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VOL. CXXXVI

The Daily Sun

GREENSBORO, WEDNESDAY, NOVEMBER 1, 1987

NEW INSECTICIDE STOPS GRUBS IN 3 DAYS!

**"Lawn care experts
get 90%
control in 3 days!"**

by THOMAS BAGOT

Recent label approval by the Environmental Protection Agency marks the introduction of the ultimate product for grub control in home lawns.

New Triumph offers lawn care professionals many advantages in grub control.

- ☐ Because it's fast acting it controls grubs in 2 to 3 days.
- ☐ Triumph's superior chemistry provides/delivers over 90 percent grub control quickly and maintains that performance over 10 weeks.

- ☐ New Triumph also controls surface insects and mole crickets and is labeled exclusively for use by lawn care professionals.
- ☐ And new Triumph's liquid formulation and low rates mean

The fast acting control of Triumph stops root damage from grubs in a hurry so your homeowner customers can relax and feel confident that the grub problem is gone.

One application of Triumph per year in the fall is all you need to control grubs consistently and effectively. Years of testing shows that Triumph continues to control grubs for over two months. This should prevent retreatment until the following season.

Triumph goes to work faster than other products you've used. Within two days of application, you see Triumph control grubs and other insects. That means you stop grub damage quickly, reducing complaints and keeping your



INTRODUCING THE BEST NEWS TO H



New Triumph®, from CIBA-GEIGY, provides, on average, over 90% grub control in just two to three days. And there are over 10 years of major university and CIBA-GEIGY trials to prove it.

Triumph offers broad spectrum control of surface feeders like chinch bugs, sod webworms, army worms, chionodes, plus sub-surface mole crickets and annual bluegrass weevils.

Application in late summer to fall can prevent turf insect damage by eliminating grubs when they're small, before they can damage roots. And if grub damage appears in spring and summer, application of Triumph quickly stops further damage.

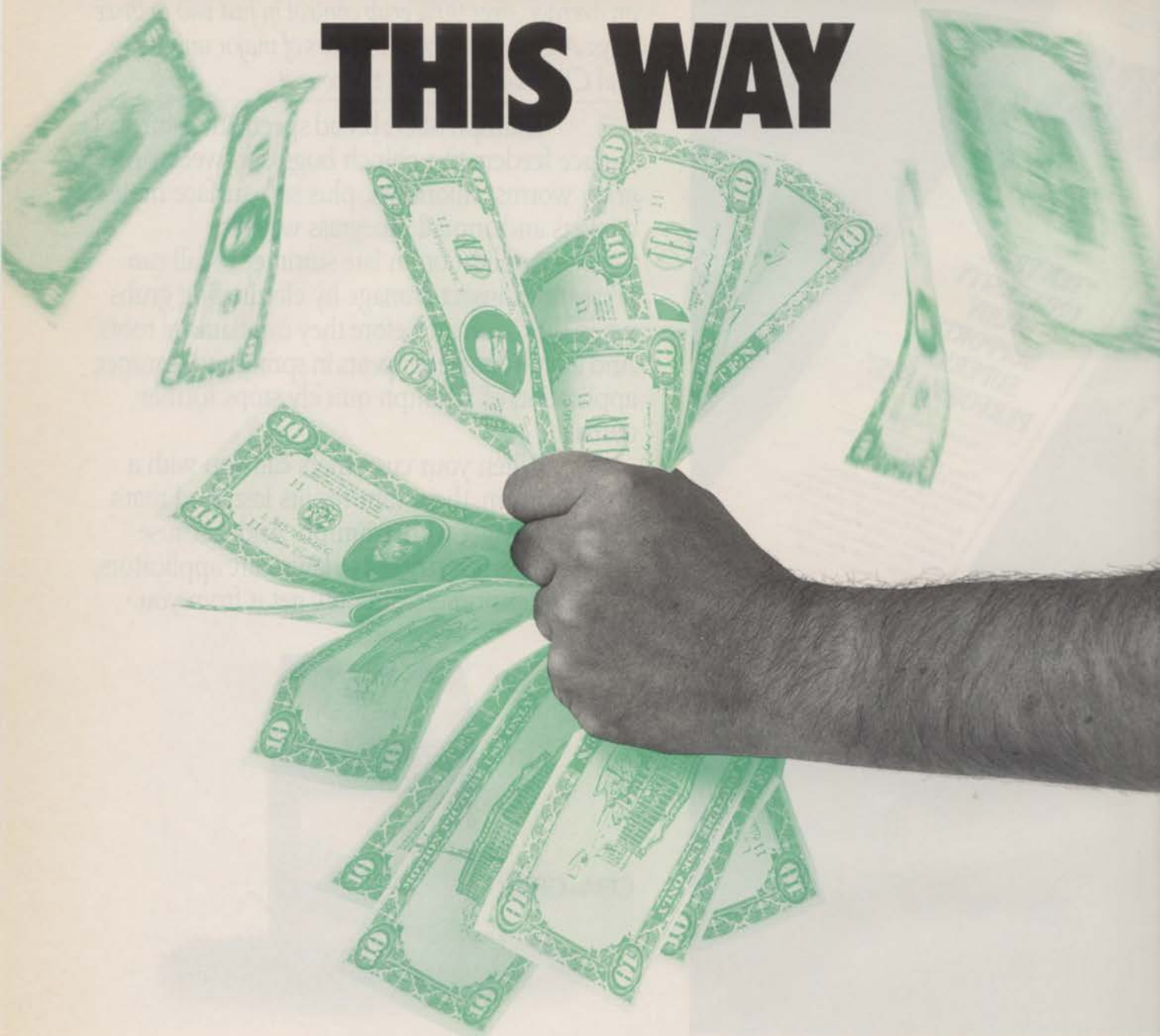
When your customers call you with a grub problem, they want results fast. And that's what they get with Triumph. And, because Triumph is restricted to lawn care applicators, your customers can only get it from you.

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the winter. These products are more effective and less corrosive than other deicing products. You can keep roads and parking lots clear of ice and snow, and put money in your pocket while your competition is hibernating. Interested? Simply call (801) 731-3100 for the facts.



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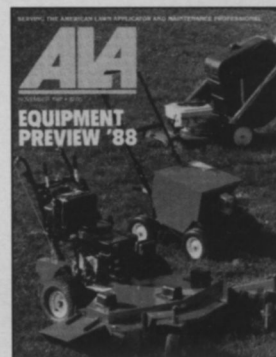
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COVER

Many new pieces of professional equipment are now on the market, or soon will be, like the 48" Commercial walk mower, Backpack blower and Power-plug® from Snapper Power Equipment, pictured on our cover.

(Cover photo by Barney Taxel)

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Groundsmaster 322-D

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Groundsmaster 220

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Groundsmaster 117

INSIDE STORY

1987 is quickly coming to an end, signaling a start to the new buying season. Equipment and chemical buyers alike will find themselves with new and improved products from which to choose.

As the industry continues to grow at a relatively fast pace, slicker, more efficient machines are becoming the norm to meet high demand. A variety of machines which do more work in less time are considered high priority items among equipment manufacturers.

And to eliminate some time-consuming tasks, many manufacturers are creating computer software programs designed to lighten the load for their customers.

In addition, the down-sizing trend which began several years ago is continuing as dealers keep refining their products. While not all companies are unveiling new equipment for 1988, don't be surprised to see some late entries to the market.

For distributors in a young industry, it can be tough keeping up with the constant changes, but equipment manufacturers con-



tinue to meet the challenge.

A similar report on new chemical offerings reveals a strong showing of new herbicides, fungicides, insecticides and fertilizers for 1988.

Led by Ciba-Geigy's Triumph® and Banner®, both of which have been awaiting final Environmental Protection Agency ap-

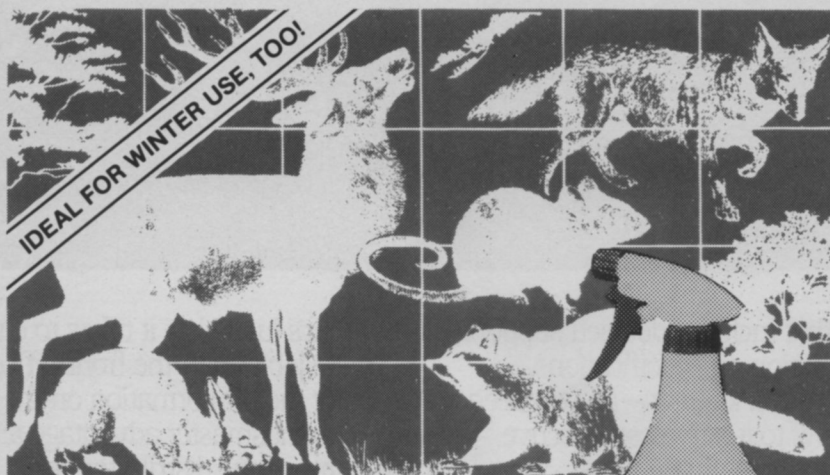
proval, many new and revised chemicals will be out on time for the new turf season.

Triumph insecticide is now available for control of grubs and a broad spectrum of insects living in grass, thatch and soil. According to the company, mid-July through early October is the best time for grub control.

Banner is a new systemic fungicide designed to control dollar spot, brown patch and other menacing diseases on cool-season grasses.

And don't miss the entry form for our 2nd Annual Award for Professionalism found in this issue. The award will go to a lawn care company or individual who deserves to be recognized for efforts in operating a professional business. Entry forms will be accepted until Dec. 31, and a winner will be announced in our March issue.

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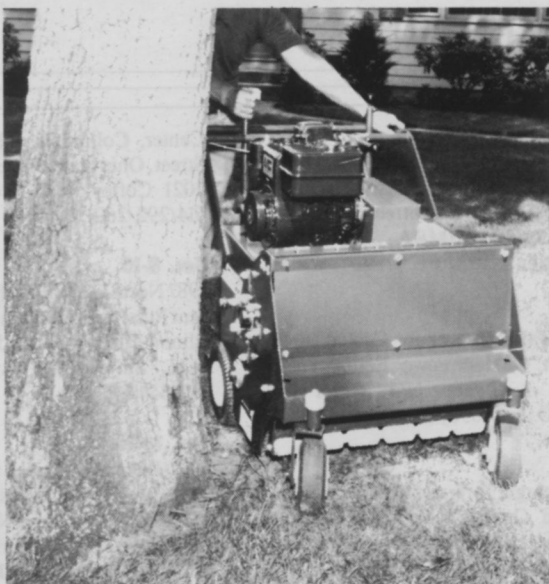
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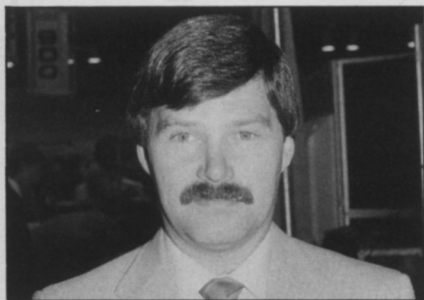
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VIEWS ACROSS THE INDUSTRY

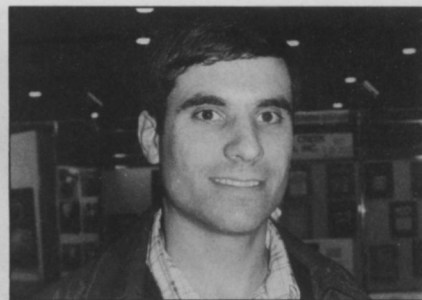
HOW DO YOU SELECT YOUR CHEMICALS?



"I try to read the trade magazines and pick up products at the field days. I also listen to my colleagues but it's difficult to get truthful and knowledgeable answers. There's a great many people in the lawn care industry in the Kansas City area but there's only a few that I would ask how they like a particular product. Last year in Baltimore I was looking at an organic product to help to prevent brown patch. In talking with the salesman I thought he had a product that might answer a lot of problems. I bought some, and it hasn't done a good job at all." — *Don Keller, Keller's Turf and Shrub Care, Independence, Missouri*



"I tend to stay with things that I've used and had good luck with in the past. It usually takes some pretty good convincing either from salespeople, or from somebody that I know and trust, to get me to try something new. There's a certain amount of risk involved when you're using something that you're not familiar with. Either you've got to trust the people you buy from or somebody that's used the product in the past. As you use these things you tend to find the ones that work for you and it's hard to change. Some guys will change for price reasons but I tend not to." — *Mike Ylinen, Lawnscape, Eden Prairie, Minnesota*



"Basically I make all decisions going by university findings. I usually go with the University of Illinois because they do testing and they're the closest to the area that I work with. I have very little interest in what I see advertised. If you ever have any trouble with customers and you tell them you saw a product advertised in a magazine, they think, 'Well, big deal.' But if you say that it's something the university recommends, that's a whole different story. All of a sudden the mountain they've developed can be shrunk down to a molehill with no trouble." — *David DeReu, DeReu Skelgas Co. & Lawn Care, Geneseo, Illinois*

CALENDAR

Nov. 16

All Industry Appointment Session, The Agricultural & Industrial Manufacturers Representatives, Westin Peachtree Plaza, Atlanta, Georgia. Contact: AIMRA, 5845 Horton, Suite 201, Mission, Kansas 66202; 913/262-4511.

Nov. 18-20

Pro Show '87, Dallas Convention Center, Dallas, Texas. Contact: Outdoor Power Equipment Institute, 1901 L Street, NW, Suite 700, Washington, D.C. 20036; 202/296-3484.

Dec. 7-9

18th Annual Georgia Turfgrass Conference, Radisson Inn and Conference Center, Atlanta, Georgia. Contact: Gilbert Landry, Jr., University of Georgia, College of Agriculture, 2400 College Station Road, Athens, Georgia 30605; 404/542-5350.

Dec. 7-10

New Jersey Turfgrass Expo '87, Resorts International Hotel, Atlantic City, New Jersey. Contact: Dr. Henry W. Indyk, Soils and Crops Department, P.O. Box 231, Cook College, New Brunswick, New Jersey 08903; 201/932-9453.

Dec. 7-10

1987 Ohio Turfgrass Conference and Show, Ohio

Center, Columbus, Ohio. Contact: Dr. John Street, Ohio State University, 234 Kottman Hall, 2021 Coffey Road, Columbus, Ohio 43210; 614/292-2601.

Dec. 8-10

1987 North Central Turfgrass Exposition, Pheasant Run Resort, St. Charles, Illinois. Contact: Illinois Turfgrass Foundation, 435 N. Michigan Ave., Suite 1717, Chicago, Illinois 60611; 312/644-0828.

Dec. 16-18

1987 Desert Turfgrass Conference and Show, Tropicana Hotel and Casino, Las Vegas, Nevada. Contact: Bob Morris, Nevada Cooperative Extension, 953 East Sahara Avenue, ST&P Building -207, Las Vegas, Nevada 89104; 702/731-3130.

Jan. 6-8

26th Annual North Carolina Turfgrass Conference and Exhibit, Winston-Salem, North Carolina. Contact: A.H. Bruneau, Box 7620, North Carolina State University, Raleigh, North Carolina 27695-7620; 919/737-2657.

Jan. 12-13

Tidewater Professional Horticulture Conference and Trade Show, Pavillion Conference Center, Virginia Beach, Virginia. Contact: Beth Wright,

Tidewater Professional Horticulture Conference, P.O. Box 6291, Virginia Beach, Virginia 23456.

Jan. 13-15

Eastern PA Turf Conference & Trade Show, Valley Forge Convention & Exhibit Center, 1200 First Avenue, King of Prussia, PA. Contact: Dr. Thomas Watschke, Department of Agronomy, 16 Tyson Building, University Park, PA 16802; 814/863-1613 or Christine King, Pennsylvania Turfgrass Council, P.O. Box 417, Bellefonte, PA 16823-0417; 814/355-8010.

Jan. 19-21

28th 1988 Virginia Turfgrass Conference and Trade Show, Richmond Centre for Conventions and Exhibitions, Richmond, Virginia. Contact: J.R. Hall, III, Virginia Polytechnic Institute, Virginia Cooperative Extension Service, Blacksburg, Virginia 24061; 703/961-5797.

Feb. 22-23

OSU Professional Lawn Care Seminar, Riverside Inn, Columbus, Ohio. Contact: Sue White, 614/292-7457 or Doug Thompson, 614/292-4230.

March 22-23

1988 Annual Meeting, West Virginia Vegetation Management Association, Charleston Marriott, Charleston, West Virginia. ■

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NEWS IN BRIEF

SHEMIN'S 9TH CENTER SAVES AREA LANDMARK

Shemin Nursery recently celebrated the grand opening of its newest wholesale horticultural distribution center at Oaks, Pa. It's the company's ninth such center in operation.

In the process, the company preserved a 380-year-old farm site — a historic landmark that includes a 200-year-old main house and a barn built in the early 1800s.

The new distribution center will serve the needs of landscape contractors, garden centers, florists, interiorscapers, arborists, irrigation contractors and other trade groups in the metropolitan Philadelphia, eastern Pennsylvania and southern New Jersey region.

"We'd been looking for a new location to serve the Philadelphia metropolitan area," said Ken Whitlatch, general manager of the Oaks center. "This new site permits us room to expand, while allowing us to help maintain a rich piece of area history. Not only did George Washington sleep here many times, but he also supervised the col-



Shemin Nurseries' newest facility in Oaks, Pa.

lection of provisions for the army at Valley Forge from here, during the Revolutionary War."

Beginning in the spring of 1986, restoration work took almost ten months, during which temporary facilities were used for

nursery operations. With landscaping completed in late spring of this year, the new Oaks facility is a fully-functioning wholesale horticultural distribution center.

Shemin's new facility will carry an extensive line of items in both product and

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service areas. In addition to nursery and greenhouse operations, stocked with an abundant variety of plant materials, trees and shrubs, the Oaks center includes hardlines and tools, pottery and accessories and irrigation supplies.

The facility, designed for one-stop shopping convenience and added value to customers, is guided by the company's original operating philosophy.

The Shemin company is headquartered in Greenwich, Conn., and is a wholly-owned subsidiary of the Weyerhaeuser Company of Tacoma, Wash.

OPARR HELPS OHIO BATTLE GYPSY MOTH

Ohio Pesticide Applicators for Responsible Regulation (OPARR) believes more must be done to rid Ohio of the threat of the gypsy moth, a foliage destroying pest inexorably working its way west from New England and now present in most northeast Ohio counties.

"The General Assembly very wisely appropriated money in this year's budget to monitor the progress of the moth," said OPARR's Chairman Lauren Lanphear, "but we're also going to need funds to control

and suppress the moth."

Lanphear, Vice President of Forest City Tree Protection Co., Inc. of South Euclid, says that the gypsy moth is a persistent pest with a voracious appetite that can threaten the very existence of foliage on trees or plants that it may attack. According to Lanphear, the State of Pennsylvania spent more than \$4 million in its efforts to suppress the moth in 1986 alone.

"The nursery industry, many cash crops, and every tree, bush and shrub is at risk when the moth gets well entrenched. Tens of thousands of acres in Pennsylvania have been completely denuded and we don't want that to happen in Ohio," says Lanphear, whose OPARR is working in conjunction with the Ohio Nurserymen's Association (ONA) in efforts to convince the General Assembly and Ohio Department of Agriculture of the need for additional funding.

William Stalter, Executive Director of the ONA agrees with Lanphear. According to Stalter, the gypsy moth was inadvertently imported into the United States in the late 19th century via plants or produce shipped from Europe and into New England. The spread of the pest has continued slowly but steadily ever since, requiring almost an entire century to work its way from New England across New York and Pennsylvania and into

the eastern most areas of Ohio.

Several findings of the larvae which later grow into the fully-developed moth were sighted in Ashtabula, Lake, and other northeastern counties early this spring while a few more sightings occurred in counties along the Ohio River further south.

During the recently completed budget deliberations held in the Ohio General Assembly, the Ohio Department of Agriculture requested several hundred thousand dollars for the next biennium to provide funds to both monitor and control the gypsy moth. However, that request, like most in this year's budget, was severely reduced before final passage of the budget bill on June 30th.

Lanphear, Stalter, and others are hopeful that the monitoring activities of the Department will be able to identify precisely the extent of the moth's invasion so that the Department will be prepared to treat if needed, next spring to counter its spread.

According to Lanphear, the larvae stage is the only one that can be effectively suppressed and that can be accomplished with selective use of a mild pesticide. The time the larvae are most susceptible is in May and Lanphear and Stalter hope that the legislature can be convinced to supply additional funds in time for treatment in May of next year.

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"It is unfortunate that the gypsy moth has traveled this far, but we know that the safe and proper use of pesticides can control them, and we hope that the Department will have the opportunity to mount a proper control program in time for next Spring's window," says Lanphear. "The gypsy moth threat is unfortunate, but happens to represent another example of how properly formulated and properly applied pesticides can provide a real benefit for our statewide community."

ARIENS BUYS SIGNET LEASING COMPANY

Ariens Company of Brillion, Wis., recently bought out Signet Leasing Company of Winston-Salem, N.C., for an undisclosed price.

Ariens manufactures a full line of lawn and garden products and snowblowers, and has been in the outdoor power equipment business for more than 50 years. Signet is a small regional leasing firm.

"This acquisition will allow our various companies, Ariens, Gravely and Promark, to offer lease-purchase opportunities to our commercial and consumer accounts in the lawn and garden industry in the United

States," said President Michael S. Ariens.

Von Jackson (Jack) Snow, president of Signet Leasing, will continue to run the leasing operation. Snow has been with the company since its beginning.

"Although Signet has had a change in ownership, our customer and dealer service and relationships will not change," Snow said. "We will endeavor to increase our market share in the leasing and financing areas of the printing, medical, computer and maintenance industries."

Previous acquisitions by Ariens include the New Holland lawn and garden tractor line in 1973; Gravely International Inc., manufacturer of commercial lawn and garden equipment in 1982; and Promark Products West Inc., manufacturer of equipment for the tree industry in 1985.

NEW FUNGICIDE RECEIVES PATENT PROTECTION

Source Technology Biologicals Inc., a Minneapolis-based company which develops and markets new, environmentally-sound plant protectants, recently was granted U.S. patent protection for Phyton-27, a new systemic fungicide/bactericide.

Phyton-27 is an organo-metallic polymer based on copper, and is long recognized effective against a broad spectrum of microbes. The polymer, a tannate complex of picro cupirc ammonium formate, is designed to buffer the plant from the toxicity of copper while delivering the active copper inside the plant to prevent and control disease.

"This patent offers us important protection and points out the uniqueness of Phyton-27," said President Will Hartfeldt. "This is especially important to a young company such as Source Technology Biologicals Inc."

Though the patent is new, Phyton-27 has been available for use against Dutch Elm disease since EPA registration for that purpose in 1983. According to Hartfeldt, "It has been performing well against the most difficult disease."

Phyton-27 has also received EPA registration for use against grey mould (Botrytis) on cut roses. Research sponsored by the cut rose growers through the Hill Foundation and by the National Science Foundation has shown Phyton-27 to be up to 99 percent effective against this disease. For more information call toll free 1-800-356-8733.

(continued on page 18)

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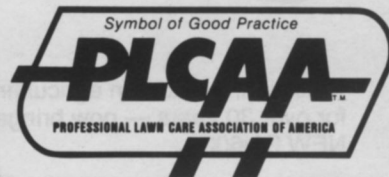
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JONATHAN GREEN INC. ENTERS NEW VENTURE

A research partnership of Barry K. Green, president of Jonathan Green Inc., and Kevin McVeigh, Willamette Valley Plant Breeders Inc., was recently formed. McVeigh will test, evaluate and further develop new turfgrass varieties released from the Rutgers University Turfgrass Research Program at Adelphia, N.J.

Willamette Valley Plant Breeders is a new company in Brownsville, Oregon.

McVeigh earned his doctorate in plant

breeding at Rutgers University where he worked as a research assistant to C. Reed Funk, a world-renowned plant breeder. During the past 15 years, McVeigh has been extensively involved in turf and forage grass breeding and evaluation. He will bring a wealth of knowledge and experience to this new partnership, according to Green.

Jonathan Green Inc., a New Jersey-based grass seed wholesaler, is a major supplier to the turfgrass industry in the Northeast and Mid-Atlantic states.

The research partnership will benefit eastern turf managers since it will shorten

the lag time between the development of superior turfgrasses and those grasses being offered for sale to eastern buyers, Green said. Large amounts of time have been lost introducing new turfgrass varieties into the wholesale market due to the fact that most West Coast seed houses have little understanding of the eastern market, he said.

AVID GRANTED CALIFORNIA REGISTRATION

Avid® (abamectin) miticide/insecticide is now available to California's commercial ornamental growers for the control of two-spotted spider mites and leafminers on flower crops, foliage plants, and other non-woody ornamental plants. Avid is marketed by MSD AGVET, a division of Merck & Co., Inc., Rahway, New Jersey.

"Of the foliar-applied miticides/insecticides, Avid is the only material registered in California that provides economical control of leafminer," according to Dr. Michael P. Parrella, Associate Professor of entomology at the University of California/Riverside. Parrella has conducted a variety of research studies and field trials with Avid.

California flower production is seriously affected by leafminer damage. The state's chrysanthemum industry reports that 23 percent of their crop is lost each year to leafminer damage. Chrysanthemums are particularly vulnerable to leafminers and California is the leading chrysanthemum-producing state, generating \$100 million annually.

Avid miticide/insecticide contains a naturally-derived active ingredient, abamectin, which is not related to other pesticides in either chemistry or mode of action. Due to the unique chemistry of Avid, cross resistance to other pesticides has not been observed and is not expected.

Avid is a 0.15 pound (active ingredient/gallon) emulsifiable concentrate formulation and is now available in one quart and eight-ounce plastic bottles. Quarts are packed six in a cardboard shipper, and eight-ounce bottles come 12 in a cardboard shipper. The product is available from agricultural pesticide dealers and nursery supply outlets.

For more information contact MSD AGVET, P.O. Box 2000, Rahway, N.J. 07065; 201/574-4000.

NAA REVISES MEMBERSHIP REQUIREMENTS

Membership requirements in the National Arborist Association have been

(continued on page 20)

from Precision Tank & Equipment Co. for the Lawn Care Industry



Precision, a leader in agricultural fertilizer application equipment for over 30 years — now brings the lawn care professional the NEW GN600.

Just look at these impressive GN600 features:

- 600 gal. stainless steel tank for 200,000 sq. ft. coverage.
- One ton Ford truck with 6.9 liter IH diesel engine.
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- American Nordic reel with 500 ft. of 1/2" hose.
- Industry-proven Chem-lawn Spray Gun with nozzles.

Other models - the GN1000, GN1200 and GN1600 offer the same top-of-the-line components with larger chassis and payloads. All Precision systems are available for mounting on customer-owned chassis.

NEW — a Portable Slide-in Skid Unit.

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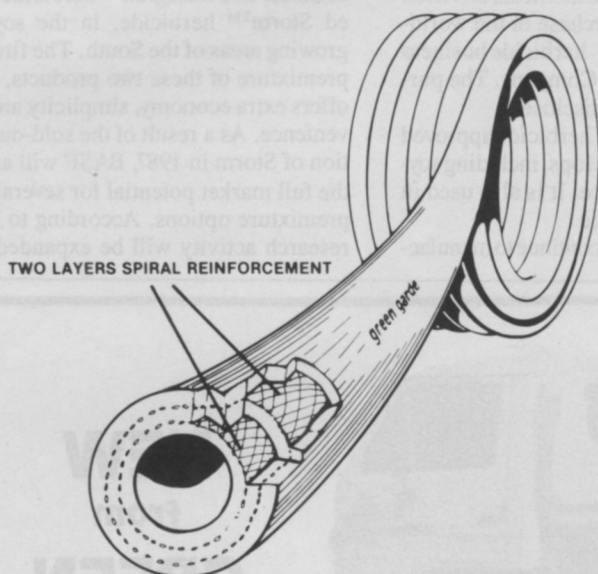
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- Available in 300 foot and 400 foot continuous lengths, 3/8" and 1/2" ID
- Hose is virtually unaffected by chemicals and solvents during use--PVC tubes are welded together without the use of adhesives.

For the Professional User -- Lawn Care Applicators, Pest Control Operators, Agriculture, Horticulture, Grounds Maintenance, Weed Control Operators and Landscape Contractors.

4-SPIRAL WHITE PVC HIGH PRESSURE SPRAY HOSE (600 PSI Working Pressure - 2400 PSI Burst)

SWG-33 3/8" x 300 feet
SWG-34 3/8" x 400 feet

SWG-43 1/2" x 300 feet
SWG-44 1/2" x 400 feet

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NEWS

(continued on page 18)

changed to encourage more commercial tree care firms to join. New requirements for membership include submitting a completed application form, copies of licenses or certifications, certificates of insurance and first-year dues of \$175 prorated on a quarterly basis.

"We've simplified our membership requirements because our members are committed to helping other commercial arborists upgrade our industry," said Robert Felix, NAA executive vice president. "Our research shows that today's arborist needs help with the very same things that the NAA has in abundance."

Felix said that the new membership requirements will enable more firms to become members of the NAA. "For 50 years, we've been a small group of professionals talking to each other," he said. "But that has changed. We now believe that the greatest service the NAA can provide is sharing our professional knowledge and skills."

Felix said that most arborists need business management, safety and training programs. In the past few years, he said, the NAA has developed more than 30 safety and training programs, produced three

home study programs, written standards of practice booklets and conducted business management and safety seminars.

Felix also notes that the NAA has an active governmental affairs program. "We keep members informed on how new legislation and regulations affect their business," he said. "NAA staff and members have been key in helping Congress and regulatory agencies understand the needs of commercial arboriculture."

For more information about membership in the National Arborist Association, contact: Patricia Felix, Association Administrator, NAA, 174 Route 101, Bedford, New Hampshire 03102; 603/472-2255.

BASF BUYS BLAZER RIGHTS

BASF Corporation Chemicals Division has completed the purchase of the worldwide rights to Blazer® herbicide business from Rohm and Haas Company. The purchase price was not disclosed.

Blazer is a broadleaf herbicide approved for use in agricultural crops, including soybeans, peanuts and rice. It is also used in landscape maintenance.

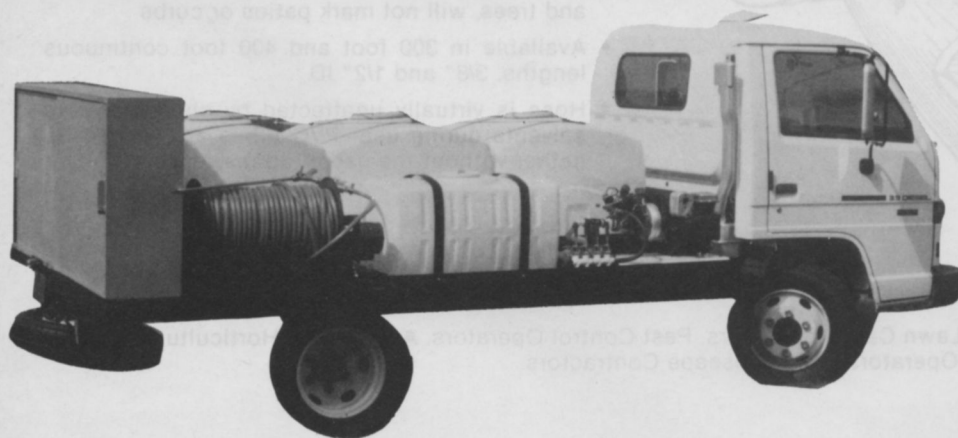
Rohm and Haas will continue to manufac-

ture Blazer at its LaPorte, Texas, plant under contract for BASF. BASF now has the marketing rights to Blazer and will acquire marketing rights to Superblazer™ herbicide used in several crops in various geographic areas.

The addition of Blazer extends BASF's growing line of high-performance herbicide products. BASF is now in a position to supply total post-emergence weed control programs, filling a critical gap in the trend toward more cost-efficient, resource-conserving cropping practices.

According to BASF, the acquisition of Blazer emphasizes the commitment of BASF Corporation to growth-oriented leadership in U.S. agribusiness.

Access to Blazer increases BASF's ability to develop much needed single package formulations. Earlier this year, BASF began marketing a premix of the active ingredients of Blazer and Basagran® herbicides, called Storm™ herbicide, in the soybean-growing areas of the South. The first such premixture of these two products, Storm offers extra economy, simplicity and convenience. As a result of the sold-out position of Storm in 1987, BASF will analyze the full market potential for several other premixture options. According to BASF, research activity will be expanded.



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(pictured without truck signs)

The most versatile skid mounted sprayer. The three 200 gallon main tanks may be filled with specific mixes for custom programs. The side-mounted 50 gallon tank allows for special applications and curbside mixing. Trident can be used for lawns or trees and shrubs. Complete with electronic flow meter, locking cabinets and truck signs which conceal the tanks for a non-threatening appearance. Does the work of three sprayers on a single 12' flatbed. Available on an Isuzu NPR Diesel. Leasing available.

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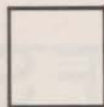
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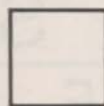
N.Y.S. (516) 538-6444

POP QUIZ

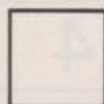
1. WHAT DO YOU CALL A TALL FESCUE THAT LOOKS LIKE BLUEGRASS?



KENFESCUE
BLUEGRASS



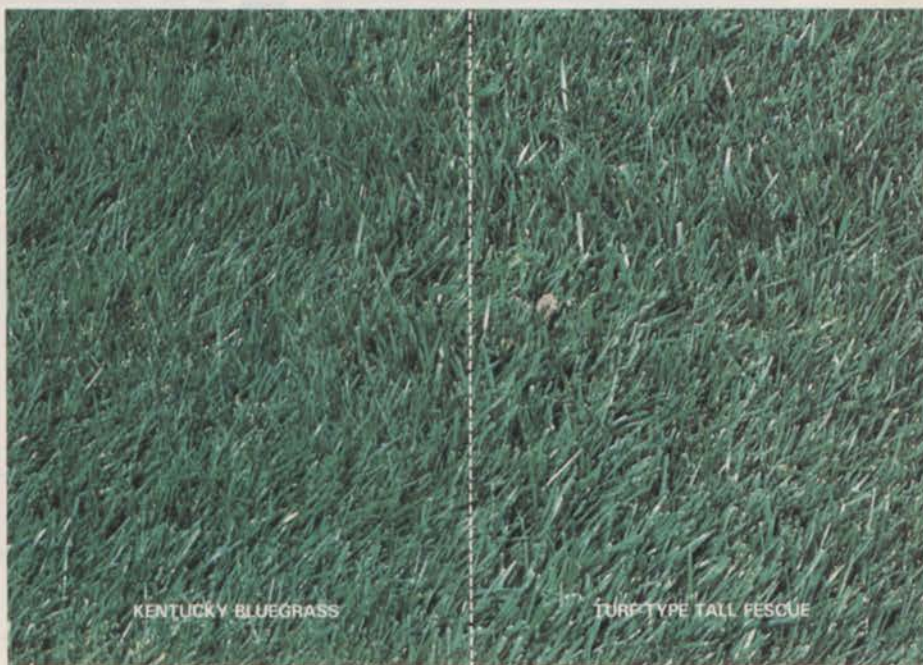
TALLTUCKY
GRASS



BLUE FESCUE



MUSTANG
TURF-TYPE TALL FESCUE



THAT'S RIGHT, Mustang turf-type tall fescue. Chances are, you already knew that, but did you know that professionals like you are choosing Mustang over K-31 and many other commercially available varieties?

You'll admire Mustang's beautiful bluegrass-like qualities; the finer leaf texture, rich dark green color and dense uniform turf.

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tremely well under low maintenance conditions like minimum fertilization, watering and mowing.

You may know about Mustang already, but it's well worth repeating: For bluegrass beauty and tall fescue practicality there's nothing like Mustang turf-type tall fescue.

Pickseed also produces



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and other fine turf grasses available nationwide from quality seed suppliers.

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Introducing the art of application for maximum germination.

SEED		POUNDS OF SEED
TYPE	BRAND	5
BENTGRASS	PENNEAGLE	.4
	PENNCROSS	.2
KENTUCKY BLUEGRASS	ASPEN	
	RUGBY	
	PARADE	
FESCUE	SCALDIS HARD	
	RUBY CREEPING RED	
	GALWAY TALL	
OVERGRASS	PENNEFINE	

The new Ryan® Mataway Overseeder® is simply better.

Better results begin with the basics, like seed calibration. An easy-to-read chart on the Mataway Overseeder tells you the exact setting for pounds of seed needed per 1,000 sq. ft. There's no need for complicated, time-consuming formulas. Just look it up, load it up, select setting, and you're ready to go.

Accurate and Efficient Application.

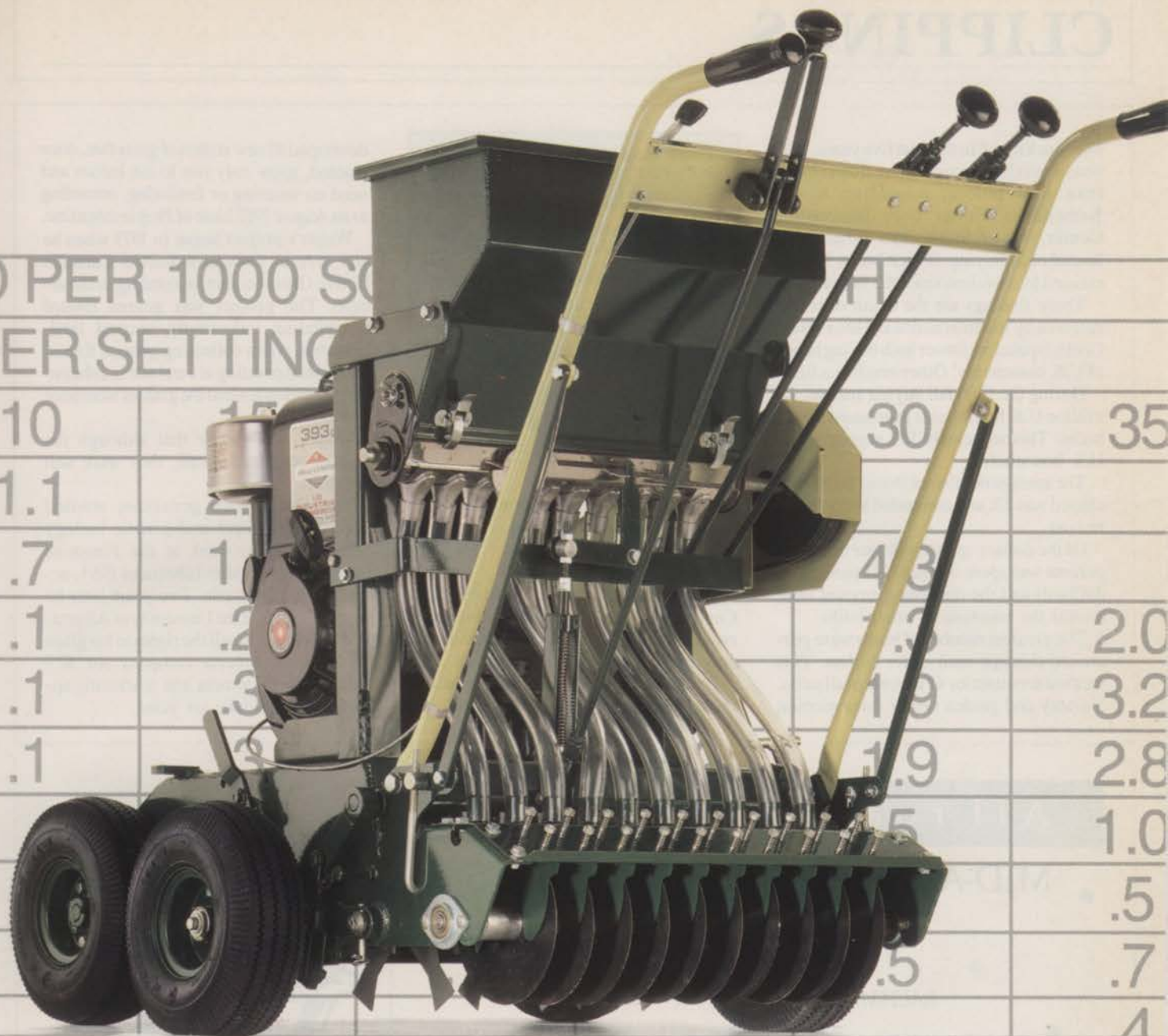
Two-inch spacing between rows gives you a dense pattern for one-pass application. Gandy® precision metering and a disc-type seed delivery system places the seed directly into the slits for uniform seed/ground contact and maximum germination.

The result is a lusher, thicker lawn. And more satisfied customers.

Ease of operation.

The new Ryan Mataway Overseeder is the only overseeder you'll find that gives you the flexibility to power rake, overseed, or to do both at the same time. It's so simple the seed delivery system can be removed with just four pins.

Front-wheel drive means better control and less operator fatigue. Seed flow stops automatically when crossing sidewalks and driveways.



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The Ryan Mataway Overseeder fits into any lawn care operation. Priced right and built to last longer, it's one of the most cost-efficient ways to stay ahead of your competition. And we'll prove it to you.



Call today or contact your nearest Ryan dealer for more information and a free test drive demonstration. You'll see why the new Ryan Mataway Overseeder is simply better, plus you'll receive a free pair of soft leather gloves.*

Call toll free 1-800-228-4444 for all the details.

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CLIPPINGS

Did you know? In the past five years, U.S. consumers have bought more flower bulbs than ever before, according to the Netherlands Flower Bulb Information Center. In addition, the number of households buying flower bulbs has increased by 3 million since the fall of 1982.

These findings are the result of recent research by the International Flower Bulb Center's panel on flower bulb buying habits of U.S. consumers. Other results include:

During the 1986 fall buying season, 9.4 million U.S. households purchased flower bulbs. This represents 11.1 percent of all U.S. households.

The average number of flower bulbs purchased was 43, and amounted to about \$12 in cost.

Of the dollars spent on flower bulbs, 32 percent was spent on tulips, 13 percent on daffodils and the remaining amount went toward the purchase of other bulbs.

The greatest number of bulbs were purchased through mail order outlets. This method accounts for 61 percent of all sales. Nursery and garden center sales account

Lawn care

58%

Flower gardening

44%

Indoor house plants

41%

Lawn care

38%

Source: National Gardening Association

for 17 percent. Discounters and other sources account for the rest.

Slow grower. A university geneticist from Canada thinks he may have the answer to rapidly growing grass — a grass that will only grow a few inches a summer.

Dr. Jan Weijer, a 63-year-old geneticist from the University of Alberta, has

developed 10 new strains of grass that, once planted, grow only two to six inches and need no watering or fertilizing, according to an August 1987 issue of *People* magazine.

Weijer's project began in 1973 when he and several associates started Canada's Native Grass project, according to the article. The project was geared toward revegetating industrially scarred land. However, when collecting grasses for experimental planting at a test site in Edmonton, the group noticed the grasses were poor growers.

Weijer told *People* that although the grasses remained small, they were still beautiful.

The Dutch-born geneticist studied tropical agriculture and genetic biology before going to work at the Firestone Botanical Institute in Liberia in 1954, according to the article. Two years later he began his work at the University of Alberta.

Weijer plans to sell the rights to his grass seeds to an Alberta company for \$7.7 million. Development and marketing apparently could take six years.

All roads lead to the

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Sorry, crabgrass. Sorry, goosegrass. You won't be checking in here this season. Not on turf areas treated with Team preemergence herbicide.

Only one group has reservations. Your turfgrass. Even bentgrass can relax, Team is that gentle.

That means you can take a 20-week vacation from weeds. From disgruntled golfers. From callbacks. And costly reapplications.

Application is easy and accurate. Team gets to the ground where you want it. It won't leach out, even in heavy rainfall. Once activated, it forms

a zone of protection that shuts the door on weeds for up to 20 weeks.

Team is widely available on dry fertilizer from leading formulators, and in granular form from your distributor.

So if weeds are planning to visit your turf this season, tell them sorry. You've booked Team for the season. See your Elanco distributor. Or call toll-free: **1-800-352-6776**.

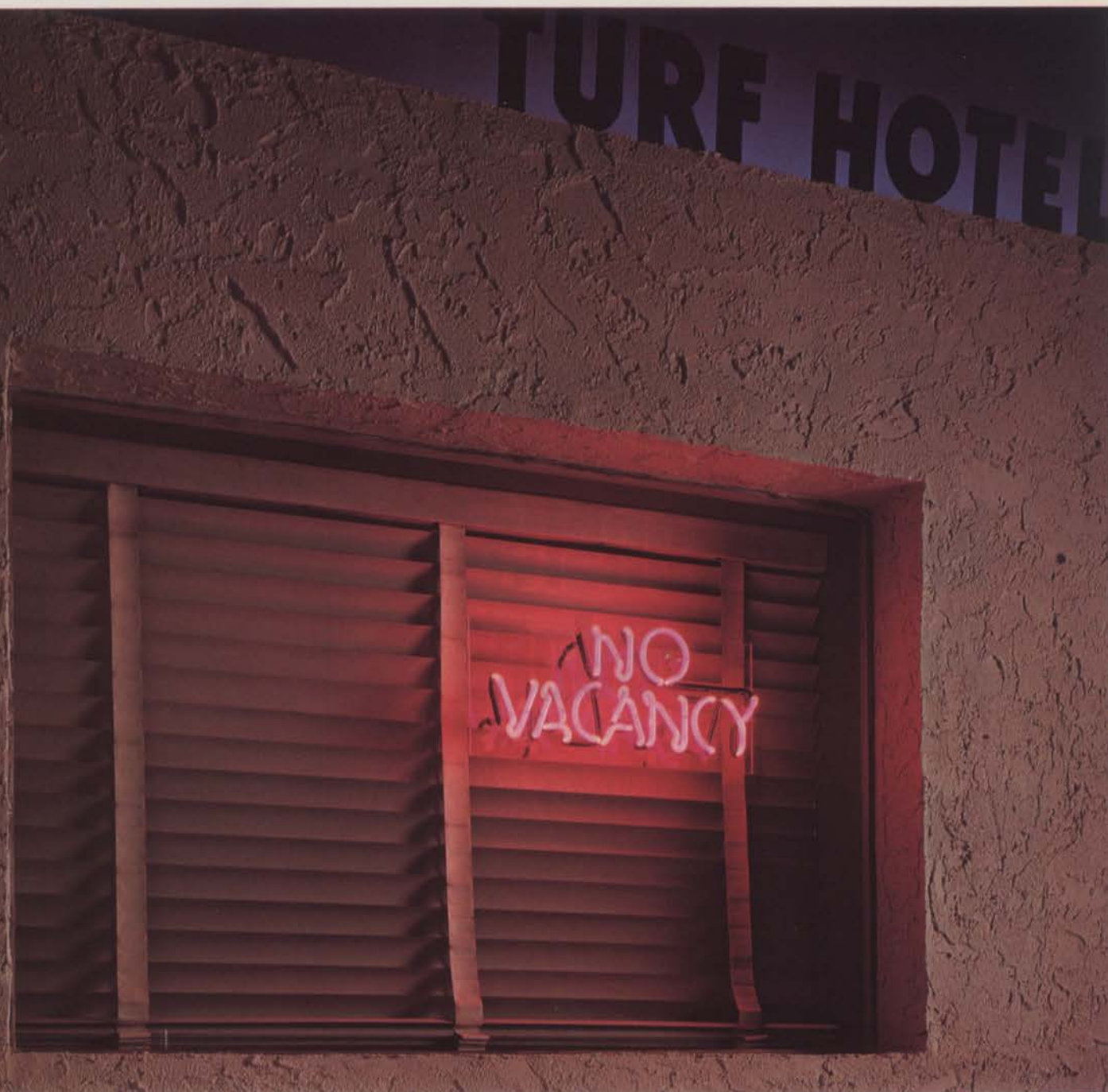
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**With Team™ on your turf,
weeds won't check in for 20 weeks.**



PLCAA UPDATE

The lawn care industry continues to flourish as is readily apparent through the rapid growth of its only national trade association, the Professional Lawn Care Association of America. Association membership has reached 1,200 firms — double the level of only two years ago.

According to Robert Parley, membership committee chairman, PLCAA has aggressively sought new members this year, with a goal of 300 new members by the year's end. "Our mix of educational and safety training videos, management aids, workshops, group insurance programs and, of course, the Annual Conference and Show have made the Association very attractive to lawn care companies who need business assistance."

Parmley, of Barefoot Grass Lawn Service, helped put together a telemarketing program and five-step follow-up procedure for prospects. PLCAA Assistant Executive Director Doug Moody credits the entire membership committee, including Jim Mello of Nice 'N Green and Dave Sek of Monroe Tree and

Lawntender, with the strong new membership growth and increased member retention. "The committee is now looking at 1988's campaign and goal of 500 new members," Moody said.

As a result of the recent surge, an update has been issued for PLCAA's 1987 Annual Membership Directory. The addendum was recently mailed to all members bringing them up to date on more than 275 new companies which have joined the Association since January 1. The directory and addendum are available only to PLCAA members. For more information, contact the headquarters office at 1-800-458-3466.

The Association has also issued a nine-page pamphlet detailing its official stand on professional lawn care service. According to the PLCAA, the management brief is the result of increased public awareness about turf maintenance which has generated doubt and uncertainty among a minority of customers, environmental activists and others.

"Some homeowners and our own em-

ployees may be unsure about the safety of lawn care chemicals," the brief begins. "PLCAA believes that homeowners and employees have a right to know the facts."

In addition to naming its position on 2,4-D and posting, the Association states its stand on pesticide use. "PLCAA believes proper application of labeled pesticides by licensed, trained applicators is the primary issue in ensuring public and employee protection. Public health records show there is no undue risk to homeowners, lawn care company employees, pets, wildlife or the environment from the proper application at labeled rates of lawn chemicals registered by the U.S. Environmental Protection Agency. PLCAA believes science, fairness and experience should be important elements in the regulation of lawn chemicals and lawn service companies."

The PLCAA says its position on the various matters was based on known scientific facts, recommendations of scientists, medical authorities and registrations granted by the EPA. ■

Rockland **Mask Offensive** **Pesticide Odors**



- Mask-It masks most pesticide, herbicide, fungicide, insecticide and solvent odors that result from spraying trees and turf.
- Mask-It stops customer and neighborhood odor complaints.
- Mask-It leaves a faint, pleasant citrus odor in the treated areas for eight or more hours, when used at high rate.

- Mask-It is economical, costing pennies per gallon.
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Your next mower needs to be tough, powerful and downtime free. Grasshopper — the professional line with true zero-turning-radius maneuverability — is all that. Plus the one thing you've always wanted a mower to be.

We're *easy*.

Starting with the unique drive lever system that turns greenhorns into expert Grasshopper operators in minutes. Precisely controlling your Grasshopper hydrostatic drives with fatigue-fighting fingertip ease.

Meanwhile, Grasshopper's out-front torsion-action deck eases tight against, even under, obstacles. Eliminating pushmowing, while manicuring rollercoaster terrain with no sweat.

What's more, Grasshopper PTO-driven accessories (including a wide line of three-blade decks, snowthrower, dozer blade and rotary broom), can save you time, money and labor all year round.

That, in a nutshell is your next mower: Grasshopper. For a test drive, see your Grasshopper dealer, or call us. Today.

**The Grasshopper Company, Box 637A, Moundridge,
KS 67107; 316-345-8621.**

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We're easy.



PEOPLE

Dixon Industries Inc. has hired **Stephen O. Dixon** to fill the newly created position of territory sales manager for northeast Texas. A graduate of Oklahoma State University with a degree in marketing, Dixon previously served as sales manager for a Dallas, Texas-based office supply company.

Kelch Corporation has promoted **Doreen Lettau** to the position of sales manager for proprietary product sales. Lettau will be responsible for gasoline tank caps, fuel level gauges, as well as steering wheels for off-the-road vehicles.

Richard E. Hunt and **Charles Russell** have been promoted by KT Enterprises. Hunt has been promoted to senior estimator for landscape installation, where he will be responsible for the estimation and presentation of all major landscape construction and installation bids. An active member of the Landscape Contractors of America, Hunt has been in the landscape industry for more than 25 years and, prior to joining KT, had his own landscape construction firm.



Dixon



Schwer

Russell, a KT employee for five years, has been named accounting manager. He will manage the day-to-day operations of the accounting department. He has a degree in accounting and data processing from Shepard College in West Virginia.

Joseph F. Schwer has been appointed vice president of research and development of Agrigenetics Corporation, a subsidiary of The Lubrizol Corporation. He will be responsible for all of Agrigenetics' plant breeding and biotechnology research. Schwer joins Agrigenetics following a

25-year career with Eli Lilly & Company. He has a bachelor's degree in agronomy from The Ohio State University, a master's degree in agronomy from the University of Kentucky and a doctorate in plant breeding and genetics from Pennsylvania State University.

The **CHIPCO® /Specialty Products Group** of Rhone-Poulenc Ag Company recently completed a reorganization of its sales, marketing and product development staff. Additions to the 13-member CHIPCO field sales force include **Don Dirksen**, Citrus Heights, Calif.; **Bob Hefta**, Burnsville, Minn.; and **Gordon Vosti**, Salinas, Calif. **Dennis P. Niemeyer** moves from his Ohio territory to Florida, where he will concentrate on sales and service in the ornamental market.

Gary L. Mangum, Creative Plantings Inc., was recently elected president of the Landscape Contractors Association. Mangum is the sales manager at Creative Plantings and has been active in LCA serving as chair of the programs committee and

(continued on page 30)

Tuflex offers you a full line of tanks to solve your pest control problems, big or small. The experts at Tuflex carefully research and analyze your needs and assist you in designing and engineering the right tank and pump system to your specific requirements. Anything less would be a compromise solution.

Tuflex is the only manufacturer to specialize in seamless fiberglass spray tanks built specifically for the pest control and lawn care industry. The exclusive Tuflex process allows a full five-year warranty on all hand-crafted seamless fiberglass tanks.

Our tanks from 100 gallon to 1200 gallon are ready to solve your toughest challenges.

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"The Tuflex standards of excellence are second to none with virtually no maintenance. We've used many Tuflex tanks over the years and they're still giving us dependable service and look as good as the new ones we just purchased. These tanks are a life-time investment."

— **Mike Kowalchuk**
Gro-Control Inc./Plymouth, Michigan

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"DO-ALL" SPRAY GUN

- ★ 3 NYLON TIPS FOR LOW, MEDIUM, OR HIGH VOLUME LAWN APPLICATION.
- ★ 4 HIGH PRESSURE TIPS FOR TREE AND SHRUB SPRAYING.
- ★ 2 BARRELS: ADJUSTABLE HIGH PRESSURE & LOW PRESSURE.
- ★ 1 NYLON FIBERGLASS REENFORCED HANDLE ASSEMBLY

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PEOPLE

(continued from page 28)

awards committee. Also elected to the executive board were: **Stewart A. Rom**, Chapel Valley Landscape Co., president-elect; **Ray Gustin, III**, Gustin Gardens, vice president; **Joseph T. Morton**, Davis Landscape Contractors Inc., secretary; **J. Robert Jackson**, The Wilderness Inc., treasurer; and **Barry L. Wood**, Botanical Decorators Inc., immediate past president.

Author and gardener **Jeff Ball** won the 1987 Quill & Trowel award from the Garden Writers of America for his new 12-part video series "Yardening."

The series, written, created and starring Ball, was completed and released in the spring of 1987. It is endorsed by the National Gardening Association and has received rave reviews from such diverse publications as *The New York Times*, *The Chicago Tribune* and *The Philadelphia Inquirer*.

The series, produced by Kartes Video Communications, consists of 12 separate volumes on planning and growing vegetable and flower gardens, how to care for houseplants, herbs and lawns; as well as special situations such as how to grow plants in greenhouses and indoor spaces.

James R. Sais has assumed the duties of district program director for the Northern Cooperative Extension Service District, New Mexico. Previously, Sais served as an urban horticulturist, and has worked for the Extension Service for 28 years.

Sais will be responsible for Extension program development in a 15-county area, including San Juan and Santa Fe. He has a bachelor's degree in horticulture from New Mexico State University and a master's in agriculture and extension education from the University of Maryland.

Kenneth Corman, CPA, recently joined Hines Wholesale Nurseries in Santa Ana, Calif., as financial resources manager. His responsibilities will include accounting, credit and management information services.

Corman brings 14 years of diversified financial experience to Hines. He previously served as controller for the Reiser Metals division of Wyman-Gordon Co., and has held a variety of upper level financial management positions since his graduation from the University of Massachusetts in 1973. He received a master's degree in 1983 from the American International College.

Hershey Entertainment & Resort Co.

recently realigned its corporate responsibilities.

J. Bruce McKinney, president and chief operating officer, will assume the additional responsibility of chief executive officer. **Edward R. Book** will remain in his current position as chairman of the board.

HERCO's board said the realignment is in accordance with the company's long-range plans.

HERCO, a privately held company based in Hershey, PA, runs a number of operations including a country club and five golf courses in Hershey, a zoo and botanical gardens, a nursery and a campground.

ChemLawn has recently elected three vice presidents.

Dave Mulbarger was elected vice president/national sales manager. He is responsible for ChemLawn's commercial, bid and residential sales forces, as well as ChemLawn's Lawn Care and Tree and Shrub Care service lines.

Bill McKinney was elected vice president/purchasing and real estate. He is responsible for all raw material, supply and capital asset purchasing, the fleet, parts distribution and real estate activities.

Rick Arquilla was promoted to vice president/commercial services division. Arquilla has been with ChemLawn since 1983.

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IMPROVING COOL-SEASON TURFGRASS

Quality turfgrass can be readily attained once you understand the process of developing blends and mixtures.

There has been a great increase in breeding work on cool season turfgrass cultivars since the Plant Variety Protection (PVP) Act was signed into law in December 1970. This law which is similar to the Plant Patent Law, except that it covers sexual and asexual species, permits the developer of a new cultivar to exclude others from any unauthorized reproduction or marketing. This does not exclude others from using protected cultivars in further breeding work.

The development of Merion Kentucky bluegrass in the 1950s demonstrated to turf workers that breeding improvements were possible in turfgrasses. This variety demonstrated a great improvement in leaf spot resistance compared to older varieties.

Today there are many varieties of all of the turfgrass species that can be used in blends and mixtures. The following will discuss the improvements available in the different turfgrass species and what each species can contribute to mixtures when used with other grasses. Some basic steps and principles to consider developing blends and mixtures will also be presented.

IMPROVED TURF-TYPE KENTUCKY BLUEGRASSES. The cultivars Adelphi, Able I, Bonnieblue, Challenger, Classic, Majestic, Nassau, Eclipse, Liberty, Midnight, Bristol and America have resulted from the hybridization work at

Rutgers University. Touchdown, Columbia, Glade, Plush, Ram I and Mystic are cultivars developed cooperatively by Rutgers University and other organizations. Nugget, A-34, Baron, Victa, Merit, Cheri, Birka, Georgetown, Julia, Parade, Haga, Fylking, Sydsport, Wabash and Blacksburg were also collections from old turf areas developed by other U.S. and European organizations.

All of the above mentioned cultivars are low growing cultivars with resistance to leaf spot comparable to Merion and more resistant to stripe smut caused by *Ustilago striiformis* (West). Merion is highly susceptible. The cultivars Baron, Cheri and Victa were originally thought to have good resistance to stripe smut in New Jersey tests and were later found, after years of testing, to be moderately susceptible. Determining the level of stripe smut resistance of a new Kentucky bluegrass cultivar adds 304 additional years to the development time needed for a new cultivar.

COMMON TYPES OF KENTUCKY BLUEGRASSES. Park, Arboretum, Argyle, Palouse, S-21 Geary, Kenblue, Delta, Common, Delft, Troy, South Dakota and Piedmont are erect cultivars with a rapid vertical growth rate and high susceptibility to leaf spot. Newport, Prato and Cougar are moderately low growing cultivars susceptible to leaf spot. All of the above cultivars perform better when mowed at 6 cm or higher. When common bluegrass is purchased on the market it usually consists of one of the above cultivars.

Park and Kenblue are the most genetically diverse cultivars and will perform better under low maintenance conditions than other common types or new turf-type cultivars.

Fusarium blight caused by *F. roseum* f. sp. *cerealis* or *F. tricinctum* f. sp. *poae* can cause severe damage to Kentucky bluegrass cultivars that are resistant or susceptible to leaf spot and stripe smut. Work by Smiley has shown the other soil borne fungi are involved in the *Fusarium* Blight Syndrome. When these organ-



A Dallas, Texas, home showing an Olympic Tall Fescue lawn.



A new turf-type Tall Fescue being tested by a North Carolina homeowner.

isms are present, Smiley has re-named the diseases summer patch and necrotic ring spot. This disease is most serious under conditions of drought stress, high nitrogen fertility and heavy thatch accumulation.

The cultivars showing the best resistance to this disease tend to be those that are less aggressive sod formers. In tests in Southern California and New Jersey, the cultivars Adelphi, Columbia, Parade, Rugby, Banff, Glade and Sydsport have shown improved resistance, while Park, Fylking and Pennstar have been most susceptible.

LOW MAINTENANCE KENTUCKY BLUEGRASSES. All of the rust diseases and dollar spot (*Sclerotinia homeocarpa* T. Bennett) are the most serious low maintenance diseases of Kentucky bluegrass. Nugget is very susceptible to dollar spot, while Merion, Glade, Sydsport, Touchdown, Baron, Victa, Cheri, Ram I and Plush have shown moderate susceptibility. The other turf-type cultivars have shown moderate or better resistance to dollar spot. This disease could become quite serious on susceptible cultivars in the future if the cost of nitrogen fertilizer continues to rise.

Stem rust (*Puccinia graminis*) can seriously damage Merion, Birka, Touchdown and Baron under low fertility. Adelphi, Majestic, Columbia, Bristol, Julia, Ram I and Midnight have shown improved stem rust resistance.

Many of the turf areas in the northern U.S. are partially shaded. Powdery mildew (*Erysiphe graminis* DC) and leaf spot are the most serious diseases in shade. A-34, Bristol, Glade, Nugget, Touchdown, Able I and Birka have shown

good resistance to some of the races of powdery mildew and perform better in the shade than other cultivars.

When Kentucky bluegrasses are maintained at short cutting heights and managed as a golf course tee or fairway under intense management, they are usually unable to compete

with *Poa annua*. Touchdown and A-34 were two cultivars able to compete with *Poa annua* under this type of management in an Illinois study. These are very aggressive cultivars with high competitive abilities. They can dominate other cultivars in blends and if they are managed at higher, non-demanding cutting heights they can develop thatch at a rapid rate.

Contributions of Kentucky Bluegrass in mixtures:

- Rhizomes — Sod strength-recovery.
- Reduced *Fusarium* snow mold, red thread, brown patch and *Pythium*.
- Less mowing.
- Winter hardy.
- High visual quality.
- Many seeds per pound.

TURF-TYPE PERENNIAL RYEGRASSES. All of the perennial ryegrasses available prior to 1960 were developed from



Manhattan growers study turf.

forage rather than turf. In 1967 Manhattan perennial ryegrass was released as the first improved turf-type cultivar. It is fine textured, leafy and persistent in turf, with improved mowability. Pennfine was released late and had better summer performance than Manhattan, but was less cold hardy.

Through the 1970s many new commer-

examples.

These turf-type ryegrasses have performed well over a wide range of soil conditions. They have excellent wear tolerance and the ability to survive in compacted soil situations better than other turfgrass species. Their excellent seedling vigor and persistence, and ability to tolerate close

When Kentucky bluegrasses are maintained at short cutting heights and managed as a golf course tee or fairway under intense management, they are usually unable to compete with Poa annua. Touchdown and A-34 were two cultivars able to compete in an Illinois study.

cial varieties of turf-type ryegrass have been developed. The list includes Citation, Derby, Diplomat, Yorktown II, Birdie, Omega, Regal, Fiesta, Dasher, Blazer, Loretta, Belle, Pennant, Premier, Barry and Elka.

More recently further development work has resulted in the release of some new varieties that have improved performance. The varieties Prelude, Sunrye (246), Palmer, Commander, Gator, AllStar, Tara, Manhattan II, Citation II, Repell, Omega II, Birdie II, Jazz and Cowboy are some

mowing and weed competition make them valuable components in mixtures with Kentucky bluegrass for athletic situations.

Since perennial ryegrasses are a cross-pollinated species, recurrent selection can be used to improve disease resistance. In our breeding program in cooperation with Rutgers University, we have been able to use recurrent selection in conjunction with single plant turf progeny tests to improve the levels of both net blotch, caused by *D. siccans* (Drechs.) Shoem, and brown patch

(*Rhizoctonia solani* Kuhn) resistance in ryegrass populations. Some of the new varieties from this program and other breeding programs with improved resistance to both of these diseases are Prelude, Palmer, Premier, Citation II, Tara, Omega II, AllStar, Repell, Sunrye (246), Birdie II, Manhattan II, Commander and Cowboy.

LOW MAINTENANCE DISEASES OF PERENNIAL RYEGRASS. Dollar spot, crown rust (*Puccinia coronata* Cda), and red thread caused by *Laetisaria fuciformis* (McAlp.) Burdsall, and stem rust (*Puccinia graminis* Pers.) can severely damage perennial ryegrasses grown under low fertility.

The varieties Citation, Regal, Premier, Repell, Birdie II, Citation II, Palmer and Prelude are examples of varieties that have shown improved resistance to certain strains of red thread and dollar spot. The inoculation of mowed clonal space plants of ryegrass with red thread in Oregon has shown a wide variation in the reactions of plants to the indigenous strains of red thread. Hopefully this technique of screening clones will result in the development of synthetic varieties with high levels of resistance to this disease.

The varieties Elka, Birdie II, Citation II, Prelude, Palmer, Cowboy, Blazer, Premier, Repell, Manhattan II and Pennant

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Sheeps Fescue	3 - 4 lbs.
Hard Fescue	3 - 4 lbs.
Chewing Fescue	4 lbs.
Creeping Fescue	4 lbs.
Perennial Ryegrass	4 - 5 lbs.
Tall Fescue	5 - 7 lbs.

have shown improvements in resistance to crown rust, while Regal is quite susceptible. This is another disease that has been reported to have many different races which could effect variety performance.

Stem rust is also a serious disease in the seed production fields in western Oregon causing yield reductions of up to 93 percent. A breeding program was started in 1975 to incorporate three sources of stem rust resistance found in germplasm collected in old turf areas into some of the improved turf-type perennial ryegrass varieties. The varieties Manhattan II, Citation II, Birdie II, Omega II, Jazz and Cowboy were developed as a result of this program and have shown good resistance to stem

rust in seed production fields and turf.

OTHER DISEASES AND PESTS OF PERENNIAL RYEGRASS. *Pythium* blight is still a serious disease of perennial ryegrasses, especially under poor drainage conditions. No resistance to this disease has been reported for perennial ryegrass. Fortunately, the new turf-type cultivars usually have the ability to rapidly recover from the disease.

The turf-type perennial ryegrasses are unique in that they have never been reported to form thatch. They are also useful in mixtures with Kentucky bluegrass to reduce the incidence of *Fusarium* blight. In our tests in Southern California the addition

of 15-20 percent turf-type perennial ryegrass in a Kentucky bluegrass mixture was an effective control for *Fusarium* blight.

Recently, reports have shown that some of the present perennial ryegrass varieties are systematically infected with the endophytic fungus *Epichloe typhina* (Fr.) Tul. The varieties Repell, Regal, Citation II and Pennant were found to contain over 80 percent endophyte content. This fungus is transmitted from one generation to the next by seed and is found widely in plants surviving the nature. This endophyte enhanced pest resistance should become an important practical method of biological control for insects and other pests of new varieties in the future.

Contributions of perennial ryegrass in mixtures:

- Quick establishment.
- Tolerant of traffic and soil compaction.
- Wide soil adaptation.
- Tolerant of close mowing.
- Competitive with weeds.
- Resistant to Summer Patch diseases.
- Deeper roots and no thatch.
- Endophyte based insect resistant in some areas.

FESCUES. The Chewings, slender creeping, creeping or spreading, hard and sheeps fescues are the predominant species includ-

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ed in the open-pollinated fine fescue group. They form a very fine, dense turf and will maintain this density at low fertility. They will tolerate infertile, droughty and acid soil conditions, moderate shade and tree root competition. They will not tolerate weak soils or perform well in open sun at high nitrogen fertility and irrigation because of severe leaf spot damage caused by *B. sorokiniana* and *D. dictyoides*.

The Chewings fescue is a very low growing species producing only basal tillers and no rhizomes. They perform best in cooler regions of the U.S. and will tolerate close mowing. Jamestown and Banner are improved cultivars with better heat tolerance than older cultivars. These cultivars can be damaged by powdery mildew in the shade. Shadow is a new cultivar with improved resistance to powdery mildew. All of the new cultivars need better resistance to red thread and dollar spot, but they are superior to creeping fescues to these diseases. They are very dense, aggressive turf formers, which can be a disadvantage when they are used in mixtures with Kentucky bluegrass by being too competitive and by rapid thatch accumulation. They combine better in mixtures with turf-type perennial ryegrasses, which are more competitive and



Breeding nursery of Monarch Tall Fescue.

help to keep a balance of species.

Dawson is the popular example of the slender creeping fescue. It forms short, thin rhizomes and looks like a Chewings fescue. Dawson is more susceptible to dollar spot and more resistant to leaf spot than most

other fine fescue.

These creeping or spreading fescues have wider leaves than other fine fescues and produce long rhizomes. They will not tolerate a close cut, but have very good seedling vigor. Fortress, Ruby and Ensylva are

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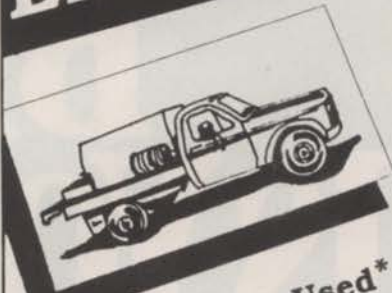


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creeping types with less leaf spot, red thread and dollar spot resistance than the best fine fescues. Flyer is a new creeping fescue variety with improvements in heat and disease tolerance. These cultivars have a more open growth habit than the other fine fescues and are more compatible in mixtures with Kentucky bluegrass than the other fine fescues.

Biljart (C-26), Reliant, Spartan, Scaldis, Aurora and Waldina are improved hard fescues. They are similar in appearance to the better Chewings fescues, but have a slower rate of vertical growth and improved heat tolerance. They have good resistance to red thread and leaf spot and improved tolerance to dollar spot. They have a seed count per pound almost twice that of Chewings or creeping fescues. Their rate of establishment is slower than the other fine fescues, but faster than Kentucky bluegrass.

The limited commercial availability of hard fescues has been caused by their lack of burning tolerance in seed production, which limits the productive life of fields to two or three years. Breeding work has been done to select clones for use in synthetics that can sustain good seed head formation over a longer period of time in the absence of field burning. Aurora is a new variety that has been developed with improved seed production capabilities.

IMPROVED VARIETIES

Perennial Ryegrass
Tall Fescue
Kentucky Bluegrass
Creeping Bentgrass
Hard Fescue
Sheeps Fescue
Chewings Fescue
Creeping Fescue

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Very Good
Good - Very Good
Good
Fair - Good
Fair - Good
Fair
Poor

Sheeps fescue has had a minor usage as a turfgrass. This has mainly been due to the very limited availability of commercial varieties. It is a very durable turfgrass that can be found in shade and growing in very poor soils. Many of the common strains have a wiry-grainy appearance and a blue-gray color. The variety Bighorn is a new sheeps fescue with improved turf forming ability. It has better establishment characteristics than hard fescues, especially under wet conditions and also improved leaf spot and red thread resistance.

Contributions of fine fescues in mixtures:

- Tolerant of shade.
- Tolerant of tree root competition.

- Wide soil adaption.
- Drought tolerant.
- Winter hardy.
- Excellent density at low fertility.

TALL FESCUE FOR TURF. Tall fescue is a cool season grass best adapted to the transition zone of the U.S. This species can also do well in the great plains and Rocky Mountains when irrigated and is well adapted to the Pacific Northwest and California. The tall fescues require less frequent irrigation to maintain active growth than the Kentucky bluegrasses and perennial ryegrasses.

Alta and Kentucky 31 were the first cul-

(continued on page 71)

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TURBO-CHARGED ENGINES

A new option for lawn and tree care spray trucks. With its variety of uses, turbo-charge can add many advantages to your business.

Many major truck manufacturers catering to the professional lawn and tree care industry have recently been offering a new option — the turbo-charged engine. It's an option that the industry should be aware of, but more important, an option we should understand.

For example, Navistar (formerly International Harvester) is scheduled to introduce its turbo-charged version of the 6.9-liter diesel engine in 1988 — available in the 1645 model truck. Recently, Isuzu introduced its model N43 with a gross vehicle weight rating of 13,250 pounds. Similar models are being offered by GMC and Chevy.

The truck is available with a 116-horsepower, four-cylinder, direct injection turbo-charged diesel engine. The chassis is one of the first of its kind offered in the United States and fills the gap between the 11,000 pounds gross vehicle weight one-ton and the 17,000 pounds gross vehicle weight two-ton chassis. It is also suited for spray tanks and systems in the 600-gallon range.

But as mentioned, it's just not enough to be aware of this new option. Our industry should understand turbo-charge. Simply put, a turbo-charge is nothing more than an air pump mounted on an engine. It pumps air into an engine, and by adding more fuel or gasoline to that air volume, you get more horsepower.

THE MECHANICS. Or in more technical terms, the turbo-charger consists of a turbine wheel and a compressor wheel separately encased, but mounted on and rotating with a common shaft. The turbine mounts to the exhaust manifold outlet flange and the compressor side with the intake manifold. Lubrication and cooling is obtained from engine oil circulated through the bearing housing.

Turbo-chargers are used two ways. They increase horsepower or maintain the engine's rated horsepower when operating at higher altitudes, such as in the Rocky Mountains. Engines are horsepower-rated at sea level by the manufacturer. A naturally aspirated (nonturbo-charged) engine loses approximately 3.5 percent of its rated sea level horsepower per 1,000 feet of altitude due

to loss of atmospheric pressure. For example, a naturally aspirated engine with a sea level horsepower rating of 200 would only produce 165-horsepower in Denver, Colorado, and 116-horsepower driving on Interstate 70 over the Continental Divide at 12,000 feet above sea level.

But add a turbo-charger to that engine, and it will maintain close to 200-horsepower at these higher altitudes. Some deviation does occur after a certain altitude.

The main advantage of today's modern turbo-charged, fuel injected, four-cylinder engine is it has as much horsepower and performance as the old gas-guzzling, V-8

Turbo-chargers are used two ways. They increase horsepower or maintain the engine's rated horsepower when operating at higher altitudes.

engine and can get three times the miles per gallon of fuel.

Through its history, the turbo-charger has had a variety of uses and advantages. For example, supercharging rapidly advanced during World War II. Planes, such as the B-17, needed to fly high and fast, out of the range of ground fire. And during the 1950's, turbo-chargers were showing up on commercial diesel trucks. The truckers driving coast to coast wanted more horsepower, especially driving over the Sierras in California and the Rocky Mountains. In the 1940's, GMC's two-cycle diesel engine had been using a type of turbo-charger called a blower. These blowers were modified and began appearing in sports racing in the 1950's.

NOT FOR EVERYBODY. Automobile manufacturers haven't had as much success with

turbo-charge. Several car manufacturers introduced the engine option to their line and then subsequently dropped it due to mechanical problems — heat caused by the hot exhaust gases which drive the turbo-charger.

When the engine is shut off, lubricating oil, which is also used for cooling, stops flowing through the turbo-charger bearing housing. The oil remaining inside is cooked or burned, oxidizing the oil. In a short period of time, the oil loses its lubricating ability and carbon deposits build up inside the turbo-charger bearing housing, damaging the bearings and causing turbo failure. While standard lubricating oils have a flash point of 350 degrees fahrenheit, several new turbo oils are now available with improved flash points of 600 degrees fahrenheit.

Also, if the engine is shut off without proper idle or cool down, the temperature inside the turbo can reach in excess of 1,800 degrees fahrenheit. However, by allowing the engine to idle before shutdown, the turbo will cool to 300 degrees fahrenheit, stopping the oil from burning.

Pyrometers, temperature gauges with a thermocoupling installed inside the exhaust manifold, measures the exhaust temperatures and can be read inside the truck cab. Using the gauge to cool the turbo to 300 degrees before engine shutdown will save oil and turbo-charger life. Many manufacturers have also alleviated this heat problem by water cooling the turbo-charger bearing housing.

The oil and filter on a turbo-charger must also be changed according to the manufacturer's recommendations and there must be a cool-down period.

CONCLUSION. Professional applicators may want to consider a turbo-charger engine when purchasing their next chassis. It may give you improved performance, cut your fuel costs, and when properly maintained, will last a long time. — Bob Smith ■

The author is Vice President of Professional Tree and Turf, formerly Denver Leasing and Professional Turf Manufacturing.

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EQUIPMENT PREVIEW '88

The coming year will bring slicker, more efficient machines designed to meet the demand created by the professional lawn service industry.

It's that time of year again — time to pull the curtain open on a bounty of new sprayers, spreaders, mowers, computer equipment and much more.

It's time to end the months of planning, and take a peek at the variety of new equipment for 1988. Sure, some of these products have been on the market or at least been talked about earlier this year, but many are just now *officially* being marketed by industry distributors.

As the industry continues to grow at a relatively fast pace, slicker, more efficient machines are becoming the norm to meet high demand. A variety of machines which do more work in less time are considered high priority items among equipment manufacturers.

In addition, computer software designed to carry out duties ranging from book-keeping to advertising and marketing are hot sellers. As lawn care companies feel the heat from their customers, they in turn are crying for software programs designed to lighten their loads. Nearly half a dozen new programs are being introduced this

year.

The down-sizing trend which began several years ago is continuing, as dealers keep refining their products. And while not all companies are unveiling new equipment for 1988, don't be surprised to see some late entries or hidden secrets suddenly revealed.

For distributors in a young industry, it can be tough keeping up with the constant changes, but if the new products being offered in 1988 are any sign of how they're keeping up...well, judge for yourself by reading about the following new products.

BLACKBURN MANUFACTURING CO. Guy Wire Cover is now available from Blackburn Manufacturing Co. Available in bright yellow or white, the wire protectant helps prevent accidents. It is impact-resistant, long-lasting, easy to attach and cut. Cut in six-foot lengths, the guy wire is packaged 1,000 feet per box. Samples are available upon request.

Blackburn will also continue to offer its pesticide application warning flags, accor-

ding to James Blackburn, president. The four by five flag warns customers and neighbors of pesticide application in the area. The easy-to-read signs come in nine flag colors, with a choice of 18" or 24" plastic staff length.

CLASSEN MANUFACTURING. Classen Manufacturing will debut the Greensplugger Core Aerators and Turf Plugger Rotary Core Aerators. The Model 36K, covering a 24-inch swath and penetrating up to three inches, is for use on home lawns, according to Manager Larry Classen. The unit aerates at 200 feet per minute or up to 24,000 square feet per hour.

The Greensplugger is available in the Classen 450 walk-behind model, which plugs a two-inch square hole pattern, in 24-inch swath, up to 13,000 square feet per hour; and the Classen 800-24, three-point hitch PTO model, which has a 48-inch swath with variable spacing, up to 50,000 square feet per hour.

CONTAINMENT TECHNOLOGY INC. Containment Technology Inc. will debut the CTI Lawn Care Spill Kit for safe, effective containment and cleanup of spills. Each kit contains three absorbent socks, six sorbent industrial rug pads, safety gloves and a poly bag for disposal. Tyvek coveralls and additional safety goggles are options to the standard kit.

DEUTZ-ALLIS CORPORATION. A mower designed to virtually eliminate hand trimming and to cut mowing time by up to 30 percent is new from Deutz-Allis Corporation.

With a tight six-inch turning radius and a front-mounted, low-profile mower deck, the Vanguard front-cut rider cuts close around trees, flower beds and other obstacles and reaches easily under fences and shrubbery. Pinpoint turning also eliminates circling at the ends of rows.

Ideal for small lawn-care operations, the Vanguard offers capabilities previously available only on more expensive commercial mowers. Sprayer, spreader, dump hop-

BILLY GOAT INDUSTRIES. Billy Goat Industries introduces an 11-horsepower wheeled blower — the BL-1100 I.C. The new blower is specifically designed for industrial and heavy-duty applications such as for commercial lawn service.

Available with either a Briggs & Stratton or Honda engine, the BL-1100 I.C. has an operator hand-controlled Gust Adjustor, which allows the operator to direct the flow of air from front to side, according to Bill Coates, president. By varying the engine speed and directing the flow of air, the operator can pick up and accumulate leaves and debris as desired.

The unit has a four-blade, 16-inch impeller with full steel back plate, 16-inch ball bearing rear wheels with pneumatic tires and an eight-inch ball bearing front wheel with semi-pneumatic tire.

"The power of the BL-1100 I.C. will

create a lot of interest in the product, but its most exciting feature is the remarkable control it provides," Coates said.



per, vacuum system and other attachments provide versatility for a host of lawn-care choices.

DEWEZE MANUFACTURING INC. Operators of commercial mowers may no longer have to worry about slopes of up to 30 degrees. That's because Deweze Manufacturing offers a mower featuring automatic leveling. The Deweze MC-70 enables operators to sit comfortably and remain safely upright on slopes of up to 30 degrees.

The 70" deck is divided in half with full flotation on each side making ditch mowing easier. Both the front and rear wheels are powered which gives positive traction on hills and resists turf damage even in tight turns. The advantage of this machine is its versatility because of its ability to do a good job mowing normal flat areas as well as safely handling the steep slopes.

The ultimate benefit of the MC-70 is the savings realized by the reduction of necessary hand mowing and trimming on steep banks, around ponds, in ditches and other hard-to-handle mowing situations.

DISTRIBUTION MANAGEMENT SYSTEMS.

Distribution Management Systems Inc., introduces a multi-user version of their CLC1 lawn care software package.

CLC1 offers total control over invoice processing, production, routing, billing, customer history and service, cash receipts and more, according to Joe Boyles, product manager.

Multi-user CLC1 will have all the benefits of CLC1 with one major improvement — the ability for more than one user to access data at a time. In the past, a lawn care company that needed multi-user configurations needed to invest in a small mini-computer.

Since it was first written more than nine years ago, CLC1 has been expanded to accommodate the ever changing needs of lawn care professionals and to provide accurate reporting over every aspect of a fast-moving business, Boyles said.

ENCAP PRODUCTS COMPANY. Encap Products Company announces new Green Garde Electric Hose Reels — hand and electric reels for lawn care trucks and vans.

An electric drive with 1/3 horsepower motor drives the Aluminum Alloy Drum. The model holds 300 feet of 1/2" hose and has the same drum which has been marketed nationally for more than 10 years, said President Walter A. Houston.

The Aluminum Reel doesn't corrode, is very attractive and has a single pedestal requiring very little space for attachment to the sprayer or truck bed, Houston said.

Hard-coated aluminum and brass make



CUSHMAN-RYAN/OMC LINCOLN. Cushman-Ryan/OMC Lincoln has expanded its line of Cushman® Front Line® mower models with the addition of two new water-cooled gasoline engine Front Line tractors.

Available in both three-wheel and four-wheel models, the newest Front Line unit features a four-cycle, three-cylinder Teledyne-Wisconsin engine that develops 26 horsepower at 3,600 rpm, according to Gary Burchfield. The engine has a displacement of 60.88 cubic inches and develops 44.7 ft-lbs torque at 2,500 rpm.

The model "809" four-wheel Front Line is equipped with hydraulic power steering and is capable of a zero turning radius, using the traction assist brake on the inside wheel, he said. The "808" three-wheel Front Line has manual steering and a turn-in zero radius for maneuverability. Outside turning circle is 150 inches when the tractor is equipped with the 72-inch mower deck.

Mower decks and other attachments are driven through a heavy-duty OMC-built PTO clutch. The engine is installed with rubber isolation mounts to minimize vibration, as is the remote coolant radiator. A warning horn signals the operator in case the coolant temperature ever rises above safe levels.

Both the 808 and 809 Front Line tractors feature a high visibility operator console with hour meter, fuel gauge, water temperature gauge, oil pressure and alternator indicator lights, and an overheat warning light for the engine coolant. An automatic seat switch shuts down the engine if the operator should leave the seat with the PTO engaged, Burchfield said.

Attachments and accessories for the 808 and 809 Front Line, in addition to both 60-inch and 72-inch side or rear discharge mower decks, include the Cushman Grass Caddy® attachment for picking up clippings, a 60-inch angled sweeper brush, 54-inch snow blade, a 51-inch two-stage snow blower and a 60-inch flail mower.

up the 1/2" swivel that comes with the reel. It has a long life, been in use a long time and has easy to replace O-rings.

EXMARK MANUFACTURING COMPANY.

Combining an efficient two-cycle engine with Exmark's computer engineered design for lower maintenance costs and easy operation, the company has developed an effective 21" two-cycle mower. And because oil

is mixed with gas in the two-cycle, the engine is continuously lubricated — even on slopes and hillsides.

The 21" Exmark provides optimum maneuverability in tight spots, on hills and around curves, delivering professional results on even the most difficult turf. An optional rear-bagging grass catcher gives the operator extra leg room and can be attached or easily removed.

GNC PUMP INC. A "Do-All" spray gun and "U-Build-It" sprayers are now being released by GNC Pump Inc. The "Do-All" is a combination of all the spray gun features that are necessary for the person who wants to do it all with one gun. GNC has combined the use of nylon, fiberglass and stainless steel into one spray gun to give the following benefits: lightweight, durability, corrosion and chemical resistance, ease of maintenance, interchangeability of parts, low pressure lawn applications and high pressure tree spraying, according to Teresa Palmer of GNC.

The "U-Build-It" sprayer is a new GNC line designed to give buyers an option of building their own unit from preassembled modules. By this method, GNC allows the customer to choose from several combinations of tanks and pump options; then to assemble the unit himself if he chooses. GNC is offering a five-year warranty on fiberglass tanks and a full one-year warranty on all pumps.

GRAHAM LAWN EQUIPMENT INC. Graham Lawn Equipment Inc. introduces Graham Reel. The product is a heavy-duty hose reel with electric and belt drive.

Also new for Graham Lawn Equipment's product lineup are hose guides that adapt to existing reels.



GRIFFIN DEWATERING CORP. Griffin Dewatering Corp. will manufacture the MAC hydraulically driven submersible water pumps, formerly offered by Aqua Pump Systems Corporation.

The MAC pumps are designed to move large volumes of water at medium to high heads. The pumps can be used in borrow-pit dewatering, sewage bypass, dewatering coffer dams, flood control, agricultural irrigation and mine dewatering.

Two advantages of the hydraulic drives on the MACs over electrically driven submersibles are: the MAC pump can be operated by a remote in explosive atmospheres, and a continuous lubrication of the shaft bearings and seals permit extended pumping under any condition, according to Geoff Bayersdorfer.

The MAC pumps are available in material-handling, trash and axial-flow configurations.

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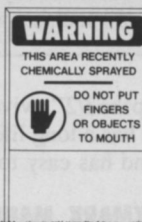
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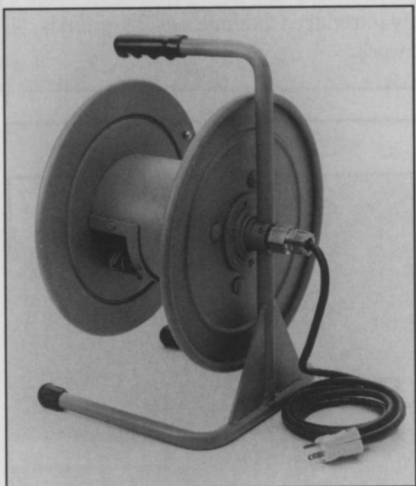
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GREEN PRO SERVICES. Green Pro Services unveils a versatile skid-mounted sprayer. The Trident has three 200-gallon main tanks, which may be filled with specific mixes for custom programs, according to Richard Hawkes, vice president of sales/marketing. The side-mounted 50-gallon tank allows for special applications and curb side mixing. The unit comes complete with electronic flow meter, locking cabinets and truck signs on a single 12-foot flatbed. It is available on an Isuzu NPR diesel. Leasing is also available.

HAHN INC. Hahn Inc. introduces a new commercial dethatcher with an optional calibrated seeder attachment. The VCS-1 Verti-Cut's blade reel is powered by a five-horsepower Kawasaki engine, and has 14 fixed blades on 1 to 1 1/2-inch centers to cultivate a 10 1/2-inch wide strip.

The blade height is adjusted with a simple threaded hand crank. With the addition of the seeder, preparing a seed bed and seeding are accomplished in one operation.

HANNAY REELS. Hannay Reels unveils its new model CR 16-14-16, a high-quality, ruggedly constructed, portable cable reel.



While compact and lightweight, the new model handles a large capacity of power cable, said Edward A. Rash, advertising manager. It comes equipped with a three-conductor collector ring assembly, which is housed inside the drum, and a pre-wired supply cord for direct live hookup. The manual rewind reel is suitable for all industrial uses including grounds maintenance and repair, industrial uses, broadcast industry, agricultural uses, fire and rescue operations and auxiliary power for power generation.

THE HOTSY CORPORATION. The Hotsy Corporation is introducing the Hotsy PC — a personal cleaner pressure washer. A Hotsy PC cleans with hot or cold water — right from the tap — at a water-saving two gallons per minute and a powerful 800 psi. The PC gives professional performance, no different from what's delivered by

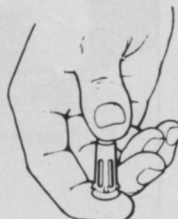
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Keeps the operator comfortably and safely upright on slopes up to 30 degrees.



The 70" deck is divided in half with full flotation on each side. The hydrostatic transmission is driven by an air cooled 20 hp Kohler engine and has an operating speed range of 0-15 mph. Both the front and rear wheels are powered which gives positive traction on hills and resists turf damage even in tight turns.



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Circle 53 on reader service card

pressure washers used by many small businesses, according to Robert Garrison, sales manager, retail division.

The Hotsy PC is designed to handle commonplace, everyday, time-consuming, but necessary chores quickly and easily. Garrison said the pressure washer is a tough, lightweight, compact personal cleaner with dozens of applications around the office or home, well within the budgets of most customers.

"In a time when chores have become an increasing burden to working households, the Hotsy PC fills a big need—conveniently and inexpensively," he said. "And a Hotsy PC complements and protects a homeowner's most prized possessions."

LESCO INC. Two offerings from LESCO Inc., include the LESCO closed mixing system and the LESCO vertical slicer/overseeder.

The closed mixing system protects workers and the environment from pesticide exposure, according to Sally M. Lee, advertising manager. In addition, the system empties bagged pesticides from a closed environment directly into the spray tank, cleans and triple rinses pesticide containers up to five gallons for proper disposal, is portable and fits all spray tanks with a fill (continued on page 47)



JACOBSEN. For demanding grounds maintenance applications, Jacobsen's new Commercial two-cycle edger/trimmer features a durable two-cycle, four-horsepower engine. A handle-mounted blade depth and clutch control and a 10" spring steel blade add to the heavy-duty steel frame construction.

Both the new edger/trimmer and the recently introduced Commercial 28 grounds vacuum are built for service in demanding work.

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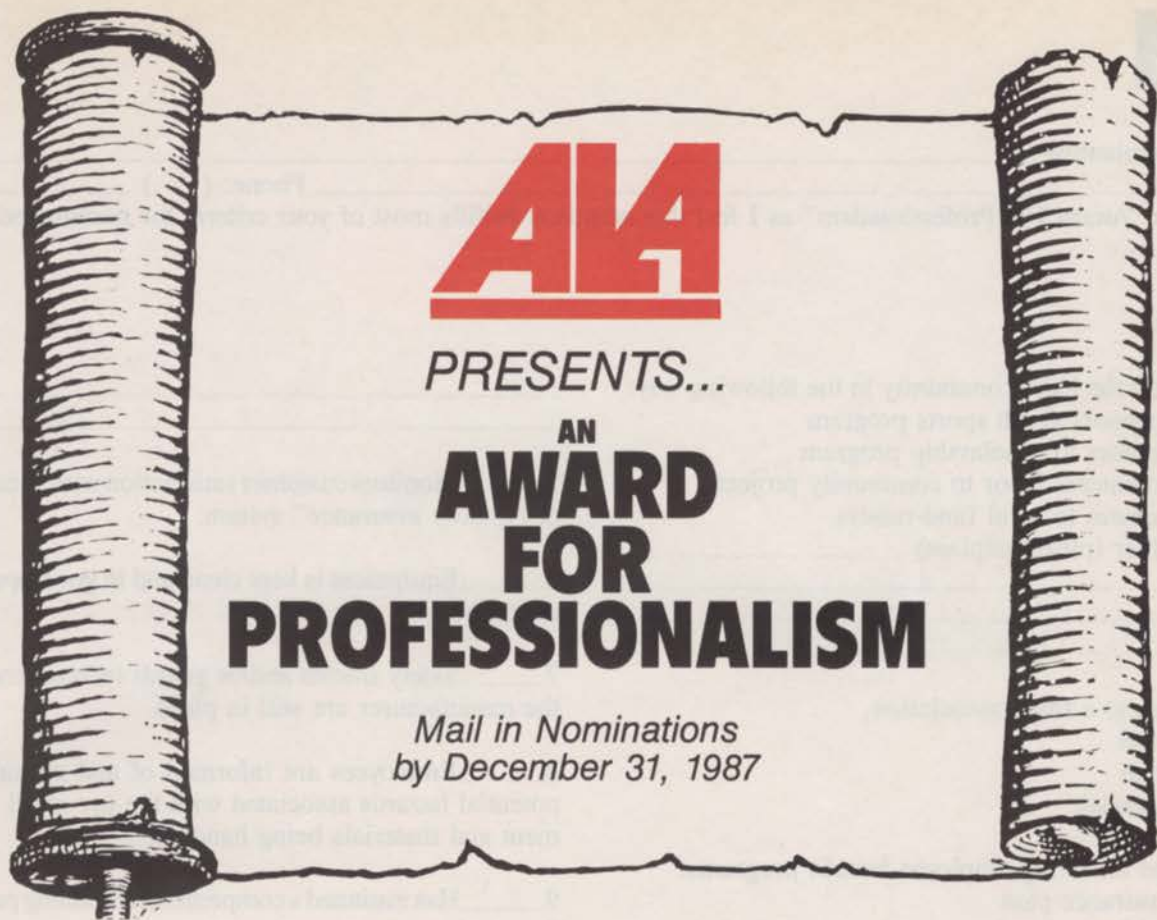
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Our 32" commercial power mower, like all Exmark Intermediate mowers, is available with variable speed or 5-speed transmission.



In our continued effort to promote professionalism, be involved in community awareness and help our industry create a positive public image, *American Lawn Applicator* magazine is sponsoring its 2nd Annual "Award For Professionalism."

The winner will be presented a plaque with the company's name inscribed on it, and camera-ready art stating they were chosen to receive an "Award For Professionalism" which will be suitable for reproduction in advertisements and brochures. In addition, photographs of the presentation, which will be made at a local or national meeting or at the winner's place of business, and a brief article about the company and the award, will be sent to the winner's local newspapers. *ALA* will also do a brief article on the winner in an upcoming issue.

Do you know a lawn care service company owner who deserves to be recognized for efforts in operating a professional business? Is the operation respected in the community and by peers? If so, then why not nominate the business or individual to receive *ALA*'s "Award For Professionalism?"

Here is what you have to do. Read over the nomination form on the following page. If you work for, or know of, a company that meets most of the criteria, then nominate that company by completing this form and returning it to us. All information must be verifiable, and nominations must be received no later than December 31, 1987 to be eligible. A company need not meet all criteria to win. The winner of the contest will be announced in the March issue of *ALA*.



I am nominating _____
(Address) _____ Phone: () _____
for ALA's "Award For Professionalism" as I feel this company fulfills most of your criteria for nomination.

CRITERIA:

1. Supports the local community in the following way: _____

- _____ sponsors youth sports program
- _____ donates to scholarship program
- _____ volunteers labor to community project
- _____ donates to local fund-raisers
- _____ other (please explain) _____

2. Belongs to a trade association. _____

- _____ local
- _____ state
- _____ national

3. Has the following employee benefit programs: _____

- _____ insurance plan
- _____ paid vacation
- _____ savings or retirement plan
- _____ incentive program
- _____ other (please explain) _____

4. Is supportive of, and involved with, industry problems at the: _____

- _____ local level
- _____ state level
- _____ national level

(Explain) _____

14. Additional comments if any: _____

5. _____ Monitors customer satisfaction with some form of "quality assurance" system.

6. _____ Equipment is kept clean and in good operating condition.

7. _____ Safety shields and/or guards recommended by the manufacturer are still in place.

8. _____ Employees are informed of and educated on potential hazards associated with the use of all equipment and materials being handled.

9. _____ Has instituted a comprehensive training program for employees.

10. _____ Chemicals that would constitute a hazardous waste are being disposed of in accordance with local and/or federal regulations.

11. _____ Lawn care chemicals are being used according to manufacturer's recommendations.

12. _____ Trees, ornamentals, sod and seed are being used in locations specified by growers and are installed according to their recommendations.

13. _____ Company's place of business is kept neat, clean and well-maintained.

Your name: _____ Your company's name: _____

Address: _____ Phone : () _____

EQUIPMENT PREVIEW
(continued from page 44)

well up to 16 inches.

The closed system operates with water pressure and is constructed of non-corrosive materials. It's available as a tank mount or free standing station.

The company's other new product is a self-propelled slicer/overseeder for proper application of seed during lawn renovation.

The eight-horsepower industrial/commercial engine has a heavy gauge steel construction and an easy-to-operate safety reel clutch. The slicer features rear wheel drive with differential, providing maximum traction and easy turning, a low center of gravity for operation on hill sides and a large seed hopper capacity.

Lee said the slicer/overseeder is compact and easily fits on a van or pickup.

MARKETING COMMUNICATIONS INC.

Marketing Communications is updating its customer services with the Green Gram New Customer Program. The program is designed to make better use of company advertising dollars, according to Brian Buckels, lawn care marketing.

The program puts an effective advertising message in the hands of qualified lawn care prospects at a price that's lower than most would expect, he said. Eye-catching Green Grams with the individual company's service offer are mailed to homeowners in zip codes where a company wants new customers — particularly to those with incomes estimated to be \$35,000 plus.

List selections, letter production and mailing are all done by the program on chosen days — January through October. Once a company signs up, Marketing Communications will not mail Green Grams for another lawn care company into the zip codes already chosen, he said.

MCKEE ENTERPRISES INC. A Roll-n-Tilt manual dumper, capable of converting almost any pickup truck into a dump truck,



is now available from McKee Enterprises. According to Vice President Rod Fraser, the steel liner bed is mounted on a tracking system of sealed bearings and can roll halfway out over the tailgate. At that point, it is free to dump, with the dumping action controlled by a pair of shocks.

"Its beauty is its simplicity," he said. "In spite of its rugged construction and one-
(continued on page 50)

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TURFLON®: Superior control. For outstanding control of a wide spectrum of broadleaf weeds, there's nothing like TURFLON herbicide. It even gets the stubborn Hard to Control weeds—oxalis, ground ivy, wild violet, spurge and the like—that other herbicides often miss. So your customers stay happy...and stay with you. And you have fewer complaints, fewer costly callbacks, fewer cancellations.

New herbicide chemistry. The active ingredient in TURFLON, triclopyr, is the first new herbicide chemistry to come along in years. It stays where it's sprayed, won't migrate through soil to harm ornamentals and other off-target species.

It's safe to established cool-season turf, and has a proven safety record for humans and animals.

Proven in use. TURFLON herbicide performance has been thoroughly proven...in years of testing and in day-to-day use on LCO route trucks across the country. Operators who have used it find that often one treatment with TURFLON does what other products fail to achieve in two or more treatments.

Choice of formulations. Whatever you need, there's a TURFLON formulation for you. Choose an amine for broadcast use, or an ester for spot application. Whichever you select, TURFLON herbicide gives you outstanding performance, every time.

You can't keep your customers from moving away. But you can keep them from moving to your competition because of poor weed control. Keep them, and keep them happy, with TURFLON herbicide.

TURFLON*

Fewer weeds, fewer cancellations.

Circle 39 on reader service card



*Trademark of The Dow Chemical Company

ton load rating, it's suprisingly lightweight."

Available in four configurations, it will fit most conventional pickups and utility beds.

MINNESOTA WANNER COMPANY. Minnesota Wanner Company, a manufacturer of pumping and spraying equipment, introduces its new "MiniTank." According to Vice President Tom Wanner, the minitank, designed for compact trucks, features a 220-gallon tank, storage compartment and decking — all fabricated from stainless steel for exceptional corrosion resistance and durability.

NOVA ELECTRONICS & SOFTWARE. New computer software being marketed by Nova Electronics & Software includes the Mac WeedMan. The Mac WeedMan is a complete chemical lawn care business management system, offering automatic routing, invoicing, billing, service scheduling, accounts receivable with full aging, letter writing, mail merge and a wide variety of business reports for efficient management, according to Sezen Tumer, president. The Mac Weedman allows you to implement your own service codes and special instruc-

NORTH AMERICAN MICRON. North American Micron introduces the Herbi Microfit™ System, a revolutionary approach in herbicide application which uses controlled droplet application (CDA), according to Director of Marketing, Nick Anthony.

"For years fruit and vegetable growers used the ultra-low volume spray method because of the savings it provides. Instead of wasting 50 gallons of water per



acre to carry herbicide to the crop, the microfit system does the same job with a 5.3-pint bottle," he said.

Technicians can apply pre- and post-emergent herbicides, fungicides and insecticides with the Herbi Microfit System, and obtain uniform coverage with reduced liquid volumes. The secret is an innovative rotary atomizer which disperses a uniform 250 micron droplet, he said. Micron droplets are almost invisible to the eye, yet they account for lower spray volumes, greater efficiency of chemicals, reduction of waste, as well as less labor and cost.

The Microfit System offers interchangeable lances which can be purchased separately or as a set. In addition to the Herbi portable CDA herbicide sprayer, the Microfit System includes the Herbaflex, a narrow band herbicide sprayer for very low volume application in a controlled swath of four to 18 inches, and the Herbi Twin, two adjustable Herbi heads which have a swath width of four to eight feet for treating large areas.

tions in your copy of the Mac WeedMan Program — making the program custom-made.

Using the integrated package, past due letters, confirmation letters or any letter

(continued on page 52)

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INTRODUCING OUR HEAVY-DUTY AND MID-DUTY COMMERCIAL MOWERS

HEAVY-DUTY.

Heavy Duty commercial mowers feature 32," 36" and 48" cutting decks, with engines available on various models from 8, 12, 12.5 HP to 14 HP. Four forward speeds and six cutting heights allow you to adjust to varying conditions. The 4 gallon fuel tank is a real time saver. Pneumatic tires are also standard. Options include a riding sulky and a 3 bushel catcher.

MID-DUTY.

Mid-Duty commercial mowers use the 30" or 41" mowing decks and feature light touch steering. An I/C 8 or 12 HP engine is standard on the 30," with a 12 HP engine only on the 41." All models feature single lever cutting height adjustments, 5 forward speeds for ease of mowing and transporting, handles that adjust to 3 height positions, and no-tools blade belt adjustment.



41"
Mid-Duty



48"
Heavy-Duty

Snapper also offers 21" walk mowers, riders, tractors, trimmers, pluggers, power rakes and snowthrowers especially designed for commercial use.

Snapper Power Equipment,
McDonough, GA 30253

Manufacturers of quality
Lawn and Turf Equipment.
A division of
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form fitted to your needs can be sent. Ease of use is one of the system's key features, Tumer said.

Every data entry is entered only once and then automatically posted to every related section of the database files. The complete turnkey system includes the MacIntosh Computer, hard disk, Imagewriter Printer, Mac WeedMan program, computer supplies and accessories. The Mac WeedMan program is also available without hardware.

OLATHE MANUFACTURING. The Model 42 Compact Two-Behind Sweeper is now offered by Olathe Manufacturing Inc. The all-welded steel unit sweeps wet and dry materials with a rubber finger mechanism. It has a 36-inch sweeping width and a hopper with 12 cubic feet capacity.



PERMA-GREEN SUPREME. Perma-Green Supreme introduces its new van spray unit. The van offers a removable 275-gallon main tank, while other tanks remain in place for

touch-up spray applications, said Gene Short, sales department.

Other features include: 50-gallon injection tank, 50-gallon auxiliary tank, more than 20 square feet of floor space (doubles when main tank is removed), injection gun equipped, sealed cargo divider to protect the driver, excellent visibility through both back and side windows, 12-volt variable output pump with jet agitation, corrosion proof fiberglass floor and hose reels with roller guides for easy access to the hoses.

PROFESSIONAL TREE & TURF. A dry application unit is now available from Professional Tree & Turf, formerly Denver Leasing Manufacturing and Professional Turf Manufacturing.

The unit is a one-ton enclosed unit for companies that run dry applications and herbicides, according to Vice President Bob Smith. The company will also continue to offer a variety of spray trucks including its one- and two-ton spray trucks and its integrated pest management spray truck.

QUINTESSENCE COMPUTING. AM+ Landscape Maintenance System is a new computer package designed specifically for turf maintenance companies by Quintessence Computing.

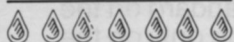
The package includes routing, billing, job costing and report generation modules completely integrated with a common user-defined data base, according to Terry Nathan, marketing director. The system features a new job costing module — adding the ability to analyze both the direct and indirect costs associated with each job.

The system will compute the hourly rate of each activity performed based on the crew doing the work and any special equipment being used. The AM+ Landscape Maintenance System will be offered as a complete package on both single- and multi-user configurations, and as an upgrade for existing AM+ users. The software will also be available in several packages including hardware and/or on-site training.

R.N.D. SIGNS. Posting signs designed to meet individual state specifications where spraying legislation has been passed, are now available from R.N.D. signs. The stake is made of a rigid plastic with special design features to hold the sign securely and for ease of entry into ground, according to

(continued on page 54)

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owners David Gabbert and Rick Rendahl. The product was designed to enhance your company image, but sells for only nine cents a piece in average quantities.

SNAPPER. Snapper will continue to offer a variety of products including the three which are featured on this month's cover. The 48" commercial walk mower, the Backpack blower and the Powerplug® provide the operator with the flexibility to handle a wide range of activities.

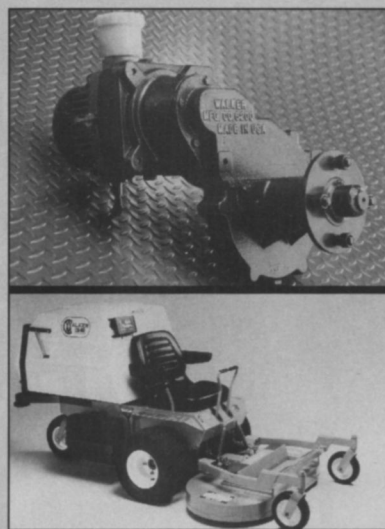
According to David Bernhardt, sales promotion manager, the rugged 48" model can cut nearly 14 acres of precision mowed turf in an 8-hour day. The Powerplug core aerator is specifically designed for heavy commercial use, yet is light enough to be easily operated and transported. Weighing about 20 lbs., the Backpack blower is easy to handle and can reach tough spots.

SPRAYING DEVICES INC. Spraying Devices Inc. introduces three new multi-purpose sprayers for 1988, according to company Vice President Terry Stone. Featuring all new style 50, 100 and 160-gallon molded fiberglass tanks with leak-proof easy open/close lids, and Spraying Device's ex-

WALKER MANUFACTURING COMPANY.

The big news from Walker Manufacturing Company is the gear case axle drive developed for the Walker mower. It's the first dual hydrostatic mower with all gear final drive. Until now, Walker and all other dual hydrostatic mowers have used chain drive or hydraulic wheel motors to independently drive wheels. Both approaches require maintenance and may cause downtime.

With the new all gear axle, the hydrostatic transmission bolts directly to the gear case, providing a sealed drive that is simple, rugged and maintenance free. The gear drive will be installed on the 1988 commercial model Walker mower, and will be optional on the standard model.



clusive self-lubricating mechanical agitator. Pump choices include 3 by 10 gpm twin piston type or 9.5 and 14 gpm twin diaphragm type.

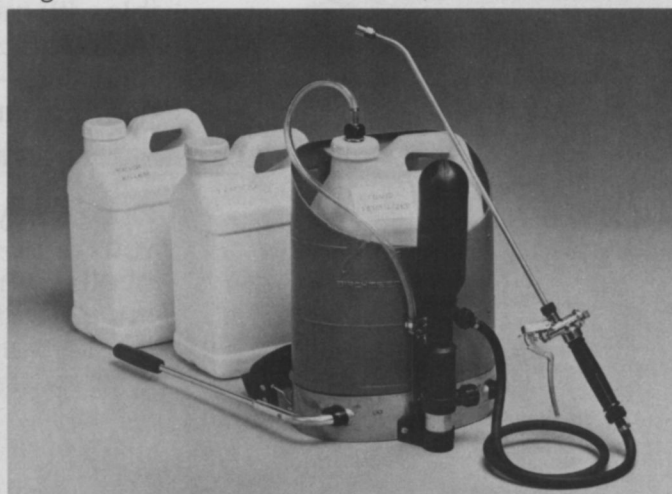
TERRACARE PRODUCTS. Terracare Products Company Inc., introduces Terra Walk-R-Ide T70WR, an aerator that provides simple operation while eliminating operator fatigue.

The Walk-R-Ide's three forward speeds and reverse control make it possible to aerate difficult areas in addition to open land. The 600-pound unit has an 18-inch aerating width with 12-inch diameter discs and 70 tines. The engine is an eight-horsepower Briggs & Stratton commercial model, according to Ray Christopherson, president. "It's simple to operate and makes

(continued on page 56)

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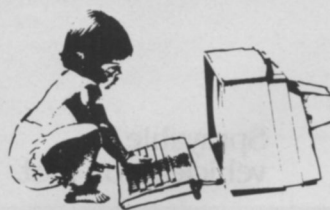
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it possible to aerate difficult areas as well as open areas," he said.

TUFLEX MANUFACTURING. A new line of small auxiliary storage tanks and storage chests are available from Tuflex Manufacturing. An addition to the company's PC series, the new tanks start at 10-gallons and go up to 30-gallons. Both the tanks and the storage chests are made of fiberglass and are for truck side rail or bed mounting. The storage chests are hinged and can be locked.

WANNER ENGINEERING. A pressure regulating valve is new from Wanner Engineering. The dual-function pressure control valve is designed to operate as either a bypass relief valve to protect the system from overpressure, or a pressure regulator to regulate system pressure, according to company Vice President Payton Hage.

The product features smooth regulation, baffled flow-through construction, chatter-free ball and seat and durable multi-seal and backup ring, Hage said. The valve can be wire-sealed for safety, and is fully repairable without removal from the system. It has dependable disc springs, quick response and a simple design.



WHEEL SPRAY CORP. A motorless 10-gallon liquid chemical spreader is now available from Wheel Spray Corp. The WS-490 Greens Wheelie Sprayer is a liquid chemical spreader with a ground-driven pumping system. This new model features larger, easy-to-push pneumatic type rubber tires and a thick-wall 10-gallon tank with a wide mouth lid for easy filling and cleaning, according to President Chuck Linskens. It is used to apply liquid fertilizers, herbicides, fungicides, and insecticides.

The WS-490 Greens Wheelie delivers chemical applications which are relatively unchanged by the speed at which the sprayer is pushed. The faster it's pushed, the faster it pumps. When the operator stops, the sprayer stops pumping. The operator controls the shut-off valves from the handle

grips whenever spray nozzles are used independently, he said.

In addition to the Greens Wheelie, Wheel Spray is introducing a WS-820 Estate Wheelie. The Estate Wheelie is a tractor pulled sprayer with a 20-gallon capacity.

The device is used to apply liquid fertilizers, herbicides, insecticides and new growth regulators. — Cindy Code ■

The author is Managing Editor of ALA magazine.

Although we have spotlighted many companies and their new offerings for 1988, we should note that space restrictions prevent us from attempting to include every new product available in the lawn service industry in 1988.

Take Aim on Crabgrass and Goosegrass with



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Acclaim translocates from the site of contact to the heart of weed growth — cleanly decomposing the entire weed after 21 days. Acclaim has no residual soil effect, and avoids the turf injury problems associated with other postemergence herbicides.

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NEW FEDERAL LAWS RESTRICT PESTICIDE USES

In order to protect endangered species from adverse effects of pesticides, many product labels will soon change. The changes, which are required by the Endangered Species Act, are being implemented by the Environmental Protection Agency.

Labels will have statements requiring pesticide users, in the counties listed, to obtain additional information on the ranges of endangered species before applying the pesticide, according to Betty Lilyquist, director of environmental and regulatory affairs. The U.S. Fish and Wildlife Service is defining geographic areas and maps are to be provided to users.

The Pesticide Endangered Species Bulletins will consist of county maps identifying the ranges of each endangered species. These maps will show border lines that are easy to recognize, such as roads, powerlines and bodies of water, she said. They are also to include the pesticide, listed by active ingredient, which may jeopardize an endangered species, as well as list the endangered species that will be found in the county cov-

ered by each map.

Use of listed products in the areas of the endangered species will be prohibited or limited.

In 1988, user compliance for pesticides used on rangelands, croplands, etc., to protect listed endangered species will cover more than 600 counties in nearly 40 states. The product labels will direct users to obtain a county Pesticide Endangered Species Bulletin in the area where they need to apply listed pesticides.

In other news concerning the use of pesticides, the EPA recently informed makers of aerosol pesticides that their products will have to be labeled "extremely flammable," even if they pass the flame extension test, if they contain propane, butane, isobutane or dimethylether.

The controversial EPA directive has industry leaders up in arms. One top official said the recent decision is unacceptable. "There is no experimental or rational justification for such a sweeping directive."

The warning statements must be implemented immediately for new products, ac-

cording to the EPA. Currently registered products released for shipment after July 31, 1988 must include the revised labeling, as must any product sold or distributed one year after that.

In addition, the EPA said if registrants fail to comply, it may initiate cancellation proceedings on the pesticides.

According to the EPA, the agency is receiving complaints of fires and explosions resulting from the ignition of the propellants in pesticide aerosols.

Opponents of the law say many products will unjustly be labeled extremely flammable under this new ruling, such as some pet sprays, which contain about 3 percent hydrocarbon propellant. Home and garden and water based flying insect killer insecticide aerosols — about 45 percent of the insecticide market — normally contain about 30 percent hydrocarbons.

Industry leaders also claim that many pesticide aerosols really have low adverse incidence rates, and when mishaps did occur, were nearly always involved in flagrant misuse.



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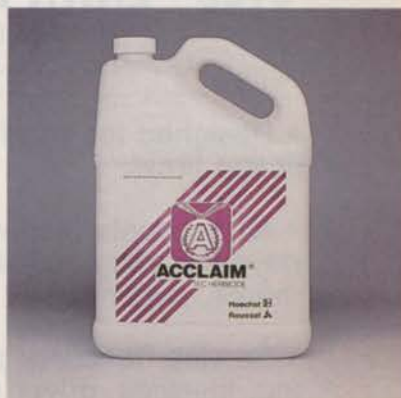
Fescues and ryegrass can be overseeded immediately following Acclaim application. Bluegrass can be overseeded after 21 days. And mowing just 24 hours after Acclaim application won't reduce efficacy.

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Take Aim on crabgrass, goosegrass, barnyard grass, foxtail species, Panicum species and Johnson grass.

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WILKINSON NAMED EXECUTIVE DIRECTOR OF 3PF

The Pesticide Public Policy Foundation (3PF) Board of Directors has named James F. Wilkinson, 40, its new executive director. The appointment comes shortly after the board discontinued David Dietz's contract as the organization's program director.

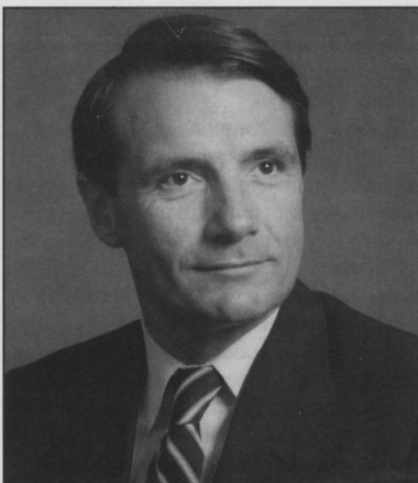
Dietz was severely injured in an auto accident last May. He is now recovering in a rehabilitation center after a several-month hospital stay.

"The directors of 3PF had to, because of the most unfortunate automobile accident, make a painful decision to discontinue the relationship," said Eric Haupt, board chairman. "This probably would be the way Dave Dietz would want it."

Wilkinson began his duties last month.

For seven years, Wilkinson served as the vice president and general manager of Old Fox Lawn Care in East Providence, Rhode Island. He is now employed as an independent contractor, and will manage 3PF from his home in Rhode Island.

"We are extremely fortunate to have a per-



Wilkinson

son of Jim's (Wilkinson) expertise, and regulatory experience directing the activities of 3PF," Haupt said. Haupt also represents F.A. Bartlett Tree Expert Company.

The board had established a search com-

mittee and interviewed several candidates for the position.

Haupt said the primary mission of 3PF will continue to be that of monitoring and responding to legislation and regulations affecting the urban/suburban pesticide user community. A key role will be the support and development of state pesticide user coalitions.

Wilkinson currently serves as president of the Professional Lawn Care Association of America (PLCAA). He has also been director of research for ChemLawn Corporation, and assistant professor of agronomy at The Ohio State University before joining Old Fox.

Wilkinson has also recently been retained by the PLCAA to assist with regulatory and environmental issues. He will serve as the Association's director of regulatory and environmental affairs.

The old 800-GET-PPPF toll free number will still be used. 3PF correspondence should be sent to: 101 Buena Vista Drive, North Kingstown, Rhode Island, 02852.

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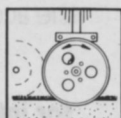
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CHEMICAL PREVIEW '88

Industry suppliers present their offerings for the coming season.

Every year *ALA* magazine surveys producers of professional turf care products on what will be available in their product lines for the coming year. This time around, 22 manufacturers and distributors responded to our request for information. Below are the responses, a sampling of some items that are brand new to the market as well other established products, some of which may have recently undergone slight changes in company ownership or packaging. In some cases, a well-known product is now owned by another company. In any event, here's the run-down — a listing of some of what industry suppliers have to offer in the way of herbicides, fertilizers, insecticides and other chemicals for the 1988 season.

CoRoN CORPORATION. Formerly Moyer & Son, CoRoN Corporation will be offering CoRoN® controlled release nitrogen for the 1988 season.

The product is a slow release liquid fertilizer which is a new source of nitrogen for lawn care problems throughout all seasons. CoRoN 28-0-0 concentrated formula is a controlled release nitrogen fertilizer with very low burn potential that promotes even turf growth over a period of time.

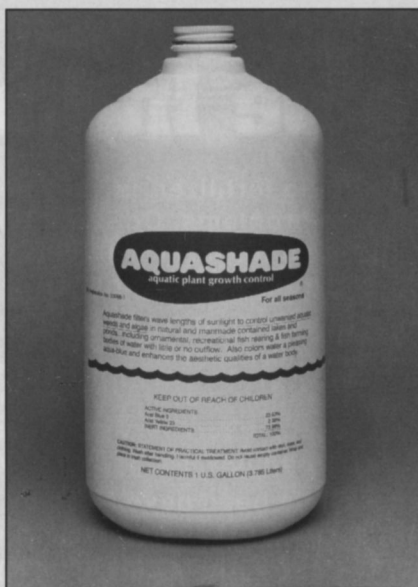
The product is completely compatible with other available turf protection products and can be mixed with other fertilizer formulations. Storage is stable. CoRoN's slow release formulation insures a continuous source of nitrogen, quick green-up and low atmospheric volatility.

UAP. For the coming season, UAP is marketing a granular fertilizer with pendimethalin preemergents. According to Howard Fairbairn, sales manager, UAP is one of only two turf care companies in the United States that will be offering this product which has been in development for several years.

Fairbairn says the product offers preemergent control crabgrass, spurge and oxalis. "It provides a broader spectrum of weeds like spurge, which is a big problem in cool-season grasses in the U.S.," he says.

"The product is easy to handle and allows applicators to spread work and get out early in the year," adds Fairbairn.

AQUASHADE INC. Aquashade® aquatic plant growth control from Aquashade controls unwanted weeds and algae in natural and manmade lakes and ponds. Non-toxic to humans, livestock, fish, wildlife and turf, the product is long-lasting and controls growth by filtering wavelengths of sunlight. It also colors bodies of water an appealing aqua, enhancing the aesthetic quality.



Aquashade can be used during all seasons. For early control, the product can be poured on ice in a one-meter diameter circle, and will melt a hole and disperse underneath.

AQUATROLS CORP. Aquatrols will be offering Supersorb®, Folicote® and Aqua-Gro® in 1988 — products which allow plants to use available moisture more efficiently.

Supersorb, a high quality water absorbant polymer, increases the ability of soil to hold moisture, absorbing up to 200 times its weight. It readily releases nearly 100 percent of stored water on demand.

Because extra water is held in Supersorb particles, mixes and soils maintain their

airspace and do not become overly wet. Plant roots can grow around and through the swollen particles, tapping water reserves as needed. The product continues to absorb and release moisture for several years and is available in two particle sizes for the best results in different applications.

A concentrated wax emulsion that minimizes moisture loss and maximizes plant survival by partially blocking leaf stomates, Folicote offsets the effects of stress conditions caused by transplanting, transporting, winter winds or summer drought.

The product mixes easily with water, stays mixed and can be applied with standard spray equipment. Sprayers clean simply with soap and warm water. Folicote has been tested and used on a wide variety of plants and costs as much as 50 percent less to use than similar products on the market.

Aquatrol's Aqua-Gro® is a wetting agent that moves water by lowering its natural tensions. The product ensures more uniform water penetration and drainage through all soils, thatch and growing media. It remains effective for several months in the soil. Because Aqua-Gro is organic and breaks down over time, it can be used for years with no harmful buildup in the environment.

CIBA-GEIGY CORPORATION. Two turf and ornamental care products from Ciba-Geigy have finally received EPA approval after years of research.

Triumph® Insecticide is now available for control of grubs and a broad spectrum of insects living in grass, thatch and soil. In the first seven days, the product provides 33 percent better control than the other major compounds available. It is fast-working and remains active in the soil for more than eight weeks. According to the company, mid-July through early October is the best time for grub control.

Triumph is applied in a spray and soaked in with one-half inch of water. Label restrictions limit application of the product to two pounds per year, which allows one application for grubs or two applications for surface insects each year. The insecticide should not be used on sandy soils.

Ciba-Geigy is also offering a product called Banner[®], a new systemic fungicide that controls dollar spot, brown patch and other menacing diseases on cool-season grasses.

"Banner will offer a broader spectrum of disease control than comparable products, plus it's been well-tested," says Dr. Houston Couch, Virginia Tech professor of plant pathology. "We've been expecting EPA approval on Banner for a couple of years."

Couch says the product has been better tested than many new turf products because of the lengthy wait for registration. "I'm convinced it will perform under most conditions, from coast to coast."

"Banner really works on dollar spot," says Couch. He adds that it provides extended control of the widespread disease.

Dr. J.M. Vargas Jr., professor of botany and plant pathology at Michigan State University, has tested Banner for the past eight years. "It works on many diseases and on most species," he says. "It's as good as any product on the market and provides long-term control, up to 28 days for some diseases."

Vargas finds Banner works particularly well on dollar spot and anthracnose, the two biggest disease problems in his area.

Patricia Sanders, associate professor of plant pathology at Pennsylvania State University, says Banner's time has finally arrived. "We need a product like Banner in the turf industry because of its broad spectrum of activity," she says.

Banner also controls such turf diseases as rust, red thread, powdery mildew, stripe smut and species of helminthosporium.

ELANCO PRODUCTS COMPANY. A new method is being debuted by the company for control of broadleaf weeds in turf and

ornamentals. Previously known as EL-107, the herbicide is now entering final stages of development aimed at achieving EPA registration in 1988. Brand names include Gallery[™], for control of broadleaf weeds in turf and Snapshot[™], for use around shrubs, trees and bedding plants.

Elanco's new herbicide controls most of the major broadleaf weeds in turf, reducing the need for postemergence chemicals and repeat applications. It has also demonstrated a high degree of safety to turf, even greater than currently available herbicides used for crabgrass control.

In ornamentals, the broadleaf weed compound has been successfully applied over the top of existing plants with a high margin of safety to the plants.

In research trials, the new herbicide has produced successful results when applied in either fall or spring. It has controlled winter annuals such as chickweed and henbit, and a wide range of summer annuals such as white clover, plantain, spurge, oxalis and many others.

Gallery and Snapshot are expected to be available in both dry and liquid formulations and are applied prior to broadleaf weed emergence. The herbicide has been tested both alone and tank mixed with a variety of preemergence and postemergence herbicides.

Elanco is also offering Cutless[®] turf growth regulator, a product which continues to demonstrate its capabilities to reduce mowing, and offers other distinct advantages such as reduced need for water and deeper green appearance.

Now under an experimental use permit, performance of this new plant growth agent has been evaluated by university turf specialists, professional turf managers and lawn care applicators.

According to Elanco, Cutless reduces the height of grass growth by interrupting the functions of gibberellic acid, shortening the internodes. It has also been evaluated as more consistent than previously available growth regulators.

Additionally, Cutless does not reduce the vigor of grass and can actually result in greater root development. When used at a sufficient rate, the product also retards the growth of *Poa annua*, while encouraging the growth of bentgrass.

FP PRODUCTS INC. When introduced to water, the off-white granules contained in Water Grabber absorb and retain up to 500 times their original weight in water. This



new gardening product may be mixed with soil in both indoor plants and outdoor gardens. Plant roots will grow into and through treated soil and withdraw water on an as-needed basis.

The product reduces watering frequency up to 75 percent, maintains consistent soil moisture levels, aids aeration and drainage and greatly reduces transplanting and transporting shock. Water Grabber is

COMING NEXT MONTH

For the first time, ALA will be offering the industry a technical journal. The journal will be comprised of all the technical features printed in ALA in 1987. The articles will be indexed and categorized according to subject matter and bound together in one issue for future use.

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"Plants which have had Water Grabber placed in their soil are generally healthier plants than those without it," says Lacy Edwards, vice president of Technical and Industrial Operations at FP Products.

Water Grabber maintains a consistent soil moisture level, he says. "It also provides for better soil aeration and drainage by expanding when the plant is watered."

LEBANON CHEMICAL CORPORATION.

Lebanon Total Turf Care will be introducing four new professional lawn care products for the 1988 season.

Lebanon NU-TECH Deep Root Tree and Shrub Fertilizer is designed specifically for the deep root feeding of landscape trees and shrubs. Its 30-10-7 formulation is a combination of 50 percent slowly available water soluble nitrogen from Melamine and 50 percent readily available water soluble nitrogen. This provides a staged nitrogen release which is ideally suited to the needs of trees and shrubs. Available in a 40 lb. bag, the product should be applied through a soil injection system.

Another new offering is Lebanon NU-TECH 25-4-10 Fertilizer. The product is a premium, high density, homogeneous fertilizer with 7.2 units slowly available water soluble nitrogen from Melamine. A

medium sized fertilizer in a 50 lb. bag, the product can be used on all types of fine turfgrasses and can be applied anytime during the growing season.

For 1988, Lebanon will also have Sprayable 36-0-13 available for liquid application. The blended sprayable fertilizer contains Urea and Muriate of Potash and is packaged in a 50 lb. bag of tank mixing.

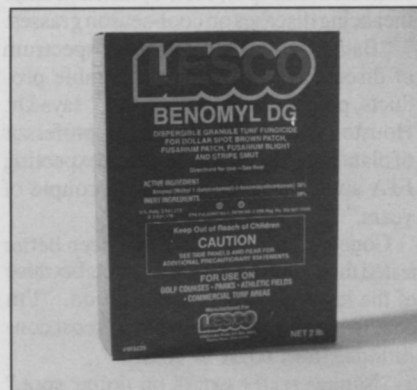
In addition to the fertilizers, Lebanon has added a new granular fungicide to its line of chemical control products. Lebanon Turf Fungicide with 1 percent Bayleton is an effective and economical broad spectrum fungicide and comes in a 15 lb. bag which treats up to 10,000 sq. ft. It works systemically to provide preventive and curative control of dollar spot, copper spot, powdery mildew, red thread, rusts, brown patch, anthracnose and other turf diseases.

LESCO INC. This year, the company is debuting a variety of new products for lawn care professionals.

Designed particularly for the granular applicator, LESCO Dylox® 5% Granular Insecticide controls sod webworms and white grubs quickly and effectively. Because of its special chemistry, the product does not tie up in the thatch, but goes through the thatch layer to reach insects where they feed.

Also new from the company is LESCO Benomyl DG, a dispersible turf fungicide for control of dollar spot, brown patch, fusarium blight and stripe smut.

The product offers both convenience and outstanding disease control on ornamen-



tals and turf. A systemic fungicide, Benomyl DG is reliable turf chemistry in a new, easier to use form.

With the use of LESCO Three-Way Selective Herbicide, turf managers can take advantage of the benefits of the three most popular broadleaf herbicides while eliminating time-consuming, inconvenient tank mixing.

Three-Way contains 2.44 pounds of 2,4-D, 1.33 pounds of MCPP and .22

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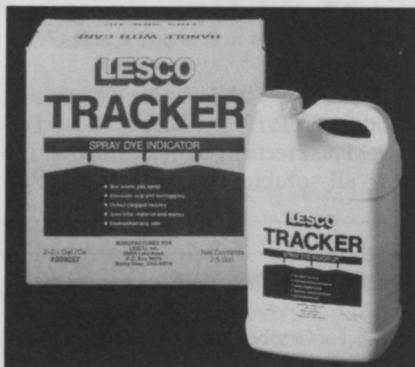
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pounds of dicamba. It is recommended for use on lawns, golf fairways, aprons, tees and roughs. The product is available in one-gallon, five-gallon, 30-gallon and 55-gallon containers.

Three-Way is labeled for control of black medic, buckhorn, burdock, chicory, chickweed, clover, dandelion, dock, groundivy, heal-all, henbit, knotweed, lambsquarter, lespedeza, mallow, morning glory, peppergrass, pigweed, plantains, poison ivy, poison oak, purslane, ragweed, sheep sorrel, shepherd's purse, speedwell, spurge, wild carrot, wild garlic, wild onion and other broadleaf weeds in turf.

The company also introduces LESCO Tracker, a blue spray dye indicator which is completely soluble in water and disperses quickly with mild agitation. The temporary color dissipates with rain, heavy dew, watering or sunlight.

Tracker is an inert liquid which can be used with fertilizer, herbicide, insecticide and fungicide or other liquid applications to prevent skips or overlaps and properly



identify sprayed areas. Use can help spot nozzle and pattern problems and will not affect the performance of fertilizers or pesticides. The product leaves no permanent coloration on equipment, clothing or hands and has been proven environmentally safe. Available individually or in cases of two, it is marketed in a convenient 2.5 gallon size.

Also available from the company is LESCO Sevin® Brand SL, which is labeled to manage insects on turf, ornamentals, shade trees, parks, rangeland and recreational areas as well as pests indoors and outdoors.

More than 90 shade tree and ornamental insects are controlled with the product, giving it one of the broadest spectrums available today. Twenty-eight turf insects can be managed, making it the most broadly registered turfgrass insecticide available. Effective control has been provided against chinch bugs, sod webworms, bluegrass billbugs and members of the white grub complex.

Sevin Brand SL is a suspension of microfine carbaryl in an aqueous medium. It readily disperses in water to form a spray which can be applied by hand or power-operated sprayer.

In addition, the company is now marketing LESCO Pre-Em® 60DG, a new herbicide containing pendimethalin which is designed for control of annual grassy and broadleaf weeds in most northern and southern turfgrasses.

Pre-Em 60 DG has been thoroughly tested with superior results at private and university facilities in the North and South for more than five years. Testing has shown that the product provides long residual and prevents many annual grassy weeds including crabgrass, goosegrass and foxtail and broadleaf weeds such as oxalis, purge and chickweed.

The product has surprisingly low cost per acre, as one bag treats more turf than one equal size bag of any other pre-emergent weed control. Only 18 pounds of Pre-M 60DG is needed per 1,200 gallon tanker (at four gallons per thousand, 2.5 pounds per acre).

The product also provides for less bulk and more storage and handling convenience. At the 2.5 rate, one ton of Pre-M 60DG will treat 800 acres, so that no large warehouse or bulk storage facilities are required. It is packaged in small, acre-increment bags for easy shipping, handling and convenient disposal. The formula-



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tion eliminates triple rinsing and disposal of 55-gallon drums. No heated storage is required.

Watering is not necessary with the herbicide for up to seven days following application. Pre-M 60DG is formulated to disperse and is compatible with most turf fertilizers, insecticides and herbicides.

The product is labeled for use on northern turfgrasses including fine and tall fescues, Kentucky bluegrass and perennial ryegrass; and on southern grasses including bahia, Bermuda grass, centipedegrass, St. Augustinegrass, tall fescue and zoysiagrass.

Weeds controlled in both northern and southern turfgrasses include: barnyardgrass, crabgrass, fall panicum, foxtail, hop clover, prostrate spurge, yellow woodsorrel, cudweed, goosegrass, evening primrose, henbit, annual bluegrass, and common and mouseear chickweed.

Pre-M 60DG is odorless, is not a cholinesterase inhibitor and has very low applicator toxicity.

The company's LESCO Image® is a new chemistry to control an old problem. The herbicide helps solve the old problem of uncontrollable weeds, including purple nutsedge. University and field tests have shown that Image has provided 80 to 100 percent control for four weeks with significant control for seven to nine weeks.

A liquid concentrate with active ingredient imazaquin, Image is a selective post-emergent herbicide for use on established warm-season turfgrasses such as Bermuda grass, centipedegrass, St. Augustinegrass and zoysiagrass for control of sedges, wild garlic and onion, field sandbur and broadleaf weeds like chickweed, henbit and pigweed.

Absorbed rapidly through the leaves and roots, Image moves to the growing parts of the weed where the reproduction, if an enzyme necessary for growth, is stopped by the product's chemical action. The plant will die slowly, in about two weeks. Meanwhile, rapid regrowth of sedge plants above the level of the manicured turf is stopped and visual differences are apparent within a few days.

Image has no mowing or watering restrictions to limit action. Application can be made anytime, even in hot summer temperatures. Image can be mixed with MSMA to further improve nutsedge control.

MONSANTO COMPANY. Monsanto is offering three turf care chemicals for the 1988 season.

The company's Rodeo® Aquatic Herbicide effectively controls many emerged grasses, broadleaf weeds and brush grow-

ing in and around aquatic sites. The product is labeled for use in all bodies of fresh water and all types of aquatic sites, including but not limited to lakes, rivers, streams, ponds, ditches, canals and reservoirs.

Rodeo should not be applied in any estuary, on rice levees when flood waters are present, or within 0.5 miles upstream from potable water intakes.

Limit® Turf Regulator is designed by Monsanto to suppress the growth of labeled cool-season turfgrasses for up to six weeks. By reducing mowing, Limit saves labor, saves time, saves on equipment maintenance and saves fuel. The product not only cuts mowing and trimming, but also reduces the amount of clippings and the need for clipping disposal.

Grasses regulated by Limit include Kentucky bluegrass, tall and fine fescues and perennial ryegrass. The product has an unrestricted label for use on commercial and industrial properties.

Monsanto is also offering Roundup® Herbicide which provides broad spectrum control for annuals, perennials, grasses, broadleaf weeds and brush species.

O.M. SCOTT & SONS. For the 1988 season, Scotts® ProTurf® will debut 20-5-5 Fertilizer Plus Preemergent Weed Control. The new all-soluble fertilizer-based pen-

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Statement required by the Act of October 23, 1962. Section 4369, Title 39, United States Code, showing the ownership of *American Lawn Applicator* published monthly at 4012 Bridge Avenue, Cleveland, Ohio 44113*3320 Cuyahoga County.

The name of the publisher is: Maureen Mertz, 42480 Park Ridge Road, Novi, Michigan 48050. The name of the editor is: Cindy Code, 4012 Bridge Avenue, Cleveland, Ohio 44113.

The owners are: G.I.E., Incorporated Publishers, 4012 Bridge Avenue, Cleveland, Ohio 44113; Richard J.W. Foster, 390-46 Honeysuckle, Aurora, Ohio 44202; Nancy Foster, 390-46 Honeysuckle, Aurora, Ohio 44202; Maureen Mertz, 42480 Park Ridge Road, Novi, Michigan 48050.

The known bondholders, mortgagees and other security holders owning or holding one (1) percent or more of total amount of bonds, mortgages or other securities are: Arthur Brown, 31505 Grand River Avenue, Suite 1, Farmington, Michigan 48024.

Average number of copies each issue during preceding 12 months, and of single issue nearest to filing date, respectively, are as follows: Total number of copies printed (net press run) 17,091/15,860; paid circulation sales through dealers and carriers, street vendors and counter sales 0; mail subscriptions 3,302/3,335; free distribution by mail, carrier or other means (samples, complimentary or other free copies) 12,983/12,057; total distribution 16,285/15,392; copies not distributed (office use, left over, unaccounted, spoiled after printing) 806/468; return from news agents 0; and total 17,091/15,860.

I certify that the statements made by me above are correct and complete.

Richard J.W. Foster, President

dimethalin offers unsurpassed weed control and cost effectiveness.

While maintaining good spreadability, the new formulation contains roughly four times more particles per square inch than typical physical blends to greatly enhance coverage and preemergent control performance.

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dimethalin per acre at .8 lbs. nitrogen per 1,000 square feet, with a flexible rate range on the label.

RHONE-POULENC AG COMPANY. As a result of Rhone-Poulenc's acquisition of Union Carbide Agricultural Products Company, the Chipco® line of lawn care chemicals has been expanded to include several products.

With Chipco Sevin® SL brand of carbaryl insecticide, Rhone-Poulenc introduces a grub control that is effective, economical and environmentally sound.

The company is also offering Chipco 26019 fungicide, a broad-spectrum, long-residual (up to 28 days) fungicide that fits program schedules and allows more profit from existing customer base.

Chipco Ronstar® brand herbicide is a long-lasting, effective preemergent herbicide that sets the standard for control of crabgrass, goosegrass and many broadleaf weeds. It does not prune roots or leach.

Chipco® Alliette® brand fungicide is a true systemic fungicide with a special mode of action for the control of Pythium.

Also from Rhone-Poulenc are Weedone® DPC Amine brand herbicide, a broad spectrum postemergent herbicide for the control of annual and perennial weeds, and Chipco® Microgreen® Liquid, a micronutrient that provides a quick, healthy-looking green-up to lawns.

Microgreen also sets as a buffering agent in the spray tank.

RINGER CORPORATION. This coming season, Ringer will be offering an all-natural, bio-organic lawn nutrient designed to cure common lawn ailments and diseases, and promote the vigorous growth of luxurious turfgrass.

Lawn Restore®, the new product, is a natural alternative to chemical treatment of lawn problems, especially patch diseases and thatch.

A three-year study at Michigan State University showed the product to be the

only totally natural item on the market that effectively eliminates the causes of necrotic ring spot, fusarium patch and other patch diseases.

Lawn Restore works by releasing soil microorganisms and protein concentrates which help to revitalize the soil's ability to break down organic matter and fertilizers into nutrients that grass plants can easily absorb. Grass plants grown in rich, organically active soil develop vigorous root systems producing a healthy turf that is naturally pest and disease resistant. Lawn Restore is also safe to apply on lawns used by children and pets.



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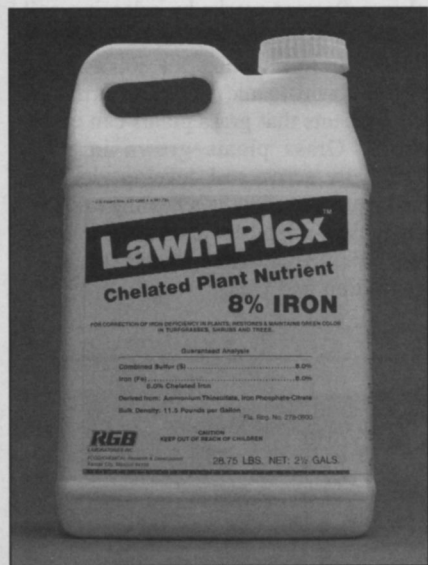
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R.G.B. LABORATORIES INC. Lawn-Plex® 8% Iron Chelated Plant Nutrient is now available for correction of iron deficiency in plants. The product restores and main-



tains color in turfgrass, shrubs and trees. According to the company, fertilization programs that include Lawn-Plex stimulate green-up, enhance root growth and improve tolerance to heat, cold and drought conditions.

The new plant nutrient is the most highly

concentrated chelated (phosphate-citrate) iron available in liquid form. It is fully compatible with virtually all (NPF) formulations and pesticide tank mixed.

Lawn-Plex will not stain sidewalks or equipment. With extremely low phytotoxicity, it's ideal for spray application even during the heat of the day.

In addition, Lawn-Plex buffers pH to prevent alkaline destruction of pesticides and maximizes green-up without excessive nitrogen.

ROCKLAND CHEMICAL COMPANY INC. The company's new Rockland® Spray Indicator is a light sensitive dye that prevents over-application and missed spray areas. The product can be mixed in spray tanks of herbicides, insecticides, fungicides and fertilizers to indicate sprayed areas. Rockland Spray Indicator produces a temporary blue-green appearance to turf area where applied.

SIERRA CROP PROTECTION CO. For the coming season, Sierra introduces Vorlan™ Fungicide 50% Wettable Powder and Fungo® 50 Systemic Turf Fungicide, products that have a tank mix recommendation to enhance the efficiency of each component.

The company is also offering Duosan® ,

a broad spectrum systemic-contact fungicide that can be used on turf and ornamental trees and shrubs. In addition, Sierra will provide Pre-San® Emulsifiable, a selective herbicide for pre-emergence control of crabgrass and annual bluegrass.

SOLAR DROP INC. Aqua Grain™, a new product for plants, trees and shrubs, which cuts watering requirements up to 75 percent has been introduced by Solar Drop.

Aqua Grain's tiny polymer granules hydrate to hold hundreds of times their weight in water. Plant roots then seek out and attach themselves to the small reservoirs for a readily available supply of water.

Turf professionals should water to capacity after applying the dry granules to ensure complete hydration. Over-watering cannot occur with the product even in low water-requirement species, provided there is adequate drainage. Subsequent irrigations will be dramatically reduced.

SOUTHERN MILL CREEK PRODUCTS COMPANY INC. Southern Mill Creek will be supplying a variety of products for control of pests on turf and ornamentals in 1988.

Diazinon AG500 will be available for control of insects on fruit, nuts, vegetables, field crops and ornamentals. Dursban .5%

(continued on page 68)

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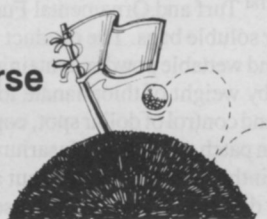
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- Insecticides — Recent Developments
- Golf Course Computers — Utilization and Cost
- Personal Financial Planning
- Stress Management
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- Chemical and Biological Control Strategies for Aquatic Management
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- Bentgrass Fairway Management— Are We Headed in the Right Direction?
- Thinking Superintendent — Time and Money-Saving Ideas
- Soil Management — Facts and Fallacies
- The Black Layer — Sifting Through the Maze
- Greens Reconstruction
- Bentgrass Breeding
- Overseeding Turfgrasses
- PGRs for *Poa annua* control

Grounds & Athletic Fields



- Ground Covers — Alternatives to Grasses in the Landscape
- Wildflower and Native Grass Renovation
- Aquatic Management Strategies for Small Ponds
- PGRs as a Tool for the Professional Grounds Manager
- Annual and Perennial Selection and Care
- Turf-Type Tall Fescues
- Insecticides — Recent Developments
- Stress Management on the Job
- Selecting the Proper Aeration Equipment
- Pre-emergent and Post-emergent Herbicides — Recent Developments
- Soil Management in the Landscape — Facts and Fallacies
- Low Budget Athletic Fields
- Player Safety/Field Quality
- The Agronomics of Athletic Field Management — A Reevaluation
- Soil Management of Athletic Fields
- Experience with Turfgrass Aeration Equipment
- A Morning with George Toma

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- Insurance Liability — Insuring the Landscaping and Lawn Care Risk
- Guidelines for Estimating Maintenance and Landscape Work

Lawn Care



- Ecology of Patch Diseases
- The Pros and Cons of Disease Detection Kits
- Patch Disease Research Update
- Why Pre-emergent Herbicides Fail
- Why Post-emergent Broadleaf Herbicides Fail
- Drift and Pattern Displacement of Pesticides
- Core Cultivation Effects on Pre-emergent Herbicide Efficacy — Another Look
- Considerations and Selection of Core Cultivation Equipment
- Soil Improvement and Management — Physical or Chemical?
- Pre-emergent and Post-emergent Herbicides for the Lawn Care Professional
- The Pros and Cons of Turf-Type Tall Fescues
- Reducing Pesticide Usage Through Agronomic Practices
- Experiences with PGRs in the Landscape
- Insecticides — Recent Developments
- Alternatives to Pesticides
- Maximizing Job Satisfaction

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2021 Coffey Road
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(614) 292-2601

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is supplied for effective long-lasting control of Chinch Bugs and Sod Webworms in Ornamental turf.

On turf, Dursban 2E Insecticide controls chinch bugs, sod webworms, ants, brown dog ticks, cutworms, earwigs, crickets, grasshoppers and hyperodes weevil. On ornamentals, the product is recommended for bagworms, grasshoppers, leafhoppers, spittlebugs, mealybugs, whiteflies, exposed thrips, mites and cutworms.

Dursban 4E Insecticide, Sevin 5% Turf Insecticide Granules and Malathion 57% are available for control of many common pests infesting lawns and ornamental turf, while Dursban Cricket Bait Insecticide is recommended for the control of field crickets and mole crickets infesting lawns, golf courses and ornamental turf.

Dursban Plus Turf Insecticide is to be applied for the control of ants, armyworms, brown dog ticks, chiggers, chinch bugs, clover mites, crickets, cutworms, earwigs, fleas, grasshoppers and sod webworms. Additionally, the company is offering Lawn and Perimeter Granules which contain 1 percent chlorpyrifos. The product is for the control of ants, chinch bugs, crickets, cutworms, earwigs, grasshoppers, European

chafer (larvae), hyperodes, weevils, Japanese beetle larvae, sowbugs (pillbugs), sod webworms and brown dog ticks.

In addition to insecticides, Sierra will be offering a variety of other lawn care products.

Green Magic Liquid Lawn Food is specially formulated to provide primary, secondary and micro nutrients necessary for healthy turf growth. This unique formulation contains more than 20 percent organic plant byproducts and other natural plant extracts.

Nutra-Aid is a fertilizer additive that can be mixed with other ingredients such as low-salt fertilizers and pesticides. The product is intended for application on soils and/or turfgrass areas following proper blending. It will dissolve easily and mix well with any one of a variety of hardened waters.

The product is highly compatible with fertilizers and will penetrate compacted soil and thatch. It will also provide enhancement of fertilizer and herbicide efficiency.

Sierra is also offering Relief, a soil additive and micro nutrient treatment for compacted and high salt soils that can be mixed with other ingredients, including low-salt fertilizers and pesticides. It is intended to be sprayed onto soils and/or turfgrass areas after being properly blended. Areas should

be watered following application.

Among other sites, Standard 2,4-D Amine is recommended for use on lawns for control of wild mustard, dandelion, goldenrod, ragweed, plantains, thistles, docks, wild morning glory, shepherd's-purse, wild carrot, mallow and certain other broadleaf weeds.

W.A. CLEARY CHEMICAL CORPORATION.

In 1988, the company will be offering 3336™ Turf and Ornamental Fungicide in water soluble bags. The product is a finely ground wettable powder containing 50 percent by weight of thiophanate for prevention and control of dollar spot, copper spot, brown patch, red thread, fusarium roseum, helminthosporium, stripe smut and many other diseases. It is labeled for use on shade trees, ornamentals, herbaceous annual, perennial and bedding plants and flower beds.

The new water soluble bags are safe and easy to use; operators risk no exposure to chemical fumes or residue. Because the bags dissolve completely when submerged in water, there are no clogged screens or nozzles to worry about and no containers to dispose of. — Julie November ■

The author is Assistant Editor of ALA magazine.

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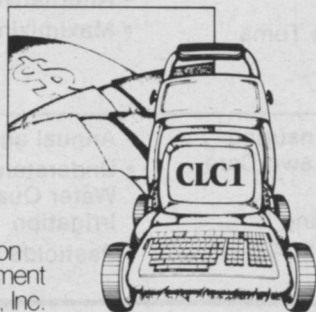
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COOL SEASON

(continued from page 37)

tivars developed for forage and turf uses. They both form a coarse, moderately open turf with a rapid rate of leaf elongation. Fawn was a later forage developed, producing poorer turf quality than the above cultivars. Kentucky 31 has shown better tolerance of brown patch and *D. dictyoides* than Alta and Fawn, which are quite susceptible. Chesapeake and Clemfine are new varieties which are similar in appearance to Kentucky 31.

Rebel, Falcon and Olympic were the first new, moderately low growing, leafy cultivars developed for turf purposes. They have softer leaves and produce a denser, more persistent turf than the older cultivars. They have shown improved resistance to brown patch and a more rapid recovery rate from disease damage. Olympic has displayed better resistance to leaf spot during establishment than other cultivars. Olympic and Falcon were screened for resistance to crown rust prior to the final selection of parents in the breeder seed production field in western Oregon. Since tall fescue is another cross-pollinated species, recurrent selection has been used successfully to improve levels of disease resistance in populations.

Other more recent varieties with improved resistance to both brown patch and leaf spot are Jaguar, Adventure, Rebel II, Bonanza, Cimarron, Apache, Arid, Mustang and Hounddog. The varieties of Apache and Bonanza have a darker green color than any tall fescues previously developed. Varieties with even higher density and texture more similar to bluegrass should be available in the next three years. Trailblazer is the first dwarf variety of tall fescue that has shown very good turf performance and leaf spot resistance.

Contributions of tall fescue in mixtures:

- Drought avoidance.
- Wide soil adaptation.
- Reduced fertility requirement.
- Heat, traffic, insect tolerant.
- Resistant to summer patch disease.
- Shade tolerant.
- No thatch.

CREeping BENTGRASS. Creeping bentgrass is a species usually used only in blends with other bentgrasses and not in mixtures with the other cool season species.

Penneagle creeping bentgrass was released in 1978 by the Pennsylvania Agricultural Experiment Station. This cultivar was developed after testing parental material for 15 years. The objective in developing this new putting green bentgrass was to have

a broad genetic base without gross segregation of off-types, improved putting green quality, enough vigor to compete with *Poa annua* invasion and good disease resistance. In tests compared with Pennecross, Seaside and Emerald, this looks like an improved disease resistant putting green grass for the northern U.S. Penneagle has done very well as a grass for fairways. Another new creeping bentgrass variety named PennLinks was recently released by Dr. Joe Duich of Pennsylvania State University. This variety forms a very dense, fine putting surface when compared to other varieties.

The selection of the best components for blends and mixtures is not a simple process. Fortunately, there are now many improved varieties of all of the turfgrass species available. If the above steps are followed in developing blends of mixtures, a turfgrass manager should be able to develop turfgrass areas with better performance and reduced management input. —
Dr. William A. Meyer

The author is president of Pure Seed Testing Inc. in Hubbard, Oregon. He is also a member of ALA magazine's Advisory Board. The ALA Advisory Board is comprised of six experts with various specialties in professional turf care who serve as consultants to the publication

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PRODUCTS

A blue color spray indicator that clearly shows where spray application occurs is available from **Becker-Underwood**. The temporary colorant called "Turf Mark" is a specially formulated concentrate which mixes easily with herbicides, insecticides, fertilizers or other plant growth regulating chemicals, and shows exact areas of application.

The amount of colorant concentrate may be varied for more or less color intensity as the treated area requires. The high visibility tracer helps eliminate problems of overlap, over-application, skips, drift, etc. Uses include spraying in home gardens, around trees, on lawns, near fences — and broadcast applications. Convenient poly bottles with self-calibrating pour spouts in one-quart and one-gallon sizes are designed for efficient consumer and commercial use.

Circle 101 on reader service card

A new four-color folder from **Warren's Seed & Special Products Division** introduces Weed Arrest Mulch Underliner. University field test results show that Warren's new product is more than 90 percent effective in restricting growth of 12 hard-to-control weeds. The findings are fully detailed in a new full-color folder released by the company.

Also highlighted in the folder are the important features and benefits of Weed Arrest, along with complete performance specifications and a product sample.

Circle 102 on reader service card

An interchangeable pump handle and a pressure control regulator are just two of the special features of CP Backpack Sprayers from **Coastal Chemical Corporation**. The versatile sprayer is available in two sizes — the 4-gallon CP15 and the 5.3 gallon CP3, along with a full line of accessories including multi-nozzle booms, spray shields, tree guards and variable-spray nozzles.

The interchangeable pump handle allows either right or left-hand operation, and changes in just seconds.

The pressure control regulator allows the operator to choose one of two pressure settings, either "L" for low pressure applications up to 15 psi, or "H" for high pressure applications up to 43 psi.

Other CP Sprayer features include a virtually indestructible polypropylene spray tank, a long-lasting diaphragm pump and a safety pressure release valve.



The CP Backpack Sprayer is the only sprayer to combine so many unique features into one easy-to-operate unit.

Circle 103 on reader service card

The new Model HSS High Salt in Soil Test Kit from **LaMotte Chemical Products Company** is designed to measure intensified levels of sodium and calcium chloride in soils.

High levels of salt can enter soils near coastal areas, along de-iced roads and can be found in arid regions. The new High Salt Test Kit measures chlorides over the range of 0 to 5 percent. A simple titration procedure is used. Test results are read directly from the titrator scale in percent chlorides. Readability to 0.25 percent. Complete components to conduct 50 tests are packaged in a foam-lined carrying case.

Circle 104 on reader service card

Triathalawn Tall Fescue blend from **Turf-Seed Inc.** is a choice combination for use in southern areas, during climate changes particularly, because of its drought tolerance. Tall fescue roots may reach down four feet, drawing moisture from deep levels long after shallow-rooted grasses have gone dormant. Triathalawn is most effective where water restrictions and high water costs exist.

In addition, its lush, dark green carpet is possible year-round and unlike other warm season grasses, Triathalawn will not creep into landscape beds. The blend is also shade tolerant and adapts well to a variety

of soil and climatic conditions.

In northern areas, Triathalawn mixes well with up to 10 percent Kentucky bluegrasses, such as Columbia. When used to overseed Kentucky 31, it enhances color, texture and density.

Triathalawn tall fescue blend germinates and establishes rapidly. A mowing height of two inches is recommended.

Circle 105 on reader service card

Distribution Management Systems, Inc. introduces a multi-user version of their CLC1 package which is designed with the specific needs of a lawn care company in mind. The package offers total control over invoice processing, production, routing, billing, customer history and service and cash receipts.



Multi-user CLC1 also allows access to data for more than one user at a time. In the past, a company that needed multi-user configurations needed to invest in a small mini-computer. Now all that's needed is an IBM PC, or compatible and multi-user CLC1.

Circle 106 on reader service card

Thor Enterprises, Inc. introduces MagnaTec™ detectable marking tape for enhanced safety and location of underground non-metallic utility lines. The tape's thick aluminum foil core puts 40 percent more metal above a utility installation than standard detectable tapes.

MagnaTec is also the only tape on the market that has no inks or pigments in the adhesive layers, ensuring maximum bond strength of the protective plastic jacketing



of the foil. It is surface printed with the appropriate color coding and warning legend to correspond to the type of installation.

MagnaTec is also overcoated with a protective clear lacquer to prevent ink rub-off. The foil is visible from both sides of the tape as a quick field check for metal content (to avoid confusion with non-detectable tapes) and for enhanced visibility.

Circle 107 on reader service card

A four-page brochure describing a variety of landscaping, yard and garden applications for Earth Blanket™ is available free from Hoechst Celanese Corporation.

Applications of the Earth Blanket include mulching, drainage, weed control, soil separation and stabilization, frost protection, and pool liner protection. As a mulching system, the product exhibits all the advantages of plastic sheeting but none of its drawbacks.

A needle-punched, nonwoven, porous fabric made from 100 percent Trevira® Spunbond polyester, Earth Blanket allows the passage of water, air and fertilizer, while controlling weeds and insects.

Earth Blanket is flexible, tough, and stable. It will not be blown away or lifted up by the wind. It resists rot, sun damage, and puncture but can be cut with scissors to any shape and is easy to install.

Circle 108 on reader service card

Feldmann

Model 2300 Multi-Purpose Turf Care Machine. For the professional lawn care and rental industry.

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Core aeration performed at the pace the operator chooses. Core depth is achieved by strategically placed 45-lb. quick-release weight bar.

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Optional accessories—20-lb. quick-release weight bar for slicing machine and a 45-lb. quick-release weight bar for the plugging aerator.

Powered by Honda 3½-hp GX series overhead valve 4-cycle engine with oil alert feature. Easy starting, maintenance-free electronic ignition. Chain drive. Fold-down handle for compact storage and transport. Lift grip. Weight 128 lbs.



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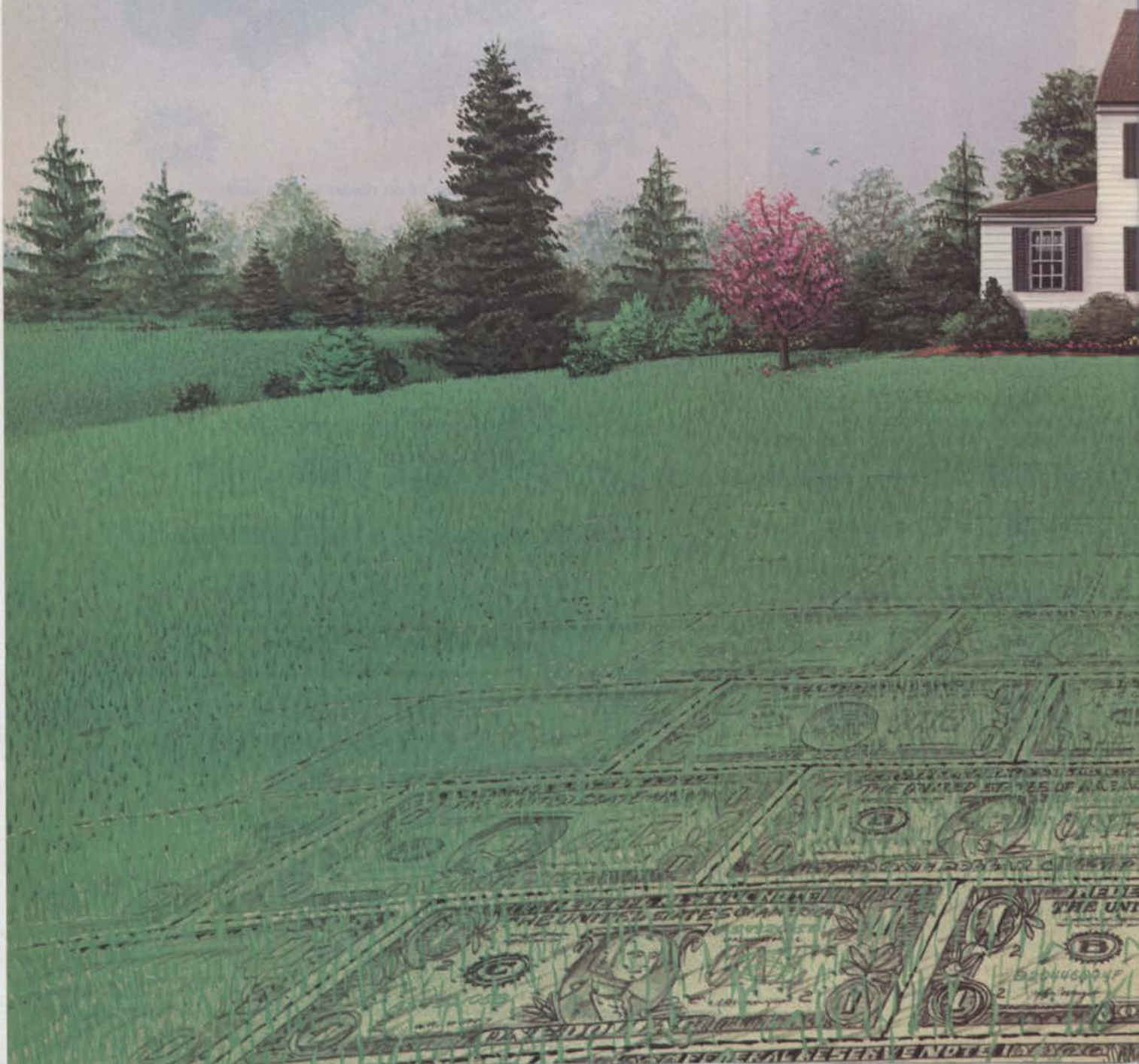
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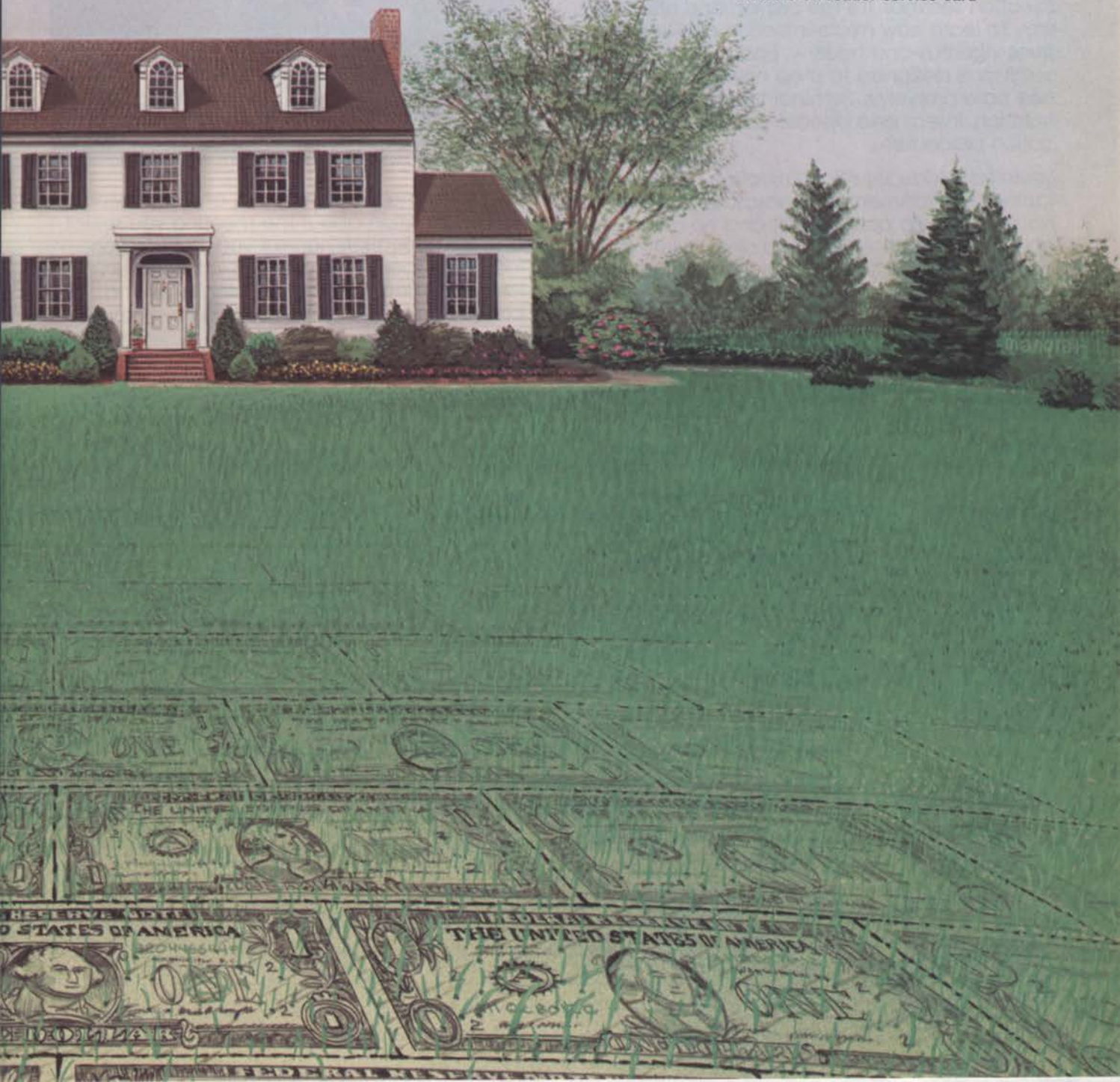
urea, there's not only far less chance of burn, but no plugged nozzles or clogged screens. You get a more consistent green over time because N-SURE provides a nitrogen release pattern that's ideal for custom lawn applications. What's more, you get a product that's stable, storable for the long term, and compatible with most commonly-used herbicides, insecticides and fungicides.

N-SURE is perfectly suited for low-volume applications. So less water and less handling are required. And that translates into greater efficiency, easier application, more lawns per man per day which means lower labor and equipment costs.

Best of all, because N-SURE works like no other fertilizer you've ever used, it means better plant nutrition. Nutrition that stays where you put it rather than losing it to the atmosphere and that's the kind of nutrition that can green up a lot more than lawns. To learn more about N-SURE and the new technology of triazone, write or call Arcadian Corporation, One Gatehall Drive, Parsippany, New Jersey 07054 1-800-524-0135.

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Growing landscape firm located in southwestern U.S. has openings for qualified Operations Director responsible for all landscape installation projects and qualified Maintenance Superintendent. Require minimum of seven (7) years commercial landscaping installation and/or maintenance management and outstanding supervisory skills. Degree in landscaping or related field desirable. Salary and benefits commensurate with experience. Send resume and salary needs to Landscaping, Box 25, 10231 N. Scottsdale Road, Scottsdale, AZ, 85253.

Manager Position

Top Firm Needs Top Person: Quality conscious, Texas-based landscape management firm has immediate opening for detail-oriented Operations Manager and/or Business Manager. If you have outstanding professional, managerial and horticultural skills and are not afraid of hard and healthy teamwork, then you could qualify for a top position with the finest landscape firm in the southwest. Outstanding compensation and opportunity. Reply today to: ALA, Box 325, 4012 Bridge Ave., Cleveland, OH, 44113.

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General Manager wanted for landscape, lawn maintenance and snow removal firm. 10 years in business. Must have good managerial and customer relation skills, with experience in the application of fertilizer, herbicide and pesticide. Horticulture background helpful. Salary of \$20,000 plus and benefits. Call 517/337-7577.

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Hannay reels new in-the-box, E1526s, E1530s, \$339; lawn spray hose, 275 psi and 600 psi, all sizes; original Imler measuring wheels, \$48; glycerin-filled gauges, 0-60 psi to 0-1,000 psi, \$19.95; polypropylene ball valves, 1/2-inch to 2-inch; ChemLawn guns, \$75.95; lawn spray boots, \$16.95; lawn spray gloves, \$1.25-pair.

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Lawn spray business servicing approximately 5,000 accounts in Detroit metro area. Excellent routing. Low square footage. Good profit margin. Respond to: ALA, Box 327, 4012 Bridge Ave., Cleveland, OH, 44113.

Sprayer Information

Every sprayer can benefit by reducing risk of toxic fumes, with do-it-yourself instructions. SASE and \$10. Durkee Spraying Service, Beaver, OK, 73932. ■

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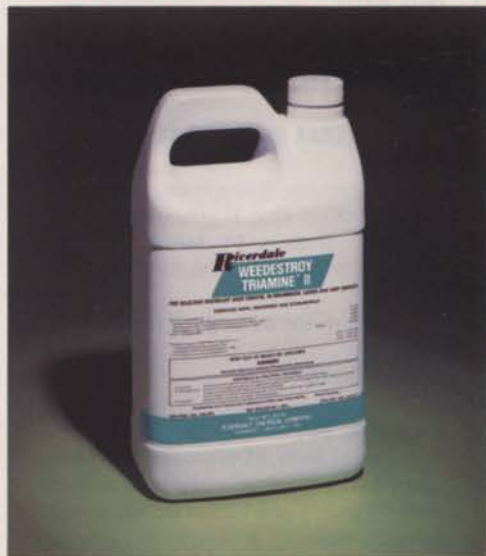
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Another benefit of Triamine and Triamine II is they can be used on both cool and some warm climate grasses all season long.

Both concentrated products have a usage rate of 3-4 pints per acre. This allows the lawn care professional to economically cover greater turf areas while using less base liquid per acre.

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TRIAMINES and TRI-ESTERS

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Riverdale Tri-Ester and Tri-Ester II are emulsifiable concentrates with low volatility. They give the same effective and dependable results as our Triamine products. In addition, they give quicker control than amines in early spring and late fall when cooler temperatures prevail.

Tri-Ester and Tri-Ester II can be applied to roadsides, rights-of-way, drainage ditchbanks and sod farms as well as golf courses, parks and ornamental turf.

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s alternative products for customers who desire a choice.

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