Dursban, Diazinon under fire in East

In a move promising to stir heated debate between the chemical lawn care industry and state governments, the Department of Environmental Conservation (DEC), in New York is currently evaluating a proposal to block further turf applications of the insecticides Dursban and Diazinon.

A ban of the materials, considered indespensible to the control of grub infestation, would render turf managers virtually defenseless against the major insect pests.

Citing recent examples of bird-kill on golf courses in Long Island and Westchester Counties, a spokesman for the wildlife division of the DEC attributed the deaths to both accidental and intentional poisoning of the birds with Diazinon, known to be particularly toxic to species of the black duck and Canada goose. While not especially harmful to other animals, the geese have an unusually low tolerance for the

to page

REGULATION

Possible 2,4-D ban for Canada lawn care?

Recent tests revealing previously unrecognized contaminants in the widely used herbicide 2,4-D may result in a conditional ban of the chemical in Canada by as early as this winter. The discovery by Agriculture Canada's Food Production and Inspection branch would have disastrous effects on the viability of lawn care and weed removal operations throughout Canada, with possible consequences for U.S. users as well.

According to Des Rice, president of the Weed Man, one of Canada's largest weed and fertilizer sprayers, legislation discontinuing use of the herbicide would put virtually all of Canada's lawn care herbicide users out of business. "I guess we'd all have to take the next train to the States if it went through," he told Lawn Care Industry, jokingly, but with a tinge of seriousness.

New chemical waste laws in effect, lawn companies should register with EPA, PLCAA president says

Two weeks after the country elected a president pledged to "get government off the backs of the American people," that government began enforcing what may be the most complicated set of regulations ever devised.

And the lawn care industry is going to be hearing a lot more about the Resource Conservation Recovery Act (RCRA) put into effect by the Environmental Protection Agency (EPA) Nov. 19, according to Jerry Faulring. He is president of the Professional Lawn

Care Association of America (PLCAA).

The law covers all businesses involved in hazardous waste generation, transportation and disposal, Faulring told a standing-room audience on the last day of PLCAA's First Annual Conference and Show in November in Louisville.

EPA officials say that for the first time since the chemical revolution began after World War II, the government will know who is generating the wastes, who is transporting them and how they are being disposed of.

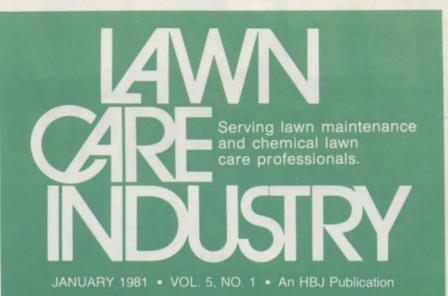
To put the regulations in place, the EPA required all companies which generate, haul or store wastes to notify the agency of their existence. Some 58,700 have done so and they have been assigned identification numbers.

Faulring told the audience of lawn care businessmen that most lawn care companies can be exempt from the law. However, he said, it appears that all lawn care companies have the potential to become hazardous waste generators. "Pesticide spills or container mismanagement could put any lawn care firm into the category of a hazardous waste generator or storer of hazardous wastes," he said.

"To preclude possible fines and liability problems for owners and managers, it is deemed advisable to fully understand the regulations and register with EPA as a potential hazardous waste generator," he said. He also said that due to the very serious nature of this issue, the industry as a whole needs to give it very serious attention.

"I feel that one of our most prominent concerns right now is to avoid negative publicity which

to pag



The herbicide is currently said to represent about 25 percent of all weed-killers applied annually in Canada and is the staple of lawn care businessmen who offer a broadleaf weed spraying service.

The highly effective weed killer has been reported to contain minute traces of dioxins, a chemical compound well known for its high toxicity. The most lethal variety, identified as TCDD has been found in the previously banned herbicide 2,4,5-T, but never in 2,4-D.

Pressure from environmental groups charging that the chemical can cause cancer, birth defects and spontaneous deformities may

to page 5

LCI SURVEY

Businessmen spend \$14.7 million annually on lawn spray tanks

Readers of Lawn Care Industry spend more than \$14 million annually on spray tanks, according to a recent survey conducted by the magazine.

In the less-than-500-gallon category, 31.1 percent of the readers in the survey said they spent an average of \$1,720 on spray tanks in 1979. This would project to \$5.2 million worth of purchases across the readership of the magazine.

In the 500- to 1,200-gallon category, 6.8 percent of the readers said they spent an average of \$6,372, for a readership projection of \$4.2 million worth of purchases.

In the more-than-1,200-gallon category, 4.7 percent of the readers said they spent an average of \$11,463, for a readership projection of \$5.3 million worth of purchases.

In an earlier survey conducted by the magazine, which charted total equipment inventory and not just purchases, 71.8 percent of the readers said they owned spray tanks of less than 500 gallons. The average number of tanks owned was 2.26, for a readership projection of 15,000 owned.

In that same survey, 20.5 percent of the readers said they owned tanks of between 500 and 1,200 gallons. The average number of tanks owned was 2.72, for a readership projection of 5,200.

Also, 3.4 percent of the readers said they owned spray tanks of more than 1,200 gallons. Average number owned was 7.4, for a readership projection of 2,300.

The results of the 1980 survey are based on a 53.6 percent response to 500 questionnaires mailed to readers of Lawn Care Industry earlier this year. For a copy of the survey, contact: Bob Earley, editor/publisher, Lawn Care Industry, 757 Third Ave., New York, NY 10017.

QUICK STARTS

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For a report on what happened at the first Professional Lawn Care now held recently in

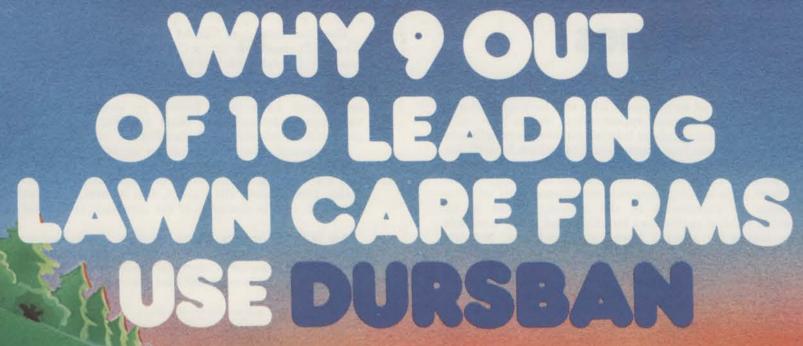
E LANSING CROP E SOIL SCL MICHIGAN STATE UNIV P E PIEKE PROF P E PIEKE PROF now held recently in TRY, page 12. The echnical problems the lext year's show is set

SPRAY TANK PURCHASES, 1979

| Tank size | % sample purchasing | average per purchaser | projection to LCI readership | |
|-------------------------|---------------------|--------------------------|---------------------------------|--|
| Less than 500 gallons | 31.1% | \$ 1,720 | \$ 5.2 million | |
| 500-1,200 gallons | 6.8 | 6,372 | 4.2 million | |
| More than 1,200 gallons | 4.7 | 11,463 | 5.3 million | |

Source: 1980 LCI Survey





When the top 9 of 10 lawn care firms in America all choose DURSBAN* brand insecticides as their predominate insecticides for surface insect control...there has to be a good reason. Or two.

Well there are two.

- 1. DURSBAN insecticides last longest of all leading insecticides.
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In fact one application of DURSBAN 4E, ¾ oz. per 1,000 sq. ft., costs only about 45¢. Yet with this small amount, you get six to eight weeks of unsurpassed residual control of dozens of turf pests. Compare this to two to four weeks with any of the other leading insecticides

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You also use a lower dosage rate with DURSBAN than with other leading insecticides. That means you handle fewer drums to do the job. So ask your supplier for the turf insecticide that saves you time, trips, storage space and money. Ask for DURSBAN 2E insecticide or double-strength DURSBAN 4E insecticide. Just be sure to read and follow all label directions and precautions. Agricultural Products Department,

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MEMOS

"Hose jockeys"? We received a letter recently from a reader at the applicator level of employment who was looking for some guidance as to employment opportunities in the lawn care industry. Nothing strange about this: we receive many calls and letters from lawn care businessmen and suppliers looking for leads on jobs throughout the industry.

Also, where we used to see want ads for lawn applicators, most of them were seeking no special experience. Now with the proliferation of companies in the industry, there is an experienced pool of applicators building, and many want ads now are asking for specific lawn care experience. Nothing strange about this either, you could almost expect it the way the

industry is growing.

But back to our lawn applicator friend. He wrote that he was looking for employment opportunities for a person holding a B.A./B.S. degree other than "hose jockey" or "Cyclone cruiser" levels. His colorful language refers of course to spray applicators and dry applicators specifically. Are there other colorful terms for the front-line people actually doing the work on the lawns in

Committee proceeds on landscape standards: The Landscape Standards Committee of California, under sponsorship of the California Landscape Contractors Association (CLCA) met recently with representatives from the Associated General Contractors, Associated Landscape Contractors of America, American Society of Civil Engineers, American Society of Golf Course Architects, American Society of Landscape Architects, California Association of Nurserymen, Interior Plantscape Association, The Irrigation Association, Northern and Southern California Turfgrass Councils, and officials of CLCA.

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POSTMASTER: Send Form 3579 to LAWN CARE INDUSTRY, P.O. Box 6017, Duluth, Minnesota 55806.

The Committee was formed last year to establish minimum acceptable standards for the California landscape industry. It is expected the standards will be adopted and used by all segments of the industry including individuals, organizations, public agencies and educational institutions. Specialized subcommittees have been formed to develop standards for mowing/maintenance and other specific areas such as site preparation, irrigation and planting.

We know of many states that are working along these lines, and we think it is a good idea. For further information, whether you are working in California or other states, contact: Roger Fiske, Three Cherry Hills Court, San Ramon, CA 94583, (415) 828-8680, who is chairman of the standards committee.

An industry grows: Steve Derrick, of Professional Turf Specialties and Lawn Groomer in Normal, Illinois, outlined growth of the lawn care industry at the Midwest Turf Conference held at Purdue University last year. Here are some excerpts of his talk:

"An industry grows in many ways," he told the audience of lawn care businessmen. "Most people measure industrial growth in relation to size or dollar volume. It's true that the lawn care industry has grown from about 5,500 companies in 1975 to 9,400 companies in 1980. Also, total dollar volume in 1975 was about \$960 million, and 1980 estimated volume is \$1.4 billion.

"However, there are other ways to measure an industry's growth. I believe more important yardsticks such as knowledge, performance, integrity, customer acceptance and satisfaction are also important measuring criteria.

"Certainly a great deal of the lawn care industry's growth has to be attributed to increased knowledge. Ten years ago a few of the large companies were familiar with fertilizer breakdown, disease problems and herbicidal half-life. Today, most firms blend slow-release fertilizers with water-soluble to attain an even nitrogen release. They can do this with confidence and full understanding of their length of release. The knowledge doesn't stop there. Through university and individual efforts, the entire industry is now better informed on cultural and chemical methods to maintain better turf.

"Performance grows out of knowledge. Every lawn care company strives to offer the best lawns economically possible. And once the knowledge was available, the lawn care industry has provided thousands of neighborhoods across the country with weed-free, healthy turf. In addition, the cost is less than that at which the homeowner could buy equal material at retail cost.

"The reputation of any industry lies in its integrity. A few who have not understood lawn care applications have accused the industry of spraying water, cutting rates, etc. The customers knew better. Through a constant effort to provide good service, answer turf problems and provide the customer with mailers and informative brochures, this industry has growth in integrity also. You can spend \$700 for a television or \$8,000 for a car, but you can't get the company to come out to your house and examine those products when something goes wrong without paying a high service call. The lawn care industry does come out, and at no cost. That's service and that's integrity.

"Increased knowledge, high performance and a continued level of integrity have given the lawn care industry a high level of customer satisfaction. It is this acceptance by the customer that has made our industry the \$1.4 billion industry it is today. And now that the Professional Lawn Care Association of America has been established, the level of integrity will increase even more.

"Our industry is made up of small businessmen, located in every size marketplace, with a great potential for more growth. The industry is young and exciting. We are growing. Not only in size and dollars, but also in product quality—where it counts most!" We couldn't have said it better Steve.

Do bankers understand our industry? We received this letter recently which proves out the importance of gathering information about our industry, a job that the Maintenance Division of the Associated Landscape Contractors of America (ALCA), the Professional Lawn Care Association of America (PLCAA) and other groups are working on.

The letter was from the assistant vice president and manager of a bank. It read in part:

of a bank. It read in part:

"I am considering making some loans to a company that specializes in lawn care. The services they offer are lawn spraying, sprinkler system installation and lawn renovation. I have tried the local libraries for reference material on this industry, but can find nothing.

"If you have any information concerning companies of this type, or of a general nature in this field, please send it to me. Specifically, I am looking for comparative financial statements, industry history, industry projections for the future, trends, etc."

Your banker might have written that letter. We as an industry need to develop this kind of information, and it behooves each and every company to cooperate with groups such as ALCA and PLCAA in developing it to give the banking community a better idea of where we are at and where we are going.—Bob Earley

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INSECTICIDES from page 1

substance, said to be fatal to them in doses of three parts per million

The issue is particularly sensitive in the New York area because grub pestilence is on the increase and threatening to get out of hand. According to Dr. Haruo Tashiro, an entomologist at the New York State Agricultural Experiment Station, grub density is directly proportional to rainfall. "It's been getting worse for the past five or six years. Since the summer of '65 we've been getting more rains in summer and eggs are hatching at particularly high levels," he said.

Grubs feed just under the turf surface and prune the turfgrass roots, splicing the sod from the soil. "After a while, you can roll the sod right back," reported Dr. Tashiro. Withdrawal of the highly effective insecticide would result in a frantic search for a suitable

replacement.

According to Thomas Strain, president of the New York State Turfgrass Association, Dursban and Diazinon are two of the only materials turf managers have to battle the pests. "We have no other product forthcoming," he said. Another insecticide, Oftanol, to be marketed by Mobay Chemical Corp., Kansas City, Kansas, has proven to be highly effective against grubs and less toxic to the birds, but is currently being held back from use pending label approval. So, according to some experts, while considering restrictions on the existing controls, regulatory agencies are holding up its only possible replacement.

Strain says his association supports the environmental concern of the DEC, but not its possible intentions. "We don't feel the most effective solution to the problem is an outright ban. Communication has been a real problem—and the cost of limiting the materials must be weighed against the cost to the

industry.'

Aside from cases of intentional bird-kill by superintendents frustrated by the menace of large congregations of water fowl on the golf courses, most of the incidents have occured when the insecticide has been applied improperly. Application before heavy rainfall, over-application, and placement close to ponds where run-off is likely are some of the misuses that have led to the poisoning incidents and the resultant public outcry. "However," said Dr. Tashiro, "the cases cited certainly don't represent proper use of the material.'

In order to avoid possible damage to its livelyhood, the New York State Turfgrass Association intends to petition state legislators and rally those who would be most affected by Diazinon prohibition, including the golf course superintendents themselves. The USGA has also expressed interest in

garnering support.

Turf businessmen would not be the only ones hit hard by prohibition, Strain remarked. Sod producers would also suffer. "They must approach at least 85% grubcontrol efficiency in their loads and without Diazinon or a suitable replacement, their entire yield would be rendered unacceptable."

The controversy is far from over, for the DEC has yet to make formal recommendations on pro-

per limitation of the material. One source indicated that this might be a restriction of insecticides use during migration seasons, but since the water fowl tend to congregate on the courses all winter long, this might not solve the problem. The DEC's report will be available shortly, so more concrete reactions can be reported soon.

2,4-D from page 1

force Canadian law-makers to forbid use of the herbicide before it can be used in next spring's crop and lawn care season.

As previously reported in Lawn Care Industry, ("2,4-D under fire from Toronto groups", March '80), groups like P.A.S.S. (Parents Against Senseless Spray) have already forced local school boards to cut back use of the chemical, putting a severe dent in local lawn care spray schedules. Lawn care businessmen throughout Canada are observing these successful

consumer-action precedents with care, for the test cases are threatening to gather national

The businessmen are not alone, however. Reports indicate that a 2,4-D ban this winter may seriously shorten next year's crop yield. "The guy on the street sees only the lawn care truck rolling by and that sticks in his mind," said Rice. "He might not be aware of the fact that far more 2,4-D is used by farmers.'

Lawn care businessmen in Toronto have formed an association of 35 companies in their area to counter any adverse propaganda on the herbicide arising from time to time. Rice says they are not sitting by passively and awaiting the outcome, but are actively campaigning in their industry's behalf by sending letters to Canada's Parliament. The focus of their lobby is the legal protection of herbicide sprayers from immediate loss of their livelihood.

Rice feels that for the most part

dioxin toxicity levels in 2,4-D are inconsequential. He compared the controversy to the recent uproar over saccharine carcinogen levels, in which test animals were fed unlikely quantities of the sweetener and developed predictable side effects. Agriculture Canada has not reported which dioxins are present in 2,4-D, or its toxicity levels, a shortage of information Rice believes is behind much of the uninformed panic.

COMPANIES

Northrup awards turf account to ad agency

The Consumer Products Division of Northrup King Co. has awarded its professional turf products advertising account to Colle & McVoy Advertising Agency, Inc., Minneapolis, Minn. The division supplies seed and other turf products to parks and recreation areas, highway departments and lawn care professionals.



"I wouldn't do anything to harm this tree. That's the reason I use Roundup."

Park Superintendent, Victoria, Texas

As Donald Dusek will tell you, controlling tough weeds is just part of his grounds maintenance problem. As a park superintendent, Don is also responsible for protecting his valuable trees, shrubs and plants. So he insists on Roundup® herbicide by Monsanto.

With Roundup, Don can be confident that all of his valuable vegetation—including this beautiful 75-year-old pecan tree—can continue to flourish. He just follows label directions for Roundup. Since Roundup has no residual soil activity, and won't wash out of treated areas, Roundup helps Don

control weeds in many different situations-even in his most delicate areas.

See your local Monsanto representative or chemical dealer soon for your supply of Roundup. Like Don, you'll find that Roundup is the solution to many of your toughest weed control problems.

Nothing works like Roundup.





ALWAYS READ AND FOLLOW THE LABEL FOR ROUNDUP. Roundup" is a registered trademark of Monsanto Co. RUP-SP1-102D @ Monsanto Co. 1981

NEWSMAKERS

Dr. William D. Phillips has been named to the board of directors of Mallinckrodt, Inc., St. Louis. He compiled more than 25 years of experience in long-range product development work with Du Pont Co., Wilmington, Del., and is currently professor of chemistry and chairman of the chemistry department at Washington University in St. Louis.

Dr. James H. Strimple has joined W. A. Cleary Chemical Co., Somerset, N.J. as manufacturing manager. He was previously employed by NL Industries. The announcement was made by company president Barbara Cleary.

The Agricultural Chemicals Division of **Diamond Shamrock Corp.**, Cleveland, Ohio has named William W. Gregroy sales supervisor for its Southwest Region. He will be responsible for the sales and service of company products in south Texas. He is a June graduate of **Auburn University**, holding a B.S. degree in agricultural economics.





Gregory

Wiggins

The company has also named Morton M. Wiggins sales supervisor for its Western Region. He will be responsible for the sales and service of company products in Montana, Utah, Wyoming, southern Idaho, northern Nevada and eastern Oregon. He is a June graduate of the University of Georgia, with a B.S. degree in agricultural economics.

Glen W. Lessig has joined Lakeshore Equipment & Supply Co., Elyria, Ohio as a salesman for the lawn care industry. He formerly worked for four years as a branch manager for Leisure Lawn and Excelawn Corp. of America in Dayton, Ohio and Crestwood, Ky. He holds a degree in political science from Western Kentucky University and has attended various agronomy and business courses at Indiana University and Purdue University.

Linden L. Griffin is president of **Griffin Lawn Care**, Kalamazoo, Mich. J. Wayne Bro is manager and Glen Holmes is applicator. The company offers liquid chemical lawn care services.

Ray May is owner of Lawn Medic of Erie, Harbor Creek, Pa. The company offers both liquid and granular chemical lawn care and mowing/maintenance services. It is a franchise company of Lawn Medic, based in Bergen, N.Y. Jack Jensen is co-owner.

The Sensation Corp., Omaha, Neb., has named two new distributors for its line of mowers. Fortune Sales Co., Ltd., Springfield, Mo. will handle Sensation's line in Missouri and Arkansas. Philadelphia Toro, Doylestown, Pa., will handle sales in Delaware,

southern New Jersey and eastern Pennsylvania.





Welch

Koch

John G. "Jack" Welch has been named senior sales representative for specialty products in the Northeast for Stauffer Chemical Co., Westport, Conn. He replaces Ernie Koch, who retired from the position recently. Welch will be responsible for promotion and further development and sales of the company's products in the turf fields, among others. Welch previously has worked for O. M. Scott & Sons, Marysville, Ohio; Northrup King Co., Minneapolis; and Lakeshore Equipment & Supply Co., Elyria, Ohio. He is a graduate of the University of Rhode Island, and will be based in the company's Dayton, N.J. office.

The B. Hayman Co., Inc., Santa Fe Springs, Calif., one of the West's largest independent distributors of turf maintenance equipment, has announced a realignment of its sales territories for increased efficiency and service.

According to vice president and general manager Robert Henshaw, sales responsibilities have been realigned as follows:

Al Nobel will specialize in sales to government agencies on the city, county and state levels. Al Reider has assumed responsibility for all company sales territories in Orange County and the tri-county areas of Ventura, Santa Barbara and San Luis Obispo counties.

Nick Dykman will continue to make sales calls on both old and new customers in Los Angeles, Riverside and San Bernardino counties. Phil Paquin will service San Diego and Imperial counties. Larry Robinson will handle the sales territory which includes the outer areas of San Bernardino County and Palm Springs and Las Vegas.

In-house sales will be handled by sales manager Harold Shaw. Among major product lines carried by the company are Jacobsen, National, Bunton, E-Z Go, Homelite, Olanthe and Smithco.





Boykin

Haesler

Gregory I. Boykin, Boyco Landscape Maintenance, Wilson, N.C., has been elected president of the North Carolina branch of the Professional Grounds Management Society, based in Pikesville, Md.

Peter L. Haesler has been named international marketing manager for **Briggs & Stratton Corp**.

MARKETING IDEA FILE

How do you advertise your lawn business?

While conducting an evening workshop on lawn care advertising at the recent Professional Lawn Care Association of America Conference and Show in Louisville, Lawn Care Industry editor/publisher Bob Earley conducted an interesting survey among the 62 participants in the workshop.

He asked three questions: (1) What forms of advertising do you use? (2) What is your total ad budget? (3) What percentage of your gross do you spend on advertising? Here is the answer to

the first question in percentages:

| the mot decoulou in berceutage | ,01 | |
|---------------------------------|------------------|------|
| Yellow Pages | | 90% |
| Newspaper | | 68% |
| Direct mail | | 60% |
| Door hanger | | 53% |
| Personal solicitation | | 43% |
| Home & garden show display | | 35% |
| Radio | | 35% |
| Discounts/rebates for referrals | | 25% |
| Phone solicitation | | 25% |
| Billboard | | 18% |
| Television | | 18% |
| Other | | 15% |
| A C . C | BIBIG MICH WHY B | .1 . |

As for average amount of money spent on advertising their lawn care business, the participants in the workshop said they were spending \$9,268 annually. Two abnormally large answers (\$500,000 and \$380,000, which kind of makes the average lawn care businessman dream) had to be discarded to keep things in line and meaningful.

Computing the percentage of collective grosses represented in the room spent on advertising, the average answer came up 5.9 percent. The mode, or most common answer given, was five percent of gross spent on advertising. For the record, the company spending \$380,000 on advertising said it was 4.2 percent of its gross, and the company spending \$500,000 said it represented eight percent of its gross.

And what were the "Others?" Answers here included magazines, Welcome Wagon, garden centers, transfers of realty, and one company in the room said it had used a hot air balloon

successfully.



Hunter (left) and Goldstein

Ed Hunter, vice president of the Toro Irrigation Division of Toro Co., has been named 1980 Man of the Year by Landscape West & Irrigation News magazine. Each year the magazine singles out an individual in recognition of his contribution to the landscape industry in the West. "Noted for his use of engineered plastics, Ed has helped propel the growth of the irrigation industry," publisher Denne Goldstein said. Hunter holds nine patents on various irrigation devices. He heads the research and development section of the company, based in San Marcos, Calif.

Dale E. Jones and Donald J. Mundy are partners in **High Country Lawns**, Grand Junction, Colo. The company offers liquid chemical lawn care and hydroseeding.

Dan Duncan is president of Apex Pest Control & Lawn Care,

Inc., Bradenton, Fla. Pat Duncan is treasurer and Ed McKinzie is secretary. The company offers both liquid and granular chemical lawn care and mowing/maintenance services.

Sidney De Jong is president of **Tender Lawn Care**, Grand Rapids, Mich. Ed De Jong is vice president. The company offers both liquid and granular chemical lawn care and mowing/maintenance services.

Carl A. Rothmeeler is landscale maintenance manager for Adam Tecza and Sons, Inc., Elgin, Ill.

James E. Hardy, president of **Brinly-Hardy Co.** of Louisville, Kentucky, recently announced the following promotions: Arnold T. Van Etten from treasurer to vice-president/treasurer; C. Robert Lievel from marketing coordinator to manager/marketing and production; and James R. Allen from sales representative to Brinly product sales manager.

Proper site prep for lasting establishment

Proper establishment is a critical factor in the development of a dense, healthy lawn for your customers. One of the most important steps in establishing a new lawn is correct preparation of the site.

As important as this is, many lawns are established on inadequately prepared, highly compacted topsoils or subsoils. Turf experts at Michigan State University recommend the following establishment sequence when preparing a site for seeding or sodding"

Soil sampling. Collect soil samples to a depth of two to three inches from 20 locations around the establishment site. Always use clean equipment for sampling and mix the 20 sub-samples well. Air dry about one-half pint of soil, package it securely, and send it to your local County Cooperative Extension Service or a reliable laboratory for testing. The test will indicate the soil acidity level and the phosphorus-potassium content. Always sample again if the topsoil is modified in any way.

Kill perennial weeds. It is important to kill perennial grassy and broadleaf weeds with a recommended non-selective herbicide prior to disturbing the soil. A subsequent application of the herbicide may be necessary prior to establishment if additional weeds have germinated. Tilling the area to control perennial grasses is usually not effective.

Remove debris. Remove all debris on and below the surface, including rocks, roots, stumps, piles of sand and gravel, buried wood, shingles and other construction materials.

Grading. The topsoil, if of desirable texture and adequate quantity, should be removed and stockpiled nearby prior to building construction or any other procedure requiring excavation or extensive grading. The slope away from buildings should be more than one percent, but normally should not exceed 25 percent. Contours can be added on the site, but always avoid areas where standing water may collect. Areas immediately surrounding established trees should be left at the original grade. Be careful not to damage the existing root systems.

Deep cultivation. On many sites, severe compaction has occurred due to the heavy equipment required in construction. This will often lead to serious maintenance problems such as diseases, poor rooting, and a tendency to wilting. If the topsoil has been removed, cultivate the site to a depth of four to eight inches to lessen compaction and to mix different layers of

Subsurface drainage. In addition to grading for adequate surface drainage, it may be necessary to install subsurface drainage in poorly drained soils or where impermeable soil layers are present. Subsurface drainage should normally be installed by a contractor.

Spread topsoil. If the topsoil is a clay loam, loam, sandy loam or loamy sand texture, no soil modification should be necessary. Spread the stockpiled topsoil back

onto the site to a depth of six inches or more. Tilling a portion of the topsoil into the upper two or three inches of subsoil will help avoid the formation of distinct soil layers which may interfere with water movement.

Soil settling. After the topsoil is spread back on the site, allow the area to settle for a period of time prior to establishing the final grade. Any underground installation (irrigation, special lighting, etc.) can be done at this time, but avoid mixing subsoil from the trenches with the topsoil.

Nutrients and lime. Follow recommendations based on soil tests for lime, phosphate and potash needs. The amount of nitrogen to be applied will depend on the type of establishment. For seeded areas, apply 11/2 to 2 pounds of actual nitrogen per 1,000 square feet. For areas to be sodded, this amount should be reduced to 1/2 pound of actual nitrogen per 1000 square feet of one-one-one ratio fertilizer when seeding lawns. When sodding, use a fertilizer low in nitrogen and high in phosphorous and potassium at 10 pounds per 1000 square feet. Incorporate the nutrients and lime into the upper three to four inches of topsoil.

Final grade and soil preparation. Establish the final grade one inch below adjacent sidewalks and driveways. The seedbed should be firm enough to prevent a human from sinking more than 1/2 inch. Several irrigations or rainfalls will aid in settling the soil. Repeated raking and leveling are necessary to avoid depressions which may allow water to pond. Always make sure water drains away from any buildings and rake the area in order to obtain 1/2 inch of loose granular soil. This can best be achieved when the soil is moist but not saturated.

Conclusion. Many future problems will be avoided if lawn establishment is done properly. Shortcuts save time now, but may ultimately lead to costly maintenance problems or an unsatisfactory lawn. All of the procedures listed are necessary in order to obtain the best lawn possible.

MONEYWISE

Increased debt, increased return?

Many lawn care businessmen are proud of the fact that they have financed the growth of their company out of their own profits, and not with debt. But sometimes, by adhering to the myth that a lack of debt indicates financial prudence, companies can limit their possible return on equity.

Often, the reason given for not borrowing more is the interest cost. That, to some, is tunnel vision. The key is the difference between the cost of the money and the possible return. If, for example, a company can borrow at 12 percent (an impossibility at the writing of this article, but interest rates do go down) and get a 15 percent return, the loan is a good deal. But is the possible return is only eight percent, the loan is a losing proposition.

Lack of debt usually indicates lost growth opportunities and limits the return on investment capital. To increase sales, you must first increase inventories, expenses and receivables. Debt is often the only way to bridge the lag time between the money spent to get new lawn care customers and the revenue increases from those new customers. In other words, someone has to pay for the lemons to make the lemonade.

Of course, the debt burden has to be in keeping with the financial strength and needs of the company, Inc. reports. But reasonable debt is an important and legitimate tool for growth.

Here is a chart that shows how increased debt can mean increased return:

| Debt-to equity | Debt | Assets | Assumed return on assets (20%) minus interest expense (1 | Return = on equity | |
|----------------|-----------|-----------|--|-----------------------|-----|
| 1 to 1 | \$100,000 | \$200,000 | \$27,000 | \$100,000 | 27% |
| 2 to 1 | 200,000 | 300,000 | 34,0000 | 100,000 | 34 |
| 3 to 1 | 300,000 | 400,000 | 41,000 | 100,000 | 41 |
| 4 to 1 | 400,000 | 500,000 | 48,000 | 100,000 | 48 |

COMPANIES

Hooker releases chemical directory

Hooker Chemical Company has just published their new chemical product directory, listing over 1,100 chemical products manufactured by the company, a subsidiary of Occidental Petroleum Corporation and one of the world's largest chemical producers.

The 100-page directory covers detailed information on agricultural products, chemical intermediates and additives, industrial inorganic and organic chemicals, plastics, plating products and surface treating products. The directory includes several indexes to trade names, products by industry. and a sales information index to help buyers locate the proper product sources.

Hooker Chemical provides industry with raw materials, finished and intermediate chemical products technology and engineering, and has over 70 facilities throughout the United States, Europe, the Far East, Mexico and South America.

For a copy of the guide, contact Hooker Chemical Company, P.O. Box 4289, Houston, Texas 77210, or call (713) 840-3956.



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. The high interest rate really had us scared — it seemed to be a bad time to replace our old spray units. However, we have virtually eliminated "down time" expense and high maintenance cost with this fantastic 500 gallon TORCO sprayer unit. It greatly improved our performance over our former spray units, and it's built to keep on performing long after others have been "cannibalized". TORCO has proven to us that great equipment pays for

Frank Reynolds, pres. Lawn Rescue, Inc.

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could result from violation of the RCRA regulations," he said. "Please, do not assume that this issue concerns someone else. Every lawn care businessman should address this matter immediately, by investigating the law, reviewing your current operations and implementing policy that is carefully administered to preclude the condition of nonexempt status.'

Faulring warned that lawn care companies must comply with the regulations if non-exempt status

cannot be maintained.

"We must realize that the lawn care industry is possibly the most publicly visible user of materials which fall under the jurisdiction of RCRA," he said. "A single violation could cause considerable long-term harm to the industry.

"Currently, compliance is not an impossible task," he said. "However, negligence could create public pressure to make the regulations tougher, which could create a circumstance that might be both costly and difficult to

accomodate.' \$1 billion compliance burden. Chemical industry experts say the 2,000 pages of rules took four years to draft, generated 100,000 pages of negative comments and will impose an annual compliance burden on American industry of \$1 billion and 5.2 million hours of labor.

But no one expects newly elected President Ronald Reagan to push for their elimination because the new rules regulate what many believe to be the most serious environmental problem of the 1980's, that being hazardous chemical wastes.

Congress called for this national roadmap of toxic chemicals when it passed the RCRA Resource Conservation and Recovery Act of 1976 and directed the EPA to get a handle on the 57 million tons of hazardous wastes produced annually in this country.

The EPA says only 10 percent of that waste is being disposed of properly—a situation the new regulations are designed to correct by making chemical companies and other generators of the waste li-

Following are some of Faulring's comments about RCRA:

"Those of you who are PLCAA members have over the past couple of months received considerable correspondence from PLCAA headquarters regarding the EPA's regulations regarding hazardous waste materials.

"EPA has established that it considers to be careful categorization of chemicals according to their potential for causing environmental and public harm if improperly handled. At the present time, products you might be using which are categorized as acute hazardous wastes are 2,4-D, lindane, methoxychlor, PCNB and

"There may be others. Silvex is also on the list. The list will undoubtedly be expanded in time to include more materials, some of which may be now in use by the lawn care industry.

"There are several exemptions in the law which are primarily the reason I believe most lawn care firms can now be exempt from the law as a whole. The exemptions regard amounts of waste generated or stored on a monthly basis by each location of a firm. If your's is a multi-location operation, the law regards each location as a separate entity.

What is a hazardous waste? "A hazardous waste is any disposed of material which contains a listed chemical such as 2.4-D. This disposed of material could be found in concentrated form as manufactured or in the residue of a container, or the sediment of a spray tank or the absorption material used to contain a spill which includes soil or other absorbing

"Although the law now exempts many chemicals, I believe it to be in the industry's best interest to treat all chemicals as if they were listed as acute hazardous waste chemicals. This action will create good habits and preclude the problem of an individual not being sure which chemicals are considered acute hazardous wastes.

"We must realize that the lawn care industry is possibly the most visible user of materials which fall under the jurisdiction of RCRA. A single violation could cause considerable long-term harm to the industry," says PLCAA president Jerry Faulring.



The RCRA hazardous waste law. "Two main criteria-quantity and chemical concentration-are utilized to measure whether a hazardous waste is exempt or non-exempt. To determine if a liquid or solid waste is hazardous or non-hazardous, an extraction

procedure test for toxicity (EP test) is used to determine the concentration of the hazardous waste pesticide in milligrams of material per liter (ppm).

"Listed acute hazardous wastes which exceed both the minimum



baryl insecticide keeps them very happy. Because that's easy to handle, mix SEVIN ranks low in toxicity to people, animals, birds

to other insecticides. So customers can use treated areas as soon as spray dries - without enduring harsh odors.

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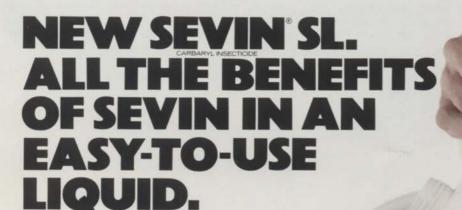
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there's a SEVIN carbaryl formulation that's right for the job. From new SEVIN SL and new SEVIN 20% Bait to a variety of sprayables, wettable powders, granules and dusts for special uses.

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And people are free to use grounds as soon as spray dries.

No handling hassles. No objectionable odor No re-entry restrictions.

New liquid SEVIN SL—now available at your pesticide supplier.

SEVIN is a registered trademark for carbaryl insecticide. As with any pesticide, always follow instructions on the label. Union Carbide Agricultural Products Company, Inc., 7825 Baymeadows Way, Jacksonville, FL 32216 concentration and weight limits are considered hazardous waste material which is non-exempt.

"We can be both a generator and storer of hazardous waste material. Waste is the key word. This is material which is disposed of and deposited in a sanitary landfill or even a non-acceptable point of disposal. It does not include liquid or solid material which results in material left over and recycled back into our equipment and then used in regular operations if this is accomplished within the specified time frame. Our two concerns are generation and storage.

Generation. If a location generates a hazardous waste greater than the following limits within one month, it becomes nonexempt and is, therefore, subject to meeting the special disposal re-

quirements of the law:

• One kilogram (2.2 pounds) of any commercial undiluted chemical product which is categorized as a hazardous or acute hazardous

· Any hazardous waste chemical containers larger than 20 liters (5.25 gallons) which are not at least triple-rinsed.

• Ten kilograms (22 pounds) of inner liners (bags) of such contain-

ers per month.

• One-hundred kilograms (220 pounds) per month of any clean-up material (such as vermiculite or clay) used to contain a spill of a commercial, undiluted hazardous waste chemical.

 Any liquid or solid hazardous waste in quantities greater than 1,000 kilograms (2,200 pounds) per month which exceeds pernissable concentrations allowed y the EP toxicity test.

Storage. Faulring explained limits of accumulation by specific

example:

• Commercial 2,3 2,4-D or cygon (undiluted) waste which exceeds one kilogram (2.2 pounds) which is held for disposal over 90

Commercial lindane or methoxychlor waste exceeding 1,000 kilograms (2,200 pounds) held for disposal longer than 90

· Waste resulting from a hazardous spill chemicals cleanup or sediment in excess of 1,000 kilograms (2,200 pounds) which fails the EP test and is held for disposal longer than 90 days.

• Containers over 20 liters (5.25 gallons) containing 2,4-D, lindane or methoxychlor which are not triple-rinsed and held for disposal longer than 90 days. Containers which are emptied must have a date written on them when they

were emptied.

Faulring said that one should never allow locations to become storers of hazardous waste. Any chemical in the hazardous waste category is not designated as a waste material until it is categorized as needing disposal. When hazardous waste exists but is in exempt quantities (below generation regulations) no permit is necessary to have it disposed in a sanitary landfill, although the carrier must know that the waste exists.

Waste procedures. Faulring said that whenever liquid or solid material enters a refuse container, it becomes waste material. This includes not only pesticide containers but also sediment from trucks or other tanks. "Although the hazardous waste generated by most lawn care firms probably does not exceed the limits,' Faulring said, "we should intentionally never accumulate enough hazardous waste to break exemption laws. Each manager must know what the limits are and calculate whether or not the location has exceeded the limits."

Rules to follow. He suggested the following rules to maintain non-generator status:

(1) Any commercial, undiluted pesticide should never be improperly disposed of whether it is or is not a hazardous waste material.

> (2) Container disposal: (a) Bags and boxes must be com-

pletely emptied before dis-

(b) Liquid containers must be triple-rinsed with the rinse solution not being used in regular operations. Do not let empty container numbers accumulate, especially ones over 20 liters (5.25 gallons). Remember, any size drums which contain hazardous waste pesticides must be disposed of within 90 days.

(c) Never let any material be allowed to reach a drain or sewer. Always recycle material to be used on lawns or landscape rather than dis-

pose of it.

(d)Drip pans must be utilized under all spigots or valves on any pesticide containers. The drippings must be added to a spray truck or disposed of in regular operations unless absorption material is used to collect the drippings which should then be disposed of frequently enough to maintain exempt status.

(e) Spills should be immediately contained. Absorption cleanup materials must be at or below exemption limits to avoid EPA notification. If this is not the case, EPA must be

notified.

What if you exceed limits? "First of all, it would be hard to do this if the above procedures are followed," Faulring said. However, if a mistake does occur, one of the following would probably have been violated:

• Liquid pesticide containers are not triple-rinsed before disposal.

· More than 100 kilograms of cleanup material is accumulated following a hazardous waste chemical spill.

• Over 1,000 kilograms of waste material (from cleaning out a tank, for example) which has 2,4-D, methoxychlor or lindane at levels over the EP test allowances.

• Concentrated 2,4-D, lindane or methoxychlor over one kilogram (2.2 pounds) is disposed of.

 Used containers of hazardous waste pesticides are stored over 90

days.
"All these examples are avoidable situations and our responsibility is to not let them occur." he said. "However, if an installation commits an act of hazardous waste generation, it is subject to all RCRA laws and regulations.

"The disposal of non-exempt amounts of hazardous wastes carries with it a tremendous responsibility. A hazardous waste permit

TOOLS, TIPS & TECHNIQUES

What is triple-rinsing?

With all the talk about the Resource Conservation Recovery Act (RCRA) which went into effect Nov. 19 (see lead story on page 1 of this issue), the question will surely arise as to what constitutes triple-rinsing of liquid pesticide containers.

The standard procedure for triple-rinsing containers has not been set by RCRA, but a recommended procedure would be to fill the container to be rinsed to a minimum of 15 percent of

capacity for each rinse.

For five-gallon containers, fill to a minimum of one gallon, shake and rinse three times. For 55-gallon drums, about 10 gallons should be used per rinse. If puncture-type rinse tools are used, the flow rate through the tools should be known to set minimum rinse times. These tips come from Jerry Faulring, president of the Professional Lawn Care Association of America.

application must be filed with EPA. A manifest must then be filled out by the installation and accompany the hazardous waste shipment for disposal. Everyone including the transporter and ultimate disposer must sign the manifest. The manifest must then be stored at the installation and held on record.

"The EPA should then be notified of all branch and storage warehouse facilities to obtain an EPA number. The only reason for obtaining this number is to use it in case a non-exempt quantity of hazardous waste must be disposed. It appears that obtaining the number after the fact will create a number of problems.

"Annual hazardous waste forms will be provided by EPA when a number is issued, but do not need to be completed if only exempt quantities of hazardous waste have been disposed."

Faulring closed by saying that the PLCAA will publish RCRA guidelines that will be available to both members and non-members. "Due to the very serious nature of this issue, the industry as a whole needs to give it very serious attention," he said.

GROWTH

Ohio company has ear to the ground

The Perf-A-Lawn Corporation, headquartered in New Carlisle, Ohio, has just announced its tenth anniversary of continued success. Started ten years ago when founders Mickael Welter and Richard Deering first started spraying lawns in the Dayton, Ohio area, the Perf-A-Lawn network now straddles ten states and counts tens of thousands of customers from LaPorte, Indiana to Tampa-St. Pete, Florida.

When asked the reason behind their continued prosperity, Michael L. Hiller, vice president of marketing for Perf-A-Lawn, replied, "You have to realize that customers aren't a dime a dozen anymore. The future of the lawn care industry will be a very selective one and very customer service oriented."

Sound public relations, especially during dry periods of agronomic hardship like the country experienced last year, slowing the industry's production, can only help a healthy business carry-over once conditions return to normal, according to Hiller.

One of the ways Perf-A-Lawn keeps in touch with its customers is through what they call 'You-Be-The-Judge' cards, left by their crews after two or three applications. Among the questions posed on the cards are: How was your initial call?; Did it meet your expectations?; How does your lawn look, (Excellent, Good, Fair, Poor)?; Are there any new products you'd like to see us supply?; Where did you first learn of PerfA-Lawn, (referral, radio, TV)? "Among 25,000 customers surveyed, we got a whalloping sixteen percent response," said

At present, Perf-A-Lawn is composed of eight to ten companyowned operations and twenty-five franchises throughout the country. Predicting a bright future, they expect around ten to fifteen more outfits to come through in the next

Organization is one of the biggest problems companies face when considering whether or not to franchise, according to Hiller. "The actual distribution of your product is the key. You have to develop a tight strategy of distribution in order to make the project worthwhile." Perf-A-Lawn franchises use products that are close to 99 percent company purchased, thus making it easier on the franchisee.

Once established, the franchises themselves contribute substantially to company growth. "A satisfied franchisee is our best advertising," he said. While some states have strict regulations governing franchise establishment Perf-A-Lawn invites interested businessmen to call the nearest outfits for tips and guidelines on starting up.

"The customer is getting more and more educated," said Hiller. There has been a drastic change in customer awareness in the last five or six years. The lawn care industry must break out of old marketing molds and adapt business techniques and strategies used in other, more established industries.

"Communication within the industry is important to our overall growth."

Inside the industry

Over 700 lawn care businessmen attend first PLCAA conference

Highlighted by standing-room-only seminars, order-writing exhibit floor

Hot on the heels of what many exhibitors and lawn care businessmen called "the best show we've ever attended," the Professional Lawn Care Association of America (PLCAA) has finalized plan's for next year's conference and show — to be held Nov. 18-20, again at the Commonwealth Convention Center in Louisville.

More than 700 lawn care businessmen traveled from all over the country to attend PLCAA's first annual conference and show. This figure does not include representatives from the more than 50 exhibiting companies who filled close to 100 booths.

Exhibitors were happy, especially Lakeshore Equipment & Supply Co., Elyria, Ohio, and Professional Turf Specialties, Normal, Ill. Lakeshore wrote over \$1 million worth of orders on the show floor, and Professional Turf sold its demonstration truck right off the floor. Dan Duncan and Ed McKinzie of Apex Pest Control & Lawn Care, Inc., picked up the keys to the 1,200-gallontank spray truck following the show and drove it home to Bradenton, Fla.

Standing-room-only education sessions were the rule for the three-day conference, including excellent presentations by Gordon Ober, Dr. Roger Funk and Jerry Faulring. Ober, general manager of Davey Lawnscape

Service, Kent, Ohio, brought the house down with a comical yet informative slide presentation on employee training. The finalsession talk by Davey research director Dr. Funk on pesticide use in the 1980's kept attendees in their seats until the end. And Faulring outlined a blueprint for the lawn care industry with his "Issues You Can't Avoid in the 1980's." Faulring, of Hydro Lawn, Gaithersburg, Md., was elected president at PLCAA's first annual business meeting

Elected as vice president was Douglas Baker of Leisure Lawn, Dayton, Ohio. John Latting of Lawn Groomer, Normal, Ill., was elected secretary-treasurer. Elected to the board of directors were: Larry Brandt, Spray-A-Lawn, Cincinnati, Ohio; Don Burton, Lawn Medic, Bergen, N.Y.; Steve Derrick, Latick, Inc., Normal, Ill.; Rick Eldred, A-Perm-o-Green Lawns, Austin, Texas; Dr. Robert Miller, ChemLawn Corp., Columbus, Ohio; Davey's Ober; Dr. Paul Schnare, Atkins Lawn Care, Columbia, Mo.; Richard White, Village Green Lawns, West Chicago, Ill.; and Ronnie Zwiebel, Chem-Care Lawn Service of Alabama, Birmingham. Robert Earley, editor/publisher of LAWN CARE INDUSTRY was named industry liaison.

Exhibitors included: AMERICAN LAWN

APPLICATOR, American Pelletizing Corp., The Andersons, Arnold Graphic Industries, Ashland Chemical Co., Balcom Chemicals, BASF Wyandotte Corp., Boots-Hercules Agrochemical Co., Bunton Co., CLC Labs, W.A. Cleary Chemical Corp., Consolidated Sales & Service, Continental Software, Diamond Shamrock Corp., Dow Chemical Co., DuPont Co., Echo, Encap Products Co., Elanco Products Co., Estech General Chemicals Corp., FMC Corp., Hahn, LAWN CARE INDUSTRY. WEEDS TREES & TURF, Heimerdinger Mfg. & Distributing Co., Infordata Systems, International Seeds, International Spike, Lakeshore Equipment & Supply Co. Latick, Lebanon Chemical Corp., Mobile Automation, Monsanto Co., National Fertilizer Solutions Association, Northrup King Co., Rhone-Poulenc, Pumping Systems, O.M. Scott & Sons, Sta-Green Plant Food Co., Stauffer Chemical Co., Torco Equipment Co., TUCO Division of the Upjohn Co., Turf-Seed, Velsicol Chemical Corp., USS Agri-Chemicals, Warren's Turf Nursery, Westheffer Co., and Wilt-Pruf Products.

For information about attending or exhibiting at next year's PLCAA Conference and Trade Show, contact: Jane Stecker, PLCAA, Suite 1717, 435 N. Michigan Ave., Chicago, IL 60611, (312) 644-0828.



13

Coated seed —

a possibility?

If there was a way that lawn businessmen could ensure successful survival and establishment of grass seed in a less than hospitable environment, it would be a great boon to the industry. Now the possibilities are opening up.

Several seed producing companies around the nation and in Canada are currently experimenting with a process to coat bare grass seed with nutrient and fertilizer coverings in order to provide a constitutional boost for the seedling in its critical early phase of development.

Seed coatings were first developed in order to aid the establishment of pasture and rangegrasses in areas where the terrain was rugged, on hillsides, and where erosion had ravaged the topsoil of its natural nutrients. The coating converts the bare seed into a potent package of natural and prepared material better equipped to withstand stressful environ-

mental conditions. According to Ed Hefley, director of marketing for CelPril Industries in Manteca, California, "the seed coating acts like a wick, absorbing the moisture right into the coat and creating the best possible environment for the young seedling." CelPril, already marketing coated seeds for revegetation and reclamation purposes, is developing its nutrient turfgrass coatings and expects to market them sometime in 1981.

The advantages of the coated seeds to the lawn care industry would be numerous. One of the main nutrients supplied by the coating to the seed would be phosphorous. Phosphorous is essential for plant growth and especially critical for young seedling survival. It ensures normal root development and vegetative growth during the crucial establishment period.

The coating materials, as well as the coat itself, would protect the seed from low pH conditions, effectively buffering the soil pH in the micro-environment around the seed. The pH range of coated seed (6.5 to 7) is the best pH range for nutrient uptake.

Dessication also can quickly reduce the rhizobium populations. The coating, therefore, would offer these viable bacteria protection from drying winds and sun. This is especially beneficial when forages

are sown with a broadcast seeder. Another possible benefit of the new process is that most rodents or birds do not recognize coated seed as food. The increased size of the seed is the main reason birds do not take it and the coating materials, especially the identification dyes used in turfgrasses, are not at all palatable to either rodents or birds.

Coated grass seed is approximately twice the weight of bare seed. Aerial sown grasses would thus penetrate ground cover and thatch far better than bare seed and make decisive contact with the seed bed. These ballistic properties allow the seed to flow readily through drop-type seeders. The coverage pattern, if a broadcast seeder is used, would be more uniform than with lighter raw seed, particularly on days when there is any air movement.

Coated seeds would also be a great benefit to the homeowner. according to Hal Dickey of the North American Plant Breeders. Because they are usually the least sophisticated scientifically, the coating package would relieve them of the task of specifying treatments, better left to agronomists and turf experts.

Also, tests have suggested that coated seed may be less likely to germinate prematurely because the coating is dense enough to prevent quick moisture from stimulating early germination. Many times the seed will germinate from exposure to a heavy dew which, after evaporating, suddenly leaves the seedling to wilt and die. The coating, then, will allow germination only when the precipitation levels are significant and lasting, providing an indicator to the seed for optimum germination conditions.

Some people would expect coated seeds to provide large yield increases and allow them to ignore seeding techniques at planting time. According to a spokesman at Canadian Seed Coaters, Limited in Brampton, Ontario, while the coating does provide major advantages, good cultivation and planting techniques must still be followed. The coating cannot alter the inherent genetic characteristics of the seed such as yield capacity.

Today's coated seeds benefit the plant only in its critical seedling stage, ensuring early vigor, he warned. There is obviously some carryover, but once the plant has started elongation and the nutrients in the coat are used up, the coating cannot directly beneflt the plant in its future development.

So, while the advantages of seed coating to the lawn care industry could be great, research is ongoing to prepare a reliable and effective product for turfgrass application.

The grass seed is both wonderfully simple and yet extremely complex, so research must be comprehensive. Look for the seeds in the coming years.

RESEARCH

Thatch build-up linked to fungicides

When planning fungicide treatments for your lawn this spring, it is important to remember that some pesticides and fungicides may have a marked effect on thatch accumulation.

According to Dr. R. W. Smiley, assistant professor of turfgrass pathology at Cornell University, different fungicides induce significant differences in thatch accumulation, with some spurring large gatherings, while others caused little or no accumulation.

to page 30

Stop polluting your lawn

Learn turf care the natural way

More than 10,000 people have learned lawn care and grounds maintenance from Don Arenberg, one of the country's leading agronomists. Find out why by attending one of his three-day clinics

The Arenberg Nature's Touch Clinic can help you make your property look better with fewer treatments, reduced chemical costs and less mowing, maintenance and watering.

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MEETING DATES

The Institute for Agricultural Irrigation, California State University, Fresno, Calif., Jan. 5-16. Contact: The Irrigation Institute, 13975 Connecticut Ave., Silver Spring, MD 20906, 301-871-1200.

Nebraska Turfgrass Conference and Show, Holiday Inn, 72nd and Grover, Omaha, Neb., Jan. 12-14. Contact: Paul Bergman, 2428 W. 11th, Hastings, NE 68901, 402-463-5055.

Southeastern Pennsylvania Turf School & Trade Show, Westover Country Club, Jeffersonville, Pa., Jan. 13-14. Contact: Dr. William H. White, Philadelphia County Cooperative Extension Service, SE Corner Broad & Grange Streets, Philadelphia, PA 19141, 215-424-0650.

Michigan Turfgrass Conference, Kellogg Center, Michigan State University, Jan. 13-15. Contact: Thomas M. Smith, 323 Agriculture Hall, Michigan State University, East Lansing, MI 48824, 517-353-4417.

North Carolina Turfgrass Conference, Royal Villa Hotel, Raleigh, N.C., Jan. 13-15. Contact: Leon T. Lucas, Department of Plant Pathology, Box 5397, North Carolina State University, Raleigh, NC 27660. 919-737-2751.

27th Rocky Mountain Regional Turfgrass Conference, Lory Student Center, Colorado State University, Ft. Collins, Colo., Jan. 15-16. Contact: D. Butler, Department of Horticulture, Colorado State University, Ft. Collins, CO 80523, 303-491-7070.

Virginia Turfgrass Conference & Trade Show, John Marshall Hotel, Richmond, Va., Jan. 20-22. Contact: John R. Hall, extension specialist, VPI & SU, 426 Smyth Hall, Blacksburg, VA 24061, 703-961-5797.

Western Pennsylvania Turf & Grounds Maintenance School & Trade Show, Howard Johnson Motor Lodge, Monroeville, Pa., Jan. 20-22. Contact: Philip L. Sellers, Allegheny County Cooperative Extension Service, 311 Jones Law Building Annex, 311 Ross Street, Pittsburgh, PA 15219, 412-355-4275, or George Morgan, Wildwood Golf Club, 2195 Sample Road, Allisong Park, PA 15101, 412-487-1234.

Turf and Landscape Conference, sponsored by the New York Turf Landscape Association and the Long Island Gardeners Association, in conjunction with the Hudson Valley and Long Island Cooperative Extension Service, Tappan Zee Inn, Mountain View, Ave., Nyack, N.Y., Jan. 28. Contact: Frank Claps, 136 Laurel Ave., Larchmont, NY 10538, 914-834-6846.

National Landscape Association/Garden Centers of America Management Clinic, The Galt House, Louisville, Ky., Feb. 1-4. Contact: Robert S. Fortna, 230 Southern Building, Washington, DC 20005, 202-737-4060.

ALCA Annual Meeting & Trade Exhibit, Hyatt Regency, New Orleans, La., Feb. 8-13. Contact: John Shaw, executive director, Associated Landscape Contractors of America, 1750 Old Meadow Road, McLean, VA 22101, 703-893-5440.

American Sod Producers Association Mid-Winter Conference, Sahara Tahoe Hotel, Lake Tahoe, Nev., Feb. 16-18. Contact: ASPA, 9th & Minnesota, Hastings, NE 68901, 402-463-4683.

Capital Area Turf & Ornamental School, location to be announced, Feb. 18-19. Contact: Harold E. Stewart, Dauphin County Cooperative Extension Service, 75 South Houcks, St., Suite 101, Harrisburg, PA 17109, 717-652-8460.

Professional Grounds Management Society Workshop, "Business Management Techniques for Professional Grounds Managers," Holiday Inn, Jessup, Md., Feb. 18-19. Contact: Alan Shulder, PGMS, 7 Church Lane, Pikesville, MD 21208, 301-653-2742.

Connecticut Groundskeepers Association Conference, Hartford Civic Center, Hartford, Conn., Feb. 25. Contact: Glenn S. Moore, Connecticut Groundskeepers Association, P.O. Box 3926, Amity Station, New Haven, CN 06525.

AWARDS

Yard-Man Co. names Distributor of Year

Carswell Distributing Co., Winston-Salem, N.C., was recently named "Distributor of the Year" by The Yard-Man Co., Cleveland, Ohio. Accepting the award for Carswell was its president, Robert E. Carswell, and a large contingent of the company's outdoor power equipment sales staff.

The special award for Yard-Man "New Distributor of the Year" was won by Florida Outdoor Power Equipment, Inc., Orlando, Fla. The plaque was accepted by the firm's president, Richard DeShetler.

Further, 50 golden "Yard-Man Buster" statuettes were presented to Yard-Man distributors who exceeded their sales goals for the preceeding selling season. Each winning distributorship was represented at the meeting, which featured a red, white and blue patriotic theme, including convention-like state and province banners representing United States and Canada Yard-Man distributors.

Presenting the awards and congratulatory messages to winning distributors were Roger W. Stockseth, Yard-Man director of marketing, and Paul T. Schmit, national sales manager.

ELECTIONS

Seedsmen pick executive posts

Don Grunebaum, state regulatory specialist, Government & Industry Relations Department, Research Division, O. M. Scott & Sons, Marysville, Ohio, was just elected president of the Atlantic Seedsmen Association. The association represents the lawn, garden farm, and seed industry and other allied interests in the northeast U.S. Harold Doellinger was the only other Scott associate elected to this position, back in

Don has been associated with O. M. Scott & Sons for 24 years in manufacguring, turfgrass research, and for the past 11 years in government and industry relations.

Following service in the marine corps, he took night courses in agriculture and attended the highly regarded seed short course at Iowa State University, Ames, Iowa, the only one of its kind at the time.

He is responsible for maintaining an effective state government relations program overseeing product registration, coping with state laws, and regulations involving seed, fertilizer, pesticides, plant industry, weights and measures. He also has regulatory responsibilities in Canada and other foreign countries.

Don serves on legislative committees in state and national trade organizations relating to seed, fer-

tilizer, and pesticides. He lives in Marysville, Ohio, corporate headquarters of O. M. Scott & Sons Co. He and his wife have three sons, one daughter and one grandson.

Other officers elected were: 1st vice-president, Robert Wetsel, Wetsel Seed Co., Harrison, Va., 2nd vice president, Randall Pope, John Zuelzer & Son, Manhasset, N.Y.; secretary, John Glattly, Whitney-Dickson Seeds, Inc., Buffalo, N.Y.; and treasurer, Charles Waliewicz, Vaughan's Seed Co., Bound Brook, N.J.

In addition to the immediate past president, Charles Kindsvater, Otis Twilley Seed Co., Trevose, Pa., two members of the executive committee were also elected: Charles Schreiber, A. Ertag, Inc., Jersey City, N.J. and Jonathan Burpee, W. Atlee Burpee Co., Warminster, Pa. Margaret Herbst is the executive secretary of the association with offices at 230 Park Avenue, New York, NY 10017

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Dry-to-liquid switch makes life easier in Nebraska

Ordinarily, Gene Heule is a reasonable man. But if there is one thing he is adamant about, it's how to run a lawn care business with a minimum of hassles maximum efficiency.

And if there is one thing Gene Heule ought to know about, it's lawn care. He has been in the business as an independent operator for 12 years. But nothing has been quite the same since he went into business with liquid foliar fertilizer.

Before he started using this fertilizer, his Columbus, Neb.-based company used dry products with fertilizers and pesticides formulated together.

All in all, this package had its advantages.

"For 10 years, I didn't mix a thing," Heule told Lawn Care Industry. "We would put on four



Columbus, Nebraska lawn care businessman Gene Heule

to five applications per year depending on what the customer wanted and what the lawn needed."

But Heule wasn't satisfied.

"It didn't make life easy," Heule admits. "Not compared to liquid. While I didn't have to mix anything, I couldn't carry very much. I was always having to refill the spreader in the middle of the yard-walking back from a far corner for the bag. With liquid, I can do a whole lawn without stopping. Depending on the equipment available, that means I can go anywhere from 50,000 square feet to 500,000 square feet without reloading."

The equipment Heule refers to includes two Bean pumps installed on 1,000-gallon stainless steel tanks plus agitation which he had mounted on a truck near the end of the '80 season. Heule previously used 200-gallon tanks and pumps; one pickup mounted, the other on a trailer to service his average customer's 8,000-square-foot lawn.

While Heule maintains that he went with the liquid program for convenience and "because it seemed to do a better job," there have been some unforeseen benefits in the switch to Folian, man-

ufactured by Allied Chemical Corp., Morristown, N.J.

"Since 1979 was my first year and I was testing the product, I didn't advertise the new program," Heule says. But even without advertising, Heule accumulated 100 liquid converts and he's gaining additional customers at a rate of two to three a day. "They're switching from a competitor who still uses the dry fertilizer program," Heule explains. "It's a word-of-mouth sort of thing.'

Although Heule insists that the grass stays greener when treated with liquid fertilizer, the difference is more than a cosmetic one. "People are dissatisfied with the dry program," he contends. "The dry preemerge isn't working and we're having to go back and spray for weeds that should have been taken care of. And the dry insecticide doesn't work any better.

"In other words, people are paying more money for the dry program and are not getting as

good of a job."

An added benefit of using liquid fertilizer is that lawn care dealers and their customers do not have to worry about tip burn. The patented product is unique in this regard, and it reportedly offers a real selling advantage.

And then there's the labor efficiency factor. "A person can't spread dry fertilizer all day," Heule says, "he'd be exhausted. It just involves too many trips. But a guy can walk around all day and spray with a hose and it won't bother him. So matching it up man for man, you can put on one-fourth more square footage of liquid over dry and not feel the effects of physical exertion."

Heule's system for liquid lawn care involves a four-step process:

The first treatment, which is applied "as soon as the lawn is greened up and has been raked," consists of fertilizer containing one pound of nitrogen plus Dacthal preemerge per 3,000 square feet. Dacthal is marketed by Diamond Shamrock Corp., Cleveland, Ohio.

The second step involves the application of one pound of nitrogen and three ounces of Dursban per 1,000 square feet. Heule says this combination of fertilizer and double-strength insecticide (for billbug and sod webworm control) is usually applied around mid-June. Dursban is marketed by Dow Chemical Co., Midland, Mich.

The third treatment, applied during the last week in July, consists of one pound of nitrogen and one and one-half ounces of

By late September the stage has



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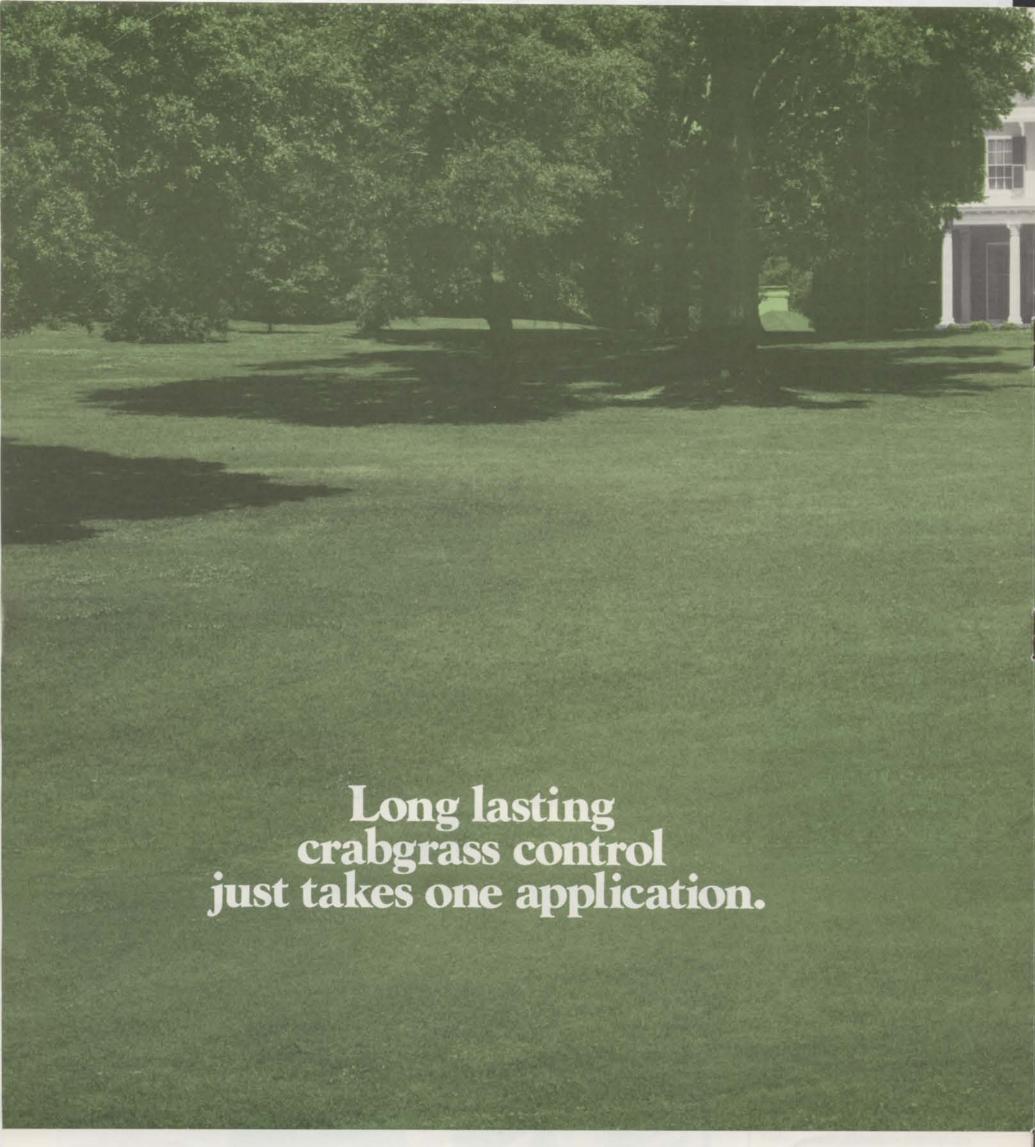
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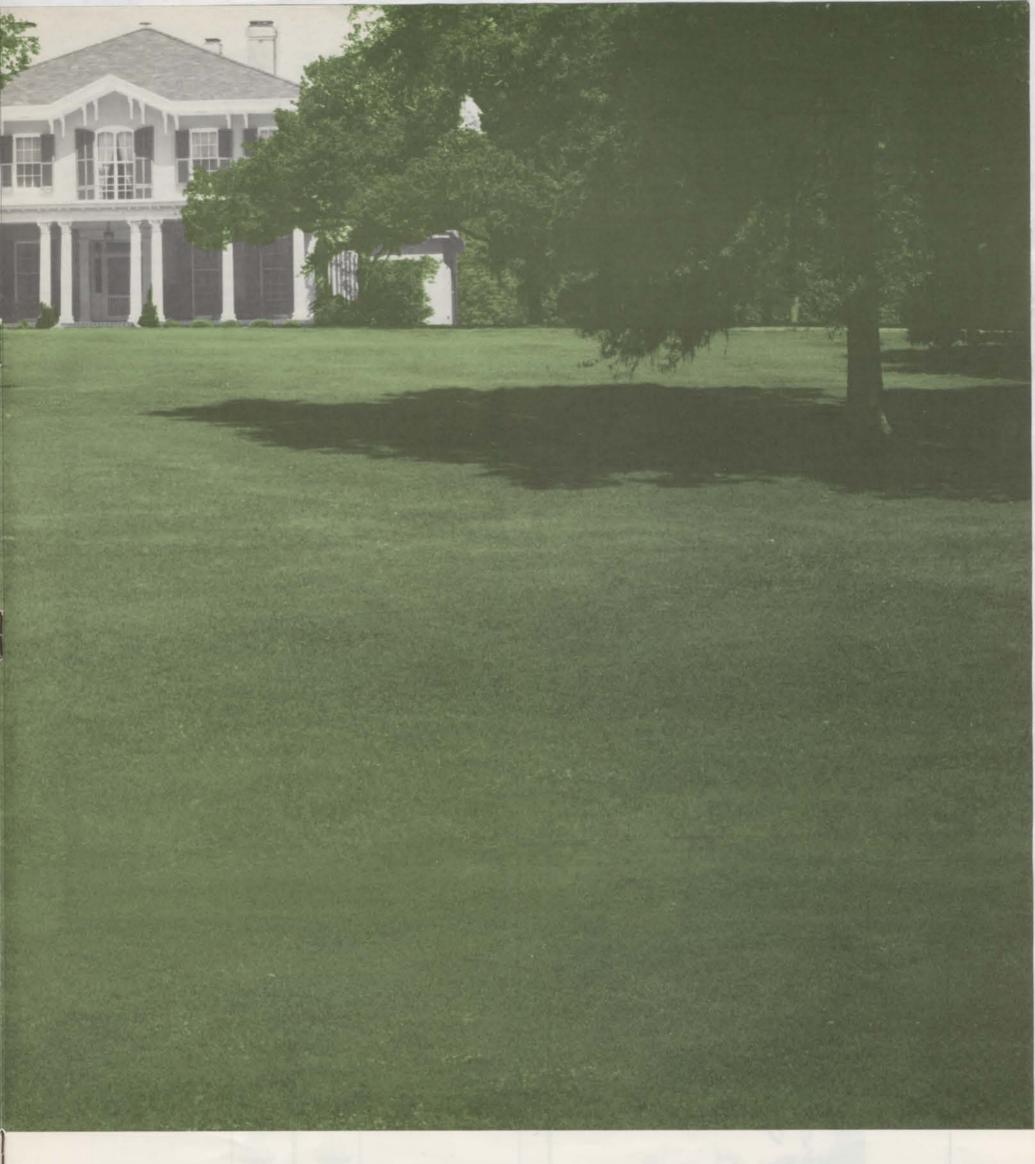
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Rockland 4-E, 12.5-G and 7-G

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Sales Area

National

Northeast

Northeast

Northeast

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been set for the final application of one pound of nitrogen and one ounce per 1,000 square feet of Diamond Shamrock's 2,4-D broadleaf herbicide.

Throughout the program, Heule follows the recommended guidelines which call for a dilution of fertilizer with water in a 5:1 ratio. In all, he applies a total of four pounds of nitrogen to the lawn during the course of the treatments.

Recent university research conducted by Dr. R. P. Freeborg at Purdue appears to confirm what commercial applicators such as Heule have determined for themselves: that Folian delivers the desired N-P-K plus surfur rate without the problem of unacceptable burn.

In the test, the fertilizer's performance was measured against that of both liquid and dry sources of nitrogen for turf on bluegrass and ryegrass. The materials were applied to replicated plots on June 25, July 17, and August 14. Phytotoxicity, quality, color response and growth rate were evaluated at selected intervals during the summer and early fall.

After two consecutive years of testing Folian, Dr. Freeborg's findings indicate that the liquid fertilizer equals the performance of other similar fertilizers in all

categories when applied at the rate of 1.5 pounds nitrogen per 1,000 square feet.

"Phytotoxicity was minimal," Dr. Freeborg concluded. "The growth rate was restrained, the color response proved as rich as the other products tested, and the quality value of grass as measured by the amount of nitrogen absorbed by leaf tissue showed it to be an efficient N-P-K fertilizer source.

Over the years, Heule's been in the position to conduct some experiments of his own. "I've tried urea and a lot of agricultural nitrogen sources and I've seen

fertilizer really burn. I've seen people put on urea in the spring and for the first two or three mowings, it was nearly impossible to cut. It would grow extremely tall and mush up with a high water content. My fertilizer doesn't do that."

Heule's conclusion? "Generally speaking, ag fertilizer is not designed for lawns. While I'll be the first to admit that everything works in a cool year, it takes one hot summer to tell you how well everything is working. That's why this past summer has convinced me to stay with the liquid fertilizer

NEW YORK

Weed slides now available

The New York State Turfgrass Association has just announced its release of a 35mm slide set on "Weeds of Turfgrass". The 80 slide set complements two other slide sets available from the New York State Turfgrass Association, "Disease of Turfgrass" and "Insects of Turfgrass in the Northeast.'

The set is a useful tool in the identification and control of weeds for maintenance personnel at parks, recreational facilities, golf courses, cemetaries, schools, commercial installations and other institutional sites.

Produced by Dr. Arthur Bing and Robert O'Knefski, the slide set pictures such weeds as tall fescue, annual bluegrass, crabgrass, goosegrass, nutsedges, wild onion and garlic, oxalis, clover, black medic, dandelion, plantain, ground ivy, chickweed, knotweed, spurge, healall, sorrels, speedwell, chrysanthemum weed, mugwort and varrow.

For each weed there is a line drawing and a close-up photograph along with shots of the weed interspersed with turf-type gras-

For further information, contact the New York State Turfgrass Association, 210 Cartwright Blvd., Massapequa Park, NY 11762, Attn: Ann Reilly, Executive Secretary.

COST CUTTINGS

There's a loophole in payroll taxes

Business experts are huddling with each other about a new way to save payroll taxes by having the employer pay both halves of Social Security (FICA) tax and reducing the employe's salary by an equivalent amount.

Two of the nation's authorities on the subject, John R. Klug and Kay Adams Mahacek of Denver-based Continental Communications Group, Inc., recently published the first manual explaining how a company can implement and benefit from this newly discovered loophole in FICA in tax regulations.

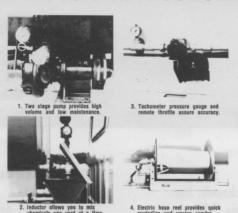
"It's neither a tax dodge nor a gimmick," Klug said recently. "Rather than pay only one-half of the total Social Security tax, an employer could pay both halves of the employe's FICA tax and reduce the employe's wage base accordingly. For example, if your secretary earns \$10,000 a year, you and your secretary will each pay \$613-6.13 percent — in FICA taxes on her salary. If you reduce her salary by \$613 per year and pay FICA tax on a wage base of \$9,387, instead of \$10,000. The net result is lower overall taxes for the employer and higher take-home pay for the employe.'

In an attempt to determine how much a company could save using this method, Klug worked out the numbers for a company with 98 employes at an average salary of \$10,204 in 1979, an annual growth rate of five percent, and an annual per capita salary increase of eight percent. If this company would have implemented the plan last January, the first-year savings would have been \$8,505, and the cululative savings through 1987 would be \$138,249.

'It's important to remember that these are real greenbacks, too," Mahacek told *Inc.* "These dollars go straight to the bottom line. Put a different way, the average company would have to do well over a million dollars in increased sales to generate that amount of cash.'

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Minimum wage up to \$3.35; lawn businessmen speak out

by Paul McCloskey Assistant editor

The minimum wage rose twentyfive cents to \$3.35 on the first of January. The across-the-board increase, usually accompanied by a ripple effect up wage scales, will have a significant effect on the way lawn care businessmen make hiring and wage decisions.

Some economic analysts point out that increases in the minimum wage fuel inflation. The minimum is at best, they say, a poor substitute for direct government aid to the working poor; at worst, a tactic used by organized labor to break down employers' resistance to raises for middle income workers.

According to Donald McCloskey, professor of economics at the University of Iowa, "The basic argument against imposing a standard minimum is that \$3.35 an hour multiplied by zero is not a very good income."

"You have to think about the relationship between the worker and the employer as two people getting together with priced stamped on their foreheads," he said. "The minimum, in effect, prevents these two people from making an economic agreement below a certain level. The result is that those who could come to terms below that level aren't going to be employed."

"There are two basic arguments in favor of the standard minimum," he continued: "The first is simple minded. It says that sub-minimum wage jobs are undignified. The alternative for many is welfare, however.

"The second argument is more sophisticated. It states that by forcing employers to pay higher wages, they are forced to think out new ways to make the employes work harder, therefore boosting productivity and advancing technical change."

Lawn care businessmen routinely bring in unskilled workers at the minimum wage and expect to advance them according to their merit. How will the increase affect them? Lawn Care Industry asked a number of both chemical and mowing/ maintenance company managers their reaction. The response reflects diverse backgrounds and opinions; it may also provide economic policymakers with a thorough index of economic attitudes against which they can make their decisions.

Ron Zwiebel, president of Chem-Care Lawn Service of Alabama doesn't feel a minimum wage increase will affect his main line personnel. "Basically, our production personnel won't be affected by the raise. These guys are skilled people already making good money. They work on a merit system and won't be affected by a twenty-five cent increase from below."

As for the argument that a minimum increase would boost productivity, Zwiebel says: "That's easier said than done. People would rather do without than do with less."

Zwiebel believes those who will be most affected by the increase are the mowing and maintenance people, the nurserymen, and the landscapers. "It's going to kill 'em. In order to cut a lawn on a company basis, they're going to have to charge seven to eight dollars an hour and the customers are going to start to back off real quick. It's going to be hard to justify on that basis."

James Walter, president of Specialty Spraying, Inc. in LaTrobe, Pennsylvania, had to abandon the mowing and maintenance sideline of his chemical care company. "The Small Business Administration suggests that you should charge 2.3 times your base wage in order to ensure a reasonable profit margin. We just couldn't afford it."

Some of those interviewed believe they are going to have to charge even more. Mike White, president and general manager of A-Perm-O-Green Lawns, Inc. in Shreveport, Louisiana, and who runs a mowing and maintenance division, said: "We see it having an even greater effect. When you start counting in the cost of gas, wear and tear, and then add on the minimum wage increase, you're going to have to start charging around ten dollars an hour."

"Some time back we started advertising for unskilled positions in the three to four dollar an hour range, thinking we'd get more qualified people that way. But the guys who came through had the same skills as the minimum wage people, so we went back to starting them out at the minimum again."

A-Perm-O-Green Lawns now hires people at the minimum and advances them through a merit schedule. But White feels the raise may bear consequences for his salaried spray applicators, as well. "They'll see it as a cost of living increase that they have a right to also. The saying that a cost of living increase just means you're making the same money you made last year holds true, so they may expect even more."

Not all the businessmen interviewed by Lawn Care Industry felt the same way, however. Dr. Gary Seitz, who runs Green Pastures, an Atlanta, Georgia-based outfit, thinks that the minimum is eminently reasonable.

"Personally, I don't think the \$3.35 minimum is too high," he said. "We employ a lot of low-income people from around inner-city Atlanta. If a man has a family to feed and doesn't have the advantages normally given to others, somebody's going to have to help him out."

"People are just going to have to realize that along with the eggs, milk, and butter prices going up, our prices are going to go up too."

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Wholesaler keeps inventory on contractor's job site

Just as every schoolboy is familiar with the saying "For want of a nail, the shoe was lost, for want of a shoe the horse was lost," so too does every lawn care businessman who handles irrigation work know how much time and money can be lost for want of a pipe nipple or a small fitting.

That is one problem that does not exist for lawn care businessmen who can take advantage of the Turf Irrigation Mobile Inventory. It is the idea of Bill Keim, president of Turf Irrigation & Water Works Supply, Inc., a wholesaler headquartered in Phoenix, Ariz.

Keim sends a van loaded with everything that might be needed to the job site, to remain there until the job is completed. The lawn care businessman draws on the inventory as parts or equipment are needed-and pays only for what has been used.

"Phoenix has become such a big area," Keim told Lawn Care Industry, "that we set up a number of



branches in an effort to get materials to the contractor more easily. We have four branches in Phoenix and one in Las Vegas.

"But the contractor still had to travel to the branch. With the cost of vehicles, maintenance and gas—plus time lost on the job—we were looking for an even better way to have material and equipment close at hand to the contrac-

The logical step, Keim reasoned, was to move the branch to the job. Last January, the first of his two Mobile Inventory vans was in operation. The program has been going so well, he plans to add two more vans.

One van is a 24-footer, the other a 28-footer. One side of a van is lined with shelves, the other has racks. The racks are loaded with Lascopipe in the sizes needed for the job while the shelves hold cartons of Lasco Schedule 40 pipe fittings, nipples and valves as well as hack saws, blades, shovels and anything else that may be needed on the job.

"We tow the van to the job site and hand the keys to the contractor," Keim said. "It is stocked with whatever is applicable to the job. For example, if there is no pipe over 11/2 inches to be used, we certainly don't put in any two-inch fittings. At the end of the job or the end of the month, whichever comes first, we take and inventory and bill for whatever was used, and only that. If the contractor doesn't use anything, the service doesn't cost him a penny. At the end of the job, we bring the van back to be restocked for the next

"It has saved our customers a tremendous amount of time. For one thing, they don't have to use anything makeshift now. They can always use the right fittings because they're right there, in the



Turf Irrigation's van being towed to job site.

Keim pointed out that the mobile inventory is ideal for jobs that are outside the regular market area, although for the most part the vans have been called upon for jobs in or near Phoenix.

"A contractor working on a job 50 or so miles out of town won't have to send a man on a 100-mile round trip for a couple of fittings that may be holding up his job," he said. "With our mobile inventory, he won't be faced with that expense or delay.

"But it costs him nothing. This is a service we provide when we bid and get a job. Prices are always competitive in these bids and we may come in a few dollars lower or a few dollars higher than the other fellow. There's little or no difference in price-but there now is certainly a big difference in service. The mobile inventory means money in the contractor's pocket."

The program is not, of course, available for small jobs. The vans generally carry an inventory of about \$5,000. "We send them on a job where the contractor may be working for a month, two months, or more," Keim said. "The jobs where they've been used include a high school, a group of town houses, an apartment complex and a golf course. "One contractor used the van to provide for a number of jobs. He had a few projects near each other at one end of town. The van was located at the site of one but his journeymen working on any of the jobs in the

area could use the inventory.

Security, which is a problem on any construction site, was one of the things Keim had to consider. The vans are insured—but they are his responsibility, not the contractor's-and made as secure as possible.

When the van is towed to the site, it is immobilized. It cannot be moved or towed away except by Turf Irrigation personnel. The windows are barred, special hinges on the doors are of a type that cannot be removed and special locks are used on the doors.

Admitting that nothing is infallible, Keim said that so far no losses have been incurred. There had been one attempt at a break in, as evidenced by signs about the van but, he said: "They evidently gave up; they couldn't get in."

Turf Irrigation may be helping contractors with its Mobile Inventory, but it is also, admittedly, self-serving.

"Our objective is to get the job," Keim said, "and we're doing it by offering a service, not a gimmick. In our bid, we say 'this is the price and, based on this schedule, you can have an inventory at the job site.' Even if we may be a few hundred dollars higher-and I emphasize 'may be'—the Mobile Inventory can be the clincher.

"Our sale of fittings has gone up 90 percent. Part of that may be because of the quality of Lasco fittings, but certainly a large part is because of our Mobile Inventory."







problem of the unilateral increase in the minimum wage is being offered by the Reagan administration. President Reagan wants to give unskilled workers a better chance in the job market by lowering their minimum. This 'two-tiered' minimum would allow employers to hire some at 2.50 an hour (teenagers and college students, for example), while maintaining the standard minimum for those already covered at the set levels.

This proposal is supported by Dave Buccholz, owner and manager of Lawn Care of Hunterdon, in Pittstown, New Jersey. Buccholz employs salaried pesticide maintenance personnel at good wages and doesn't believe the minimum wage itself will affect the salaries his skilled people receive. "It's the cost of living that's pushing up wages," he said, "not any imposed minimum."

"The split minimum wage is advocated by others. This, they feel, would enable them to hire unskilled workers at a sub-minimum wage, bringing them up through a merit system."

"It will affect us with some people, however. We wouldn't mind paying a minimum wage if it didn't apply to those who are generally less productive. There needs to be a lower threshold in order to absorb the cost of on-the-job training. We have to be able to reduce the risk of hiring a person with no prior proof of his productivity."

It does not readily follow, however, that cutting the minimum for some is better than cutting it for none. According to some experts, a partial reduction would create some jobs, but it would also give employers an incentive to substitute workers paying a reduced wage for those entitled to a higher minimum.

The general reaction around the industry reflects the awareness of smart buisnessmen. Some believe that the steady increase in the minimum wage level is gradually forcing them out of mowing and maintenance services they would like to supply to their customers. Although the consensus is that it will affect that side of the industry the most, many feel that it will influence the salary levels of their middle-income workers, as well.

An equal portion believe there is no alternative to raising their prices. They hold that they are just part of the general increase in the cost of goods and services which the customers must bear.

The split minimum is advocated by others. This, they feel, would enable them to hire unskilled workers at a sub-minimum wage, bringing them up through a merit system. The workers could then prove their valuability without the industry absorbing the cost of inadequate production during training.

Whatever the real effect of the dispute, economic planners would do well to study the consequences of wage regulation in the lawn care industry. Because they employ a good many workers at the lower end of the income curve, these businessmen are particularly sensitive to changes imposed from above. And as the industry continues to grow, any marginal change represents a greater magnification of both labor cost and company growth.

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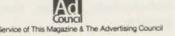
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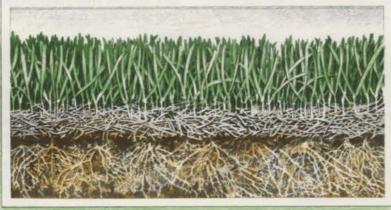
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Understanding turf growth important to lawn businessmen

Lawncare businessmen must be shrewd enough to compete in an industry that continues to grow despite inflationary setbacks. But they need not limit their business wiles to marketing techniques and sales projections. Understanding the mystery of the grass plant itself will broaden business sense, for its the plant upon which our livlihood depends.

According to Dr. Peter H. Dernoeden, extention turf specialist at the University of Maryland, the seed of the grass plant is botanically classified as carvopsis because the fruit or ovary is simple (derived from a single rather than a multiple ovary), and indehiscent (not splitting open along definite lines, with the ovary wall and seed coat firmly united to one another).

The complex process of germination begins with water absorption by the seed. Once absorbed, a hormone (gibberllelic acid-GA) is produced in an organ of the embryo called the scutellum. The acid is then transported out of the scuttellum to a thin tissue of cells that surround the seed embryo, where it induces the production of enzymes. The enzymes are used by the young seedling to digest starches which in turn yield energy needed for the production of vital proteins and other growth related processes.

The first observable change in the young seedling occurs with the elongation of the protective sheath of tissue which surrounds the primary root. This protective covering eventually stops growing, but the primary root does not and eventually ruptures its protective sheath. The rupture produces three pairs of seminal roots which anchor the seedling in the soil and absorb water and nutrients.

The seminal root system is short

lived and is replaced in six to eight weeks by adventitious roots which develop on stems rather than the embryo. These roots arise on crowns, rhizomes and stolons at nodes or swollen points of the stem where the roots, leaves and buds develop. Adventitious roots may live as long as the tiller they support and may survive longer than one year as in Kentucky bluegrass-or they may be replaced annually, as in bentgrass and ryegrass.

Uptake of nutrients is an active energy-expending process generated by respiration. When the supply of oxygen is reduced by waterlogged or compacted soils, respiration is inhibited and nutrient uptake is dramatically reduced. Root production and growth occur primarily in the spring in cool season grasses, whereas root growth of warm season grasses is most active in summer.

Shortly after the protective sheath elongates, another sheath located opposite its mate on the embryo begins expanding and encloses the growing point of the plant. The second sheath finally emerges through the soil surface and provides the first glimmer of green in the seed bed. When it grows to about an inch in length, it ceases elongation and is soon ruptured by the first leaf. The growing point remains at or slightly above or below the soil surface until the flower head (inflorescence) is produced. The low position of the growing point of turfgrasses insures that it is not removed by mowing.

The growing point of the grass plant is located on an elongaged stem or crown and is about a millimeter long. New leaves are continuously produced by the growing plant basipetally, (i.e. new leaf primordia are produced from below rather than above the apical meristem). The youngest leaf, therefore, is produced on a primordium developing above the

preceeding leaf.

The young, developing leaf elongates within a cylinder of older leaf sheaths and eventually protrudes above all previously produced leaves. This development of leaves is best envisioned by a collapsable telescope in which each individual unit is enclosed within the next largest unit of the telescope. Generally, five to eight primordia are present per shoot, but as many as 20 may be produced.

When young leaves are mown, regrowth occurs at the base of the leaf blade (laminia) at its point of connection with the sheath collar, or from the growing point located at the base of the leaf sheath. Those cells located in the collar region that are capable of dividing and producing more leaf tissue are referred to as an intercalary meristem. Once the leaf is fully exposed and leaf expansion has been completed, no further regrowth will occur, even after mowing. Leaf production by cool season grasses is favored by moderate temperatures, high light intensities, and most moist fertile soils. The leaves will generally live between three to five weeks during the growing season.

Undeveloped buds, formed in the axil of each leaf, are called axillary buds. Axillary buds may develop into new tillers, rhizomes or stolons. Rhizomes and stolons are lateral stems that develop when axillary buds rupture the leaf sheath, a phenomenon called extra vaginal growth. Tillers are also lateral stems developing from axillary buds; however, these buds develop within leaf sheaths (intra-

vaginal growth).

Rhizomes are below ground stems, whereas stolons are above them. Both types of stems can produce roots and shoots at nodes. Rhizome and stolon formation of cool season grasses is promoted by cool, moist periods of spring and fall, but inhibited by temperature extremes and dry soils. Kentucky bluegrass, red fescue, and red top are rhizomateous turfgrasses, whereas creeping bentgrass, rough bluegrass and buffalograss produce stolons. Bermudagrass and zoysia grass produce both rhizomes and stolons. Rhizomes, stolons and crowns are also major carbohydrate storage tissues of grasses.

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The fourth type of stem produced by grasses is the culm. The culm develops from the growing point and bears the flower head or inflorescence. For many turfgrasses, flowering is induced by a combination of cold, winter temperatures (vernalization) and lengthening of daylight in late spring. During floral initiation, the growing point rapidly produces leaf primordia and lateral buds, causing an elongation of the growing point. Eventually, floral parts are formed and the culm elongates, elevating the inflorescence above the leaves of the plant.

There are three primary types of inflorescences produced by members of the grass family: raceme, spike, and panicle. Most cool season turfgrasses produce panicles; however ryegrass produces a spike. The spikelet is the basic unit of the inflorescence consisting of one, two or several flowers. The spikelet of a panicle consists of one or several flowers borne on branches that are connected to the main axis or rachis. Each flower in enclosed by two bracts, the lemma (the larger, outer bract) and the palea. The entire spikelet is enclosed by two, large lower bracts, the glumes. The typical grass flower has three pollen bearing structures (anthers) and two pollen receptors (stigmas), and one ovary, within which is a single ovule.

Once pollination and fertilization has occured the ovule develops into a seed. Two protuberances, called lodicules, are located at the base of the ovary and function in separating the lemma and the palea. Once these bracts have been separated, the anthers and stigmas are exposed and pollination can occur. Both cross and self pollination can occur within the grass family.

Some grasses, most notably Kentucky bluegrass, produce seed asexually. The asexual production of seed involves pollination, but fertilization of the ovule does not occur. This phenomenon is known as apomixis. Apomicitic seed develop into plants that are genetically identical to the parent. Apomixis is an extremely desirable characteristic because swards produced using apomictic seeds exhibit uniform color, texture and verdure.

The events described and attendent terminology are complicated. Hopefully, this report has clarified these processes and terms and has provided a meaningful contribution to your knowledge of turfgrasses.

ASSOCIATION

Power equipment distributors organize

The Outdoor Power Equipment Distributors Association, representing a billion dollar industry, was recently formed when leaders of the outdoor power equipment distribution industry met at the GIA Show in Baltimore, Maryland to discuss the need for such an organization. Specifically designed to meet the varied needs of the independent outdoor power equipment distributors, officers and directors of the newly formed association were elected.

Joe H. Brady, Jr. of Joe H. Brady &

Associates, Inc., Birmingham, Alabama was elected as the first president of OPEDA. Wyn Eaton of Eaton Equipment Corporation, Hamburg, New York was elected vice president along will Bill Niemeyer of the Niemeyer Corporation, West Chester, Pennsylvania as secretary and Joe Porter of Porter Brothers, Inc., Shelby, North Carolina as treasurer.

Appointed to serve as the first directors of the new association were: Pete Burgwald of Power Tool Co., St. Paul, Minnesota; Carlos Caccipop of Timsco, Inc., Marshall, Texas; Art Kerckhoff of Sterling Distribution Co., Maryland Heights, Missouri; Peter McDonough of Summit Power Equipment Distributors, Inc., Fort Wayne, Indiana; Sunny Roberts of Southern Seed Co., Inc., Jackson, Mississippi; Bob Carswell of Carswell Distributing, Winston Salem, North Carolina; Scott Smith of Stull Enterprises, Inc., Chester, Pennsylvania; and Gary Merrill of Crandall Hicks Co.,

Southborough, Massachusetts.

The firm of Fernley & Fernley, Inc. has been retained to provide association management services of OPEDA with Stewart G. Potter as the executive director and Thomas A. Fernley, III as consulting director. The Fernley & Fernley offices, located at 1900 Arch Street, Philadelphia, PA, will serve as headquarters for the newly formed association.

BUSINESS

PGMS sets first management workshop

The Professional Grounds Management Society will hold its first area management workshop Feb. 18-19 at the Holiday Inn in Jessup, Md.

The two-day workshop, "Business Management Techniques for Professional Grounds Managers," will be led by Dr. W. R. Luckham and Professor Robert Reynolds of

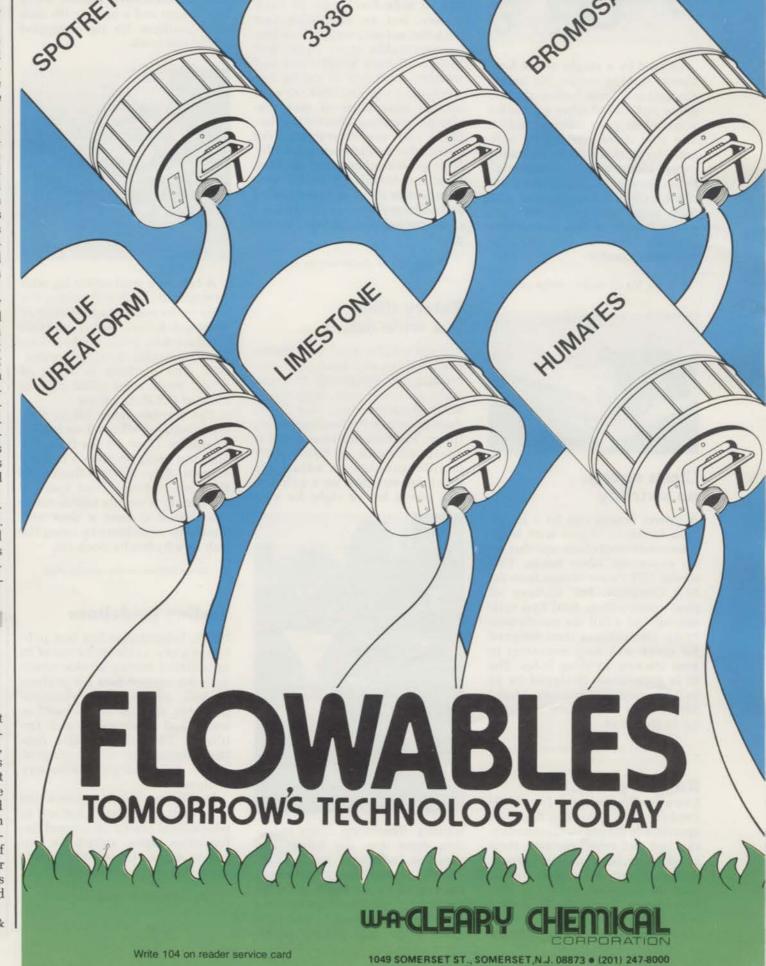
Virginia Tech.

The workshop will run from 9 a.m. to 4 p.m. each day. Topics to be discussed are: Management Orientation and Managerial Decision Making, Budgeting Techniques, Labor Cost and Labor Efficiency, Machinery Budgeting, and Machinery Replacement Decisions, Job Cost Estimating, Break-Even Analysis and Partial Budgeting.

Registration is limited to the first 35 applicants. The fee for PGMS members is \$95, and for non-members \$115. The fee includes all materials, two lunches and four coffee breaks.

Room reservations should be made directly with the Holiday Inn, 7900 Baltimore-Washington Blvd., Jessup, MD 20974, 301-799-7500.

For information and registration brochure, contact: Allan Shulder, Executive Director, Professional Grounds Management Society, 7 Church Lane, Pikesville, MD 21208, 301-653-2742.



Diesel tractor offers low fuel and long life

PRODUCTS

Designed with the operator in mind, the 19 H.P. diesel rotary tractor from the Bunton Company features an air-cooled engine, forged crankshaft, and cast aluminum crankcase for long life and weight reduction.

The tractor frame, built from 11 and 7 gauge steel, is welded into one piece to support the long lasting diesel engine. The cutting deck is constructed with steel reinforcements on stress points and the self-adjusting belt tightening system is used to prevent belt slippage in high, tough grass.



Steered by a single wheel for a shorter turning radius, the tractor also features assist brakes used for either right or left drive wheels for a complete zero turning radius. The side drive wheels are activated hydrostatically by hydraulic pump along with a differential. Other available attachments include a 60 inch V-type plow, a 60 inch angle-type blade, 60 inch rotary broom, a two-stage snow thrower and a cab for the operator's comfort.

Write 701 on reader service card



Clean sweep, no swirling

A power broom can be a handy item for those of you with huge, time consuming clean-ups that eat up expensive labor hours. This model SHT Power Broom from the M-B Company, Inc. features all steel construction, total hydraulic control and a full six month warranty. The unit is custom designed for quick and easy mounting in your tractors' existing holes. The fit is guaranteed. Designed for 18 to 25 horsepower tractors, Model SHT broom widths are available up to eight feet.

Write 702 on reader service card

Rugged pro-cutter

Lawnflite Professionals from MTD Products, Inc. have been designed specifically for use in the commercial turf and rental markets. Built to take long, hard use and keep on going without costly breakdowns, each is powered by a big four horsepower Tecumseh XL engine with sealed solid state ignition and double protection, fine-filtration



air cleaners. Special durable parts common to the series include long-life sealed bearings, reinforcing lower handle supports, rugged throttle mechanism, large capacity (1.2 gallon) tank with gauge cap, and easy rolling eight inch steel wheels with thick-wall tires. A distinctive yellow and black finish identifies these as the Lawnflite Professionals. Model 618, a side-discharge 20 inch mower, has an aluminum cast deck that not only weighs less than a comparable steel deck, but shrugs off hard knocks and bad weather. Professional model 638 combines a wide 22 inch cut with all the advantages of rear discharge mowing. Providing balance and maneuverability, the model also includes an especially large grass catcher to cut mowing time and trouble. Powerful vacuum action lifts the grass blades and collects clippings to provide a clean cut and a clean lawn in one

Write 703 on reader service card

Rotary tiller is a wide driver

Recognizing the need of lawn care businessmen and landscape contractors for equipment that can stand up to constant, rugged use, MTD Products, Inc., has introduced two new Professional rotary tillers. Professional Model 398 is equipped with a heavy-duty handle and has an adjustable depth bar mounted on a tailpiece that pivots left or right for easy



turning. Three-step chain reduction drive uses the Briggs and Stratton industrial engine efficiently: power flows directly from the engine to the chain drive for quick response. The tiller's sixteen self-sharpening, heat-treated tines gives a 26 inch tilling width.

Professional model 418 has a heavy-duty handle that adjusts to nine positions, accommodating tall or short operators and allowing them to guide the tiller while walking beside it. The tiller is equipped with a powerful eight horsepower Briggs and Stratton industrial engine plus chain reduction drive with five speeds to wheels and tines. Throttle control and wheel-engaging clutch lever are mounted on the handle panel and a separate clutch lever engages the self-sharpening, heattreated bolo tines. Tilling width is 21 inches.

Write 704 on reader service card

Keep equipment in shape with new lift

Hanson's sturdy Hydraulic Lift Table has a 2,000 lb. lift capacity. The heavy duty hydraulic ram will lift lawn mowers, yard and garden tractors, snowmobiles, motorcycles, snow blowers, rototillers, golf carts—any small engine equipment you have to service. The lift features a welded angle base frame and a one-eighth inch steel platform for rigid support while you work.



A two inch steel safety leg with an automatic latch will hold up the table in the event of a hydraulic or electrical failure and a pressure relief valve built into the hydraulic pump provides overload protection. The platform is made of safety tread steel plate and is painted O.S.H.A. yellow.

The flexible table lift is infinitely adjustable from floor level to 42 inches. Once off the floor, the platform freely revolves a full 360 degrees. Since it stores flush with the floor, valuable floor space is not tied up when the unit is not in use. Install it near a door and double its usefulness by using the unit as a hydraulic dock lift.

Write 705 on reader service card

Testing guidelines

Harris Laboratories has just published a new guide to the use of its agricultural testing service which includes revised fees for analysis of soil, plants, feed, vitamins, pesticide and herbicide residue, water and wastewater, and fertilizers. The schedule also contains listing for microbiological and veterinary pathology analyses.

In addition, Harris carries a line of soil sampling equipment and an educational series of general information tapes, anhydrous ammonia tapes. Other soil testing sales aids may be ordered.

Write 706 on reader service card

Gooseneck or straight tongue hitch trailer

Handy Mandy Trailers offer an efficient and economical method of hauling with your compact pickup truck. The Mini-Gooseneck Trailer, available for mini-pickups can be changed to a Mini-Tow Straight Tongue for bumper pulling in approximately 20 to 30 minutes. The durable



trailer features a tubular construction in both Gooseneck and Mini-Tow tongues, a 2 by 6 inch tubular main frame and a thick one-inch main decking. The frame sports 1500 lb. springs, chrome wheels and white-walled tires.

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Zinc-plated bedknives

LESCOE Products is now plating its custom-made bedknives with a zinc coating in its new bedknife finishing operation. With this system, bedknife steel stock is produced on rolls at a specialty steel plant and then shipped to LESCOE for processing. Once there, the steel bedknife stock is cut to the required lengths for various mower applications and pierce punched with special die punches to insure accurate alignment. The knives are then counter-bored and each blade is placed on a magnetic chuck on the Thompson surface grinder. The placement of the blade on the chuck insures that the individual blade is ground perfectly straight. The finished blade is then plated with zinc coating to improve its appearance and handling and to avoid build-up in the grinding stone.

Write 708 on reader service card



Perfect placement with vibratory plow

One of the most compact plows on the market, Ditch Witch's new V250, 25 horsepower vibratory plow has newly designed drive and plow lift systems for dependable and efficient production. The V250 can make underground installations without digging up the trenches of power and communications cables, plastic pipe for water or natural gas service lines, or residential sprinkler systems.

Write 709 on reader service card

Tractor tailored for all seasons

The Ariens Yard Tractor offers the homeowner and businessman added working versatility with a number of useful, durable attachments for multi-seasonal use. This



year the efficient Yard Tractor Grass Bagger option virtually eliminates the chore of raking up grass clippings and leaves.

Two heavy-duty hoppers hold 30 gallon standard plastic bags which, when full, can be tied up, lifted out, and then set out for collection or dumped for compost. The Bagger features a sturdy, steel tubular frame and the cover is vented for proper air movement. Other available attachments include a 42 inch front-mounted dozer blade, a 36 inch two-stage snow thrower, a carry-all trailer and a rear-mounted rotary tiller.

Write 710 on reader service card

TEXAS

Bermudas vary in low-temp hardiness

Winterkill is a convenient name for a widespread problem of warm-season turfgrasses in Texas in three of the past four years. It actually includes all types of injury to grasses that occur during the winter season.

The three major types of winterkill to turfgrasses are direct lowtemperature kill, winter desiccation (drying), and winter diseases, according to Dr. James B. Beard, turf and crop physiologist at Texas A&M University with the Texas Agricultural Experiment Station.

Winterkill has been especially severe on St. Augustine, with some bermudagrasses also being damaged.

Field evaluations give an indication of the overall ability of various grasses to survive winter stresses of the types just mentioned, but unfortunately, Beard says, they don't necessarily indicate low-temperature kill.

There is a real need for specific information concerning the comparative low-temperature hardiness of the various warm-season turfgrasses available for use in Texas. For this reason, Dr. Beard and his associates used a low-temperature simulation to test the relative low-temperature hardiness of 19 of the commercially available and new-release bermudagrasses.

The low-temperature simulation chamber permits controlled conditions and can screen large numbers of grasses more efficiently than field studies can, according to Steve Batten, who worked with Dr. Beard on this research.

Conditions in the simulation chamber included both a moderate cold stress and a severe cold stress. Soil temperature is a more critical factor in low-temperature stress than the air temperatures.

Midway bermudagrass ranked superior in low-temperature hardiness regardless of the cold-stress level.

Pee Dee, Sunturf, Midiron, and Turfgreen also ranked quite high in low-temperature hardiness under moderate cold stress, while under severe cold stress Midiron proved to be superior to the other three and similar to Midway in terms of low-temperature hardiness.

These tests confirm that there are significant differences in low-temperature hardiness of the bermudagrasses, Beard says, and provide a sound basis for selecting grasses for those locations where low-temperature stress is a significant problem.



"Our results indicate that decomposition of thatch was possibly impeded through the inhibition of microbial activities by unfavorable pH environment and/or by direct toxicity of the fungicides," said Smiley.

Citing his recent research, he said that decomposition of surfur-bearing fungicides contributed sufficient acidity to restrain the decomposition of thatch and that these acidification processes explain the level of thatch accumulation in most instances.

Dr. Smiley says that too often fungicide choice is made only by taking immediate cost and target pathogens into consideration, without considering the long-term effects which the fungicides may have.

"The long-term effects of these fungicides are far more important to the overall economy of management programs and to turfgrass quality than the shortterm cost and fungi toxicspectrum considerations."

He stresses that costs to remove thatch and to neutralize soil acidity are very likely to exceed differences in costs of fungicides. "Whenever possible, turfgrass managers should attempt to utilize the most economical long-range maintenance programs," Smiley reported.

"In this study, the combined application of ethyl thiophanate and thiram contributed the highest sulfur amounts. It would require about three pounds of lime per 1,000 square feet per year to neutralize the acidity attributed to soil by this fungicide program."

Thatch depth measurements where the combination of thiram and ethyl thiopanate were applied showed a thatch depth of 18.4 millimeters and a pH level of 5.7. Non-treated control grass showed a 6.3 millimeter thatch depth and a pH of 6.3.

But, Dr. Smiley points out, acidification is not responsible for thatch accumulation in plots treated with nonsulfur-bearing fungicides, which displayed thatch depths of 13.8, 17.0 and 16.0 millimeters, respectively, while showing pH levels above 6.0. "For these treatments, it appears that direct toxicity toward the microflora is more important than indirect suppression through acidification of soil," he contends.

In contrast to these fungicide treatments resulting in significant thatch accumulation, turfgrass treated with other fungicides such as cycloheximide (Acti-dione TGF), cycloheximide & quintozene (Acti-dione RZ), captan (Captan), anilazine (Dryene) and chlorothalonil (Daconil 2787) showed minimal thatch accumulation and pH levels of 6.3 not significantly different from the test areas.

The Acti-dione TFG-treated turf had a thatch accumulation measuring 2 mm. and a pH of 6.3; Acti-dione RZ-treated turf had a thatch accumulation of 2.8 mm and a pH of 6.5, compared to a thatch accumulation of 6.3 mm. and a pH of 6.3 for non-treated control turf.

ELECTIONS

New PGMS officers elected

Members of the Professional Grounds Management Society cast their ballots during their annual conference in Kansas City, Missouri for new officers to lead them in 1981. Having been elected last year to serve as president-elect, John R. Van Vorst advanced automatically to the presidency this year. He is a former treasurer of the society and a past award winner in the Grounds Maintenance Awards Program. Mr. Van Vorst is supervisor of parks for Tenafly, N.J.

The new president-elect, E. Earl Wilson, is a founder and charter member of the Southern Ohio Branch of PGMS, and was active in the founding of the new Miami Valley of Ohio branch. Vice president of National PGMS in 1980 and board member for three years, Mr. Wilson is vice president of Thornton-Wilson, Inc., Maineville, Ohio.

Vice President Fred Rigger has been a national board member for the past three years, a director of the Free State branch of PGMS, and co-chairman of the 1979 annual conference. Mr. Rigger is assistant manager in charge of grounds for the Padonia Swim Club in Cockeysville, Maryland.

Treasurer Robert Fisher, elected to a second term, is a past national PGMS president and has been a PGMS member since 1940. Mr. Fisher is a consulting horticulturist and is retired from the Mount Vernon Ladies' Association of the Union, Mount Vernon, Virginia.

Joining these officers in the executive committee will be Immediate Past President William H. Link, Century Development Corporation, Houston, Texas; and Allan Shulder, Executive Director of PGMS, Baltimore, Maryland.

Elected to serve three year terms on the board of directors were J. Paul Barefoot, chief of grounds maintenance, landscaping and transportation division, U.S. Soldiers' Home, Washington, D.C.; Phil Lee, parts manager for the Cornell Equipment Company of Gaithersburg, Maryland; and Fred A. Lennertz, Jr., superintendent of grounds and transportation for Indiana University-Perdue University in Indianapolis, Indiana.

Appointed to serve during 1981 on the board of directors replacing Robert Peters, who resigned, George Eib served as the committee chairman for the 1980 annual conference. Mr. Eib is superintendent of forestry and landscaping for the Parks and Recreation Department of Kansas City, Missouri.

Other members of the current PGMS board of directors were Clarence Davids, Sr., Blue Island, Illinois; Kenneth Rust, Zionsville, Indiana; Len Spencer, Houston, Texas.

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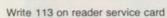


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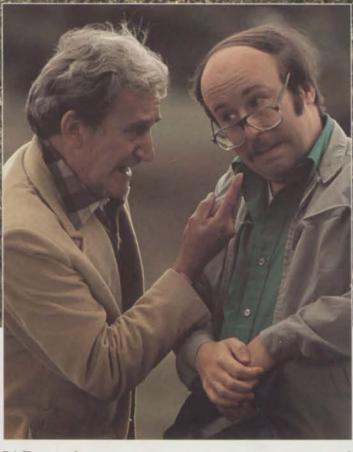
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The first Professional Lawn Care Association of America Conference and Trade Show is history, but here are a few postscripts. One is from a founding member, the other from one of PLCAA's newest members.

First, Paul Hairston of Vitalawn Chemical Lawn Care, Jeffersontown, Ky. writes: "I was so proud of us. Just over a year ago 24 or so of us founded the PLCAA, and then we had more than 700 participants at our first convention. It was great to meet fellow lawn care businessmen from all over the country. We are indeed a fraternal bunch. We all have obsession for success, have an automatic appreciation for the necessary 14-hour days and understand the importance of good employees and keeping the customer first but our most valuable asset is each other."

Then came the letter from Richard Steinau, president of Greenlon, Inc., Cincinnati: "I must tell you, since the inception of PLCAA I have, at best, been skeptical of the intentions of the founding members. I felt they were aiming towards a self-serving goal. You know, the 'Let's-give-ourselves-a-title-and-fool-the-public' syndrome many new service industries go through. 'Okay,' I said to myself, 'I'll go to their meeting just to prove these people are not ready to stand on the pedestal they are building for themselves.'

Well, now I have attended, I owe this written apology to the organizing members and to those who had faith from the start. The entire conference was impressive and tremendously informative. I have now joined the PLCAA and have offered my services to the board of directors as an expression of confidence to this new organization. Companies of all sizes and services can and will benefit from the work this association is doing and I strongly advise anyone in the lawn care industry to join.

"Any of you who are hesitant to join are invited to contact this former doubter."

Rob Galey

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