Billings, Mont., has been appointed a distributor of turf maintenance products by Jacobsen Manufacturing Co., Racine, Wis. George Ellinghouse, Turf-Aid president, became involved in equipment distribution 12 years ago. His company, which moved into a new addition of 5,000 square feet in December, is responsible for the distribution, service and replacement parts of Jacobsen turf products throughout Montana and in the northern half of Wyoming.

The Irrigation Division of Toro Co., Riverside, Calif., has promoted four of its top sales and marketing executives. Daniel E. Clawson has been named to the new post of group director of sales and marketing; Robert Batterson is new director of turf sales; Richard A. Danielson is new director of marketing services; and Craig Tanner is new director of marketing.

# Lawn care laboratory service now available

A complete laboratory service for the lawn care industry is now available from CLC Labs, a division of the ChemLawn Corp., Columbus, Ohio.

Areas of laboratory testing include:

 Cholinesterase biomonitoring, a quick and reliable method for checking the effectiveness of the safety procedures of employes who handle organophosphate pesticides

· soil testing

• fertilizer quality control

· pesticide screening

"CLC Labs is a lawn careoriented laboratory that is aware of the problems of the industry," lab manager Bob Coury told LAWN CARE INDUSTRY.

"We offer rapid turn-around time, clear, concise laboratory reports and interpretational guidelines of the reports," he said. The company address is 1046 Crupper Ave., Columbus, Ohio 43229. Phone is (614) 888-1663.





# BEAUTIFUL ALL OVER.

0217® brand Fylking Kentucky bluegrass is beautiful in every way; brilliant green in early spring, consistent green in summer heat and long-lasting green into autumn. It has improved resistance to many diseases, drought, heat, cold, smog and traffic. Low-growing, Fylking forms exceptionally thick-knit rhizomes and root system for a dense sod that helps resist weed invasion. Now you can have a home putting green

because fine-textured Fylking thrives on low-mowing (even as low as 1/2 inch).

This physically pure, genetically true seed contains no annual bluegrass (*Poa annua*), bentgrass, or short-awned foxtail.

Beautiful in price, too. Fylking Kentucky bluegrass seed costs less than most other elite bluegrasses. Ask for the Swedish beauty, 0217® brand Fylking Kentucky bluegrass seed when ordering at your local wholesale seed or sod distributor.



**FYLKING KENTUCKY BLUEGRASS** 

Another fine, quality-controlled product of Jacklin Seed Company.

is hard for a guy to go right into it without some training.

The first thing he does when he hires on an employe is to give him one of the many books on the market and tell him to go home and study it from cover to cover. He recommends Sprinkler Irrigation Systems, by Virgil Young, president of Mr. Rain, Inc., Tacoma, Wash. The book is available through Young. Another good book on the market is the comprehensive Turf Irrigation Manual, by James A. Watkins, director of training for Weather-Matic Division, Telsco Industries. It is available through the company at P.O. Box 18205, Dallas, Texas 75218.

The Irrigation Association also sponsors many turf irrigation training courses each year. The Association address is 13975 Connecticut Ave., Silver Spring, Maryland 20906.

Line-Mai's Levy installs irrigation systems for anywhere from 25 cents to 45 cents a square foot. He put in his first job seven years ago on a 12,000-square-foot lawn with 70 pop-up sprinkler heads. The price then was \$1,400, and has just about doubled in seven years.

His three-man crew has "done an incredible job of streamlining our installation operation, and this is where we make our money," Levy said. He said his crew spends about 31/2 days on a job, and that he has seen other installation crews spend twice that amount of time on a job. Even one of his competitors, Paul Constant of Constant Care Lawn and Tree Service, Kansas City, Mo. admits that "Pete's crew has their installation operation down to the fine degree of a gnat's whisker."

Levy stresses that irrigation manufacturers such as Toro, Rain Bird and Imperial were his main source of information and help when he started out in the residential irrigation contracting business. Toro Irriga-

tion Division is located at P.O. Box 489, Riverside, Calif. 92502. Rain Bird Sprinkler Manufacturing Corp. is located at 7045 N. Grand Ave., Glendora, Calif. 91740. Imperial Underground Sprinkler Co. is located at 705 E. 31 St., Kansas City, Mo. 64109.

Other irrigation manufacturers include: Champion Brass Manufacturing Co., 1460 N. Naud St., Los Angeles, Calif. 90012; Johns-Manville Ag Turf Division, P.O. Box 232, Fresno. Calif. 93702; L. R. Nelson Corp., 7719 N. Pioneer Lane, Peoria, Ill. 61614; Weather-Matic Division, Telsco Industries; Melnor Industries, One Carol Place, Moonachie, N.J. 07074; Moody Sprinkler Co., Inc., 3020 Pullman St., Costa Mesa, Calif. 92627; Royal Coach Sprinklers, Inc., 4381 N. Brawley Ave., Fresno, Calif. 93711; and Safe-T-Lawn, Inc., 7800 N.W. 32 St., Miami, Fla. 33122. These companies and others have excellent resource material available to the lawn care businessman.

Levy's company did the irrigation work for the Kansas City Chiefs' Arrowhead Stadium, installing 500 pop-up sprinkler heads on the job. Chiefs' officials told Levy that the system is saving more than \$350 a month in water.

Residential irrigation contracting provides about one-third of Line-Mai's total business, between \$300,000 and \$350,000 a year. Levy is considering offering a commission to lawn care companies to turn over names of customers interested in residential irrigation.

He is also becoming more strict on the company's policy of not handling service on jobs they did not install. "We get so many calls that we have just had to draw the line on not servicing installations by other companies," he said. "And we guarantee our work. More than 50 percent of our service calls are no charge."



# MEETING DATES

American Sod Producers Association Summer Convention and Field Days, Sheraton-Spokane, Spokane, Wash., July 19-21. Contact: Bob Garey, ASPA, Association Building, 9th and Minnesota, Hastings, Neb. 68901, (402) 463-5691.

**Missouri Turf Field Day,** University of Missouri South Farms, Columbia, July 25. Contact: Dr. John H. Dunn, 1-43 Agriculture Building, University of Missouri, Columbia, Mo. 65211, 314-882-7838.

Penn Allied Nursery Trade Show, Hershey Convention Center, Hershey, Pa., July 25-27. Contact: PNA, Inc., 169 W. High St., Carlisle, Pa. 17013, 717-243-1786.

**University of Massachusetts Turfgrass Field Day,** University Farm, South Deerfield, July 26. Contact: Dr. Joseph Troll, Stockbridge Hall, University of Massachusetts, Amherst, Mass. 01003, 413-545-2353.

Nebraska Turfgrass Field Day and Equipment Show, University of Nebraska Field Lab, Mead, Neb., August 1. Contact: Dr. Robert C. Shearman, 105 Plant Industry Building, University of Nebraska, Lincoln Neb. 68583.

Illinois Landscape Contractors Association Annual Summer Field Day, Stonegate Farm Nursery, Poplar Grove, Ill., Aug. 2. Contact: Carole Rachesky, Box 484, Bloomingdale, Ill. 60108, 312-894-4774.

**Lawn, Garden, Outdoor Living Show,** Division of National Hardware Show, McCormick Place, Chicago, Aug. 14-17. Contact: Charles Snitow, National Hardware Show, Inc., 331 Madison Ave., New York, N.Y. 10017, 212-682-4802.

**Penn State Turfgrass Field Days**, Joseph Valentine Turfgrass Research Center, University Park, Pa., August 16-17. Contact: Dr. Joseph Duich, 21 Tyson Building, Department of Agronomy, University Park, Pa. 16802.

Central Plains Turfgrass Association/Kansas State University Field Day, Kansas State University, Manhattan, Kan., Aug. 23. Contact: Dr. Robert N. Carrow, Horticulture Department, Kansas State University, Manhattan, Kan. 66506, 913-532-6170.

Rhode Island Turfgrass Field Day, Kingston, R.I., August 23. Contact: Dr. C. Richard Skogley, Department of Plant and Soil Sciences, University of Rhode Island, Kingston, R.I. 02881.

Farwest Nursery Garden and Supply Show, Memorial Coliseum, Portland, Ore., Aug. 25-27. Contact: Carl Plog, Farwest Nursery Show, 224 S. W. Hamilton St., Portland, Ore. 97201, 503-221-1182.

Ohio Turf and Landscape Day, Ohio Agricultural Research and Development Center, Wooster, Ohio, Sept. 12. Contact: Edward H. Roche, OARDC, Wooster, Ohio 44691, 216-264-1021.

Virginia Turfgrass Field Days and Trade Show, Virginia Polytechnic Institute and State University, Blacksburg, Va., Sept. 12-14. Contact: Dr. John F. Shoulders, Department of Agronomy, 419 Smyth Hall, VPI Blacksburg, Va. 24061, 703-951-5797.

Illinois Turfgrass Field Day, Ornamental Horticulture Research Center, Champaign, Ill., Sept. 12. Contact: Dr. John R. Street, 106D Horticulture Field Lab, University of Illinois, Champaign, Ill. 61801, 217-333-2123.

Michigan State University/North Michigan Turfgrass Field Day, Traverse City, Mich., Sept. 13. Contact: Dr. John E. Kaufmann, 101 Soil Science Building, Michigan State University, East Lansing, Mich. 48824.

International Pesticide Applicators Association Annual Convention, Sea-Tac Motor Inn, 18740 Pacific Highway South, Seattle, Wash., Sept. 13-15. Contact: Ed Walters, 20057 Ballinger Rd., N.E., Seattle, Wash. 98155, 206-362-9100.

Pacific Horticultural Trade Show, Anaheim Convention Center, Anaheim, Calif., Sept. 20-22. Contact: Richard Staples, 1005 8th St., Suite 303, Sacramento, Calif. 95814, 916-443-7373.

Midwest Turf Field Day, Purdue University, West Lafayette, Ind., Sept. 25. Contact: Dr. William H. Daniel, Department of Agronomy, Purdue University, 2-443 Lilly Hall, West Lafayette, Ind. 47907, 317-749-2891.

Northwest Turfgrass Conference, Holiday Inn, Richland, Wash., Sept. 25-28. Contact: Dr. Roy L. Goss, Western Washington Research and Extension Center, Puyallup, Wash. 98371, 206-845-6613.

Turf Irrigation Short Course, Calgary, Alberta, Canada, Sept. 26-28. Contact: Irrigation Association, 13975 Connecticut Ave., Silver Spring, MD 20906, 301-

Fourth Annual Garden Industry of America Conference and Trade Show, Cincinnati Convention and Exposition Center, Sept. 29-Oct. 1. Contact: Paul Anderson GIA, Box 1092, Minneapolis, Minn. 55440, 612-374-5200.

Northern California Turfgrass Council Irrigation Seminar, Goodman Hall, Jack London Square, Oakland, Calif., Oct. 4. Contact: Richard Harrison, Room 201, City Hall, Alameda, Calif. 94501.

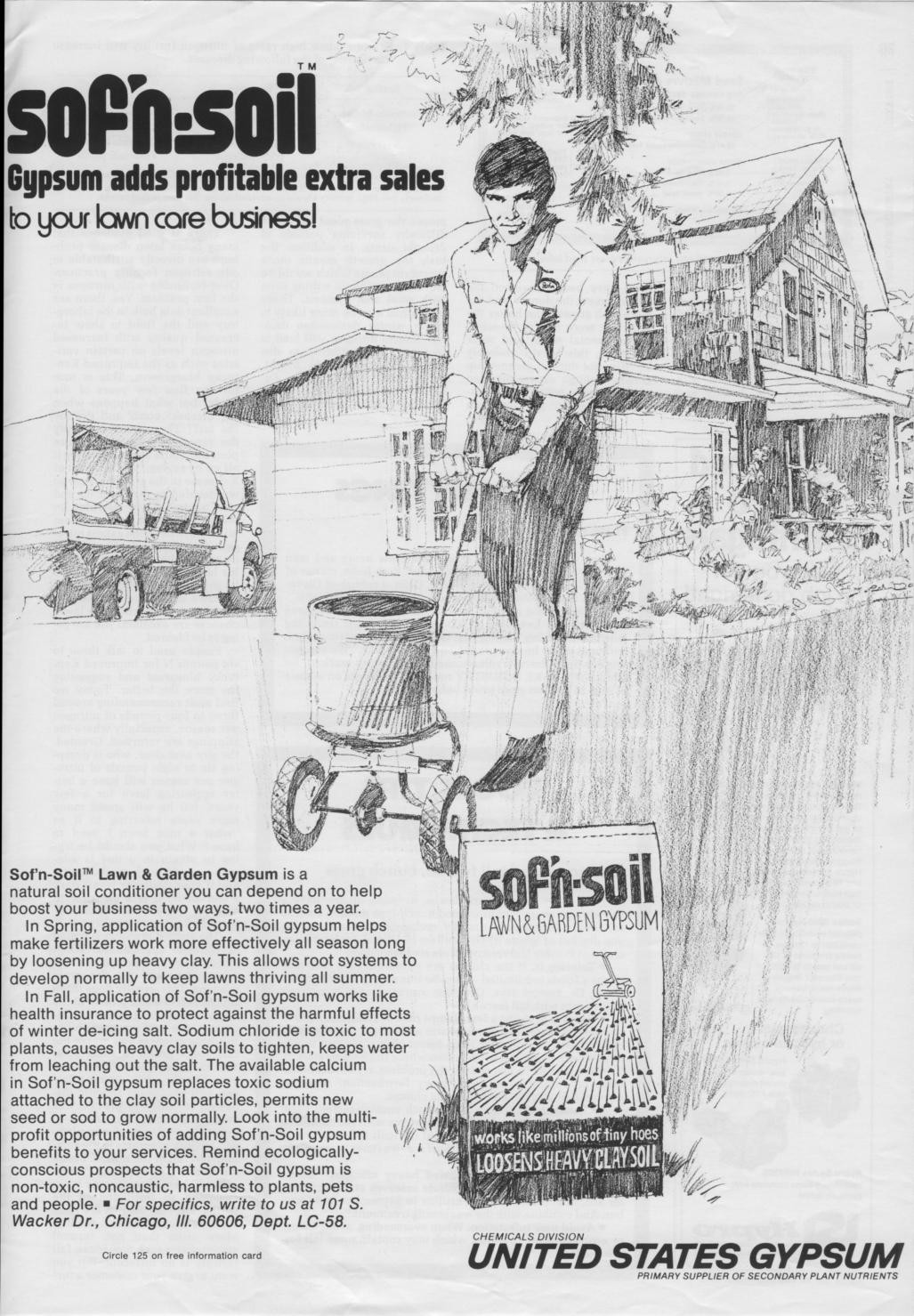
Central Plains Turfgrass Conference, Kansas State University, Manhattan, Kan., Oct. 4-6. Contact: Dr. Robert N. Carrow, Horticulture Department, Kansas State University, Manhattan, Kan. 66506, 913-532-6170.

**Professional Grounds Management Society** Conference and Trade Show, Atkinson Hotel, Indianapolis, Ind., Oct. 8-11. Contact: Allan Shulder, 19 Hawthorne Ave., Pikesville, Md. 21208, 301-653-2742.

Florida Turf-Grass Association Annual Conference, Orlando, Fla., Oct. 15-18. Contact: Nona Murphy, 1520 Edgewater Dr., Suite E, Orlando, Fla. 32804. 305-

18th Annual Southern California Turf/Landscape Equipment and Materials Educational Exposition, Orange County Fairgrounds, Costa Mesa, Calif., Oct. 18-19. Contact: Ed McNeill, SCTC, 1000 Concha St., Altadena, Calif. 91001,

Southwest Turfgrass Conference, Texas A & M University, Research Center at El Paso, Oct. 19-20. Contact: Dr. Arden A. Baltensperger, Agronomy Department, Box 3Q, New Mexico State University, Las Cruces, N.M. 88003.



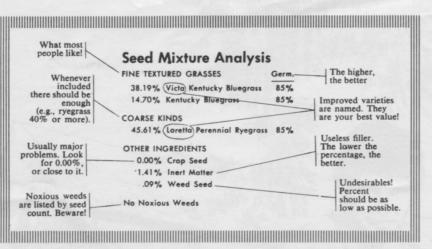


Fig. 1. How to read and interpret a grass seed label

FERTILIZING from page 1

level, effects the following in a grass plant: shoot growth and density, root growth, color, heat, cold and drought tolerance, wear tolerance, and disease susceptibility. Of all these, the homeowner is most concerned with shoot growth and density and color. In fact, the majority of

them have been convinced the darker green, the denser, and the more lush growth, the better the turf. If it were not for diseases, environmental stress and wear problems, this would probably be true. But darker, greener top growth through excess nitrogen applications is usually at the expense of the root growth which Table 1. Seasons when high rates of nitrogen fertility will increase the severity of the following diseases.

Spring	Summer	Fall
Fusarium blight	Stripe smut	"Helminth"
"Helminth"	Pythium blight	Melting out
	brown patch*	Typhula blight
	grey leaf spot	Fusarium patch

\*Brown patch is a problem in the St. Augustine grass-growing area during late spring and early fall. High fertility should be avoided during this time in those areas.

means the grass plant will have difficulty surviving periods of drought stress. In addition, the lush top growth means more succulent plants which would be more susceptible to wilting even with good root systems. These plants will also be more likely to suffer winter desiccation damage. Excess nitrogen will lead to increased susceptibility to diseases like, Fusarium blight, stripe smut, brown patch, Fusarium patch, Typhula blight, Pythium blight, "helminth" and

grey leaf spot.

There is good evidence that many home lawn disease problems are directly attributable to our nitrogen fertility practices. Over-fertilizing with nitrogen is the first problem. Yes, there are excellent data both in the laboratory and the field to show increased quality with increased nitrogen levels on certain varieties such as the improved Kentucky bluegrasses. This is true for the first few years of the study, but what happens when the diseases occur and destroy the turf? The answer is simply the researcher renovates those plots and starts again, summing it all up by saying, "we had a lot of X-disease in the plots this year so we decided to dig them up and start again;" never dawning on them that part of their problem might have been the excess nitrogen they applied. The homeowner neither wants to replace his lawn every few years, nor is he going to brush aside the loss of his lawn so easily. As a matter of fact, if you are treating his lawn, chances are excellent you are going to be blamed.

People used to talk three to six pounds N for improved Kentucky bluegrass and suggesting the more the better. Today we find most recommending around three to four pounds of nitrogen per season, especially where the clippings are returned. Granted, the guy next door, who is dumping six to eight pounds of nitrogen per season will have a better appearing lawn for a few years, but he will spend many more years referring to it as "what a nice lawn I used to have." What you should be trying to obtain in a turf is adequate growth with good density, and if your customer wants dark green color, it is a lot safer to achieve it with iron (iron sulfate) than with excess nitrogen.

The second problem is timing of nitrogen applications. When spring fever hits, everyone wants to fertilize and get the grass growing. This usually does three things; forces shoot growth at the expense of root growth, increases the turf's susceptibility to spring diseases and makes the turf more prone to some summer diseases. (See Table 1 for time of year when excess nitrogen will encourage specific diseases.) In order to prevent this from happening, we need to move the majority of our nitrogen fertility programs to the summer and fall of the season. I realize this is like opposing "motherhood" because everyone is accustomed to fertilizing in the spring, but very seldom are radical new ideas accepted readily. More often than not, turmoil accompanies such new ideas, fall fertility is no different. But you want to give your customer a turf

# **COST CUTTINGS**

# How much to charge?

How much should you charge for crew hours and man hours or residential maintenance jobs? Rick Jesse, owner of Perma-Green based in Chesterland, Ohio, a suburb of Cleveland has worked out a basic formula for easily defined jobs.

He charges \$50 an hour for a three-man crew, and figures the crew can handle a 37,000-square-foot lawn including mowing, trimming, edging, bed work, etc. in about two hours. For hand work, he charges \$12 an hour per man. "We are getting our times down to remain competitive in our market," he told LAWN CARE INDUSTRY recently. He works on a basis of 25 to 35 percent gross profit before taxes.

# High speed Hypro Centrifugals help you get the job done right!



Whether you're spraying fertilizer or herbicides or insecticides, Hypro Series 9200 pedestal-mount centrifugal pumps give you nozzle pressures to get the job done right! Even with those long discharge lines, Hypro centrifugals deliver. Check 'em out. Rugged, dependable, economical Hypro centrifugal pumps - and a full line of accessories. Send for your free Hypro Sprayer Pump Handbook or pump catalog today.

Series 9200 Hypro pedestal centrifugals offer capacities to 130 gpm, handle pressures to 170 psi and speeds to 6000

rpm. Compact, engine driven model features space-saving side-by-side mounting

> Choose gear or hydraulic drive.



hydraulic motor.



Circle 107 on free information card

# **TOOLS, TIPS** & TECHNIQUES

# How to control tall fescue, bunch grass

Perhaps your customers' lawns, as many others, have a few clumps or spots of unwanted bunch-type grasses, such as tall fescue, bromegrass, timothy, orchardgrass or red top. Do you dig, kill or ignore it? Dr. William H. Daniel, turfgrass specialist at Purdue University, offers six suggestions:

• Tolerate it. If the clumps are numerous and your customer's funds are limited - maybe it is a back lawn - tolerate it, Dr. Daniel says. Consider overseeding thin or worn areas again with tall fescue.

• Remove it. If just a few clumps rake or comb each clump towards its center to determine size and reduce digging. Then use a shovel or sodcutter to undercut clump. Go one to two

inches deep to get below the crown where thick stems start. Weaken it. To just reduce the problem, try vertical thinning, or cutting close, plus heavy fertilization. Also, let competition weaken the tall fescue clumps.

• Chemical kill. There is not much encouragement here, according to Dr. Daniel. "The large stems with rolled-in-thecrown buds are well-protected and difficult to kill," he told LAWN CARE INDUSTRY. "Surface treatments normally only kill the exposed leaves.'

 Close mowing plus repeated heavy nitrogen. "Stress bunchgrasses, reduce carbohydrate reserves and favor winter kill," Dr. Daniel said. "Fertilize in September and October. And combine with the weakening treatment."

 Avoid new infestation. When overseeding, avoid cheap, or economy seed mixtures, which may contain some tall fes-

Table 2. Annual phosphate applications based on soil test (Bray P1 Table 3. Annual potash application based on soil test (neutral normal extractable).

Soil Test (Lbs. P/Acre)	Pounds Phosphate (P2O3) Recomment General Turf High Maintena Per 1000 Sq Ft Per Acre Per 1000 S			ance Turf
Less than 15 (very low)	3	130	4	
16-25 (low)	2	85	3	
26-40 (medium)	1	45	2	
41-70 (high)	0	0	1	
More than 70 (very high)	0	0	0	

<sup>\*</sup>High maintenance turf would include golf greens.

state university or to a private laboratory.

It may seem like a small thing, but in addition to being the only accurate way of determining how much phosphorus or potassium your customers need, the public relations benefit should be great. Your customer now has something tangible that he can see. He should be more convinced you are trying to do your best, and that you are approaching your business in a scientific manner.

Granted you cannot make a custom fertilizer treatment for every lawn, but you may be able to apply a high phosphorus and/or potassium fertilizer once a season when you make a dry application, or make up a tank of high phosphorus and/or potassium and treat those lawns that need it. Again, you should only have to do this once. Chances are good that if one customer in a given area is low in phosphorus and/or potassium, they all will be low because quite often deficiencies are related to soil types. If extra costs are involved there is nothing wrong with charging extra for a "special" treatment explaining that this treatment is not part of the normal program, but that it is necessary in order to have the best lawn possible and that you would apply it for a fee or that they could apply it them-

Many soil test printouts contain the necessary information concerning how many pounds of phosphorus and potassium are required to correct the deficiency. If not, below you will find a table that you can use to interpret the results.

One final point. There is a lot written in the literature about high or low potassium or high or low phosphorus in relation to each other and in relation to high and low rates of nitrogen for specific disease control. If you have only one disease in your area, then following a specific program may be practical, but in most areas there are two or three major diseases all having different requirements. The best approach is to have adequate levels of phosphorus and potassium based on soil tests and to apply the nitrogen during the time of year when it will not encourage disease development.

Soil Test (Lbs. K/Acre)

51-101 (low)

175-250 (high)

Less than 50 (very low)

More than 250 (very high)

101-175 (medium)

ammonium acetate extractable).

# **NEXT MONTH**

High Maintenance Turf

Per 1000 Sq Ft

4

3

Pounds Potash (K2O) Recommended

170

130

85

45

0

General Turf

Per 1000 Sq Ft Per Acre

\*Including golf greens and other high maintenance turf on sandy soils with high irriga-

0

The August issue of LAWN CARE INDUSTRY will feature a profile of the Minneapolis lawn care market and a special emphasis on lawn building techniques and lawn care businessmen who have made them an integral part of their operation.

he will be happy with and going to summer and fall fertility programs is one of the things that will help do this.

Two questions often asked about such a program are: When do I put on my pre-emergence weed control and when do I spray for broadleaf weeds? For pre-emergence, either apply them without fertilizer or with a small amount (i.e., less than 1/2 lb. N/1000 sq ft). For broadleaf weed control, the agronomist and horticulturalist involved in weed control for years have been saying that the fall is the best time to control broadleaf weeds. In other words, it can be done, but the problem has to be approached with an open mind.

### Potassium

Potassium contributes improved hardiness to drought, cold and heat stresses, improved wear tolerance, and in reducing susceptibility to such diseases as brown patch, Fusarium patch, dollar spot, "helminth," and red thread.

## Phosphorus

Phosphorus contributes to seeding establishment, better root development and increased tillering.

## How much phosphorus and potassium?

Neither phosphorus or potassium are readily leached from the soil, and therefore do not have to be applied as often as

How much should be applied? For both potassium and phosphorus this can best be determined by a soil test. Such a test usually costs around two dollars per sample. Normally, one sample per lawn is sufficient. A pint of soil is all that is required and it can be taken with a soil probe, and should come from various areas of the lawn so it will be representative. The samples can be sent to any soil test laboratory, either at your



Dr. Joseph M. Vargas Jr. is associate professor in the Department of Botany and Plant Pathology at Michigan State University, East Lansing, Mich.



ROCKLAND DIAZINON is available in 3 different strengths; 14% granular • 5% granular • 2% granular. All formations are on a corn cob base.

ROCKLAND has a complete line of granular insecticides, herbicides and fungicides for Professional Turf Maintenance.

ROCKLAND Fertilizers contain combinations of IBDU, NITROFORM and new SULFUR COATED UREA. Some available formulations — 25-5-15, 30-2-5 and 20-4-10.

All products are formulated with the highest quality ingredients and carriers.

ROCKLAND PROFESSIONAL lawn and garden PRODUCTS CATALOG

or write

Ask your supplier CRC ROCKLAND CHEMICAL CO., INC. PASSAIC AVE., WEST CALDWELL, N.J. 07006

Circle 112 on free information card

# Here's What You Should Know About Cholinesterase

Cholinesterase is an enzyme in the blood which is necessary for proper functioning of the nervous system. Your applicators' cholinesterase levels are reduced when they are exposed to many commonly used insecticides. To ensure your employees' health and safety and possibly reduce your workman's compensation costs, you should have cholinesterase levels checked frequently during the insecticide season.

CLC Labs, a division of ChemLawn Corporation, is offering this testing service to any company in the lawn care industry for a nominal charge. Please read the article on cholinesterase in this issue and call or write to CLC Labs for more details.





1046 Crupper Avenue • Busch Corporate Center • Columbus, Ohio 43229

Phone (614) 888-1663

# **BEHIND THIS ISSUE**



More than 70 percent of the comments we hear from our readers have to do with the MARKETPLACE feature in each issue of the magazine (for assistant editor Mike Casey's report on the Denver lawn care market, see page 12). Apparently, lawn care businessmen want to know what is going on in other lawn care markets.

To give you an idea of what our editors will be doing until the end of the year, here is a lineup of markets we will be visiting in the next few months: August — Minneapolis; September — New York; October — Baltimore; November — Philadelphia; and December — Miami. Early next year we will be visiting Pittsburgh, Atlanta, San Francisco, Seattle, Boston, Houston, Toronto, Washington, D.C., and others. We're looking forward to meeting you.

Rob Garley

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# SPRAYERS



Whether your needs are for weed control, lawn insect or fungicide spraying, ornamental and shade tree spraying, or any general outdoor work, we have the exact sprayer you require.

door work, we have the exact sprayer you require.

Our reinforced fiberglass low profile tanks are available in the following sizes: 50, 100, split 100 (2 x 50), 200 and split 200 (2 x 100) gallon sizes.

The reinforced fiberglass tanks are a low profile square design to minimize space, look attractive, and reduce chemical sloshing that you get in higher round style tanks.

you get in higher round style tanks.

These tank sizes can be incorporated into many varieties of sprayers using Hypro, Bean, Cat or Sherwood pumps, either electric or gasoline powered.

All our spray units come complete with tank, pump unit, welded steel chassis and hose reel, either skid or trailer mount.

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# **PRODUCTS**

# 200-gallon spray tank installs in pickup truck

The new PC-200, 10 gallon-perminute spray unit from Tuflex Manufacturing Co. was designed specifically for the lawn care industry. The fiberglass tank holds



200 gallons and is 64 inches long, 31½ inches wide and 27½ inches high

Circle 201 on free information card

# Mixer-proportioner

Young Industries has announced availability of its latest model — MP-60 — with a concentrate capacity of 60 gallons.



The unit applies liquid concentrates of fertilizers and chemicals for application by sprayers, and other systems.

Circle 202 on free information card

# pH tester

A compact, lightweight, handheld pH tester is available that will read pH in a range from 3.5 to 9 in soil, water or solutions. It is self-powered, needing no batteries. It is available from A & H Enterprises.

Circle 203 on free information card

# Chemical mix tank brochure

Raven Industries, Inc. has published a free, four-page brochure which illustrates six styles plus accessory options of its centrifugally cast fiberglass chemical mix tanks. The tanks

feature flat bottoms, dished bottoms or dished bottoms with legs. Flanged tank lips, mixer bars and bolt-down covers meet mixer mounting requirements. Sizes from 65 to 1,000 gallons are listed for easy ordering.

Circle 204 on free information card

# Pesticide sprayer

A new, portable, high-pressure pesticide sprayer featuring the "Micro-Injection System" is available from Power Spray Technology, Inc. The "Silver



Skunk" measures the gallonage used, injects precise amounts of concentrate directly into the high pressure flow.

Circle 205 on free information card

# 5-bushel utility cart folds for transport

A five-bushel capacity utility cart that folds to five inches for shipping and 10 inches for



storage and hanging is available from Stow-A-Way, Inc.

Circle 206 on free information card

# Gravely spec brochure

Gravely has made available three four-color specifications brochures on its lines of commercial grounds maintenance equipment free of charge. The GMT 9000 covers the 26 horsepower grounds maintenance tractor and attachments; the 8000 series the riding tractor line of 12 to 16 horsepower tractors and attachments; and the 5000 series the eight to 12 horsepower convertible walking tractors and attachments.

Circle 207 on free information card

# CLASSIFIED

When answering ads where box number only is given, please address as follows: Box number, c/o LAWN CARE INDUSTRY, Dorothy Lowe, Box 6951 Cleveland, Ohio 44101.

Rates: 35¢ a word for line ads, 65¢ a word for display ads. Box numbers add \$1 for mailing. All classified ads must be received by the publisher before the 10th of the month preceding publication and be accompanied by cash or money order covering full payment.

covering full payment.

Mail ad copy to Dorothy Lowe, LAWN
CARE INDUSTRY, Box 6951, Cleveland,

## **HELP WANTED**

BRANCH MANAGER — National automated lawn service in franchise market seeks experienced individual to start and head up com-

pany areas. Tremendous growth potential for one presently with liquid spray management experience. Send confidential resume to Lawn Doctor, Inc., P.O. Box 525, 142 Highway 34, Matawan, New Jersey 07748.

## FOR SALE

FOR SALE: Stainless steel lawn-combine. Excellent condition. Seeds, fertilizers, aerates, rolls and sprays from 50 gallon tank, at 600 square feet per minute. \$2,500 or best offer. Serious inquiries only. Send inquiries to Box 5, Lawn Care Industry, Box 6951, Cleveland, Ohio 44101.

CHEMICAL LAWN SERVICE in southeastern area will top \$450,000 volumn in Bermuda-Zoysia market. Five application program. Excellent reputation. Inquire Box 6, Lawn Care Industry, Box 6951, Cleveland, Ohio 44101.



# The revolutionary HF-15.

What happens when you combine the advantages of the Jacobsen F-10 mowing tractor with the advantages of hydraulically driven reels?

You get seven reels that can cut turf beautifully even while it's raining. Constant reel speed is maintained hydraulically. This means you can cut to your schedule instead of the weather's.



Two cutting frequencies easily selected at front of unit. The same reels can now cut formal and rough turf areas.

Cutting.

You also get increased versatility. The hydraulically driven reels will give you a beautiful cut on formal turf areas as well as rough areas where Blitzer units would be used. With the HF-15, you simply change the cutting frequency instead of changing reels.

You also get the mowing job done faster because mowing speed is increased. And from the driver's seat, the operator can raise and lower reels in several combinations, and put them into forward or reverse. Reverse can be used to quickly unclog reels from branches, rocks and grass clippings.

Plus, we use wheels instead of skids or rollers to support the reels. Just to reduce scalping on sharp ground countours. And, our exclusive tension springs put even pressure on height adjustment rollers for smoother cutting.

More good news. Reels can be easily backlapped without being removed or disassembled.

It's all in one complete mowing system. The amazing HF-15. Get more details from your Jacobsen distributor.



The HF-15 is a complete mowing system that combines the time-tested Jacobsen F-10 mowing tractor and Fairway gang unit. Plus many new features.

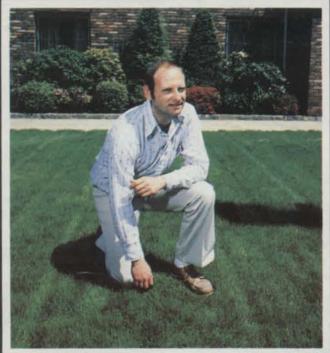
Jacobsen Manufacturing Company. Racine, Wisconsin 53403

# JACOBSEN

An Allegheny Ludlum Industries Company

# baron KENTUCKY BLUEGRASS

# is the most customer-proof'



# grass seed buy"

alan Maged

Lawn-A-Mat dealer, Garden City Park, Long Island, New York. . . one of the largest independent lawn care dealers, servicing over 2000 lawns.

"I make sure Baron is in every pound of grass seed we use. Last year it amounted to 80,000 pounds of Lofts special lawn seed mixtures. If all goes well, I'll order even more this year.

"Why do I insist on Baron? Because my customers expect me to compensate for everything, from the weather to their own mistakes. Some homeowners may let their lawn grow to six or eight inches, then cut it to three-quarters of an inch! Or they'll forget to water their grass during a drought, or

use their lawn for a baseball field. With all that abuse, they still expect a good lawn.

"I need a 'customer-proof' grass seed mixture. So I specify Baron, Yorktown and other top quality Lofts grasses in my special mixture. I get a lush, green color, an excellent root system and the best resistance to leaf spot I've ever seen. Guess that's why I get better than 85% renewals every year.

"One last thing, I really depend on my suppliers for delivery and service. I've dealt with the Lofts people for 15 years and they haven't failed me yet.

