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*Four years after Ecolab
acquired ChemLawn, the
green industry leader is still
on top, with a decidedly
different look.*

ALSO IN THIS ISSUE:

Thwarting Erosion

**Turfseed
Harvest Report**

Unity in Composting

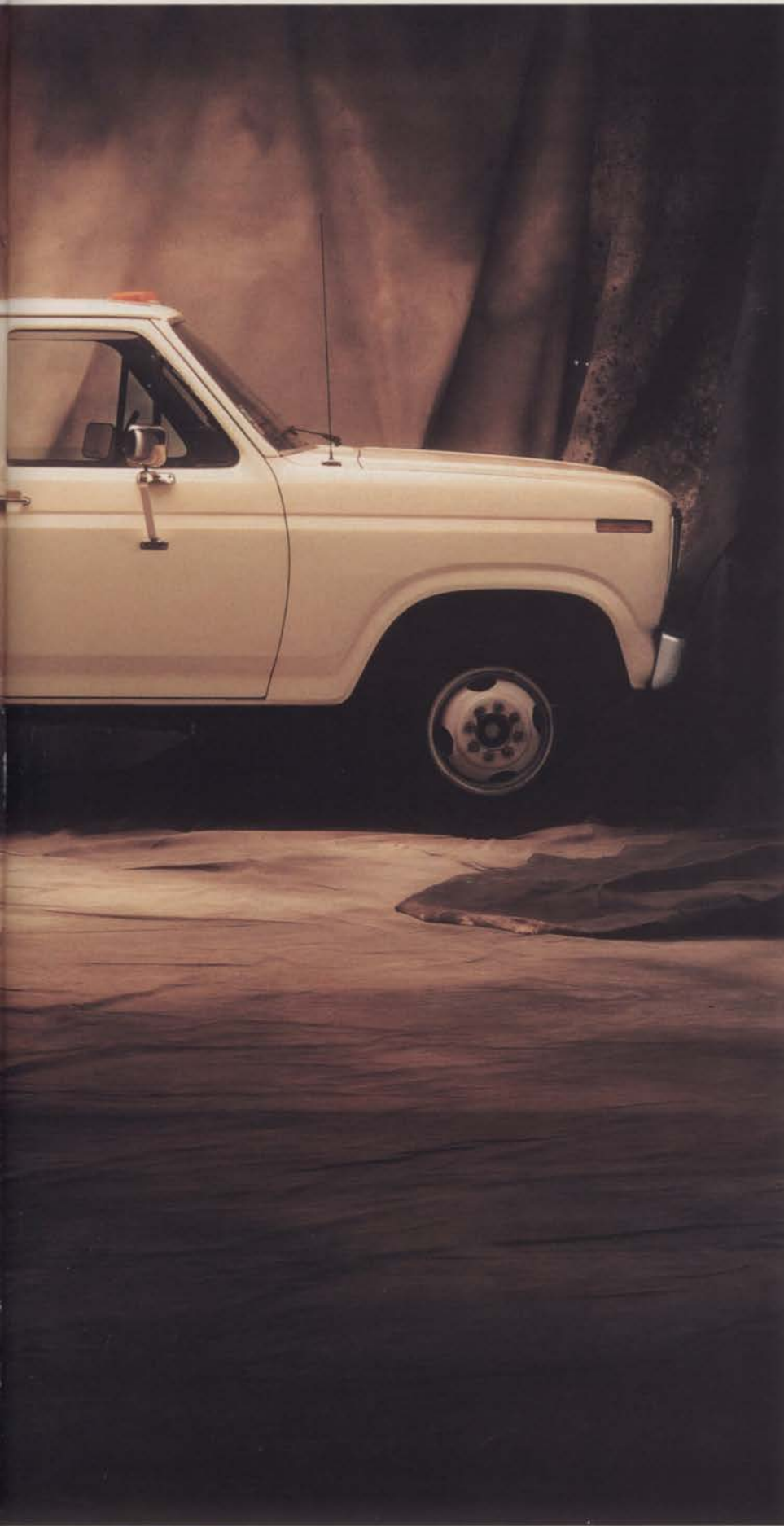
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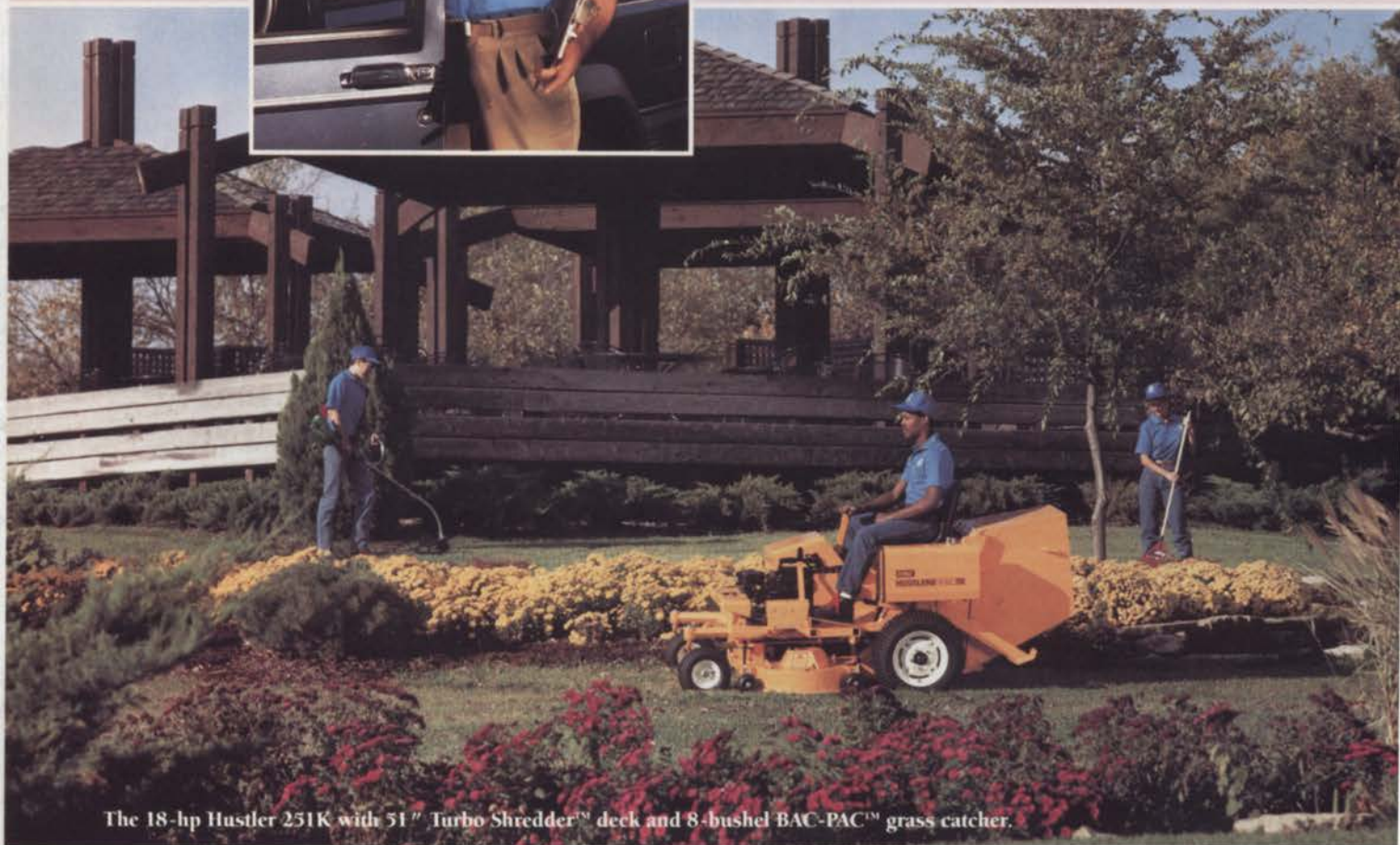


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Lawn & Landscape MAINTENANCE

VOLUME 12, NUMBER 9

SEPTEMBER 1991

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Slopes, ditches, shorelines, detention ponds and landfill covers are all key target areas for erosion control.

Cover Photo:
Ron Rovtar, Columbus, OH



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Editor's Focus

THE WEATHER, more than the economy has been the Achilles heel of the lawn and landscape maintenance business this year.

After a slow start because of the recession and the Persian Gulf war, business, in most parts of the country, returned to normal. (As normal as it ever gets in this business.)

It was a period of reflection for business owners. Some took steps to reduce staff or tighten financial checks and balances, while others took the opportunity to improve communications with customers. These are good steps for maintenance operators to fulfill, and shouldn't be reserved for slow economic periods.

But what can you say about the weather? It's possibly the one business check that can't be controlled or budgeted, but can sure make life and business difficult.

Weather extremes were prevalent across the country. New England, parts of the Northeast, sections of the Midwest and the West Coast all experienced severe to extreme drought conditions this summer. Potentially as damaging, the Southeast (Florida in particular), parts of Texas and New Mexico and Minnesota were inundated with rain.

To maintain full schedules during slow periods, supplemental watering, cultivating bedding materials and pruning trees and shrubs have been common. If too wet to do any work, equipment maintenance, attending local trade shows or simply working through the rain have been common.

While you can't control Mother Nature, you can control, or at least refute, another industry plague: Misinformation.

In a recent question and answer column, *The Washington Post* told readers that of the most used pesticides on lawns, nine have been linked to cancer, 20 may cause birth defects, three have exhibited adverse reproductive effects, nine have been shown to damage the liver or kidneys and 20 are known to affect the nervous system adversely.

The author of the column linked these statistics with laboratory studies on exposure to humans. This grossly erroneous statement — pesticides are not tested on humans and have not been linked to the problems in humans as reported — has been reported all too often.

Further reported in the article was that if pesticides are applied prior to a heavy rain, they can run off into your lawn or into the street and eventually contaminate groundwater.

As reported in the August issue of LLM,



insecticides applied to turf with thatch pose little or no potential for downward mobility, according to Harry Niemczyk of The Ohio State University. Niemczyk has been studying the vertical mobility of pesticides used in turfgrasses with and without thatch for about six years.

Even without thatch, he has found, if the turf has been established for any length of time, pesticides moving through that zone have a great probability of being tied up by organic matter.

As stated by ChemLawn President David Siegfried in this month's cover story, there isn't a whole lot of enthusiasm for hearing the positive aspects of lawn maintenance. Nevertheless, it's up to us as an industry not to ignore misinformation printed in the news media.

Since the Supreme Court ruling left pesticide regulation in the hands of local government, any negative news, whether it's inaccurate or not, is more dangerous left ignored.

Fortunately, all published information of late concerning pesticides is not all bad. The American Council on Science and Health recently reported that when used correctly, lawn care chemicals pose no known hazard to human health.

The report, titled "Lawn Care Chemicals: What Consumers Should Know," examines the scientific evidence highlighting the excellent safety record of lawn care chemicals.

To obtain a complimentary copy of the report, send a self-addressed, business-size envelope (66 cents postage) to: Lawn Chemicals Report, American Council on Science and Health, 47 Maple St., Summit, N.J. 07901. — *Cindy Code*

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News in Brief

NEWS DIGEST

Field Burning Law Takes Effect

An Oregon House and Senate compromise to curtail field burning has been signed into law by Gov. Barbara Roberts.

The bill calls for the banning of open field burning once economically feasible and environmentally acceptable alternatives are developed. It's also expected to raise about \$1 million a year to develop alternatives to field burning.

Originally sponsored by the seed industry, most suppliers feel it's a law they can work with.

Doane Drops 'Terra' Name

To simplify and strengthen its line of micro-computer software, Doane Agricultural Services Co. removed "Terra System" from its name.

The name Doane System will identify all products. The line offers specialized accounting and production management software for nurseries, greenhouses and landscapers.

Biosys Receives Biopesticide Patent

Biosys, Palo Alto, Calif., has received a U.S. patent for its liquid-culture, large-scale production technology. The patent covers Biosys' process for producing insect-killing nematodes cost-effectively and on a mass scale.

The Biosys' patent is the first awarded for the production of multicellular invertebrates in fermenters and enables the firm to produce biopesticides in commercial quantities. The process couples an enhanced media emulsion with other techniques to accelerate the organisms' growth.

Promark Operations Move to Wisconsin

Ariens Co. has announced that all operations of its Promark subsidiary have been moved to Ariens' headquarters in Brillion. According to Steve Dunpal, vice president, marketing, Ariens will focus its resources on the Promark chippers/shredders and turf/pavement vacuum products.

Many New Homeowners Require Landscaping Services

ABOUT 33.5 PERCENT of new homeowners require the services of a lawn or landscape maintenance firm during the first six months in the home, according to a survey conducted by Getting To Know You International, Ltd., a national new homeowner welcoming program.

Stuart Siegel, executive vice president, said the survey was developed to provide an updated profile of the new homeowner target market. The company conducts a survey every five years to keep up with changing demographics.

Survey information indicates that new homeowners are an affluent, educated and upwardly mobile group of professionals, executives and entrepreneurs. The majority are married and have children living with them in the new home.

Some statistics about the new homeowner: The average annual household income is \$59,000; 10 percent earned more than \$100,000. The average age of the male head of the household is 38.1, while the female head averages 37. The overwhelming majority (73.6 percent male, 49.3 percent female) are executives, managers, professionals, sales people or business owners.

The homeowners are an educated group with 51.7 percent females and 60.1 percent males having a minimum of a college degree.

Of those who owned their previous home, the average length of residence had been 6.6 years; for those who rented their previous home, the average length of residence had been 4.1 years. In addition, 35.8 percent of the respondents say that they are first-time home buyers; 25.5 percent moved from another state.

PLCAA Hires New Coordinator

Karen Weber is the new communications coordinator for the Professional Lawn Care Association of America.

Among her responsibilities are writing and editing PLCAA's quarterly newsletter, *ProSource*, and working with other association programs such as grasscycling.

The new position was formed after Sandy Marting resigned as the association's public relations director, and is designed to continue the PLCAA's emphasis on member communications.

Weber was previously publications director of the National Asbestos Council.

Toro to Market Hahn Product Line

The Toro Co., Minneapolis, Minn., and Hahn Inc., Evansville, Ind., signed an agreement last month giving Toro exclusive marketing rights to the majority of Hahn's equipment line.

Hahn will continue to manufacture the products for Toro from its Evansville facilities, according to Dennis Brown of Toro. Specific products to be marketed under the Toro brand name won't be disclosed until later this month.

However, Hahn spray vehicles includ-

ing accessories such as the sonic boom, spreader and cargo bed attachment are said to be among those marked for change.

Hahn will continue to market its aerification line as well as some agricultural products, and will retain input in new product development.

Pesticide Regulations To Get Tougher

The requirements for the application and storage of pesticides will be more stringent in the near future.

Arty Williams, chief of the Environmental Protection Agency's Field Operations Division, said the requirements for people who apply restricted-use pesticides — especially certified applicators — will get tougher. The message was delivered at a recent environmental forum hosted by the Golf Course Superintendents of America.

Currently, any pesticide classified by the EPA for restricted use "shall be applied only by or under the direct supervision of a certified applicator." The new rules will require certified applicators to keep records of site-specific training, as well as to show competency of non-certified applicators who are applying RUPs.

(continued on page 10)

THE WALKER TOUCH



The Perfect Touch Many operators are finding the mid-size Walker Mower is the perfect size for their jobs – a compact, maneuverable tractor for small areas, combined with open space productivity of a rider, saves time.

The "Midas" Touch Walker Mowers are moneymakers; one owner explained why he was buying a second Walker, "The first one made me money – I like to make money."

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USE READER SERVICE #21

News In Brief
(continued from page 8)

In addition, re-certification will be required at least every five years for all certified applicators. Some states already have regulations similar to these. Williams said the final rule should be issued in 1992.

Regulations concerning pesticide storage and mixing/loading are still under development and are not expected to be effective until 1993 and 1994, respectively. The storage requirements are expected to affect those facilities storing 11,000 pounds or more of pesticide product.

Rinse pads will likely be required in areas where concentrated pesticides are routinely transferred.

Deere Forms New Grounds Care Division

Deere & Co.'s Consumer Products group is now known as the Lawn & Grounds Care Division.

The new division will be headed by Bernard Hardiek, senior vice president, who will also retain responsibility for the parts division, and Mark Rostvold, vice

**EXPO '91
Another Success**

The three-day International Lawn, Garden and Power Equipment Expo, Louisville, Ky., finished with attendance of 25,505, a 3 percent increase over last year's show.

Visitor attendance, excluding exhibitors, increased 5 percent.

But the two categories seeing the largest attendance increases were the landscape/commercial mowing contractors and servicing dealers showing commercial equipment, with increases of 57 percent and 73 percent, respectively.

Indoor exhibit space covered 276,000 net square feet and included 560 exhibitors, and the outdoor exhibit area covered 624,300 net square feet and included 126 exhibitors; 45 in the commercial area.

Expo '92 will be held in Louisville, Ky., July 26-28.



president.

The grounds care division manufactures products for a variety of markets including the commercial turf, golf and homeowner markets. Hardiek said the company's worldwide growth in these markets continues to match or exceed the company's objectives.

John Deere now has 3,000 lawn and grounds care dealers in North America.

The products of the Lawn & Grounds Care Division are manufactured at the division's primary facility in Horicon, Wis., and also at newer facilities in Greeneville, Tenn., and Augusta, Ga. The division also recently located a national marketing organization in Raleigh, N.C.

John Deere has more than 3,000 lawn and grounds care dealers in North America.

(continued on page 11)

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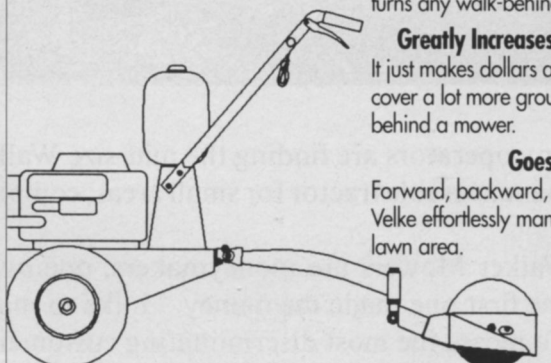
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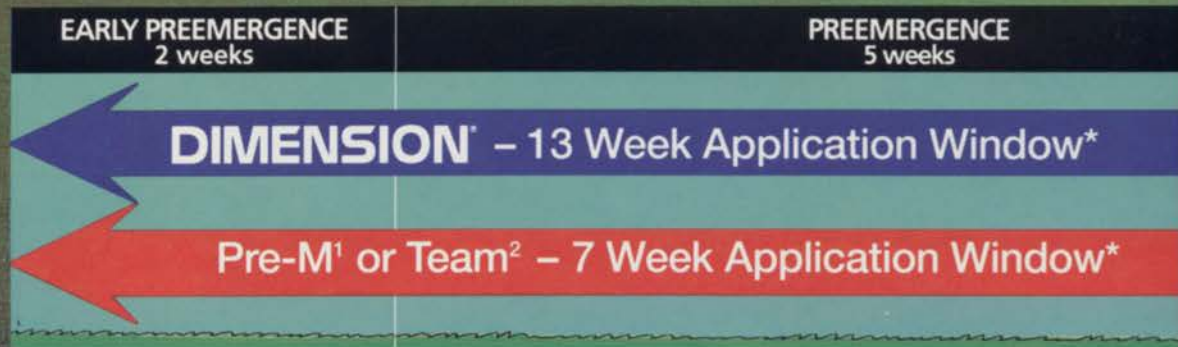
From Lawn-Wright, Inc., The Makers of Grass Gobbler
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*Velke sulky Patent #5,004,251.

USE READER SERVICE #53

Introducing
DIMENSION®
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...by stretching your application time for crabgrass treatments.



Break-through chemistry allows preemergence and postemergence crabgrass control.

New DIMENSION® turf herbicide helps you take your busiest season in stride. Break-through chemistry makes Dimension the only herbicide on the market with both preemergence and postemergence activity. This wider application window gives you up to 13 weeks to apply Dimension, instead of the normal five to seven.*

No other herbicide gives you so much flexibility. With Dimension, you'll have more time to serve more customers — more efficiently.

Season-long crabgrass control with one application.

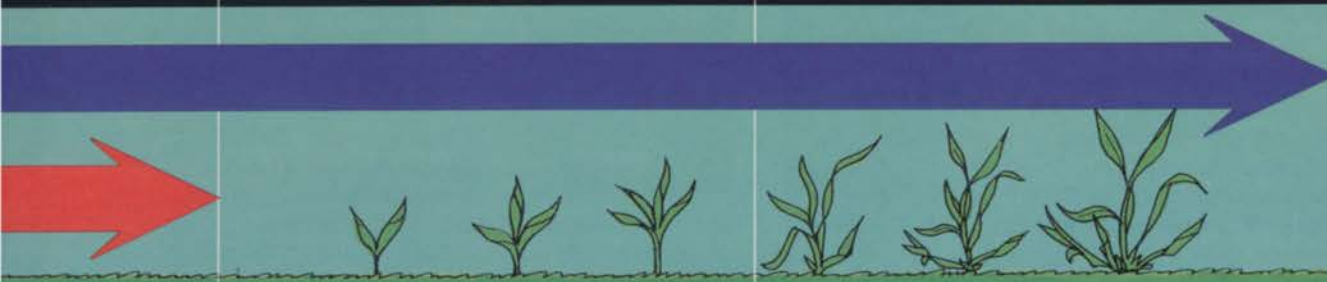
Advanced chemistry also makes Dimension the first turf herbicide to allow true season-long control of crabgrass. Unlike competitive products, Dimension keeps working, month after month. So you won't have to waste time on re-treatments to maintain great-looking turf. Plus, you'll have happier customers and fewer call-backs.

*Based on a single application. **For control of tillered crabgrass, tank mix Dimension with Acclaim® or MSMA.



POSTEMERGENCE—PRE-TILLERED
3 weeks

POSTEMERGENCE—TILLERED**
3 weeks



Foxtail

Goosegrass



Spurge

Oxalis



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Dimension herbicide doesn't stop with crabgrass. Its broad-spectrum activity targets a variety of annual grasses and broadleaf weeds. This control includes foxtail, goosegrass, spurge and oxalis.



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Join the professionals who have stepped up to Dimension.

David Hanus
Herwald Lawn Care
Bryan, TX



"Dimension works very well for me on crabgrass, mainly because it is flexible. The wider window allows us to visit a customer in March or April with a one-time application and get lasting control. Having that flexibility is a big benefit."



Mike Kowalchuk
Owner
Gro-Control Inc.
Westland, MI

"I like Dimension because there is no staining and it mixes easily. Also, you can spray it late in Round 1 and kill any emerged crabgrass, while putting a barrier down for the rest."

Randy Zweifel
President and Owner
Lawn Managers
St. Louis, MO



"We used Dimension on lawns with crabgrass in the two- and three-leaf stages and were very pleased with the results. The one application eliminated the existing plants while keeping the new ones from emerging. It's nice to have the option of applying a product with both preemergent and postemergent activity."



Ray Sammis
Technical Manager
Professional Grounds
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"The worst time of the year for every LCO is the spring burst; trying to get the pre-emergent down with a very narrow window. Dimension doubles that window. It takes you out of the push, saves you overtime and saves wear and tear on your equipment. It literally takes the pressure out of the chemical maintenance program."

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DMP-1-257

Does Pollution Grow on Trees?

You thought cars in Southern California were a major source of pollution. Now the state's air quality officials are concerned that trees and shrubs could be a major source of hydrocarbon emissions — one of two pollutants that combine in sunlight to form ozone, the most harmful part of smog.

Recent research indicates trees and shrubs in greater Los Angeles emit 190 tons of hydrocarbons a day, double the amount previously estimated, according to a report by the *Gannett News Service*.

Twelve trees can emit as many hydrocarbons in one day as a 1991-model car driving a 30-mile commute.

In greater Los Angeles, trees account for 12 percent of all hydrocarbon pollution. By themselves, hydrocarbons are harmless, but when they combine with nitrogen oxides — manmade pollutants from car and industry exhausts — they form ozone.

Research from the University of California, Riverside, shows some trees produce more hydrocarbons than others. Camphor trees, for instance, had very low emissions, while Ginkgo trees emitted 100 times as much as camphors.

GREEN NOTES

Top 100 Private Companies. Environmental Industries, Calabasas, Calif., ranked 97 in *California Business* magazine's list of the state's top 100 private companies. The landscape/construction firm was listed with 1990 revenues of \$196 million.

Swimming Pool Water Recycling. Assisted by Port Hueneme's Naval Construction Training Center in Los Angeles, the station's recycling program personnel developed an innovative, inexpensive and environmentally sound plan for diverting nearly 200,000 gallons of water annually during pool maintenance. The water is now reused for landscaping the station's golf course.

Arboricultural Scholarship Awarded. The Davey Tree Expert Co., Kent, Ohio, awarded the third annual Davey Co. Arboricultural Grant to David Fathauer, Seville, Ohio. Fathauer, who receives \$800, is a first-year student enrolled at The Ohio State University Agricultural Technical Institute (OSU/ATI), Wooster, Ohio.

Liquidambar trees, popular throughout Southern California emit 1,200 times as much as camphors. Pine and citrus trees are said to have low emissions, while oak trees have high emissions.

NPCA Finance Director Dies

Larry Dennis, director of finance/comptroller for the National Pest Control Association, died Aug. 21. He was the husband of

Debra Dennis, executive director of the Associated Landscape Contractors of America.

He had been with NPCA since May 1979. A scholarship fund has been established with the U.S. Chamber of Commerce Institute. Checks may be made payable to the U.S. Chamber of Commerce and sent to Peggy Morgan, U.S. Chamber of Commerce, 1615 H Street, NW, Washington, D.C. 20062. Indicate the contribution is being made toward the Larry C. Dennis Scholarship Fund. ■



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Association News

WILLIAM THORNTON JR., president of Thornton Environmental Industries, Maineville, Ohio, was recently chosen to serve on the board of directors of the **National Federation of Independent Business**.

NFIB provides small and independent businesses with a voice in governmental decision making. It has an audited membership of more than 500,000 business owners, including manufacturers, service companies and neighborhood retailers.

Thornton is currently chairman of the NFIB/Ohio Guardian Advisory Council, which comprises NFIB/Ohio members who bring pertinent issues to the attention of Ohio legislators and provide input to the national federation.

Thornton is also a past president of the Associated Landscape Contractors of America and is currently serving on several ALCA committees.

The **Georgia Green Industry Association** is accepting entries for its 1992 Awards Program. The program is designed to pro-

For more information...

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Georgia Green Industry Association Conference and Trade Show on Jan. 24 at the Georgia International Convention and Trade Center, College Park, Ga.

Richard "Dick" Campbell has been elected president of the **American Association of Nurserymen**. Campbell has served on the board since 1987.

For his one-year term, Campbell named these major goals: "Finish our strategic plan and begin its implementation, continue to expand our coalition building and work to strengthen and revitalize AAN."

More specifically, Campbell said, he will build on the strategic planning session held in Washington, D.C., last October. Also, he would expand "intra-industry communications begun via the New Alliance and the joint AAN/ALCA legislative cooperation." And, he continued, "we will continue to forge coalitions with all groups on an issue by issue basis that provide the best representation for our members."

The **Illinois Landscape Contractors Association** recently introduced new officers and directors at its annual meeting.

New officers include: Frank Mariani,

Mariani Landscape, president; Scott McAdam, McAdam Landscape, executive vice president; Scott Byron, Scott Byron & Co., vice president; Cheryl Muskus, C&J Landscape, treasurer; Herb Buhr, Buhr's Landscaping & Lawn Care, secretary; Cathy Ricciardi, Interior Garden Services, sergeant-at-arms; and Peter Grathoff, Thornapple Nurseries, immediate past president.

Directors for the year are Bob Busch, Busch & Sons Landscape Construction; Gene Grant, Grant & Power Landscaping; Leo Kelly, Kellygreen Design; Chuck McGinty, McGinty Bros.; Sue Meier, Adam Tezca & Sons; Eric Moore, Moore Landscapes; Tom Nenoff, Assurance Agency; and Michael Pezza, Pezza Landscape.

The **Florida Turfgrass Association** hosts its annual conference and show at the Prime F. Osborn Convention Center in Jacksonville, Fla., Oct. 13-16. Author and researcher James Beard of Texas A & M University provides the keynote address.

More than 200 exhibitors from the United States, Canada and England will display new products, techniques and strategies for turfgrass professionals. Hands-on workshops and educational sessions are

also planned.

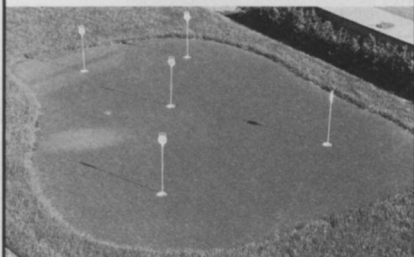
This year's convention will highlight the successful acquisition of \$350,000 in matching funds received from the state of Florida for construction of Environtron, a new research facility. FTA has designated this laboratory for the development of methods of preserving and improving the environment.

George Toma will deliver the keynote address for the fourth annual **Southern Grounds & Turf Maintenance Exposition**, Myrtle Beach Conference Center, Myrtle Beach, S.C., Nov. 18-19. Toma is said to be the only groundskeeper the NFL has used to prepare Super Bowl playing surfaces. He will lead one of many seminar sessions at the exposition.

The SG&TME Conference presents nationally recognized speakers on various grounds and turf maintenance topics.

This year's two-day schedule offers 23 sessions, including nematode control, developments with plant growth regulators, effective water management, personnel management, working with consultants, commercial landscaping, wetlands innovations, environmental issues and turf area construction. ■

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Irrigation News

Annual Irrigation Show Has Conservation Theme

WATER CONSERVATION experts will share their industry expertise at the Irrigation Association's 1991 International Irrigation Exposition and Technical Conference, Nov. 10-13. This year's show, themed "Water...Enough for Tomorrow," is slated for the Convention Center in San Antonio, Texas. More than 3,000 irrigation and landscape contractors are expected to attend.

"I think we're going to have a great expo and conference," said IA President Bob Emmerich. "Our President-Elect Tom Kimmell has put together a great program."

New products and services for the irrigation industry will be showcased. In addition, seminars will be held on a variety of topics, from irrigation technologies to business strategies.

Keynote speaker Bill Smith, vice president and senior quality assurance manager

for Motorola's Land Mobile Products sector, will speak on "excellence."

Other speakers and their topics include: Joe Henggeler, Texas Agricultural Extension Service, distribution uniformity in home lawns using automatic sprinkler systems; Bill Stinehart, Lorill Associates,



The Irrigation Association

Modesto, Calif., "Manage What You Have"; David Beck, Irrigation Design Technologies, Bellevue, Wash., "Improved Landscape Irrigation Efficiency Using Soil

Moisture Sensors"; and Ram Dhan Khalsa, the Bureau of Reclamation, Grand Junction, Colo., sand media and screen filtration for irrigation water filtration.

Richard Tate, consultant, trainer and speaker, will head up the management seminars. Tate's subjects include leadership, worker motivation, service improvement and organizational excellence.

Also featured is Don Rice, director of the Thomas A. Read Center for Distribution Research and Education, who will present "Planning and Managing for Profit."

Other seminar topics include: the construction of large scale drip irrigation systems, converting to centralized irrigation control in a park setting, the effects of global warming on turfgrass and computer selection.

For registration information, contact Martha Lindauer, director of communications, IA, 1911 N. Fort Meyer Dr., Suite 1009, Arlington, Va. 22209; 703/524-1200.

(continued on page 16)

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Model 182 Brush Chipper

Trailer-mounted hydraulic feed disc chipper quickly reduces brush, limbs and branches up to 6" diameter. Powered by 20 or 24 hp Onan or 21.5 hp Kubota diesel engine for added chipping power. Features 12" x 20" infeed opening with a 360° discharge chute. Ideal for landscape/ground maintenance professionals and arborists.



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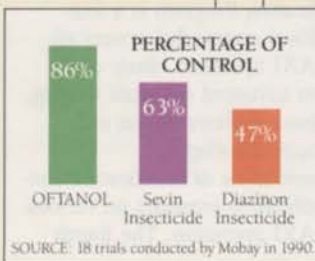
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OFTANOL USERS KNOW THE BEST WAY TO OUTSMART GRUBS IS WITH A LITTLE EXTRA HOMEWORK.

Getting rid of grubs that attack your customers' lawns can be pretty tricky sometimes. Unfortunately, simply treating against these destructive pests doesn't always guarantee success.

But many lawn care operators have learned that all it takes to outsmart grubs is a little preparation—finding the right product and the right time of year for application. The product is OFTANOL® Insecticide. Studies show that time after time, OFTANOL provides consistent grub control. And delivers superior control over widely used products such as Sevin® and Diazinon Insecticides.

The right time to apply it? That will vary from region to region. But a good rule of thumb is



to treat with OFTANOL when grubs are at the surface. An easy way to check is by just pulling back a bit of sod and looking for infestation. Or call your local Extension office to determine peak periods of grub feeding in your area.

These are, of course, just the basics of effective grub control. If you'd like to learn more about OFTANOL and its proper usage, contact your local Mobay representative. Or just give us a call at (800) 842-8020. One of our trained professionals will be standing by to answer your questions. Mobay Corporation, Specialty Products Group, Box 4913, Kansas City, MO 64120.

So why let grubs continue to test your patience when the easy answer is OFTANOL.

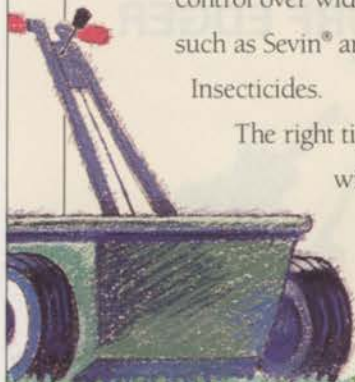


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Irrigation News

(continued from page 14)

Florida Makes Rain Sensors Mandatory

The Florida Legislature has passed a bill which requires the use of rain sensors for all sprinkler systems installed since spring. Rain sensors shut off sprinklers during rain and keep them off until the turf requires water.

Bruce Adams of the South Florida Water Management District indicated that the bill could save millions of gallons of water a year throughout the state. According to Adams, approximately one-half of the per capita water demand in urban areas of south and central Florida is for residential outdoor use.

Paul Klinefelter, president of Glen-Hilton Products, said that rain sensors attach easily and inexpensively to any automatic sprinkler system. He added that the sensors usually pay for themselves in one season from water savings.

"People are finding out that simply applying water haphazardly to vegetation isn't sufficient. It needs to be applied at

the proper time with uniform coverage," Klinefelter said.

"A timed, automatic sprinkler system which applies water, coupled with a rain sensor, which tells it when not to apply water, makes great sense and cents. This is particularly true in areas where water is scarce, such as California; or where rainfall comes sporadically, like in Florida."

Rain Bird Encourages Irrigation Proficiency

Rain Bird Golf Sales Inc. now offers its first multi-level certification program for the MAXI Computer Water Management System.

Designed to help users become more proficient in irrigation control systems, the MAXI Certification Program is a four-level instructional course that covers all aspects of MAXI operation, from computer basics to advanced schedule writing, detailed database implementation and diagnostic troubleshooting.

The first three levels of certification consist of comprehensive seminars on various aspects of MAXI operation. The fourth

level is an instructor level for irrigation consultants and others who want to teach MAXI's water management features.

Persons already experienced with the MAXI system can complete a qualifier test for possible certification in lieu of the seminar. However, instructor level will be granted only to those who attain Level 3 certification.

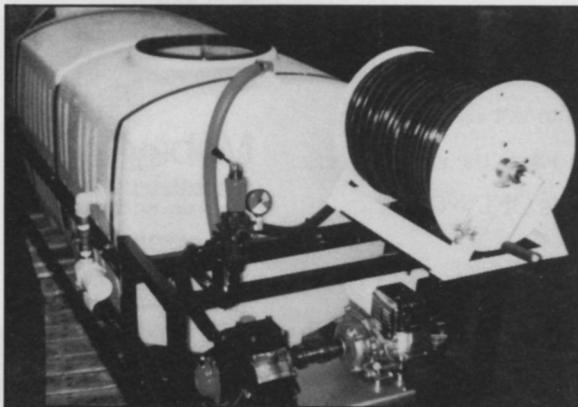
Level 1 requires understanding of the basics of golf irrigation design, computer operation and the fundamentals of DOS. Level 2 includes weather station interface, ET concept, database computing and entering and advanced schedule writing and sensor functions. Level 3 covers flow management table structure, as well as custom applications, diagnostics and troubleshooting.

The instructor program is based upon attaining a Level 3 certification and submission of the applicant's teaching materials, training aids and other documentation of MAXI certification teaching skills. Certificates are good for 12 months and must be renewed on an annual basis.

For more information, contact Cozz Regele, Rain Bird, 145 North Grand Ave., Glendora, Calif. 91740; 818/852-7353. ■

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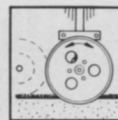
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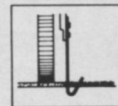
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Focus on Drought

DROUGHT OPENS THE DOOR FOR SUPPLEMENTAL SERVICES

"WHEN THE weather's lousy, business is lousy," said Rick Doesburg, president of Thornton Landscape Inc., Maineville, Ohio. And what lousy weather it's been — at least for some regions of the United States.

Like the summer of 1988, below-average rainfall has once-again wreaked havoc on businesses that make a living off the land. While California has been struggling with drought-like conditions for the past five years, many other regions are enduring their second major drought in four years.

This year's drought appears to have hit portions of the Midwest and Northeast especially hard, especially Ohio, New York, Pennsylvania, Indiana, Illinois, Virginia and Maryland, according to Richard Tinker, meteorologist for the National Weather Service. Other states experiencing localized drought conditions include Montana, Oklahoma and Kansas, among others.

Lawn and landscape contractors were more prepared for this year's below average rainfall and above average temperatures.

"The summer of '88 woke a lot of people up. That was the first real drought we've seen in this (Ohio) area," Doesburg said. "We got smart. Irrigation has been more of a factor."

Russ Frith, president of Lawn Doctor, Matawan, N.J., said, "We've had several of these droughts in the past 10 years. The customer is more in tune and recognizes that there's more to lawn maintenance than the lawn service company."

As lawns quickly turned from green to

brown, many landscape firms found downtime on their hands, but had little problem filling it.

Ed Reier, sales and marketing manager for Tecza Brothers, Elgin, Ill., said less mowing has meant more time for extra services.

"Our company is actually looking very good in our clients' eyes because we aren't mowing as frequently as in a normal year. We have more time for general upkeep."

To maintain a full maintenance schedule, the company has devoted more time to supplemental watering, cultivating bedding materials and pruning shrubs and trees.

"Really, it's a general upkeep of the site that covers everything aside from mowing," Reier said.

Dick Bohns of Outdoor Service Co., Windham, Maine, said his company caught up on maintenance work and drainage projects as business slowed down.

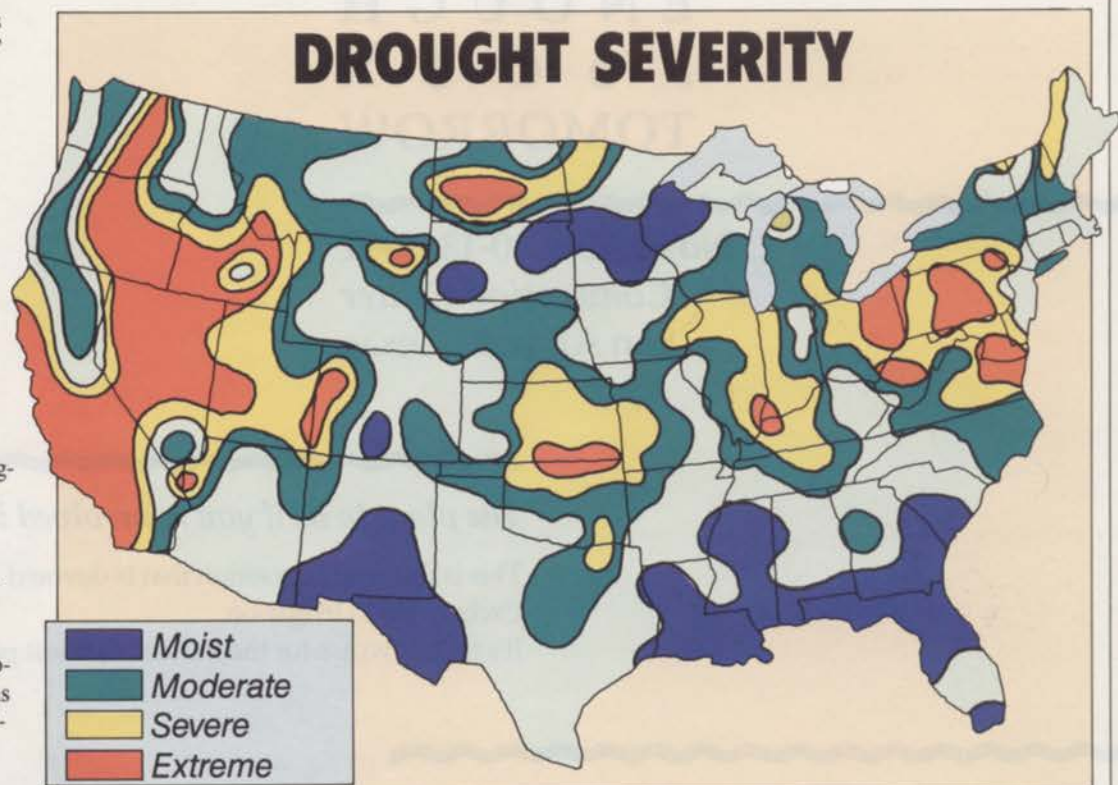
"A lot of our customers are hesitant to spend money on watering lawns," he said.

Andy Knauer, landscape consultant for Yardmaster, Painesville, Ohio, said that the dry weather has enabled the company to spend more time on hardscape, including walks, walls and patios.

"A lot of people have decided that because of the dry conditions, they didn't want to have to maintain new plants. Some jobs were put on hold," he said.

"In places where the water was safe and secure, we operated on a normal basis."

Knauer said that he expects to see an increased number of lawn renovation pro-



Drought severity index (Palmer): depicts prolonged (months, years) abnormal dryness or wetness; responds slowly, changes little from week to week. Uses: applicable in measuring disruptive effects or prolonged dryness or wetness on water sensitive economies; designating disaster areas of drought or wetness; and reflecting the long-term status of water supplies. Source: NDAA/USDA Agricultural Weather Facility.

jects this fall, especially on shallow-rooted lawns and on lawns where homeowners provided inadequate watering. But he doesn't anticipate major problems for homeowners who opted to let bluegrass lawns go into normal dormancy — as long as they let their lawns stay there.

"If you're going to irrigate, you're going to have to keep it up," he said. "Each time you go into dormancy, it loses a little bit. It's hard to get across to people — they'll water when they have time."

Reier said that customers are advised to spend their irrigation efforts on trees and shrubs, rather than turf.

Older turf, he said, if not irrigated, has gone into dormancy. "To try to bring it out of dormancy is wasteful. We tell them to concentrate on the larger investment, trees and shrubs."

DROUGHT VETERANS. L&L Landscape Services is no stranger to working within the restrictions of a drought. Located in Santa Clara, Calif., the landscaping firm has had its share of dry weather — and then some.

To find the best landscaping techniques under extreme drought conditions, employees attended drought seminars throughout the state of California. They

Some landscape firms had little problem filling downtime with supplemental services.

came up with a list of water-conservation techniques, many of which can be applied throughout the country.

Irrigation:

- Use multiple program automated sprinkler controllers.
- Make sure all sprinklers have a matched precipitation rating.
- Install check valves on all low sprinklers.
- Install a rain switch to all controllers.
- Inspect and fine tune irrigation systems often.
- Install a master valve to each irrigation system.

Plant Material:

- Mulch all planter beds (at least 2 inches thick).

- Build water basins around trees and shrubs.
- Deep root water trees with a pressure injector.
- Water trees and shrubs deeply and infrequently.
- Core drill holes around trees and large shrubs 1 inch in diameter and 3 feet deep.
- Eliminate weeds from the overall landscape.
- Phase out moisture-requiring plants and replace them with plants which require less water.
- Remove ground cover surrounding established shrubs.
- Reduce pruning of trees and shrubs.
- Do not fertilize established shrubs.
- Eliminate annual flower planting.
- Eliminate container planting.

Lawns:

- Aerate lawns monthly through spring and summer.
- Plant new lawns with fescue-type turfgrass.
- Apply preemergent herbicides to lawns.
- Fertilize lawns in moderation with a complete balanced fertilizer.
- Mow lawns at 3 inches in height.
- Dethatch lawns only in the fall. ■



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AFTER THE BUY OUT

CHEMLAWN SPRAY TRUCKS used to roll along urban thoroughfares and side streets with the confidence of knowing they "were the lawn care industry." If residents didn't use ChemLawn, then they had certainly heard of it and wondered if they would ever be one of the lucky ones to contract the lawn care service.

But that was in the early days of the lawn maintenance industry, and today the story isn't as straightforward. In the multibillion dollar maintenance industry, ChemLawn is still perceived as the "big fish," but in the last decade, it has lost employees to start-up firms and customers to those same start-ups and price wars.

If ChemLawn had its way, its customer base would still hover somewhere near 1.7 million, a feat it hasn't accomplished since 1987. ChemLawn, since its acquisition by Ecolab, St. Paul, Minn., has been moving relentlessly in the last year to redefine its scope, expand its services and hang on to the exodus of customers who have turned to other firms — determined to remain their lawn maintenance firm of choice despite increased competition and market saturation.

ChemLawn is unquestionably successful, North America's largest lawn maintenance firm. In recent years, however, its operating profits and customer base have lagged.

No firm has come anywhere near reaching ChemLawn's size or revenue figures, but a number of firms have achieved success in recent years where ChemLawn hasn't; Barefoot Grass, TruGreen and ServiceMaster just to name a few.

Enter David Siegfried. Since taking charge in October 1990, Siegfried, with the deep pockets of Ecolab, has been masterminding a refocusing and rebuilding plan. The strategy was created to correct the fundamental problems that have prevented ChemLawn from taking advantage of its leading market position, according to Ecolab's 1990 annual report.

Specifically, the plan is to improve management quality and streamline the management process; reduce structural costs and improve productivity; aggressively grow commercial and beneficial services; develop new business systems to meet future challenges; and reposition the residential customer base by developing specific strategies to reach identified growth segments of the residential lawn care market.

Siegfried joined ChemLawn in March 1990 as executive vice president, strategic development. He was promoted to president a short time later. Prior to joining ChemLawn, he was president of Burlington Airline Express, Irvine, Calif.

Four years after Ecolab bought ChemLawn, the green industry giant has executed a \$37 million refocusing and rebuilding plan to strengthen its hold on the marketplace.

By Cindy Code





David Siegfried's past accomplishments at Airborne Freight and Burlington Airline Express earned him the top spot at ChemLawn, and the challenge of returning ChemLawn to profitability. Siegfried doesn't talk much about the old ChemLawn, instead focusing only on its future.

He is the third president to head ChemLawn since becoming a wholly owned subsidiary. Siegfried replaced Michael Shannon, Ecolab's executive vice president and chief financial and administrative officer. Before Shannon, Jack Van Fossen was president.

Burlington was Siegfried's second stint with an air freight company. In his early 20s, he was head of Airborne Freight Co.'s New Jersey district. He walked into an office that had been losing \$1 million a year, had had nine managers in seven years and some painful

labor relations between management and employees.

After a rocky start, he managed to smooth out the labor problems over three years and return the district to profitability.

ChemLawn is hoping for the same outcome to a similar scenario. In the four years since Ecolab acquired ChemLawn in a \$375 million deal, ChemLawn has recorded losses totaling nearly \$56 million, including a \$34.5 million restructuring charge in 1989, and an operating profit in only one year, 1988, when it earned \$14 million.

Peak profitability was realized in 1984 when the firm reported \$292 million in sales, a \$27 million operating profit and 1.5 million lawn care customer base.

ChemLawn's residential customer base fell from 1.7 million at the end of 1987 to 1.3 million at the end of 1990.

A May 1990 security analysts' report indicated that Ecolab's strategy of using ChemLawn as a springboard for entering other residential service businesses had yet to get off the ground.

But Siegfried, an amiable man, is determined to change the perception of ChemLawn in the industry.

Since taking over the presidential reigns, ChemLawn has upgraded its record-keeping with a \$10 million computer system and beefed up its marketing efforts, adding telemarketing to its familiar direct-mail campaigns.

In addition, it has expanded its service line, tailoring programs to the customer's budget and taste. If someone wants only one or two lawn treatments, that's what they get.

Tree and shrub service is a growing part of ChemLawn's business as well as service to commercial customers such as hotels, restaurants and office buildings.

Commercial sales increased to 12 percent of ChemLawn's revenues in 1990; a 25 percent growth in commercial sales over 1989.

ChemLawn also offers Organix, an organic-based fertilizer program consisting of about 58 percent natural organic nitrogen sources and about 42 percent urea nitrogen. It also contains all natural organic phosphorous and potassium and muriate of potash.

Pest-Free, which in 1990 represented only 1 percent of ChemLawn's business mix, is expected to grow beginning next year. The firm has no plans to bring mowing services in-house.

ChemLawn is expected to finish the year in the black, despite a slow start because of the recession and the Persian Gulf war.

REGAINING MARKET POSITION.

Since fighting off a hostile takeover bid by Waste Management in March 1987, and eventually agreeing to a buy out by Ecolab in April 1987, ChemLawn has endured a few rocky years.

Critics also contend ChemLawn management hasn't recognized its shortfalls since attaining remarkable success in its early days. And many believe the firm may never turn itself around.

But Siegfried is determined to make believers out of ChemLawn skeptics. As if to show the industry it still has some bite to its bark, 1991 has been a positive "leadership" year for ChemLawn.

Legislatively, it participated in the spring lawn care hearings; Dr. Roger Yeary was a guest on *Nightline*, along with Jay Feldmann and Victor Kimm; the firm supported the hiring of Capitol Line International, a lobbying firm for the lawn maintenance industry; and responded to sensational articles published in *Family Circle* and other consumer press.

Additionally, the firm released a medical study which showed that as a group, long-term ChemLawn specialists are healthy. More specifically, results showed no long-term adverse health effects attributable to the applicators' work with chemicals, and showed only minor ill effects related to their work.

One hundred applicators participated in the study which began in 1987 and was intended to assess the general health status of veteran pesticide and fertilizer applicators.

CHEMLAWN CORP.

HEADQUARTERS: Columbus, Ohio

BRANCH OFFICES: About 162 in more than 100 markets.

FRANCHISES: 50 locations

FOUNDED: 1969 by Dick Duke

OWNER: Ecolab Inc., St. Paul, Minn.

PRIMARY SERVICES: Lawn care, including chemical and organic product offerings, aeration and seeding; tree and shrub care; commercial; and pest control services mainly in the Southeastern U.S.

EMPLOYEES: 8,000 in North America

1990 NET SALES: \$383 million

Although the study applies only to ChemLawn employees rather than the industry in general, other green industry applicators will probably point to the study as beneficial evidence, although not their own.

While Siegfried set a credible tone for ChemLawn in his first year as president, past events continue to haunt the firm.

In the spring of 1990, ChemLawn settled a 1988 lawsuit initiated by New York Attorney General Robert Abrams accusing it of false advertising.

In the following interview, David Siegfried shares his insights of the lawn and landscape maintenance industry, and how ChemLawn is positioned to succeed in the 1990s.

Q: You were with ChemLawn a short while before becoming president. What insights did you gain?

A: It was a nice opportunity to sit down and look at what was in place and what was in the works.

ChemLawn is so much larger than its competitors and the chal-

Peak profitability came in 1984 with \$27 million in operating profit.

ChemLawn did not admit any wrongdoing, but agreed to pay \$100,000 in court costs. After more than three years of dispute, ChemLawn officials said it was cheaper in the long run to settle the lawsuit rather than carry out a lengthy court battle.

The 1988 lawsuit, preceded by a year of debate, stems from Abrams' claims that ChemLawn provided false and misleading information concerning pesticide safety to its customers.

At the end of 1989, ChemLawn fired about 1,500 employees in a companywide restructuring effort. Only 500 of the jobs were permanent as others were later hired to improve productivity.

lenge is so much broader; so much more national in scope. For smaller firms, the complexity is either "Do I raise prices or I do I find a way to cut costs?"

What we're dealing with is more markets with different regulations and different economic impacts. In New England you might have a recession, but that could be different from what's happening in the Southeast. Environmental pressures also differ from market to market.

I think we have to be more comprehensive in our overall strategies in lawn care since we are recognized as the market leader both inside and outside the industry. When people want to talk

about the industry they have a tendency to talk about ChemLawn. Whether it's controversial or not, it's still going to be "What's going on at ChemLawn?"

Because of our position, we probably have the best opportunity to change the perception of the industry. I had an opportunity to draw some conclusions early on. For instance if an operator goes out and does something improper, is the whole industry responsible? We are very responsible.

You don't want to spend a lot of time arguing are pesticides risky or not. What we should be arguing is how do you deal with pesticides responsibly? You train people and you make sure you have practices in place that are sure to minimize risk. Create some industry practices that everybody agrees are reasonable.

Q: Nevertheless, there will always be those who oppose pesticide applications.

A: You can't stop it and you can't stop sensational journalism. What you can do, as an industry, is put forth a platform; an effective operating tenet which most responsible companies are practicing already. We would have loved to have industry tenets incorporated into federal law and put an end to whether or not this is good or bad.

Efforts in this area obviously are not moving to where we would like to see it, or as quickly as we would like to see it.

We don't have a problem with posting, prenotification and putting in responsible fill systems if it lends itself to good business practices. You can do all those things; in reality it's probably what people are doing anyway, but there will always be this controversy.

A united effort is not going to stop the sensational press, but I think most thoughtful consumers will listen to it and understand there is a level of responsibility and understand what the risks are.

We have 8,000 employees who are not going to do things that put themselves at risk. The products we use are most concentrated when they are being mixed at the branch and significantly less concentrated when being sprayed on someone's property.

We tend to take the risk out of it or minimize the risk. And the way you do that is to make sure that the people who are handling

it are well trained, and you don't just put it in the hands of every Tom, Dick and Harry. Which is not to say there isn't a need for pesticides. That's a whole different issue.

Q: What about state registries?

A: We are already committed to working with people who think they are chemically sensitive. It's a question of logistics. Who gets enrolled, how often do they get the information and who is paying for the information, etc. It's more how do you do it rather than if it's a good or bad idea.

We have two board certified toxicologists on staff. If someone calls up with a concern then we have one of those toxicologists talk with the concerned person, interact with their doctors and provide a skin patch — a process to test for specific allergic reactions.

In many cases we find that they may be experiencing some reaction, and we are not doubting any reaction that they may be having, it just has nothing to do with ChemLawn. And people should know that.

If someone in my family was ill or having a reaction and that service was offered, I would certainly want to take advantage of it. If it isn't lawn chemicals then there is something at home or something in their diets that's causing it.

Q: Why can't ChemLawn or the industry flood the market with positive reports in January or February and stop the "spring lawn care attacks" in their tracks?

A: Because the media won't pick up on it. We gave *Family Circle* plenty of information for their article, and they chose not to print any of it. We gave a variety of TV shows all kinds of evidence that what they were about to say wasn't accurate, and they chose to edit it and include a limited amount of our information.

Early on, I just thought we weren't doing a good job because we had all this ammunition, but were getting all this lousy press. But then I experienced it.

When anyone calls, we invite them out, show them test results, let them sit down with Dr. Roger Yeary, who is an authority on this, and so on. But after all that, there's nothing reported. We call them back, send them letters, but to no avail.

It's difficult to get a positive story told because there is not a

lot of enthusiasm out there for hearing that lawn care is safe. Although we can't use that word, even though it is.

Q: What are some of the highlights of your first year as ChemLawn president?

A: Let me backtrack to how I approached the whole situation,

ChemLawn expects to finish the year in the black despite a slow start.

and you can see what we have been up to. One of the ways I've found particularly effective in studying businesses is looking at three elements: business strategy, organizational structure and support structure.

From a business point of view, 'Do I have an articulate strategy that the employees understand, that we can bring to the marketplace and is updated at any given period of time?' Secondly, 'Do I have the people in place to execute the strategy or am I doing something too complex?' And then you look at your support structure, 'Do you have the computer systems and technologies to do what you want to do?'

In most service businesses, if you can do these three things and keep them in balance then you will be successful. Your strategy isn't so sophisticated that people don't understand it, and customers can't figure out what you're doing.

We see a marketplace with people who want certain levels of service. So part of our strategy is understanding the segments and offering a variety of products. Not just granular or not just organic, but a range of products and landscape services that can fit multiple segments.

On a people basis, we looked at the organization and said we have strong technical people, strong people out doing the applications and a strong branch network. We had some holes in the corporate organization so we brought in some key people with good service background and broader management experience.

The ChemLawn of the 1970s and the ChemLawn of the 1990s aren't the same. So we addressed the people and training issues emphasizing more quality training in the organization.

We have replaced the old Texas Instruments stand-alone, branch-by-branch system for a very sophisticated IBM computer system. No computer in itself can do much but process information, but the speed it processes it and the peripherals we can add to it as we build the business can bring more information to the customer such as different billing options,

hand-held computers and various diagnostic tools.

On the inside, the computer gives us the ability to react more quickly to changes in the marketplace.

The other support we have is research and development. In long-term research we are involved in or in contact with every level of biopesticide activity and are well positioned to offer our customers this service should something of value hit the market.

Most of the products we have looked at are very targeted or high cost. Plus, we haven't yet felt the demand for alternative products.

The interesting thing we are finding out about organics is that many people who buy organic fertilizers still want weed and insect control. So, we are finding that people are sensitive to product terminology but desire familiar control methods.

Q: The New York Attorney General has gotten a lot of mileage out of ChemLawn's settlement. What kind of long-term negative publicity has it brought to ChemLawn?

A: The New York situation was a political platform by its attorney general. ChemLawn never agreed that we misrepresented anything; the battle had just been going on too long, and we had spent too much money trying to defend ourselves. We provided 60,000 documents, but the situation was going nowhere. So at one point, it was just easier to settle it.

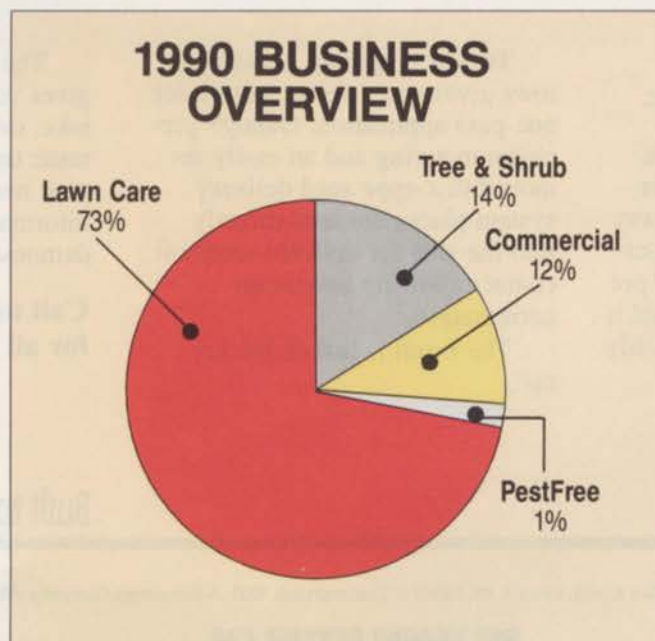
Unfortunately, that thing gets used every year. In essence, it becomes a big political issue. It goes a long way with the environmental issues in the world today. Most of those issues, however, are rehashes of brochures used in 1985-87 and have nothing to do with what we do today or did in 1988-90.

Q: ChemLawn's residential customer base has fallen from 1.7 million at the end of 1987 to 1.3 million at the end of 1990. How does ChemLawn intend to stabilize its residential base?

A: I think people read too much into the fact that our customer base has fallen and not thought about what kinds of customers ChemLawn has.

(continued on page 28)

ChemLawn provides residential and commercial services in 110 major metropolitan markets and 50 franchise locations.



The art of application for maximum germination.

SEED		15	20
TYPE	BRAND		
BENTGRASS	PENNEAGLE	2.0	3.2
	PENNCROSS	1.3	2.0
KENTUCKY BLUEGRASS	ASPEN	.2	.4
	RUGBY	.3	.6
	PARADE	.3	.6
FESCUE	SCALDIS HAWK		.1
	RUBY CREEPER		.1
	GALWAY TALK		.1
RYEGRASS PERENNIAL	PERENNIAL		.3
	DURHAM		.3
MIXTURE	ATLANTA	.2	.3
	OVERSEED	.2	.3



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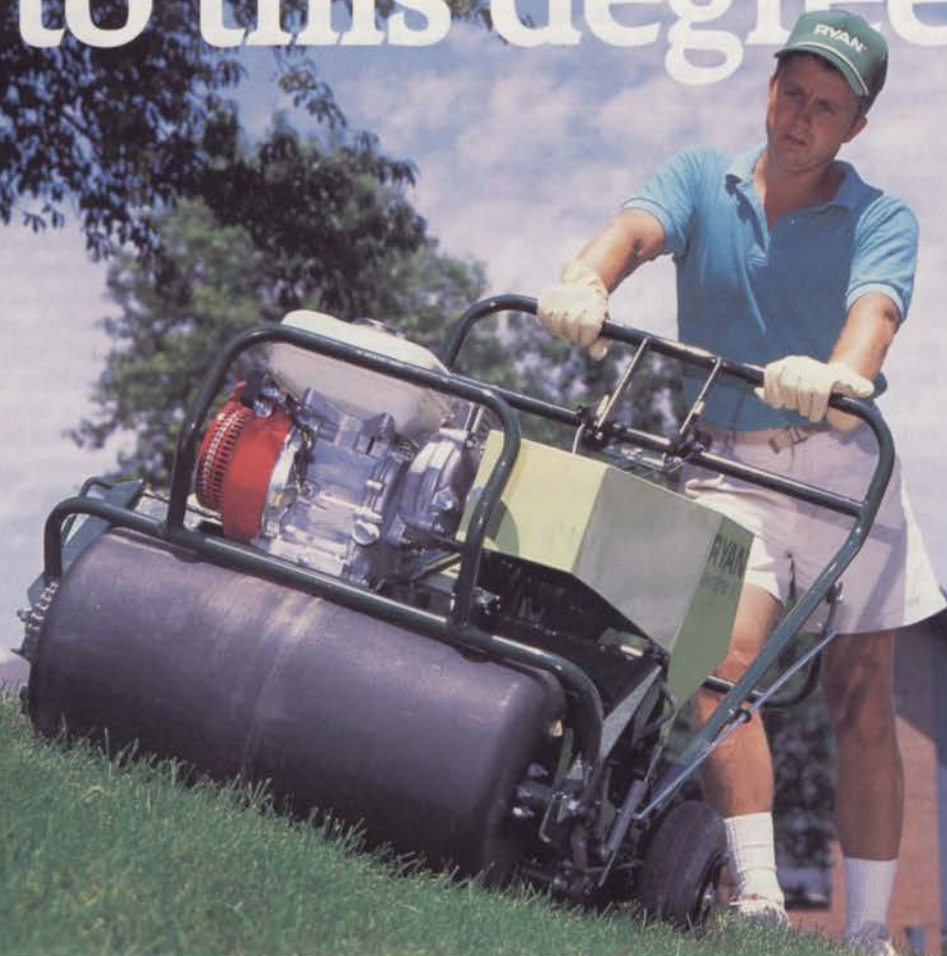
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Clearly the market, the traditional five- or six-round market, has been fully penetrated and as a result, place more pressure on pricing. The consequence of that is more discounting and lower pricing.

Some smaller companies are willing to work for much narrower margins. What we've chosen to do is look at the business and determine if there are an adequate number of people who want the quality of product we are delivering.

Q: Dick Duke set up ChemLawn to be a company based on its people. 'If you teach your people and give them state of the art equipment, they'll take care of the customer.' Did ChemLawn lose its focus in recent years?

A: I've looked at the situation differently since I was not here during that period of time. Whenever markets begin to mature and you're part of an entrepreneurial company, you look at business differently. People are making money and then all of a sudden the market matures, reality sets in and you start realizing that you have to manage the business like a business. You can see that in other businesses besides ChemLawn.

As far as the dictive 'If you take care of your employees and your employees take good care of your customers,' you can't have 8,000 employees or individuals taking care of everybody.

When the business started getting tough eight or 10 years ago, people in the business had to start making choices like where they were going to start spending their money and what they were going to provide. When you start doing that people say 'Well that's not the same company.' And we aren't the same company and couldn't be the same company because competitive pressures are different today.

The business will never be just as it was in the 1960s and 1970s. People started looking at what it was going to cost to run ChemLawn and it was apparent that we couldn't do it at discounted rates and provide the quality service we thought was appropriate. So we had to make a decision: Do we want to stay with lower prices and get rid of some things, or do we want to try and raise the price

and get the mix of customers up to the premium marketplace.

From the margin side the decision was to go this way. So you go from a vision of 2 million customers, and you literally drop 500,000 customers.

Q: It's been four years since Ecolab acquired ChemLawn. When will Ecolab see the fruits of its labor?

A: It may seem like we're working at a slow pace, but it's only because we've been, number one, wrapped up in our strategic positioning and converting customer programs over to our new computer; and, number two, developing a business relationship in which we can begin cross-marketing services with a more effective marketing plan.

I think they should start seeing changes this year. As a company, we've gotten back into explaining the agronomics of the property rather than simply telling customers 'you're on this program or that program.' We haven't been

develop our commercial sales force.

When you're already everywhere in the country with multiple branches the opportunities seem limited, but the growth opportunities have improved significantly in the commercial business.

Q: What kind of promotions have opened up?

A: In the old days the lawn care specialist went out and sold and serviced properties. But ChemLawn being what ChemLawn was, the selling process was really order taking.

Recently we've taken a group of senior specialists and put them through a formalized sales program. Now they are doing a higher percentage of the follow-up calls so leads get followed up by people who have real sales training and an understanding of the selling process.

During part of the year they still go out and do applications and service calls and that doesn't mean

of the old leveraged buy outs and some of the junk bond problems in the marketplace, ChemLawn could have easily been faced with that.

With Ecolab, we had the ability to generate more capital, faster. Ecolab invested about \$37 million in its refocus and rebuild program in 1989. As a result, it wasn't a question of whether or not we had the funding to do these kinds of strategies; we were already pre-funded as a one-time expense.

This way, we're not left saying, 'Gee, it's a great idea, but where are we going to get the money.'

Refocus/rebuild was a very comprehensive business strategy for the 1990s, and it was a strategy that took some time to develop. If you start thinking about computer systems, product positioning, market segmentations and broad-sweeping issues like how and when do I fund it, it takes time to put it into executable paths like we are doing right now.

Ecolab has already made investments upfront in this field. All we're doing now is trying to turn that into good results.

Q: Is there any truth behind First Boston's prediction that Ecolab will turn ChemLawn around or sell it by the mid 1990s?

A: Anytime it's reported that Ecolab is thinking about selling the company, it's always a puzzle that is contrary to world investments and anybody's business sense. Why would you go out and invest \$37 million in a business and sell it? For the quality of business run by Ecolab, obviously every step they take is well thought out. They understand the risks, and they have a strong board so the whole notion that you invest that much and turn around and sell the business is ridiculous.

You can speculate and say if ChemLawn lost \$20 million every year we'd be forced to do something about it. If any company lost \$20 million a year somebody would be forced to do something about it. The reality is that literally isn't the kind of financial woes we're faced with.

I've also seen one report recently that praises ChemLawn for its success. So what do these guys know that the other guys don't know?

Is ChemLawn up to Ecolab's success level? Of course not. Does Ecolab realize in the long

(continued on page 68)

"I don't think there's anything prohibiting us from being successful."

good about developing the features and the benefits of a program.

The more we expand upon our features and recommendations, the more people have comfort dealing with things we are recommending. We're becoming more service conscious and trying to provide more information than recommendations.

Q: What's the average length of stay by a ChemLawn employee?

A: If they've been here two years, they generally stay fairly long. The turnover is in the first three to six months. They ask themselves 'Is it really what I thought it was going to be?' and all of a sudden it starts getting hotter and the work gets a little bit more demanding and the hours get longer and that's where we have the greatest turnover.

It's improved dramatically each year. It's been very hot this year, but people are staying longer. Plus we are doing more and more internal promotions, particularly to

the other guys don't do selling, but their percentage of selling is a lot less.

On the commercial side we have full-time sales people.

Q: Who calls the shots: Ecolab or ChemLawn?

A: Everything we do is ChemLawn driven. Mike Shannon (executive vice president and chief financial officer for Ecolab) was acting president here for two years and there was a lot of interaction concerning business strategies. So much here parallels Ecolab, so it's only natural that there is a lot of potential to interact our businesses.

On one hand ChemLawn is running ChemLawn, but on the other hand, Ecolab is a great partner to have.

If ChemLawn didn't have an Ecolab, we would have had to go to other public markets to raise capital. It would have been much more difficult, and we probably would have paid a much higher interest rate. If you look at some

SELLING YOUR CUSTOMERS A NEW LAWN

Dry conditions and older lawns spell trouble for the lawn maintenance professional. To the rescue: turf renovation with newer grass seed varieties.

By Julie A. Evans



BRUCE BRANHAM likens turf-grass renovation to carpet replacement. Both result from use, abuse and everyday wear and tear. Yet while many people change their carpeting as signs of wear appear, they often are less receptive to replacing their lawns.

"Tell them it's like changing your carpeting. You don't expect your carpeting to last forever, but you do expect your lawn to," he said.

Branham, associate professor in the department of crop and soil sciences, Michigan State University, added that it's easier to sell lawn renovation when there's been extensive damage.

Enter summer 1991. As of mid-August, many areas of the United

States had been classified "extreme" or "severe" drought by the National Weather Service. From the California coast to the New England states, water for lawn maintenance has become a precious commodity in many communities.

This year's dry conditions, following closely on the heels of the 1988 drought, have led many in search of landscaping techniques that minimize water use, including drought-resistant grasses.

Even as weather conditions become more favorable, landscape contractors may find this an ideal time to offer renovation projects.

"We've found that some landscape contractors are expanding

into the turf renovation market to differentiate their services from those who are strictly mowing, and yet not have to invest in the chemical aspect," said Bud Muser, director of customer service for Ransomes, Racine, Wis.

Muser said that renting equipment is an option for landscape contractors with limited capital who want to enter the market.

"The landscape contractor may rent until he develops a demand from customers and the necessary skills. Aeration and overseeding equipment are in the price range of midsize walk-behind mowers, and to purchase that equipment outright is somewhat more difficult to justify than a mower he knows he'll use every day."

The tines in a core aerator remove soil plugs and allow for good seed-to-soil contact. After overseeding, a heavy watering will help to wash seed into the aeration holes and break up aeration cores on the surface. Photo: Cushman Inc.

DEFINITION. Because turf renovation ranges from aeration to overseeding to replacement, a definition may clarify the concept.

John Street, extension agronomist for The Ohio State University, offers a comprehensive definition: "Lawn renovation refers to any practice beyond routine maintenance to improve a damaged or poor quality lawn. Renovation is acceptable for any site that has good drainage and contours, and in which the topsoil is a desirable for grass growth."

According to Street, renovation can be as simple as seeding bare spots or as extensive as overseeding the entire lawn. Lawns that need soil modification or recontouring should be reestablished rather than renovated.

The proper timing of a lawn renovation project is imperative to success. For most of the country, the best time to renovate is mid-August to early September, when weed competition is least intense.

Spring seeding is an alternative in some areas, but success may be hampered by any attempt to apply a preemergent crabgrass or broadleaf weed control.

Dormant overseeding is an

other alternative. This involves seeding in late fall or early winter when soil temperatures are low enough to prevent seed germination. Successful dormant overseeding usually requires a good snow cover to prevent wind or water erosion.

This year, some homeowners may be tempted to delay renovation projects, as they wait to see how much of their turf returns

Older home lawns tend to be more disease and insect prone.

from brown to green. This approach could be problematic, said Jeff Lefton, extension turfgrass specialist at Purdue University.

"My concern is that because the drought hasn't broken, people are going to evaluate their lawns later," Lefton said. "The customer is going to hope that his lawn comes back. Now he has missed the window of ideal time

to seed."

This leaves two options: dormant overseeding or early spring seeding. And if the customer elects to undertake his own seeding project, the landscape contractor should be the first to know, Lefton said. Otherwise, routine spring maintenance could kill off new seed growth.

"If you come back in late March and put down a preemergent for crabgrass control, the grass has not started growing yet. You've just prevented the seed that he's planted from growing properly. You've goofed up."

Bermudagrass and other warm-season grasses need warmer weather to germinate and develop. Late spring or early summer seeding usually works best for those varieties.

GETTING STARTED. An oft-quoted rule of thumb for turf renovation is that if less than 50 percent of a lawn is comprised of desirable turf, total renovation and replanting are recommended.

If, on the other hand, a lawn is made up of more than 50 percent healthy turf, overseeding is advised.

But often the choice comes

down to personal preference and long-term maintenance plans. "If you want to start over completely and kill out everything, then you can make a major difference on how that area will be maintained in the future," said Virgil Meier, turfgrass breeder, O.M. Scott & Sons. "You don't have to worry about the compatibility of old turf with new turf.

"But if you are overseeding into the old turf, you don't have to worry about the soil condition as much. Existing sod helps to protect you. If you're starting out from scratch. The soil is a bit drier."

A soil test is recommended as the first step in a renovation project to determine pH and phosphorous levels. Nutrient deficiencies may have caused the lawn to decline in the first place, according to OSU's Street.

Too often, landscape contractors don't have soil test information at the time of renovation, said Peter Dernoeden, professor of agronomy, University of Maryland. "The problem is that they take the soil test and the turn-around time could be weeks, so they generally don't have the soil test information when they establish or renovate.

LINGERING DROUGHT EFFECTS IN MINNEAPOLIS PARKS

WHILE THE DROUGHT years of 1987-89 may be a distant memory for most people in Minnesota, Minneapolis parks are still suffering from sunburn.

Home to more than 6,500 acres of recreation space, the Minneapolis Park & Recreation Board is conducting a five-year program to restore healthy turf in areas devastated by the drought, according to Mary Maguire Lerman, park board horticulture program coordinator.

"We experienced major turf losses in areas exposed to full sunlight during the drought," Lerman explained. "In many cases, that meant almost total conversion to weeds. So we began a turf renovation program last fall in areas where the turf was more than 50 percent infested with weeds."

The project is one of the busiest fall efforts for the maintenance department, she said. The 170 park properties in Minneapolis provide walking and biking trails, lakes, golf courses, gardens, playground areas and wide open spaces to visitors throughout the year.

FALL RENOVATION PLANNED. Most of the renovation work is done in the fall, because it is the best time to establish new turf in the upper Midwest, according to Lerman.

"Weed seeds stop germinating about Aug. 15. It's easier to establish new turf after that date because the competing vegetation is eliminated," she explained.

Because more turf area was lost during the drought than originally anticipated, what started out as a small project has developed into a larger renovation program.

"Our initial line of thought was to see if we could restore an area by just removing broadleaves. But as we got into the project,

we realized the necessity for a total renovation," Lerman said. "That meant going with a different program to help alleviate the soil compaction caused by the drought and heavy use of the parks."

The board initially tried to control the weeds with 2,4-D alone at three pints per acre, but it wasn't enough in some areas. "If knotweed infested the site it had to be eliminated because of its alleopathic effect on germinating grass seed," she explained.

Control of dandelion, purslane, plantain, knotweed and oxalis, which invaded the parks during the drought, has been difficult.

To alleviate the weed pressure in certain parks, crews treated knotweed-infested turf with Roundup by Monsanto and 2,4-D in late July and early August. They aerated, slit-seeded and fertilized two weeks later.

The maintenance department uses a general seed mix of hearty perennial ryegrass, several bluegrasses requiring low nitrogen, some creeping red fescue and hard fescue to overseed general park areas. A bluegrass/perennial ryegrass mixture is used on athletic fields and a salt-tolerant seed mix is used on areas bordering parkways.

"We favor those grasses which have low nitrogen requirements because we don't have the budget or staff to fertilize enough to maintain grasses with high nitrogen requirements," Lerman explained. "These grasses come from a Canadian source, so they are hearty enough to withstand winter stress and survive on the equivalent of one pound nitrogen released from grass clippings.

"This is just such a big project that we can't do it all at once," she said. "We only have so many staff we can tear away from other work to do the renovation." ■

"The soil test is important because when you are establishing a lawn, it's an ideal time to adjust the pH and bring the phosphorous into balance."

To prepare a soil test, schedule it several weeks prior to renovation and submit the sample to a county extension agent or soil testing lab. Street recommends the selection of 20 to 30 small soil cores, at a depth of three inches, from various parts of the lawn, using a narrow garden tool or soil probe. Mix all samples, air dry and send ½ pint of soil to be tested.

When results are received, adjustments can be made to bring nutrients into balance.

OVERSEEDING. Overseeding, or planting grass seed directly into existing turf, helps to fill in bare spots, improve turf density, establish improved grass varieties or enhance lawn color.

Many older home lawns are typically established with common type turfgrasses which tend to be more disease and insect prone and require higher levels of nutrients. Overseeding offers the opportunity to change over gradually to an improved grass species.

"Overseeding makes it possible to introduce a tougher species that is more resistant to wear and also to introduce a species that is more drought resistant than the lawn is already composed of," Muser said.

"Customers pay for overall lawn maintenance. Unless there is an irrigation system in place and water restrictions aren't too severe, the lawn typically doesn't look as nice as it might. If the contractor can overseed with better grasses, he's going to increase his customer base and thereby build his business."

Overseeding can be accomplished with a slit-seeder or seed can be broadcast with a cyclone or drop-type seeder. Many prefer slit-seeding on established home lawns because it ensures good seed-to-soil contact, and requires less seed than broadcast seeding.

"The slit-seeder is highly efficient to get the job done," said Jeff Mack, vice president of equipment sales for LESCO, Rocky River, Ohio. "It combines the dropping of the seed with slicing of the soil in one operation."

"With the slit-seeder, the chances of getting a good crop are enhanced," said Bob Brophy,

manager, lawn care sales for Cushman, Lincoln, Neb. "Seed is very expensive. If you have a good quality slit-seeder with good placement, you can cut back application rates dramatically. You're cutting seed costs in half."

Brophy added that savings are also realized on the reduced number of recalls to the job site. He offered this analogy: "How often do you see a farmer in today's world going out and throwing his seed around. Planting grass is an advanced form of farming. Farmers don't just go out and throw seeds around. They plant them and grow a good crop. We're trying to do the same thing on a lawn."

Slit-seeders have verticutting blades that cut through thatch and open up a furrow in the soil. Brophy recommended making the passes at a 45-degree angle to each other, leaving a diamond-shaped pattern. This method is fast, and results in seed being placed a maximum of two inches apart.

If broadcast seeding is the chosen method, the soil first must be aerated several times. The tines in a core aerator remove soil plugs and allow for good seed-to-soil contact. After overseeding, a

Extensive damage leads to more sales.

heavy watering will help to wash seed into the aeration holes and break up aeration cores on the surface.

Broadcast seedings are generally more successful when mulched with sawdust, compost or straw, according to Tom Cook, associate professor, department of horticulture, Oregon State University.

Thorough aeration is important because seed can get "hung up" in the thatch layer, preventing it from reaching soil where it can germinate. Grasses such as bluegrass that have a "creeping" growth method work best with broadcast seeding; grass types that do not spread will grow in clumps in the aeration holes.

Other continuing maintenance includes mowing the area regu-



Core aeration brings cores of soil to the surface and prepares the lawn for seeding.

larly at approximately 1 to 1 ½ inches. Mowing height can be raised once the seed germinates, and a nitrogen fertilizer can be applied after several mowings.

REPLACEMENT. If replacement of the existing lawn is the desired solution to maintenance needs, glyphosate (Roundup) should be sprayed seven to 10 days prior to seeding to kill off existing grasses. Under drought stress, however, some weeds may not readily absorb the glyphosate. To get a thorough kill under drought conditions, it's important to stimulate growth with water or fertilizer and stop mowing for a couple of weeks prior to treatment.

Research at the University of Illinois has shown that seeding also can be done one to two days before the Roundup treatment. According to Randy Kane, turfgrass adviser, United States Golf Association, many have experimented with this method since living turf does not tear during slit-seeding operations. When Roundup is applied prior to seeding, decaying turf is more susceptible to tearing and must be replaced by hand or filled with topsoil.

Following treatment with Roundup, seedbed preparation takes place. The lawn should be checked for thatch, and if dethatching is required, a dethatcher or power rake is used.

A dethatcher consists of a series of vertical knives on a horizontal shaft that remove surface debris and thatch. The knives should penetrate into the soil no more than ¼ inch. Dethatching needs to be performed in several directions over the lawn to open the sod and expose the soil for good seed-to-soil contact.

Dethatching takes on special importance in drought conditions,

Muser said. "Dethatchers serve to remove thatch buildup. Thatch buildup promotes shallow roots which make the turf more subject to drought damage," he explained.

If the turf is compacted, aeration should follow dethatching. Core aeration brings cores of soil to the surface and prepares the lawn for seeding. A steel mat or the back of a rake will break up the soil cores.

According to Muser, aeration helps improve water and fertilizer absorption rates. Like dethatching, aeration should be performed in several different directions to ensure good seed-to-soil contact.

Purdue's Lefton recommended a starter fertilizer high in phosphorous and advised against high nitrogen fertilizers. Nitrogen may burn new seedlings or overstimulate the turf.

After seeding the area, seed-to-soil contact needs to be established, typically by dragging the back of a rake over the area. Watering should be frequent (three to four waterings a day) and light.

Rob Zolezzi, vice president, L & L Landscape Services, Santa Clara, Calif., said that most of the company's renovation jobs use the Roundup method. "Generally, when the lawn is bad enough to need overseeding, it's better to kill what's existing, mow it down short, thatch it with a dethatching machine, put down seed and topdress it. On almost all lawn renovations, we kill out the lawn first.

"I think that with the drought, this is even more important. One of the drought recommendations is to keep the lawns weed free, because weeds are drinking the water."

(continued on page 68)

ADEQUATE TO GOOD SUPPLY GREET'S BUYERS' MARKET

Suppliers report average to good supplies for many seed varieties. Prices remain soft and suppliers move to decrease acreages and deplete their carryover stocks.

By Julie A. Evans

PRICES ARE DOWN and supplies are up. That's the general consensus among seed growers this year.

While some seed varieties are in limited supply, the majority appear to be in adequate to good supply. This year's crop, combined with last year's carryover, add up to low to stable prices for most varieties.

"There's more seed than need, particularly for tall fescues," said Barry Green Jr., vice president of sales for Jonathan Green, Farmingdale, N.J. "That's why you're seeing a drop in selling prices. The fields were overplanted for a demand that no one could fill."

In such a cyclical business, the drop in prices is only temporary, he added. "This is going to be the last harvest where there is not a big demand. They are going to plow 40 percent of all bluegrass acreage and a similar amount of turf-type tall fescues. Ryegrasses are already cut down.

"Nobody's talking about putting anything new in. They're talking about how much to plow out."

According to Bill Young, sales manager for Lofts/Great Western, Albany, Ore., prices have declined in all markets, due to overproduction and a greater supply

than demand.

Mike Robinson, president of Seed Research of Oregon, Corvallis, Ore., agreed that prices of some varieties are depressed from last year's figures. "With tall fescue, even though yields are down, there is a tremendous carryover from last year. Because of that, the price of tall fescue is depressed."

Robinson said that prices of perennial ryegrasses are also soft, due to carryover from last year's reserves. Prices for common Kentucky bluegrasses and fine fescues, however, are "on the firm side and moving up daily." In both cases, yields and acreages are down.

Prices for proprietary Kentucky bluegrasses appear to be softer than last year, Robinson said, because there were not as many acres plowed out as with the common, and carryover stocks were considerable.

However, Gayle Jacklin, marketing representative for Jacklin Seed Co., Post Falls, Idaho, estimated that the crop of proprietary Kentucky bluegrasses is 10 percent to 15 percent below original field estimates.

John Zajac, president of Zajac Performance Seed, Haledon, N.J., said that commodity prices

in general are at a lower level than a year ago, due to the recessionary business climate. "Seed is no exception. We expect wholesale prices this year to be stable to negative," he said.

Like Robinson and Green, Zajac noted that older fields are being plowed out to bring supply and demand more in line. "It won't take much to firm prices up again," he said.

BUSINESS CLIMATE. Despite a national economy that limps along, most businesses report that they are hardly affected by the poor business climate.

"Recession? We've heard about it but we've had a wonderful year," Young said. "We look at 1991-92 as being a very good year for us. The cost of seed may be down, but the amount sold is higher.

A slowdown in new housing starts translates into a slowdown in seed sales, said Don Herb, sales manager for Normarc, Tangent, Ore. However, stressful weather conditions in the Northeast and Midwest will contribute to healthy seed sales for turf renovation projects. "Not only lack of rainfall, but extremely high temperatures have led to turfgrass diseases," Herb said.

Robinson said he feels optimis-

Citation II ryegrass seed awaiting shipment at the Wilco seed cleaning facility, Donald, Ore. Photo: Copyright Larry Kassell/Turf-Seed Inc.

tic that seed sales will increase. Like Herb, he attributes some of the anticipated upswing to increased overseeding and turf renovation projects caused by dry weather conditions.

Tom Stanley, marketing manager for Turf-Seed Inc., Hubbard, Ore., noted that during a business slump, it's more difficult to launch a new variety: "There are so many new varieties on the market that it's costly to make an impact with





Harvesting fine fescue in the Silverton Hills, Oregon. Photo: Copyright Larry Kassell/Oregon Fine Fescue Commission.



grass variety, but other varieties are available because of carryover.

According to Turf-Seed's Stanley, yields in the southern end of Oregon's Willamette Valley were more affected by the inclement weather than those in the northern end. Specifically, tall fescue varieties in the southern portion of Oregon's Willamette Valley "lodged," or laid down flat, and did not stress as much as they would have under more ideal growing conditions.

"The lack of stress resulted in fewer seed heads and more leaves," Stanley said. "When laying down flat, it's hard for the seed head to completely pollinate."

Seed heads in the northern end of the Valley had more fortunate weather conditions, he added, where they yielded above average supplies. Even yields in the southern portion of the Valley were average, despite weather conditions.

Robinson noted damage to the fine fescue crop. "We had a cold dry spell in December which did damage to the fescues, and along with that we had a cool wet spring, which contributed to poor yields."

Robinson said that the cool weather didn't affect the perennial ryegrass crop, because seed formation doesn't start until

spring for that variety.

"Perennial ryegrass is an aggressive grass, whereas the fine fescues, if they get cold weather in the fall, that's when they produce most of their seed tillers," he explained.

Herb reported that the proprietary varieties of chewing fescue will be in short supply this year. "The crop seems to be down 25 percent to 30 percent," he said.

Herb said that early bookings on chewings and red fescues are advisable.

Bill Junk, president of Fine Lawn Research, Columbus, Ohio, reported that yields of perennial ryegrass are coming in lighter than anticipated, primarily due to the late harvest. "There's plenty of seed, but we won't have the extraordinary abundant crops we originally anticipated," he said. "Now you're going to see shortages of specific varieties."

Presented below are seed yield reports for various producers. This is not an all-inclusive list of producers or varieties; it is a representation of the 1991 harvest.

JACKLIN SEED. The crop of proprietary Kentucky bluegrasses is approximately 10 to 15 percent below original field estimates, ac-

a new variety, no matter how good it is."

WEATHER REPORT. A cool spring and a wet June delayed harvesting in the Northwest by approximately two weeks. Consequently, those varieties without carryover stocks could see delayed availability.

But suppliers say that the delay is more of a producer concern than a consumer concern. "The har-

vest is not playing as critical a role as it has in the past, because there's seed already in the pipeline," Zajak said.

Although the weather did not affect seed yields across the board, it may have affected some varieties more than others.

Mark Grundman, turf specialist for NK Lawn & Garden, Minneapolis, Minn., said that the weather delayed the availability of Rugby, a newer Kentucky blue-

Kentucky bluegrass seed being brought in for conditioning.
Photo: Jacklin Seed.

according to Jacklin.

Common Kentucky bluegrass is an estimated 30 percent below last year's yields. The lower yield, coupled with a 35 percent to 40 percent plow out of acres between fall of 1990 and spring of 1991, will contribute to price strengthening for the common Kentucky bluegrasses.

Jacklin also reports a potential shortage of 85/80 common Kentucky bluegrass grade.

LESCO. Trailblazer II, a new dwarf, dark green turf-type tall fescue is available in limited supply. This variety has shown excellent resistance to leaf spot, crown rot and brown patch, as well as producing good cold, wear and shade tolerance and excellent drought tolerance, according to Art Wick, vice president of research and development for the Rocky River, Ohio firm.

LESCO also introduced Lancer dwarf turf-type tall fescue, a fine leaf, low growing dark green selection. Limited supply is available for demonstration purposes.

Other introductions include Legacy, a dwarf turf-type perennial ryegrass chosen for its low growth habit, very fine texture and dark green color; and in 1992, Shamrock, a new Kentucky bluegrass hybrid exhibiting improved disease tolerance, dark green genetic color and very dense fine turf with relatively low growth.

VANDER HAVE OREGON INC. The Albany, Ore.-based company reported good yields for its Sapphire turf-type tall fescue, available for the first time this year on the commercial market. Dimension perennial ryegrasses also registered good yields.

Silvana hard fescue, available last year in limited supply, is in its first year of adequate supply. According to Ray Brubakken, general manager, "Hard fescues are selling like hotcakes and yields are down." Therefore, he said, expect prices to remain firm and supplies tight.

FARMERS MARKETING CORP. The Phoenix, Ariz.-based company reported average yields for its bermudagrasses, but total acres



harvested were down. Demand by Japanese for bermudagrass hay has resulted in grass going for hay, not seed, according to Helen Lucas, marketing representative.

Bermudagrass was harvested later this year due to a mild spring and temperate June.

Wholesale seed prices are reportedly much stronger than last year for common bermudagrasses due to little to no carryover inventory and higher grower prices impacted by the strong hay market.

O.M. SCOTT & SONS. "This has been a good year for good yields, so there should be good availability for all varieties," said Virgil Meier, turfgrass breeder for O.M. Scott & Sons, Marysville, Ohio.

This year's harvest marks the first for Aztec tall fescue. Because of the delays caused by rain, Aztec will not be available until spring 1992.

Supplies of proprietary ryegrasses, including Accolade, Loretta, Ovation and Caravelle are "good."

ZAJAC PERFORMANCE SEED.

"Based on early information, there are no disasters and no barnburners," Zajac said.

Perennial ryegrass yields are on the "minus side of average." Supplies of Saturn and Omega II perennial ryegrasses are good, but will be exhausted before the new crop due to high demand, according to Zajac.

Tall fescue yields range from poor to good, depending on location and age of the field. Bluegrass yields look good to average. Liberty Kentucky bluegrass is available in good supplies. Fine

fescue yields are below average, but supplies of low maintenance Vista are adequate.

NK LAWN & GARDEN. Dandy and Target perennial ryegrasses will be in good supply. Both varieties are high in endophyte and show improved drought resistance. Dandy is in its second year of national distribution, and Target is now available in Northeast formulas.

Amigo turf-type tall fescue will be in good supply. Arriba turf-type tall fescue is in its first year of full production, and supplies are adequate. Both are available also in blends.

Supplies of Delray perennial ryegrasses are "very good," while supplies of Pennfine are "adequate." A limited supply of Goalie and NK-200 perennial ryegrasses is available, primarily for the Southeast markets.

Bluegrass yields are said to be "excellent" for Aspen, Adelphi, Freedom, Kelly and Trenton. Rugby Kentucky bluegrass had a "good" yield, but Grundman said that it may sell out during the season due to high demand.

NORMARC. Adequate supplies of Phoenix, Vegas and Austin turf-type tall fescues are reported.

Proprietary chewings fescue will be in short supply this year, Herb said. Chewings fescue crops are down 25 percent to 30 percent due to cool, wet weather during pollination. Bridgeport chewings fescue faces limited supply.

Bargena creeping red fescue is in adequate supply, but if demand increases, supplies could run short, Herb said.

Premier and Barblue Kentucky

bluegrasses are in limited supply, while Barzan Kentucky bluegrass is in adequate supply due to increased production.

FINE LAWN RESEARCH. Chateau Kentucky bluegrass is available in adequate supplies, but overall, premium bluegrasses are going to be in tight supply, Junk said.

Supplies of Flyer creeping red fescue will be adequate for the first time. Perennial ryegrass yields are lighter than expected, primarily due to the late harvest, Junk said. Adequate supplies of Pebble Beach and Stallion perennial ryegrasses are available.

Suprapoa supina, a new species to the United States, is available in extremely limited supplies. The wear-tolerant species is the number one sports grass in Europe, according to Junk. The company also is introducing Camaro chewings fescue in limited supplies.

LOFTS SEED/GREAT WESTERN.

Repell II and Yorktown III perennial ryegrasses yielded adequate supplies. Both varieties are enhanced with endophytes. "As we go along, almost all varieties will be enhanced with endophytes," Young said.

Southshore creeping bentgrass has been introduced and limited quantities are available. Southshore is dense growing and fine textured, Young said.

Rebel II and Tribute tall fescues reached adequate yields.

TURF-SEED INC. Yields of perennial ryegrasses are "above average in the north end of the Valley," Stanley said. However, supplies are somewhat down, due to lack of carryover stocks. In addition

to established varieties Manhattan II, Citation II and Charger, a new perennial ryegrass, Quick Start, is in the startup phase.

Tall fescue varieties, including Monarch, Apache and Olympic, had adequate yields. Two new varieties were introduced: Olympic II, in adequate supply; and Safari, in limited supply.

Average supplies of bluegrass varieties are available, including Columbia and Challenger. Midnight and Blacksburg are in limited supplies, due to increased demand, Stanley said.

Fine fescue crops appear to be light.

E.F. BURLINGHAM & SONS. Pen-nant and Competitor perennial ryegrasses reached adequate yields, as did Falcon, Winchester and Thunderbird tall fescues, according to Mike McCarthy, director of research, Forest Grove, Ore.

Opal and Haga bluegrasses also came in at adequate yields. Production was delayed approximately two weeks, due to weather conditions, but was closer to schedule at harvest time.

JONATHAN GREEN INC. Good yields are reported for two new dwarf turf-type tall fescues, Montauk and Duke. The low-growing, fine-bladed tall fescues exhibit good resistance to pythium and brown patch, Green said. Richmond turf-type tall fescues had a record yield.

Gettysburg perennial ryegrass, introduced this year, had good yields. Sherwood perennial ryegrass, now in its third year, is yielding a consistent 1,000 pounds per acre.

"This year, the yields are basically good. They're good in tall

fescues, not as good in bluegrasses and ryegrasses. There's more seed than need, particularly for tall fescues," Green said.

SEED RESEARCH OF OREGON.

Two new tall fescues, SR 8200 and SR 8300, will be in limited supplies this year. SR 8200 is a low growing, dense tall fescue, developed at Rutgers University in conjunction with the company. SR 8300 is a low growing, fairly dark green variety adapted for the transition zone.

The company has also introduced a new hard fescue, SR 3100,

in limited supply.

SR 2000 and SR 2100 Kentucky bluegrasses are showing limited supplies in their first year of commercial availability. Colonial bentgrass SR 7100 shows potential as a low maintenance home lawn grass, either straight or in mixtures with fine fescues, Robinson said.

GREEN SEED. The crop of Astro turf-type tall fescue has reached anticipated yields, said Ron Goodbub, national sales manager for the Gallatin, Tenn.-based company.

"With prices down, I think we're going to move a substantial amount of product this year."

Goodbub reported that the company is now in the process of "coming onstream with some new turf-type tall fescue varieties." ■

The author is Associate Editor of Lawn & Landscape Maintenance magazine.

Seed field days offered a preview of the year's harvest. Photo: Jacklin Seed.



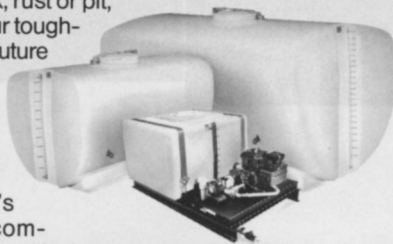
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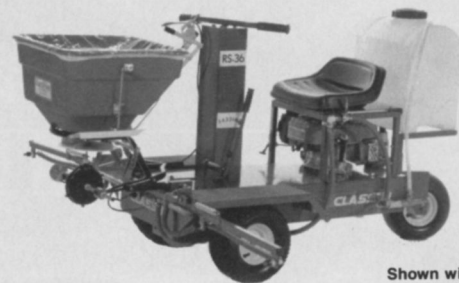
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USE READER SERVICE #10

UNITY IN COMPOSTING

Lawn maintenance professionals generate and compost hundreds of thousands of tons of yard waste each year. How can communities tap these professionals to expand municipal composting projects?

By Jeff Solomon-Hess

WHY REINVENT THE wheel? For more than a few years the traditional scrap processing sector of the recycling market worked to deliver that message to municipalities starting up collection programs for recyclables. It still devotes considerable energies to convincing communities to tap their generations of experience in collecting, processing and marketing recyclables.

With the recent upsurge in legislation banning yard waste from landfills and an increase in yard-waste composting projects, another group — the professional lawn and landscape maintenance industry — wants to lend its expertise in cooperative efforts to divert yard waste from landfills.

The most visible national effort to foster cooperation comes from the Professional Lawn Care Association of America. PLCAA assembled what it calls its Grasscycling Community Action Plan to encourage maintenance professionals and homeowners to take the simplest route to composting grass clippings: leaving them on the lawn.

According to Tom Delaney, director of government affairs for the association, PLCAA distributed some 5,000 copies of the action plan to its 1,500 members, lawn and garden centers and municipalities in the United States and Canada. "We've also received

32 specific requests for the guide from communities and organizations interested in the program," Delaney said.

In addition, seven communities currently operate Grasscycling programs. One of the seven, Salt Lake City, thinks highly of its program, but getting it started took more than a little effort, said Denny Linnell, vice president of LawnLife Corp., Salt Lake City.

"I started to talk to people in the city government about Grasscycling last fall," Linnell said. "I made phone calls to city hall, but nobody called me back. I even sent them the information from PLCAA and still didn't get any response after five weeks."

Then Linnell decided to take a different tack. Instead of trying to talk to the people at the top, he went to the person most affected by the yard waste: the operator of the municipal landfill.

"I called Joyce Leach, the recycling coordinator, and she thought the idea was great," Linnell said. Leach took the idea up through channels and got the right people at city hall enthusiastic for the program.

"After that," he said, "the city formed a committee and got everyone involved in Grasscycling. The best part is that Grasscycling is cheap, easy and the results are immediate."

"We don't really have a way to

directly measure how much material is diverted from the landfill by Grasscycling," Leach said, "because we don't know how many people are actually doing it at this point."

But, she added, there are 31 residential demonstration lawns

and more than 30 commercial demonstration lawns within the city. "We estimate, however, that the average lawn produces about a ton of grass clippings each year."

As a way to promote Grasscycling in Salt Lake City, one of the county commissioners gave it a local twist. He traveled the neighborhoods with a pack of tickets to Utah Jazz basketball games and gave tickets to families he found practicing Grasscycling.

Communities seek the expertise of PLCAA and its members in other facets beyond Grasscycling, said Bob Tracinski, media relations manager for John Deere, Moline, Ill. Tracinski also serves on the public relations committee for PLCAA. He offered Fairfax County, Va., and Milwaukee as two examples. Officials in Fairfax approached PLCAA to help present seminars on handling yard waste. In Milwaukee they got a

COMPOST DIGEST

Is Composting An Option To Open Field Burning?

Composting plant residue after harvest is being researched as an alternative to the turf seed industry's current practice of open field burning.

Art Krenzel, president of Phoenix Industries in Lebanon, Ore., said he completed two successful small-scale demonstrations to that effect and is now seeking funds for a large scale commercial project.

Seed manufacturers burn the straw left after harvest, a technique that has proven to be the cheapest and best method to control disease and weeds as well as to increase seed yields.

The practice has received increased opposition in recent years, particularly, since the deaths of seven people in August 1988 were blamed on smoke which had drifted across the highway from a burning field.

Seed suppliers have been working on solutions to reduce burned acres, including propane burning, but most alternatives have proved costly.

Composting plant residues after harvest instead of burning them and then scattering the compost on the fields would solve the problems, but appears to be more expensive and less effective.

Krenzel said that seed companies such as Jacklin Seed and Davenport Seed are supportive of the project. Contracted seed growers



A recent surge in legislation banning yard waste has forced maintenance contractors to look for alternative disposal sites.

of PLCAA and Grasscycling. But, after hearing a few details of the program he appeared enthusiastic about the concept and eager to explore it in greater detail.

While Grasscycling provides a simple method for diverting the grass-clippings portion of the estimated 32 million tons of yard waste generated each year, it still leaves municipalities and others with the task of handling leaves and brush. For that they need access to composting operations.

It is here that the expertise of lawn and landscape maintenance professionals comes into play on three levels: collection, processing and marketing.

Just as their scrap processor counterparts understand the intricate needs of moving inorganic recyclables from generator to user, so do maintenance operators possess the expertise to make the recycling of organic wastes, par-

little more detailed.

"Milwaukee called a meeting in 1989 to get people from the mowing industry around a table to talk about meeting the state's mandated ban on the landfilling of yard waste beginning in 1993," Tracinski said. "The city wanted

to know how to educate people about the products available to reduce or eliminate yard waste."

The following year, he continued, the county extension office in Milwaukee organized a yard fair to educate people about backyard methods of composting

and to allow manufacturers to show equipment like shredders, chippers and mulching mowers.

As an indication of the long educational road ahead, however, one of Milwaukee's aldermen directly interested in recycling and composting said he was not aware

generally are more receptive than noncontracted seed growers, he added. He expects the majority of seed growers to convert to composting within three years and said that 10 percent of farmers have already committed to major composting demonstrations on their land.

Phoenix Industries, a consulting engineering company, took on the challenge of demonstrating that composting not only solves the air pollution problem of open field burning, but in the long run will be better for the soil and therefore less expensive.

Krenzel said his firm is committed to a successful conversion to a nonburn scenario within three to five years.

Metro Opens Composting Demonstration Centers

Four home composting demonstration centers were recently opened by the Metropolitan Service District, Portland, Ore.

The demonstration centers at Fulton Community Gardens, Clackamas Community College, Portland Community College Rock Creek campus and Mt. Hood Community College are designed to educate the public about composting at home. They feature 13 active home composting systems, self-guided tours and home composting brochures.

Included in the center are a holding bin made from old pallets, a homemade worm bin for composting vegetable and fruit scraps, a wood and wire three-section turning system and a commercially made plastic barrel composter. Signs describing system-specific pros and cons are located next to each compost unit.

Agricultural Compost Turning Japanese

Usuda, a small agricultural municipality in the Nagano Prefecture of Japan, annually produces 400 tons of organic compost from 1,000 tons of food waste.

The town collects the waste wrapped in newspaper or specially marked brown paper bags. Approximately 25 percent of the 32,000 residents take part in the municipal composting program. The rest either compost their own food waste, or send the material to an incinerator.

"We are manufacturers of organic fertilizer, not waste disposers," said Kenzo Kobayashi, a staff member at Usuda's Fertilizer Production Center. "Each resident should be proud to supply raw material and take responsibility for separating refuse in order to produce high-quality fertilizer."

The center sells the compost for approximately \$22 per ton to farmers, but residents receive up to 88 pounds of compost free.

Sludge Compost Renovates Damaged Athletic Field

A large-scale renovation project was recently undertaken by Bill's Nursery, Gettysburg, Pa. The landscape/retail operation was hired to renovate severely damaged athletic fields at Mount St. Mary's

(continued on page 40)

Compost Digest

(continued from page 39)

College in Emmitsburg, Md., according to Mark Himmelreich, general manager.

Himmelreich said that the area initially had the appearance of an old farm field with weeds scattered throughout. "It had a fair amount of dirt and very sparse grass areas."

Prior to hiring Bill's Nursery, the school had fertilized and reseeded to get things growing, but due to poor excavation and poor soil quality, the fields needed more extensive renovation.

The solution: total renovation using a sludge compost.

"The first thing we did was a total kill with Roundup. Then we started bringing in the sludge. We put down 100,000 pounds per acre and spread it approximately one-inch deep," Himmelreich explained.

"The soil was so hard that we brought in a tractor with rippers and went eight inches deep. We went over it in two different directions to make sure it was loosened. Then we brought in a tiller and tilled it up."

Next, Himmelreich said, they raked the fields and prepared to seed. "We broadcast the seed and adjusted for any pH and fertilizer needs. Mother Nature took care of water."

Himmelreich said the job was a success. "The only request they (Mount St. Mary's) had was that it had to be green for graduation. It made it next spring."

Community Garden Makes Compost To Save Money

Ocean View Farms, a 7.5-acre community garden in West Los Angeles, began composting to save \$1,200 per year in landfilling costs for the weeds and plant cuttings removed from the individual plots.

According to an Ocean View representative, 200 gardeners cultivate 400, 225-square-foot plots, making it the largest community garden in Los Angeles.

Randy Ziglar and Warren Miyashiro, composting co-chairmen, said waste hauling four containers per week was the single larg-

est expense at the garden, exceeding even that of water.

est expense at the garden, exceeding even that of water. Through composting, the garden eliminated two of the container pulls per week and expects to reduce the waste load by an additional container per week in the future.

Delaware Markets Its Own Compost: Fairgrow

The Delaware Solid-Waste Authority, Dover, now distributes its own compost product: Fairgrow. The state manufactures the compost from sludge collected at the Wilmington Wastewater Treatment Plant and from organic wastes collected from lawns, gardens and homes in New Castle County.

The state's Department of Natural Resources and Environmental Control approved the product for use in lawn renovation and maintenance, tree and shrub planting, potting and bedding mixes and ornamental mulching. Fairgrow is not approved for use on home vegetable gardens, production of crops for human consumption or for areas where grazing of animals for human consumption occurs.

Delaware markets Fairgrow in bulk and in plastic bags manufactured by Bonar Inc., Burlington, Ontario, from 25 percent post-consumer recycled plastic.

Ohio County Offers No-Cost Composting to Cities

Cities in and around Columbus, Ohio, have an opportunity to get their residents' yard waste composted for free in return for one favor: Cities must find transfer sites for grass clippings, leaves and other yard wastes.

The yard waste would be taken to transfer stations, then on to two composting facilities planned by the Franklin County Regional Solid Waste Management Authority.

The plan is being offered to the cities at no cost; all the county asks is that communities work together to identify logical transfer sites on public or private property.

To date, officials from 10 cities have shown interest in the offer. Others are encouraged to act quickly because the no-cost offer

tip their yard waste for free at the county's compost facility. In 1989, the year of the ILSR study, Upper Township landscapers deposited 2,500 tons of yard waste at the facility. That equaled 15 percent of Upper Township's total waste, ILSR reported.

tip their yard waste for free at the county's compost facility. In 1989, the year of the ILSR study, Upper Township landscapers deposited 2,500 tons of yard waste at the facility. That equaled 15 percent of Upper Township's total waste, ILSR reported. In Cape May County, landscapers tip their grass and leaves for free, but the composting facility charges \$35 per ton for wood waste, said Mary Ann Fieux, recycling coordinator for the county. The facility grinds the wood into four grades of chips and mulch that it sells for \$7 to \$10 per cubic yard.

The policy for landscapers in Wellesley Hills more closely resembles that found in other parts of the country. There, the landscapers pay a lower tipping fee for yard waste than for other waste. "The tipping fee for com-

postable material is \$35 per ton," said Pat Berdan, director of public works for the municipality. "Trash is \$85 per ton."

Berdan estimated that landscapers account for 17 percent of the 3,000 tons of yard waste the facility takes in each year. Amazingly enough, the town collects none of the waste curbside. Residents and landscapers must deliver the yard waste to the composting facility.

Wellesley Hills also developed an entrepreneurially friendly system to facilitate leaf collection. It sells stickers at \$225 each to anyone who wants to collect leaves from residents' lawns during the fall.

A sticker, good for the season that lasts from mid-October to December, once placed on a vehicle allows it to tip as many loads of leaves at the compost facility

won't last forever.

The two planned composting facilities are expected to be in operation by Oct. 1. One of the compost operators is O.M. Scott & Sons in Marysville, Ohio. The other site has not been announced.

Skokie Offers \$25 Rebate On Mulching Lawn Mowers

Skokie, Ill., offers its residents an incentive to mulch their grass clippings rather than bag them for curbside pickup. The municipality pays each resident purchasing a mulching lawn mower \$25, or it pays one-third of the cost of a mulching attachment for the resident's present lawn mower.

In the first year of operation, 400 residents took advantage of the program, and Skokie paid out \$6,000. The municipality raised the funds through its refuse disposal budget, according to Mark Willing, a representative for Skokie.

Garden Council Issues Leaf Recommendations

The Garden Council, Chicago, issued simple guidelines for composting fall leaves. "Leaves need to be removed in the fall to eliminate hiding places for insects and to prevent the lawn from being smothered," according to the council. "When leaves are left for the next spring's clean-up chores, the lawn gets a slow start and may have holes or brown spots which will then require special treatment."

According to Doug Welsh of the Texas Agricultural Extension Service, leaf composting is a simple, four-step process.

First, gather the leaves in a pile and shred them with a lawn mower to promote rapid decomposition.

Second, create a compost area using either a commercially available compost unit or any number of home designs.

Third, add leaves in a three-layer formula consisting of 10 to 12 inches of leaves, one inch of soil and a handful of nitrogen fertilizer per layer.

Fourth, stir or turn the pile regularly and keep it moist.

as possible during the 10-week period.

"The town makes between \$10,000 and \$12,000 per season from the leaf-collection program," Berdan said. And, he adds, more of the landscapers and others collecting the leaves are purchasing leaf vacuums and other special equipment to make the operation more efficient.

Landscapers don't always find a friendly reception when they propose composting to a community. In Newton, Mass., Dan Pellegrino, president of J&D Landscaping, composts the material he generates from his business. But he initially got a cold shoulder when he tried to help organize a larger facility.

"We attended several meetings at city hall to discuss the project," Pellegrino said. A lack of open land, high land prices and the

NIMBY (Not-In-My-Backyard) syndrome raised concerns of trucks traveling in the proposed facility and caused Pellegrino and others much frustration.

"The city is in the process of rethinking it now." He wants to push city officials to get something done, he added.

Tim Doppel, president of Atwood LawnCare, Sterling Heights, Mich., suffered some of the same frustrations as Pellegrino when he tried to get a program started in his community. "There's a head-in-the-sand attitude with very little composting going on," he said. The yard-waste ban begins in Michigan in 1995.

A number of professionals in the lawn and landscape maintenance industry, however, successfully make the lawn maintenance-municipality connection.

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Efforts in Burbank, Ill., Pittsburgh and Columbus, Ohio, stand out as just three examples.

Don Clark and Vincent Cainkar own Composting Corporation of America in Burbank. Earlier this year the company received a \$50,000 grant from the Illinois Department of Energy and Natural Resources, Springfield. The department gave the Round Eight grants a twist when it required all recipients to use some form of recycled content products.

Besides running a Honda dealership and a driving range, the partners operate a nursery — a natural end use for their compost. "We serve 31 communities with a total population of about 420,000," Clark said. "We began taking in yard waste in July 1990." According to Cainkar, the facility took a high of 1,100 cubic yards of material (mostly leaves) per month in October and November.

L&M Lawncare, Pittsburgh, entered into an agreement with seven municipalities with a total population of approximately 30,000 represented by the Council of Governments to operate a pilot composting project. Pennsylvania's yard-waste ban took effect this month.

"We've set aside 2.5 acres where we expect to compost 20,000 cubic yards of yard waste," says David Middlemiss, manager for L&M. The company collects a tipping fee from the municipalities to take the grass and brush. "We're getting about 25 percent grass and 75 percent brush right now," he said.

L&M invested some \$400,000 to set up the pilot project, including the purchase of a shredder and a screener to process the compost. "We plan to use the shredder to turn the compost as well," he said.

If the project goes well, L&M has more than enough room for expansion at its 300-acre facility south of the city.

But an agreement entered into between O.M. Scott & Sons, Marysville, Ohio, and the Franklin County Regional Solid-Waste Management Authority stands to dwarf the projects in Burbank and Pittsburgh. The \$130 million per year company manufactures and sells lawn care products including potting soil, fertilizer and compost under the Scotts and Hypo-nex names.

Franklin County signed a five-year, \$1 million agreement with Scott last month to construct and operate a 22-acre windrow composting facility.

"Our composting facility will turn materials such as grass clippings, leaves, small tree branches, etc., into organic products that will be marketed," said Michael Kelty, vice president of research and development for Scott. The company gets to keep all profits from the sale of the compost.

The county expects Scott to take some 50,000 tons of yard waste annually at a tipping fee of approximately \$20 per ton, according to David Gubanc, chief engineer for the FCRSWM.

The company entered the bid and qualification process for one of two composting sites with several other companies, said George Martin, a representative

Communities need to encourage landscapers to compost waste.

for Scott. (The county intends to open a second site with another contractor on the south side of the city.) Its years of expertise in composting played a large role in winning the agreement, Martin said.

Scott already operates a number of similar composting facilities through its Hyponex subsidiary, Kelty said.

"We compost hundreds-of-thousands of tons of organic material each year," Martin said. The majority of the yard waste now composted by the company comes from municipalities in the Northeast, he added.

Whether a composting project entails 50 tons or 50,000 tons of yard waste, expertise on better ways to handle it exists. All community officials need to do is place a call to a few local, regional or national maintenance professionals to get the flow of information moving. A multibillion dollar industry wants to help. So why reinvent the wheel? ■

The author is Editor of the municipal edition of Recycling Today magazine, a Cleveland-based publication.

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BEYOND YARD WASTE

Product packaging represents a dilemma of recyclability vs. convenience.

By Bob Gitlin

JUST AFTER YOU got done fighting the summer long battle with pesticide critics, just when you're able to assure folks you're composting their yard waste, there may be another mandate lurking. It may not be your fault — it may depend on where you are and what you're buying — but you may be dumpstering, and thus landfilling, an inordinately large amount of trash.

Lawn and landscape maintenance is a packaging intensive enterprise. Everything from heavy equipment to fertilizer to seeds to pesticides comes bagged or boxed in something. Is the industry recycling that waste? Are its suppliers providing more benign materials to begin with?

In communities with active recycling programs, lawn and landscape contractors are able to contribute their share of refuse along with other commercial operations and area residents. For the most part, however, packaging used by lawn and landscape maintenance contractors seems to be thrown away.

Arnie Sieg, vice president of The Bruce Co. of Wisconsin, Racine, has always been on the cutting edge. He speaks with pride of a new operation where yard waste from his and other companies and a few small municipalities is processed into usable compost.

But packaging is largely sent to landfills, he said. His people give glass, tin, aluminum, plastic and paper to Racine and Middleton municipal recycling facilities (MRFs). It doesn't amount



Water soluble packaging is becoming more prevalent. Photo: Ciba-Geigy.

mains plastic.

"Grass seed typically comes in ply-woven bags, and those are thrown away," Sieg said. "Most fertilizer products come in paper, plastic or plastic-lined paper bags, and for the most part, those are simply thrown out too."

Sieg feels his industry has addressed its biggest recycling mandate by instituting composting programs nationwide.

"By far our biggest generation of products or materials to dispose of is not the containers the products come in but the yard waste, which gets into significant amounts of grass clippings, leaves and brush and tree limbs from pruning plants."

The Middleton recycling operation employs a large tub grinder to process the waste. Separated into various categories, it's put in windrows and composted. It's not a lot — but it does represent recycling.

Packaging has yet to achieve that sort of recyclability. But packaging *has* gradually become more convenient, Sieg said.

"The biggest change, which has been a positive one, has taken place over 20 years: switching from metal containers to plastic containers for liquid products. Those metal containers could deteriorate."

The old metal container, if it contained product that took two years to use up, posed greater danger of rust getting into the li-

(continued on page 46)

to much.

Much of the plastic comes from motor oil containers marked "recyclable." Much of the rest comes from such things as soft drink cans. The two towns recycle only newsprint now, so Sieg's people are unable to process their paper bags, cardboard boxes or other paper waste through a recycling operation.

A regular volume of cardboard boxes and bags of various components is tossed. One major throw-

away: plain old plastic trash bags used to pick up litter on work sites.

In terms of sheer volume, lawn and landscape contractors throw away mostly cardboard boxes and fertilizer bags.

Equipment parts are regularly shipped in cardboard boxes, as are some other materials (for instance 20 gallons of Roundup is shipped in a corrugated container filled with individual two-and-a-half-gallon containers). The most insidious throwaway probably re-

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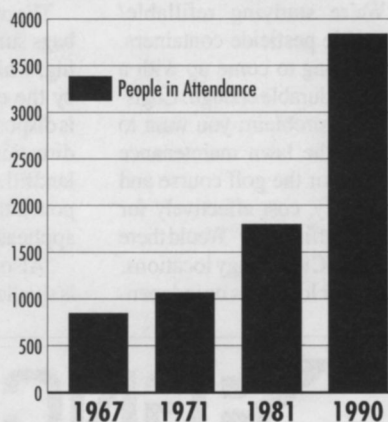
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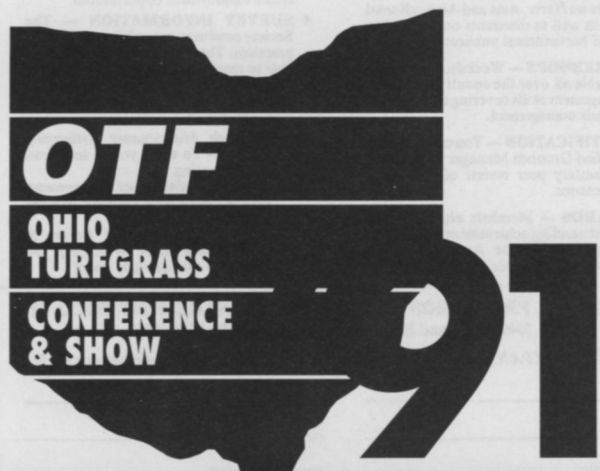
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Yard Waste

(continued from page 44)

quid or liquid being lost due to a leaky seam. Still, most plastics pose the danger of non-biodegradability, he added.

Sieg would love to see refillable containers his people could return for refund. He would also like to see a biodegradable fertilizer sack, but he understands the problem that besets manufacturers: non-biodegradable plastic has the clear demonstrated advantage of strength in holding 50 pounds.

Scott Moffitt, product manager for insect control products at Ciba-Geigy Corp, Greensboro, N.C., has what may be good news to Sieg.

"We're studying refillable/returnable pesticide containers. We're trying to come up with a container durable enough. Logistics are a problem; you want to get it to the lawn maintenance company or the golf course and back easily, cost effectively for refill," Moffitt said. "Would there need to be Ciba-Geigy locations, distributor locations or indepen-

dent agents that would set up stations? That's the dilemma."

Ciba-Geigy has products in place that reflect concern over container disposal, Moffitt said. For instance, Pace fungicide's active ingredients are in a water soluble pouch. Such water soluble packaging is becoming more

for the same amount of active ingredient. We now use less material."

The product itself is being made more concentrated, more able to cover a large area. Ciba-Geigy's Triumph insecticide, Pennant herbicide and Subdue and Banner fungicides all reflect this same

formulate products at high concentrations, so the same volume of product controls more acres. This way, you reduce the packaging at the very beginning," said Doug Jeske, corporate affairs specialist.

Sandoz is looking into putting specialty products into premeasured water soluble bags to offer advantages in terms of convenience to the user, and create safety advantages in terms of reduced exposure to the applicator. Sandoz has also taken the lead in bilingual labeling (see sidebar).

Jon Loft, chief executive officer, Lofts Seed, Bound Brook, N.J., has good news for anyone following the lawn and landscape industry with an eye for recycling inroads. This broad-based operation, with six locations, sells its product in new packaging that "goes away" very quickly.

"We have a biodegradable cotton sack and our boxes that go on the shelves are all made of recycled fiber." These normally get to the lawn and landscape professional in 25- or 50-pound sizes.

(continued on page 48)

A regular volume of cardboard boxes and bags of various components is tossed.

prevalent in the green industry.

The product is shipped with the bags surrounded by foil packaging, which in turn is surrounded by the cardboard box. The box is disposable without any special directions to a hazardous waste landfill. As the product is in a pouch that dissolves. There's no applicator or mixer exposure.

"Also," Moffitt said, "the box is smaller than what we once used

sort of change in their packaging approach, he said. "All our labels are recycled paper, and we use soybean oil ink," he added.

Although Sandoz Crop Protection Corp., Des Plaines, Ill., uses no recyclable materials in its packaging, it's trying to target the landfilling problem through the angle of source reduction.

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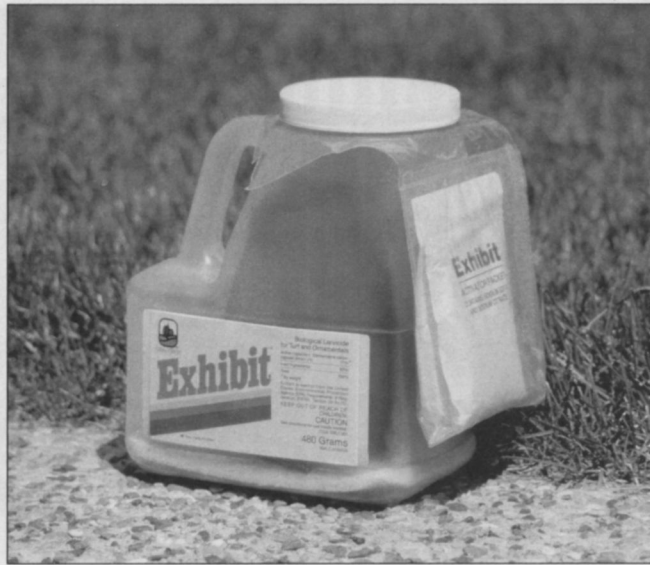
(continued from page 46)

The woven poly Lofts uses for yet other packages is not biodegradable, but is at least made from recycled fibers.

"If we use recycled plastic, paper or cardboard, and we use packages made of cotton and burlap as much as we can and we recycle our grass clippings, we in the lawn and garden industry can do a lot to eliminate garbage," he said.

Cotton packages were instituted at Lofts Seed just this year. Experiments are afoot to go to bigger sizes with woven poly, but concern has arisen about the lower tensile strength of recycled fiber. Lofts began looking at more recyclable packaging about three years ago, prompted by superstores like K-mart and Walmart and by increasingly shrill consumer media.

"The lawn contractors themselves I don't think are that interested in packaging, to be honest," he said. "The retailer is a lot more aware of how the packag-



ing is made and whether or not it's biodegradable. When we had our field day, the lawn industry and landscape operators were much more involved with the contents and concerned with durability of the package (whether or not it's going to break). Paper or cotton is a lot more fragile than woven poly."

Norman Gray Jr., president,

Transit Seeding Inc., Norfolk, Mass., throws away all refuse generated by his burgeoning hydroseeding operation. But the mulch product itself employs a wood cellulose fiber containing recycled newsprint (in one formulation, it's as much as half).

"What we're dealing with is disposal of mesh bags the seed comes in, paper bags the fertilizer

Easier to handle packaging and better label instructions are goals of most manufacturers.


comes in and paper or plastic bags the mulch product comes in. And at this point in time we're not involved in any effort to recycle those bags."

He thinks packaging has gone downhill, if anything.

"I can't give anybody high marks for innovations. I'm looking today at mesh plastic bags for seed that once were cloth. Cloth degrades. Most of what we buy now is the poly-lined paper bag," he said. "One thing we accomplished in my particular specialty business some years ago, we began to have our fertilizer manufacturer process that product at basically double strength and with less filler, so we were using fewer bags."

Once his people got with that program six years ago, they cut use of fertilizer bags in half.


William Davids, executive vice president, Clarence Davids & Co., Blue Island, Ill., reported his employees recycle the card-



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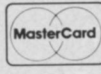
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board packaging surrounding such things as liquid herbicides. Davids' people recycle their used motor oil through a local program in which oil haulers buy it or just take it away. They pitch their paper fertilizer bags in the garbage.

"I think packaging has definitely gotten better," he said. "It seems more convenient. Labels are clear and readable. And I like the products in the new biodegradable plastic bags you just throw in the water and that's it. When I was on the truck, we wrestled with five-gallon metal pails. These new molded plastics are easier to handle."

Stephen Hillenmeyer, co-own-

er and treasurer, Hillenmeyer Nurseries, Lexington, Ky., remembers well the old unwieldy barrels and cans, which required a larger labor force to load and unload, and a constant bracing for lawsuits due to back injuries. He agrees that packaging in the lawn maintenance industry has improved.

His company regularly separates out its paper and plastic and puts them in separate dumpsters destined for a landfiller that also does some recycling of presorted trash.

Big equipment comprises a large portion of trash for maintenance professionals.

Chuck Jacobucci, packaging engineer, The Toro Co., Minneapolis, said most of his product goes into corrugated containers, which contain a component of recycled fiber. He speculated most places around the country have corrugated recycling efforts into which that refuse could be directed.

"We also use a lot of plastic bags. What percentage of those are recycled, I'm not sure. Some communities are recycling plastic and some aren't. But we try to keep away from using excess plastics," he said.

Is there a demand for greater package recyclability?

"Depends on who you talk to. People who set up the product always want less packaging. Some cite worries about cost, saying they need smaller containers so they don't have to pay the shipping cost you get with more packaging to dispose of," Jacobucci said.

He guesses most Toro lawn maintenance customers recycle their corrugated, particularly on the East Coast, where acute landfill shortages have resulted in stringent clamps on what can be thrown into trash heaps. ■

The author is a free-lance writer based in Cleveland, Ohio.

A PACKAGING INNOVATION THAT DOESN'T CREATE GARBAGE

THROUGHOUT THE industry that supplies lawn and landscape maintenance contractors, packaging provides that double-edged challenge: Try to reduce landfilling — but make it easier for them, lest they choose Brand X. The two angles can be at odds.

Some responses to user outcries for convenience, however, seem nothing but overdue and sensible. As a growing labor force of Spanish-speaking people emerges with special needs, companies are re-examining their responsibility to make it easy for the end user. Fully bilingual labels may be the norm in the future.

Pioneering that move is Sandoz Crop Protection Corp. The new labels on the company's full line of specialty products hit the fields in May, after careful consideration of the fact that an awful lot of people who use the product are Hispanics speaking English as a second language (if at all).

"As far as we know, we're the first company in the industry to have labels that have complete versions in both English and Spanish," said Doug Jeske, a corporate spokesman. Up until this point, only warnings were in Spanish.

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USE READER SERVICE #40

USE READER SERVICE #41

THWARTING EROSION IN ITS TRACKS

Slopes, ditches, shorelines, detention ponds and landfill covers are all key target areas for erosion control.

By Mark Ward

THE GOVERNMENT has been concerned about soil erosion at least since 1933, when Congress created what is now the Soil Conservation Service. Though the infamous Oklahoma Dust Bowl is a memory, even today the agency estimates a fourth of the nation's cropland suffers from excessive rates of water erosion.

Stable soil has long been an agricultural concern, but during the 1980s a growing number of lawn and landscape maintenance firms have added erosion control as a service to their customers. Projects have often been subcontracts related to roadway or housing construction. But in recent years, erosion control has also become a service for landscape maintenance and repair.

"Our erosion control products have been on the market for 30 years. But since about 1984 we've seen a real movement in using these products for residential maintenance work," said Larry Wood, product marketing manager for American Excelsior Co., Arlington, Texas.

Wood admitted his company's chief market is civil engineering applications. But he described that segment as a mature market. Today he sees the landscape in-

dustry "growing as fast as any market we've got."

"Erosion control blankets and matting have been used for years in highly visible projects like highways and home developments. Now consumers are aware of the technology, and want their own landscapes protected."

Homeowners are looking for expertise in erosion control—and are willing to pay for it, said Tom Blunk, president of Blunk's Wholesale Supply Inc. Operators who offer the service, he believed, can therefore make some money.

"The dollars to protect a landscape aren't that much, compared to what houses cost today," suggested Blunk, whose company distributes erosion control products nationwide. "Homeowners have so much invested already, they want their properties kept in good repair. Putting erosion control into your service mix is another value-added way to finish off the job."

Both Blunk and Wood claimed erosion control can be performed at relatively high profit margins, compared to other landscape services. "The economics of erosion control are such that the smaller the job, the higher the margin," explained Wood, "and the low-



Super Grow from Phillips 66 was used to stabilize this property in New England. Despite two inches of rain after application, the grass turned out fine. Photos: Blunk's Wholesale Supply.

end market is so under-developed, it'll be at least 10 years before it becomes very competitive."

An obstacle for smaller operators entering the market, Blunk said, is that erosion control blankets and matting have often been available only in quantities suited for large-scale projects. Indeed, he noted about 90 percent of his sales are to customers who use his products in connection with new construction.

But with lower-end uses becoming a significant presence, Blunk said, "We design our products to be sold one or two rolls at a time, and to be affordable one or two rolls at a time." Similarly, explained Wood, American Excelsior sells by the roll "and in response to our landscape industry customers, we're making smaller product versions available for the smaller repair job."

According to Jeff Rodencal,

product manager of Tensar Earth Technology, Morrow, Ga., most landscape firms "enter the erosion control market by working as seeding subcontractors on housing or commercial developments. But once they gain some experience, they start adapting erosion control to others parts of their businesses."

Tensar manufactures erosion control products, and Rodencal admitted that for now "smaller maintenance jobs for homeowners is still fairly peripheral to the market." But he has seen this segment grow, and predicted its popularity will increase. "Erosion control is an environmental issue and, at least in this case, the lawn and landscape maintenance industry is on the right side."

GETTING STARTED. For operators who consider adding erosion control to their service mix, all manu-

(continued on page 52)



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Thwarting Erosion

(continued from page 50)

facturers agreed on one thing: No single product handles every situation. Applications may include slopes, ditches, shorelines, detention ponds and landfill covers. At each site factors such as slope height, soil texture and percolation and water velocity must be considered.

But there was disagreement on how many products operators need in their arsenals to address the erosion control situations they are most likely to face.

"There are three basic steps," said Rodencal, which he described as essentially complementary. "First get the grass started, perhaps with hydroseeding or straw blowing. Next, lay down a degradable organic blanket that stabilizes the area and helps germination. These blankets are often made of straw, coconut fiber and excelsior wood sewn between two polypropylene plastic nettings."

Lastly, for challenging sites with high water flow, a permanent, non-degradable synthetic blanket can be used. So between these products — seeding, organic blankets and synthetic blankets — "you can handle most applications," Rodencal said.

Wood recommended a "starter kit" of five erosion control products: an organic blanket, synthetic blanket, revegetation mat, block revetment mat and silt fencing. Blunk, on the other hand, cited

Weed block and erosion fabrics can create virtually permanent installations.

several variations within each product requiring "about 10 to 15 products for a good arsenal."

But all agreed operators can get started with little investment other than the cost of materials, since no heavy equipment is needed for installation. "You might have to rent a Ditch Witch for a particular job," explained Wood, "but most of the things you need like shovels, rakes and mallets, are already on hand."

According to Wood, material costs range from: 50 cents to \$1 per square yard for degradable blankets; \$5 to \$8 per square yard for synthetic blankets; up to \$1 per lineal foot for silt fencing; and up to \$5 per square foot for block revetment mats. He said these are prices for smaller quantity purchases.

Blunk also noted prices for erosion control mats vary according to thickness. "If it's a residence and you're placing stones by hand to hold down the mat, you might only need a fabric that weighs 3.3 ounces and costs 10 cents per yard. But if it's a construction site with bulldozers going over top, you could need a fabric that weighs 5.3 ounces and costs 15 cents per yard. Overall, you can run the gamut from 5 cents to 50 cents.

Expressing the average retail value of various erosion control methods, Rodencal pegged hydroseeding and straw blowing at 25 cents to 50 cents per yard, organic blankets at 50 cents to \$2 per yard and synthetic blankets at \$3 to \$7 per yard.

GAINING EXPERIENCE. But if operators can muster the capital,

can they also "buy" the product knowledge needed for effective erosion control installations? After all, lawn and landscape maintenance firms build a new service by getting referrals from those first few jobs. With possible disaster as close as the next rainstorm, they can't afford much trial and error.

According to the Soil Conservation Service (Agriculture Information Bulletin No. 513) six major types of water erosion can occur:

- Splash erosion occurs as raindrops break the bonds between soil particles and splash a short distance. The particles are then more vulnerable to erosion by water flowing over the ground surface.

- Sheet erosion can begin when rain falls faster than the soil can absorb it. Water begins to collect and flow over the ground surface, carrying along particles detached by raindrops.

- Rill erosion follows as surface flows establish paths. Water flowing through these small eroding channels, or rills, readily detaches soil from their sides and bottoms. Moving downslope the water becomes more erosive, causing rills to enlarge and join with others.

- Concentrated-flow erosion may be dictated by topography where water tends to collect in new major waterways before leaving the field. Water flows in channels that may range from a large rill to a small gully, and if allowed to continue a gully may form.

- Gully erosion is difficult to control. Soil is rapidly eroded by

water as it gushes over the uphill end of the gully, scours the gully bottom, and removes soil that has slumped from the gully sides. Since the slope of the uphill end is steep, runoff velocity is high. Water is highly erosive so that the gully advances upslope.

- Mass erosion or slumping occurs where a hillside becomes so saturated by water that large areas of soil slide or creep downhill. Gullies can form rapidly in such slide areas.

"Ground cover is the first line of defense against erosion by water," the agency advises, and its effectiveness depends upon many factors: percentage of soil area covered and exposed, density and height of plant canopy, capacity of plants to intercept water, the stage of plant growth and the amount of thatch.

Erosion control is "something that takes time to learn," claimed Blunk. "The place to start is with your trade magazines. Use the bingo cards and build a library of product information. Then when it comes to the job you've got to evaluate factors like slope degree and slope length, soil type and water flow."

Blunk also pointed out operators must ask questions such as: Will the water come over the slope evenly?

Where is the slope aimed? What happens to the water at the bottom of the hill? How much silting is expected? What are the local rainfall patterns?

Operators that perform smaller erosion control projects must put even more thought into their work, said Wood. "On a large roadway or housing construction job, the erosion control techniques you use are specified by the project engineer. But when you're doing work for a homeowner or commercial account, you've got to spec the job yourself."

The bottom line in erosion control, according to Rodencal, is "whether you know how to grow grass. Most lawn and landscape maintenance companies do. There's a learning curve, but you should be able to succeed."

All agreed a crucial factor for entering the erosion control business is selecting a supportive product manufacturer. Especially in the early stages, when operators are still learning yet trying to earn referrals, manufac-

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Thwarting Erosion

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turers and distributors should be willing to coach things along.

"The company should at least have a number you can call for questions," said Wood, "but even better is when they have somebody near enough to come out to the site. Getting good information from the manufacturer or distributor is really key. Installation techniques for erosion control products don't vary so much by site, as they vary by manufacturer."

Another significant factor in selecting products is the manufacturers' delivery terms. Erosion control is "something that, when you need it, you need it now," explained Rodencal. Since mats and blankets are too bulky for storing large quantities, operators must depend upon distributors for rapid delivery.

OTHER CONSIDERATIONS. Terms used in describing various erosion control products include "woven," "non-woven," "geotextile" and "geogrid." Many materials are used in making organic blankets, while synthetic blankets now available have been made from polyethylene, polypropylene and polyvinyl plastic.

"Each manufacturer, of course, will try to sell you on the strengths of their product," Rodencal said.

However, other technologies are used by some operators as part of an overall erosion control strategy.

For example, a benefit of drip irrigation is the system uses less water than traditional sprinklers and eliminates surface runoff. And hydroseeding can be employed to establish vegetation in areas where workers would have difficult footing or accessibility for laying down erosion control blankets.

"Drip irrigation works underground and emits only the water the soil uses," explained Kathleen Baldwin of Olson Irrigation, a San Diego-based manufacturer. "So there's no surface runoff to create erosion problems. Lawn maintenance operators aren't buying drip irrigation specifically for that reason. These systems are fairly new and the industry is now beginning to accept them in a general way. But the ability to eliminate a potential erosion problem is certainly one of the benefits we're selling to operators."

Baldwin sees drip irrigation not necessarily as a replacement for other erosion control measures, but as a complement. There will always be rain, she said, so vulnerable sites will need some anti-erosion product on the surface. But drip irrigation at least eliminates any erosion problems caused by sprinkling.

Drip irrigation is more efficient in establishing the vegetation necessary to stabilize erosion-prone soil, suggested Baldwin. "With traditional sprinkling you water everything, so the weeds as well as the grass get the benefit. But for the most soil stability, especially in high visibility areas, you don't want weeds.

Drip irrigation helps make sure only the desired plants germinate."

Especially on sloped areas where water velocity is low, hydroseeding is a quick and economical method of establishing ground cover, according to Don Sharp, sales manager for Finn Corp., Fairfield, Ohio. Sharp said the costs and labor needed to apply hydroseeding are substantially less than erosion control blankets.

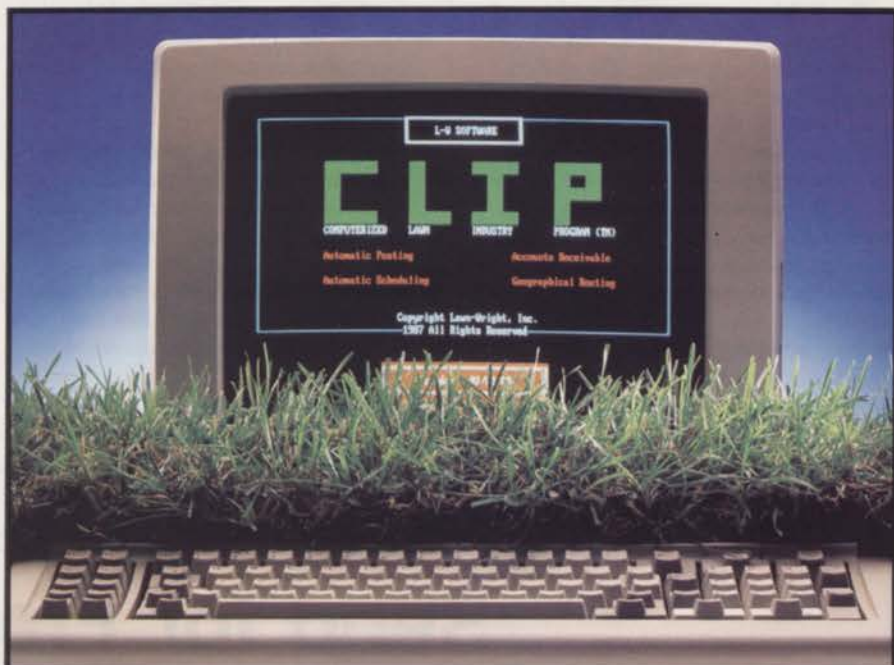
Neil Reinecker, vice president of Reinco, Plainfield, N.J., pointed out "since hydroseeding can be remotely sprayed, it's a good way to seed challenging areas where you'd have trouble sending in crews, either because of

problems with accessibility or footing."

But whatever erosion control strategy they adopt, operators who enter the market now can gain customer goodwill, according to Wood.

"With the public's concern about the environment, states and towns are waking up to the problem. Someday soon erosion control is all going to be legislatively mandated. You can still get in on the ground floor — and that's better than waiting, and being dragged in kicking and screaming later." ■

The author is a free-lance writer based in Schroon Lake, N.Y.



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USE READER SERVICE #42

People

RANSOMES PLC, Ipswich, England, has appointed **Irvin Aal** to the newly created position of president, Ransomes America Corp.

Aal's past management experience includes vice president of Sperry New Holland, president of International Harvester's Agricultural Equipment Group, president/CEO of Steiger Tractor Inc. and CEO of Phoenix International Corp.

Jim Wilkinson was named president of Lawnmark. Wilkinson joined the company in 1990 as chief operating officer. Company founder **J. Martin Erbaugh** is chairman of the board of directors.

Donald Myers is Nor-Am Chemical's new project manager, responsible for the field development of potentially marketable products for use on field crops and turf and ornamentals. He is located at corporate headquarters near Wilmington, Del.

Prior to joining Nor-Am, Myers was a senior scientist, fungicides and most recently manager, wood protection research,

for Maag Agrochemicals, Vero Beach, Fla.

Nor-Am also appointed **Christopher Leake** to group leader, environmental sciences. Previously, Leake worked in the senior principal scientific offices of Schering Agrochemicals Ltd., Essex, England.

Joe Jacobson has been named regional sales manager for Olathe Manufacturing, industrial products division.

Jacobson's responsibilities include sales of Olathe tub grinders and heavy-duty chippers that are used in the recycling and waste reduction markets, including lawn maintenance.

Miroslav Jiranek has joined Turf-Seed Inc. as marketing representative in the upper Midwest and Northeastern United States, and internationally to Europe, Japan and other foreign markets.

Jiranek assists distributors with marketing and field technical questions from turf-grass managers and sod producers in his territory.

James Kelley has been named distribu-



Jiranek



Carothers

tor product and program manager for Southern California by the contractor and commercial divisions of Rain Bird Sales. He is responsible for increasing distributor and contractor knowledge of products and marketing programs.

Kelley joined the company in 1988, serving most recently as an inside sales representative.

Also at Rain Bird, **Sharon Carothers** has been appointed district manager for Florida Lawn Line accounts by the contractor division of Rain Bird sales. Previously, Carothers was the district sales manager for Century Rain Aid's southern region. ■

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Products

CIBA-GEIGY introduces Exhibit, its first biological, nematode-based larvicide.

Exhibit is formulated with a naturally occurring species of beneficial nematodes that coexist in the ecosystem with wildlife, beneficial insects, domestic animals and humans.

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The nematode enters a host pest through a body opening and releases a deadly bacteria directly into its blood system. The host pest dies within 48 hours, and nematodes develop rapidly and reproduce.

The cadaver fills with juvenile nematodes, which then leave and seek out a new host. The juvenile nematodes die if they cannot find a host within 14 days.

Circle 126 on reader service card

The new Hydrosense system for light commercial mowers uses hydraulic tech-

PRODUCT SPOTLIGHT

RECYCLING SYSTEMS introduces the RSI commercial tub grinder. The grinder processes a variety of organic waste, including brush, limbs, small stumps, bark, yard waste and demolition debris at output levels up to 40 tons per hour.

The unit features a hydraulic tub tilt for easy access to the hammermill and quick clean-out of material and debris. The portable tub also features fold-in flare sections, making the unit legal width for highway transport.

Circle 125 on reader service card

nology to provide drive traction and steering for commercial walk-behind and riding mowers.

The system, from **TRW Ross Gear** division consists of two wheel mounted TRW torquemotors, one fixed displacement load sense pump and a load sensing, pressure compensated directional valve. By direct mounting the pump to an engine with a horizontal crankshaft, the need for a belt drive is eliminated.

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variable speeds, progressive control for low speed and maneuvering operations, low operating noise levels and lower fuel consumption.

Circle 127 on reader service card

The Sure Pour II nozzle from **Vemco Inc.** is designed to make refueling small gas engines safer, cleaner and easier. The nozzle shuts off automatically when the tank is full.

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Circle 128 on reader service card

Petrolon Inc. offers Slick 50 engine treatment. The product is formulated to reduce engine wear at start-up and improve fuel economy.

The engine treatment bonds polytetrafluoroethylene, or PTFE, resins to internal mechanical engine parts to generate full-time lubrication. One quart of the treatment coats moving engine parts and protects and lubricates the engine for more than 50,000 miles.

Circle 129 on reader service card

Synoptic Systems introduces Lbase, a complete landscape management software system. The software is designed for single user or network IBM compatible personal computers. It features integrated estimating, accounting, job costing, payroll and equipment management modules, which may be purchased together or separately.

The system runs on any IBM-compatible computer with a hard disk and 640K RAM.

Circle 130 on reader service card

Calhoun Manufacturing Co. offers the TRAK replacement seat cover for most riding mower pan-style seats.

The vinyl seat covers are available in four sizes. Sizing, installation instructions and product information are included.

Circle 131 on reader service card

Riverside Simazine 90DF from **Terra International** is a water dispersible granule for control of many annual grasses and broadleaf weeds. The product disperses in water to form a spray which may be applied by air or ground. Because it's dry-flowable, it can't freeze or settle out in storage.

The product controls 45 annual weeds, including annual bluegrass, annual ryegrass, crabgrass, nightshade, pigweed, ragweed, smartweed and witchgrass.

Circle 132 on reader service card

Ransomes has added a hydrostatic midsize mower to its line of Bob-Cat mowers.

Features include tracking adjustment, blade brake and zero turning radius. The mower is available in 54- and 61-inch cutting widths and offers forward and reverse

(continued on page 60)



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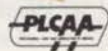
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Products

(continued from page 58)

walking speeds of up to 6- and 2-mph., respectively. Three models are available, powered by a choice of Kohler 18- or 20-h.p. engines.

Circle 133 on reader service card

Precision Metal Works has introduced the Mule-3000, a maintenance utility lift for equipment. The lift raises to a height of 31 inches and has a 3,800-pound lifting capacity. Removable center plates provide access to the underside of the equipment and allows for service of 3- or 4-wheeled equipment.

Mule-3000 has three safety stops and a hydraulic flow device for operator safety.

Circle 134 on reader service card

The new leaf mulcher kit from **John Deere** turns commercial mowers into leaf mulchers. The kit is placed in the mower discharge opening and secured with a single bolt.

The attachment holds dry leaves in the mowing chamber as cutting blades chop

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FYI

Agency invites clients to network. The Pancoast Concern Ltd., a public relations and advertising agency, offers a brochure, "An Invitation to Join Network Green." The informal network helps green industry clients share marketing ideas.

Circle 144 on reader service card

Publication details chemical storage options. Safety Storage has published a guide to its line of chemical storage buildings and lockers. Included are product dimensions and capacities, and standard and optional features.

Circle 145 on reader service card

Build your own pesticide storage system. "How to Build Your Own Integrated Pesticide Storage, Mixing, Recycling System," by Frederic Haskett, is a guide to constructing a facility to store, handle, mix and recycle pesticides and fertilizers.

Circle 146 on reader service card

"Grass Heals the Scars of Man." This 16-page environmental guide from Turf-Seed Inc. describes the environmental benefits of turfgrass and explains the characteristics of five cool-season species, as well as wildflowers.

Circle 147 on reader service card

Video targets crabgrass control. The Hoechst-Roussel Agri-Vet Co. offers a 10-minute video that features crabgrass control strategies using Acclaim IEC Herbicide.

Circle 148 on reader service card

John Deere offers video operators manual. The 20-minute video on commercial mower safety and preventive maintenance can be used as part of a safety workshop. A voice-over announcer prompts the presenter on when to stop the tape for review.

Circle 149 on reader service card

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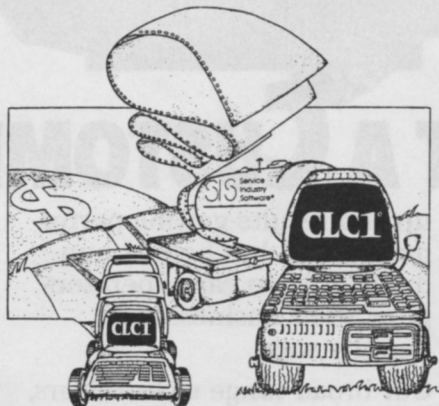
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Products

(continued from page 60)

them into tiny particles. The particles are then blown onto the turf where they deteriorate quickly to avoid thatch buildup.

The attachment can be added to such John Deere commercial mowing machines as the 48- and 54-inch walk-behind mowers, and the mowing decks of F710 and F725 front mowers.

Circle 135 on reader service card

Hunter G-type gear-driven sprinklers are now available with low angle nozzles and optional drain check valves.

Check valves help to conserve water and reduce erosion on slopes. Model PGP

pop-up can check up to 10 feet in elevation change; Model PGS shrub head can check up to 12 feet.

Low angle nozzles are designed for use in heavy wind areas, on slopes and banks and in greenhouses. The nozzles apply water with a 13-degree trajectory. The radius can be varied from 22 to 44 feet.

Circle 136 on reader service card

Honda has introduced a self-propelled, two-stage HS828TAS snowblower with a hydrostatic drive system.

Powered by an 8-h.p. Honda four-stroke commercial engine, the snowblower clears a 28-inch path and throws snow up to 49 feet, depending on snow conditions.

Standard equipment includes a 120-volt

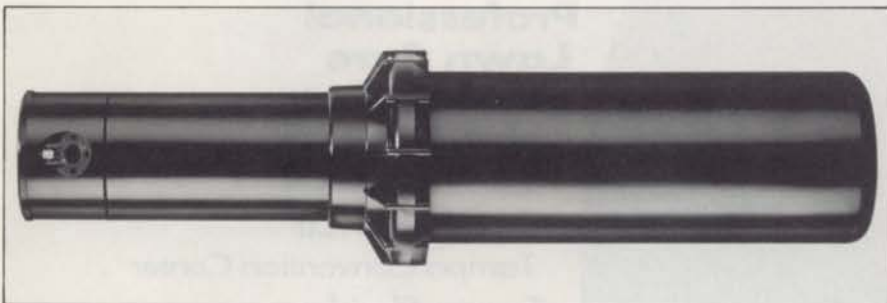


electric starter and recoil start. One hand operation with integrated drive and auger clutch controls leaves the other hand free to make discharge chute and speed adjustments.

Two-way adjustable discharge chutes with a 210-degree discharge radius allow the operator to choose a variety of directions for discharging snow. A new serrated auger with all-metal housing cuts through hard-packed snow.

Circle 137 on reader service card

(continued on page 64)



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USE READER SERVICE #47



"In today's economy, any edge in efficiency is money in the bank."

"To be competitive in this marketplace, you have to cut operating costs without cutting service. Our customers are cost-conscious, so we have to manage our business better." George and Patricia Morrell own and operate one of Atlanta's largest landscape maintenance firms. They have owned Isuzu trucks since 1985.

"After the first two or three Isuzu trucks we were hooked. Our mechanics told us these trucks were simply built better. Our Chevrolets are about the same age and they're literally falling apart.



With Isuzu trucks we've had no major problems. The mileage is twice what we were getting with other trucks. And the employees aren't tearing them up. They're solid, quality trucks. The difference in initial cost is paid back ten times over during their life.

"No matter what the competition does, we feel that as long as we keep buying Isuzu trucks and managing our people well, we'll continue to grow."

To find out where you can get the Isuzu Truck edge, call (800) 255-2550.



USE READER SERVICE #22

Works for the Morrells.



Products

(continued from page 62)

Margosan-O botanical insecticide from **Grace-Sierra** is now available to professional growers in 38 states on the East



Coast, in the Midwest and Southwest.

The neem-based insecticide makes sprayed plants unpalatable to insects. If insects come in contact with Margosan-O treated plants, it inhibits their ability to molt and lay eggs, and can kill them.

Circle 138 on reader service card

Epoleon offers Epoleon N-100, a biodegradable deodorizer for turf insecticides and pesticides and organic fertilizers. The product is designed to dissolve and neutralize obnoxious gases by reacting to both acidic and alkali odors.

It can be mixed with pesticides or used alone when diluted with water. The product will not harm birds, animals, fish or humans, according to the company.

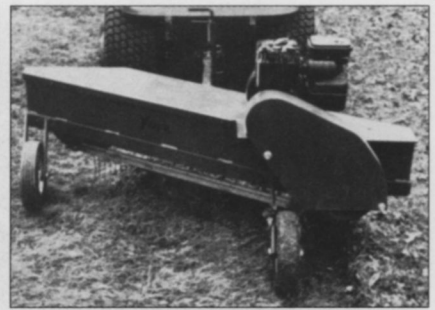
Circle 139 on reader service card

The Living Fence from **Barrier Concepts** is a hardy, rapid-growing plant that provides an alternative to wire, wood or block fences. The hedge acts as a barrier, with 3- to 5-inch thorns and a system of stout stems.

The plant produces white spring blossoms and offers aromatic fruit in the fall with year-round greenery.

Circle 140 on reader service card

An improved version of the Model LFT lawn rake from **York Rakes** is designed to remove lawn thatch without damaging



grass roots. It clears a three-foot wide swath in a single pass and is angled to discharge material to the right in continuous windrows.

Circle 141 on reader service card

Briggs & Stratton announces that its new 3.75 Sprint engine offers a mechanical compression release. The new feature is designed to produce quieter operation and more power.

The engine also features the new Prime 'N Pull easy starting system for one pull starting.

Circle 142 on reader service card ■

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Figure your savings at the new lower price. Then see your dealer or retailer to save on Roundup.



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USE READER SERVICE #15

Product Profile

HOW A ONE-MAN LAWN SERVICE KEEPS AHEAD OF COMPETITION

DALE WOJTASEK BELIEVES the lawn maintenance market is pretty well saturated. Yet, after six years in business, he has all the business he can handle.

He started Wojtasek's Mowing & Tilling Unlimited to fill in his off-duty hours as a Lincoln, Neb., fireman. For awhile, he offered mostly mowing and tilling services along with small landscaping jobs. Three years ago, he added lawn aeration to his service list and now aeration is generating about 75 percent of his business income.

After researching the market, Wojtasek decided on a Ryan LA 28 aerator. He liked the professional looking job it did, as well as the speed of the unit.

"I think it works faster than anything on the market," he said. He did one 40,000 square feet acreage in less than 30 minutes. "The owner was so amazed, he walked over the area to make sure I hadn't missed any of it. When he realized it was all done, he asked me to come back and do it again next spring."

Wojtasek's aerating jobs almost always result in repeat business, as well as generating new business in the same neighborhood. "I get a lot of notice when I'm working and the cores are flying, and many times neighbors will come over to inspect the job after I'm done. Frequently, they want me to come back and do their yard, too."

Last summer, Wojtasek worked in one housing area for nearly three weeks, mostly following up on referrals. "I could hardly get out of the area," he said, "and there were two other people living in the same area that were offering aeration services."

Wojtasek usually asks customers to water their lawns for 30 to 45 minutes before he aerates. He said the ideal is when homeowners water in the morning before he aerates in the afternoon. "It really makes it work slick, although it causes me extra work to clean up the machine afterwards."

He asks customers to flag their own sprinkler heads before he aerates. In one month last summer, he did 40 yards with sprinkler systems and hit only one head. "That was my own mental lapse," he said. He won't take responsibility for repairs if heads aren't flagged, or if the irrigation



Dale Wojtasek started his mowing and tilling business to complement his off-duty hours as a fireman. Today, aeration comprises about 75 percent of his business income.

lines aren't buried deep enough. "But, I always try to watch out for either problem and most often I can avoid hitting them."

Wojtasek learned how to achieve the most efficient coverage in the least time. Usually, he works around the yard in continuous circles, minimizing the number of times he has to stop and raise the unit.

"I've gotten so I can raise it on the go when necessary. That way, I can keep traveling and don't waste a lot of time stopping and turning. If I can save a few seconds on each swath, by the end of the day I can almost do another yard."

Wojtasek is a strong believer in equipment maintenance and does most of his own. "At the end of the day, it's always tempting to put the machine away and clean it off 'tomorrow,' but I don't do it. I clean all the mud off, spray silicone on the chains, lubricate it and check the tires. I also spray silicone on the exterior surfaces and blow them dry with an air compressor, to keep the machine looking like new."

In fact, his aerator is often mistaken for a brand new machine. He said the appearance of his equipment sells business for him. "When it looks professional, people expect it will do a professional job. The looks of my equipment are tremendous selling aids; I've had customers tell me that time and time again."

"The owner of a \$175,000 home doesn't like a greasy, junky-looking machine parked in his driveway."

Wojtasek also makes it a point to clean up after his work. He carries a push broom and sweeps cores off drives and walks after aerating.

"Customers don't like to have to clean up after a hired job, so they appreciate it when I do," he said.

While Wojtasek used to haul away clippings after he mowed, this year he purchased four mulching mowers; eliminating the clippings problem.

He also switched from using a standard-sized pickup to a more compact, three-wheel Cushman Haulster vehicle. After the company lengthened the dump box for him, he added a special box insert just for hauling clippings.

But the smaller vehicle has plenty of other advantages, too, like better gas mileage, lower maintenance costs and much lower insurance costs. "I don't give up anything for speed, either, because most city speed limits are 40 mph or less, so I don't have any problem keeping up with traffic."

Wojtasek said he isn't really aiming to expand his business. His two young sons sometimes help him with mowing in the summer, but during school he's strictly a one-man operation.

With his equipment selection and the way he keeps it up, Wojtasek keeps as busy as he wants to be and then some. "I don't often turn down work, but sometimes the days get to be pretty long." ■

Calendar

SEPT. 15-17

30th Annual Alabama Turf Conference, Auburn University Conference Center, Auburn, Ala. Contact: Dr. Coleman Ward, 205/844-5475.

SEPT. 16-19

Northwest Turfgrass Conference & Exhibition, Couer d'Alene, Idaho. Contact: NTA, P.O. Box 1367, Olympia, Wash. 98507; 206/754-0825.

SEPT. 17-19

Virginia Tech Turf and Landscape Field Days, Virginia Tech Campus, Blacksburg, Va. Contact: J.R. Hall III, 703/231-5797.

OCT. 2-3

Southern California Turfgrass Expo, Orange County Fairgrounds, Costa Mesa, Calif. Contact: Chuck Wilson, Southern California Turfgrass Council, 26442 Vera Cruz, Mission Viejo, Calif. 92691; 714/951-8547.

OCT. 2-4

Interstate Professional Applicators Association, Annual Convention and Trade Show, Red Lion Hotel, Portland, Ore. Contact: John Landon, 503/656-2656.

OCT. 3-6

Plantec '91 International Horticultural Exhibition, Frankfurt Fair and Exhibition Center, Frankfurt, Germany. Contact: Messe Frankfurt GmbH, Ludwig-Erhard-Anlage 1, 6000 Frankfurt 1; (069) 75 75-0.

OCT. 11-12

1991 New Mexico Association of Nursery Industries Horticultural Trade Show, Albuquerque Convention Center, Albuquerque, N.M. Contact: Dianne DeAngelis, P.O. Box 667, Estancia, N.M. 87016; 505/884-7441.

OCT. 13-16

Florida Turfgrass Association Annual Conference and Show, Prime Osborn Convention Center, Jacksonville, Fla. Contact: FTA, 302 S. Graham Ave., Orlando, Fla. 32803; 407/898-6721.

OCT. 17-18

Xeriscape '91 — San Diego Style, San Diego Convention Center, sponsored by Cuyamaca College Botanical Society and the San Diego County Water Authority. Contact: Jan Tubiolo, Cuyamaca College Botanical Society, 2950 Jamacha Road, El Cajon, Calif. 92019; 619/443-1756.

OCT. 19-22

American Society of Landscape Architects Annual Meeting and Educational Exhibit, Kansas City Convention Center, Kansas City, Mo. Contact: ASLA, 4401 Connecticut Ave., NW, Fifth Floor, Washington, D.C. 20008-2302; 202/686-ASLA.

NOV. 5-8

New York State Turfgrass Association, Turf and Grounds Exposition, Rochester, N.Y. Contact: NYSTA, P.O. Box 612, Latham, N.Y. 12110; 800/873-TURF.

NOV. 10-13

The Irrigation Association International Irrigation Exposition and Technical Conference, Convention Center, San Antonio, Texas. Contact: IA, 1911 N. Fort Meyer Drive, Suite 1009, Arlington, Va. 22209-1630; 703/524-1200.

NOV. 12-13

Indiana State Lawn Care Association Conference and Trade Show, Indiana Convention Center and Hoosier Dome. Contact: Robert Andrews, ISLCA, P.O. Box 481, Carmel, Ind. 46032; 317/575-9010.

NOV. 18-21

Green Industry Expo '91, sponsored by ALCA, PGMS and PLCAA, Convention Center, Tampa, Fla. Contact: GIE, 1000 Johnson Ferry Rd., NE, Suite C135, Marietta, Ga. 30068-2112; 404/973-2019.

DEC. 2-5

Ohio Turfgrass Conference and Show, Cincinnati Convention and Exposition Center. Contact: OTF, 2021 Coffey Road, Columbus, Ohio 43210; 614/292-2601.

DEC. 2-6

"Your Home Turf," The Michigan State University Turf School, East Lansing, Mich. Contact: Dr. Frank Rossi, 517/353-0860.

DEC. 3-5

Rocky Mountain Turf Conference, Currihan Hall, Denver, Colo. Contact: Rocky Mountain Turfgrass Association, P.O. Box 903, Parker, Colo. 80134; 303/688-3440.

DEC. 5-7

TCI Expo '91, Ohio Center, Columbus, Ohio. Contact: Tom Clancy, 800/733-2622.

JAN. 13-16

32nd Virginia Turf and Landscape Conference and Trade Show, Richmond, Va. Contact: Randeem Tharp, 804/340-3473. ■

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USE READER SERVICE #56

ChemLawn

(continued from page 28)

run ChemLawn has the potential? Yes. So our challenge is to get it up to the same level Ecolab enjoys.

In 1985, as part of its strategic plan, Ecolab was looking for an advantage to get into residential services. It took them until 1987 to find ChemLawn. When you go to that much effort and make a multimillion dollar investment, it's not something you jump in and out of in a year or two. You believe the strategy is sound, you stay with it, you work the strategy, you fix the tweaks and you keep moving along.

It's my expectation that there is nothing here that is going to stop us from doing the things that we would like to do.

Q: Describe your relationship with Michael Shannon.

A: I think Mike's vision, and part of my coming here, was to say 'I know how to carry out that vision.' I'm not too different from Mike. Mike's intention was never to run ChemLawn.

He's just a phone call away and usually comes down here fairly frequently. He still has a lot of interest and a lot of interesting insights into the business. Plus he's a good person and a good connection to the opportunities ChemLawn can achieve with Ecolab, particularly in the

commercial industry. He brings a lot to ChemLawn.

Q: What about talk of a ChemLawn name change?

A: We have looked at the issue and are balancing the equity of what we have in a name and the fact that over a million customers know us as ChemLawn. With such high customer awareness, can we make it in the market place if it wasn't ChemLawn? With the research we have done in the last year or two, there's no benefit in changing the name.

In the long-term, if we find something that better represents who we are in the sense of products and services, then it would make some sense.

Q: How can a company the size of ChemLawn instill customer service values in each and every employee?

A: There are two ways to do it. When you hire people into the organization, they really have to believe that service is their number one priority. You have a clear understanding of what you want and that you can provide it with the right people. You pay more for these people, but we attract a different quality of person.

We have management built into the organization and field service managers to work with the people and check for quality. We have that consistent message there all the time. And that brings quality.

But we also offer a range of products that have their own quality assurance.

Q: What about the future of lawn care?
A: I don't think there is anything out there that prohibits us from being successful. We're just entering a different level of complexity.

Our computer system will be programmed to deal with it and produce information in a way that our specialists can look at it and determine what needs to be done to an individual property.

Legislatively, it would be nice if the states accepted more responsibility, but, other than that, I think we've got all the abilities to continue to grow in our level of expertise and knowledge in the lawn care industry. Although I don't think the lawn care industry in the long term is the only business for ChemLawn; it's clearly our direction to broaden our present services.

The only consolidation we'll see is companies who have not been successful looking for partners and hoping to find a way to become successful. There aren't any large consolidations of companies that will even begin to rival half the size of ChemLawn, much less the size of ChemLawn, especially if they stay focused in a more narrow part of their business offerings. ■

The author is Editor of Lawn & Landscape Maintenance magazine.

Turf Renovation

(continued from page 31)

SEED SELECTION. The investment in new seed varieties pays off by reducing fertilizer, water and pesticide consumption. Seed selection remains highly influenced by regional and maintenance factors.

Cool-season grasses, including Kentucky bluegrass, perennial ryegrass, bentgrass and fine fescues, are used primarily in western, northern and eastern areas of the United States, according to the seed experts at NK Medalist, Minneapolis, Minn.

These grasses tolerate moderate summertime temperatures, but also survive severe cold associated with northern winter conditions.

Bluegrass is still the seed of choice for many lawn applications in the Midwest and Northeast. With their underground stems, bluegrasses form a low-growing, dense turf that resists tearing.

The ability of perennial ryegrass to establish quickly in competition with other grasses and weeds makes it a popular choice for turf renovation, said Tom Stanley, marketing manager for Turf-Seed Inc., Hubbard, Ore. A perennial ryegrass/Kentucky bluegrass mix provides a healthy turf that resists damage from drought, stress and traffic.

The fine fescues are the most shade

tolerant of all turfgrasses. They tend to perform best in the northern half of the United States.

In the transition (midsouth) zone, Stanley recommends perennial ryegrass or tall fescue. Tall fescue adapts well to the area and provides year-round color. Tall fescue is especially popular in California, Stanley said, where water conservation is key.

"Within the last five years, the sod industry in California has gone from blue/rye mixes being the dominant sod to tall fescue being the dominant sod."

Stanley cautioned against overseeding a bluegrass lawn with tall fescue. "You cannot overseed blue/ryegrass lawns with tall fescue and have success unless you totally renovate," he said.

Warm-season grasses, such as bermudagrass, centipedegrass and bahiagrass, are found in the south, southeast and southwest portions of the United States. They withstand extreme hot summer conditions but cannot tolerate sustained below-freezing temperatures.

Mark Grundman, turf specialist, NK Lawn & Garden, Minneapolis, Minn., suggested purchasing seeds with fungicide coating to protect against damping problems. The coated seeds provide better stands of turf in a shorter period of time, especially in warm, humid conditions, he said.

PRICING. According to Purdue's Lefton, one important and often overlooked area of turf renovation is pricing strategy.

"It's important to price it correctly so they (landscape contractors) don't lose their shirts," he said. "Turf renovation is very labor intensive, with a lot of callbacks."

Many landscape firms charge by the square foot for renovation projects. Terra-Care Inc. in Malden, W.V., for example, charges 18 cents per square foot for total renovation; 15 cents per square foot for overseeding; and 12 cents per square foot to core aerate and seed.

Lefton suggested pricing the service by the hour, rather than by the square foot. To illustrate, he compared renovating two lawns of equal size, one flat and treeless, the other hilly and tree-covered.

"If you do it by the square foot, you can get into trouble not thinking about the property. Some square footages are more difficult to do. Think about how long each job is going to take you. If it takes 5 hours to do the flat lawn and 10 hours to do the hilly lawn, then square footage is going to cost you money."

Nevertheless, many find pricing by the square foot a more convenient and measurable approach. ■

The author is Associate Editor of Lawn & Landscape Maintenance magazine.

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RENOVATION REVOLUTION

Home lawn two months after overseeding with Turf-Seed ryegrass and bluegrass products.



Quality Turf Products Green-Up Your Bottom Line

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2HH 'Charger'

Kentucky Bluegrass
Midnight • Challenger •
Columbia • Galaxy Blend

Southern Turf Renovation

Tall Fescues
Olympic • Apache • Monarch
• Silverado • Eldorado •
Triathalawn Blend

Perennial Ryegrasses
Citation II • Birdie II •
Omega II • Manhattan II •
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