

LM REPORTS: WETTING AGENTS

NOVEMBER 1992 • \$3.00

LANDSCAPE MANAGEMENT

INCORPORATING LAWN CARE INDUSTRY

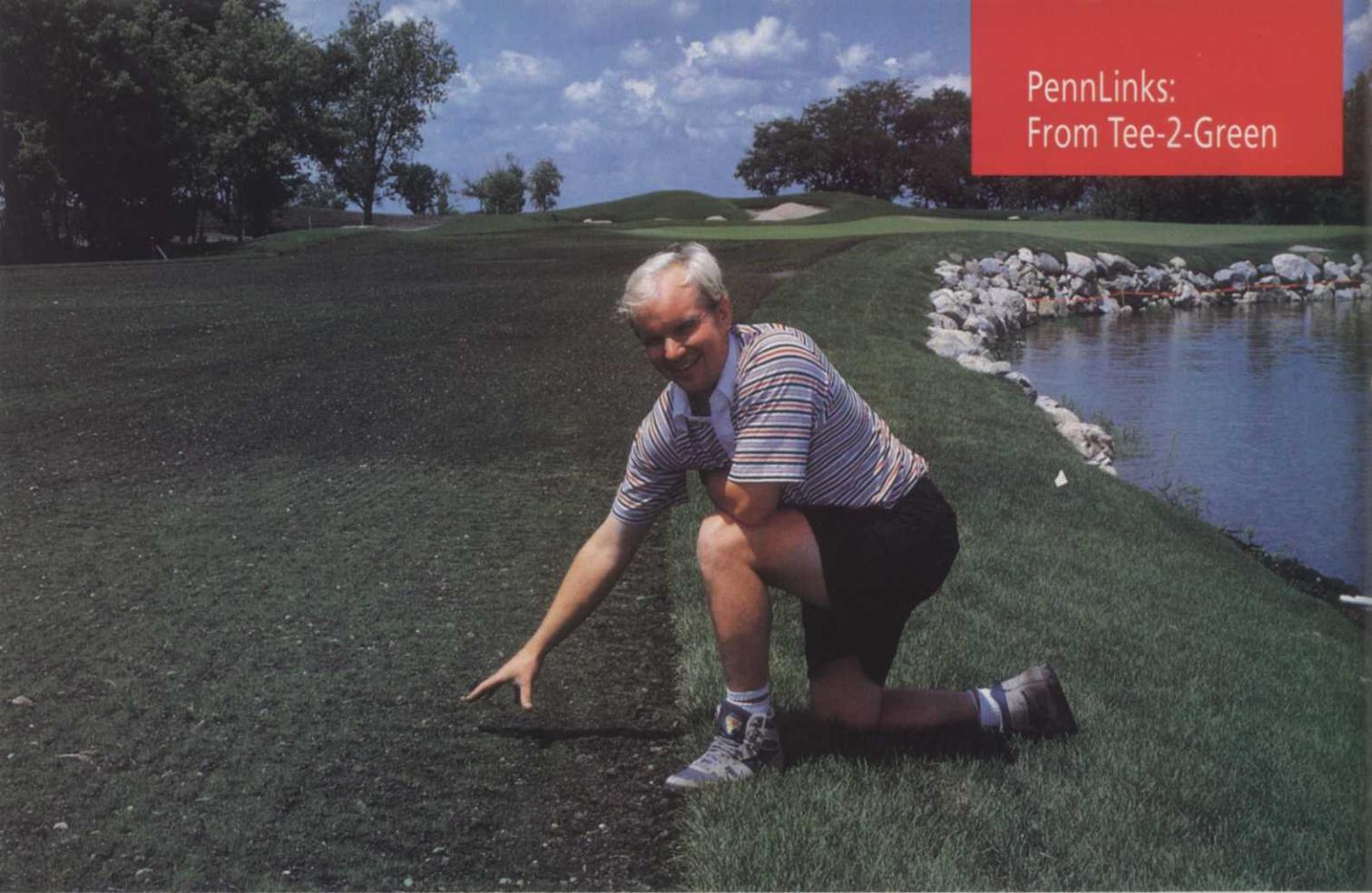


BARGAIN PRICES: AN INDUSTRY HEADACHE

Budgeting for 1993

What not to bid on

**The ChemLawn story,
Part II**



Tony Kalina, First Assistant Superintendent, appraises the 12th Hole seven days after seeding at McChesney Golf Club, West Chicago, Illinois.

PennLinks Greens, Tees and Fairways Add Excitement to Excellence at McChesney Golf Club in Chicagoland

"This twenty-one hole public course is destined to be a Chicagoland showpiece when it opens in August, 1993. Nothing about this Robert Trent Jones, Jr. designed course is halfway" says Tony Kalina, Assistant Superintendent at McChesney



Left to Right: Assistant Matt Springer, Scott Nissley, CGCS, and First Assistant Tony Kalina

Golf Club in West Chicago. "The clubhouse focuses around a 2½ story brick structure moved three miles to the center of the 240 acre site."

Selecting the right creeping bentgrass for greens, fairways and tees was not left to chance, either. Superintendent Scott Nissley says, "I specified PennLinks because of its predictable germination and outstanding heat and moisture stress tolerance. I've found PennLinks to be more aggressive in cool soil temperatures than other bent varieties, and the best *Poa annua* competitor."

Tony Kalina, responsible for seeding and establishment, finds PennLinks germinates rapidly and establishes uniformly, with seedling emergence as early as four days. Tony says, "We were mowing our

fairways with lightweight mowers twenty days after seeding. After 50 days we're maintaining putting greens height at 0.2 inch."

Superintendent Scott Nissley sums it up: "The ball rolls truly on our greens and our fairway lies are excellent. I think Chicagoland golfers will enjoy this course as much as any course they play, and one reason will be PennLinks."

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Associated Landscape Contractors of America, 12200 Sunrise Valley Dr., Suite 150, Reston, VA 22091; (703) 620-6363.

American Sod Producers Association, 1855-A Hicks Rd., Rolling Meadows, IL 60008; (708) 705-9898.

Golf Course Superintendents Association of America, 1421 Research Park Dr., Lawrence, KS 66049-3859; (913) 841-2240.

International Society of Arboriculture, P.O. Box 908, Urbana, IL 61801; (217) 328-2032.

International Turfgrass Society, Crop & Soil Environmental Sciences, VPI-SU, Blacksburg, VA 24061-0403; (703) 231-9796.

National Arborist Association, The Meeting Place Mall, P.O. Box 1094, Amherst, NH 03031-1094; (603) 673-3311.

National Golf Foundation, 1150 South U.S. Highway One, Jupiter, FL 33477; (407) 744-6006.

Ohio Turfgrass Foundation, 2021 Coffey Rd., Columbus, OH 43210; (614) 292-2601.

PGMS

Professional Grounds Management Society, 10402 Ridgland Rd., Suite 4, Cockeysville, MD 21030; (301) 667-1833.



Professional Lawn Care Association of America, 1000 Johnson Ferry Rd., NE Suite C-135, Marietta, GA 30068-2112; (404) 977-5222.

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Sports Turf Managers Association, P.O. Box 98056, Las Vegas, NV 89193-8056; (702) 739-8052.

Turf and Ornamental Communicators Association, 8500 Normandale Lake Blvd., Suite 1200, Bloomington, MN 55437; (612) 831-8515.

AS WE SEE IT

RON HALL, SENIOR EDITOR



DIY lawn care is really not the bargain it might seem

We saved \$60, maybe a few dollars more. In return, we forfeited about six hours of our Saturday leisure time.

This surprised us. When we decided last winter to improve our lawn with a program similar to that of a professional applicator company, we thought the savings would be greater. A professional quoted us a price of \$128.40 (\$120 plus tax) for four lawn applications.

But when we tallied our costs and efforts at season's end, we realized we had undervalued two important variables: convenience and time.

We suspect most do-it-yourselfers make the same mistake.

A lawn care DIYer can choose from a world of fertilizer products. Retailers carry plentiful supplies of turf fertilizers, mostly granular, in a variety of analyses.

We bought the O.M. Scotts four-bag, four-application program for a 5,000-sq.-ft. lawn in early March. Our lawn is just slightly under 5,000 sq.ft. The program cost \$49.95 plus \$3.50 tax, \$53.45 total. The four 15-pound bags included fertilizer products containing pre-emergent, broad-leaf control, and insect control in the first three rounds, respectively, and just fertilizer in the fourth. (By mid-August the price of the program had fallen to \$24.95.)

Another decision had to be made. For \$40 or so we could buy a serviceable drop spreader. But where would we store it over the winter? The basement is too unhandy; the lawn shed full of bicycles.

We decided to rent one, as needed, from a neighborhood hardware store. A Scotts' PF-3 spreader cost \$2.50 per day. We rented it four times this past season for \$10.70, including tax.

So, for a reasonable \$64.15 we grew the best looking lawn in the neighborhood?

Hold on. It's not that easy.

It took us 35 minutes for a single pass over our property.

We followed the instructions on the fertilizer bags, and didn't rush. Even so, in backing the spreader away from several

small trees, or getting into several tight spots around our small storage shed, we evidently applied too much product. A couple of days after the August application, four or five patches of turfgrass, each about a foot square, turned brown.

For the fall application, we set the spreader on half the rate suggested on the bag. We walked the lawn one way, then walked it again from side to side. No problem with burns this time, but we turned the 35-minute walk into an hour job.

For the season we invested just over three hours to apply fertilizers.

Convenience?

We decided we couldn't get an accurate accounting of our effort if we overlooked the automobile trips to buy or rent the materials we needed. Add three hours of driving, loading and unloading.

Presto, we've got six hours invested in improving our lawn.

And it did improve. The lawn, except for one dry week in June, was green and full well into the fall. Because 1992 was one of the wettest, coolest growing seasons ever in northern Ohio, every lawn in the neighborhood looked good. Even the weeds remained a bright green.

A lawn care pro can't compete on price with a do-it-yourself program. We knew this going into the season.

But if time is money, then what is a do-it-yourselfer's time worth? What is our time worth? That seemed to be the heart of the matter as we loaded the spreader into the back seat of the four-door Dodge after the final application.

LANDSCAPE MANAGEMENT

INCORPORATING LAWN CARE INDUSTRY

NOVEMBER 1992 VOL. 31, NO. 11

COVER FEATURE

26 Bargain prices, an industry headache

Seven lawn pros tell us that competition from part-timers is pesky. But a massive marketing push by a national company would be downright scary.

Ron Hall

FEATURES

31 LM Reports: Wetting agents

Harmless to plants, wetting agents are especially helpful in improving water penetration on heavy or compacted soil, or on turfgrass with excessive thatch.

Terry McIver

36 Budgeting for 1993

If increased expenditures are proposed for 1993, revenues must increase proportion to ensure financial balance, says this park manager.

Greg Petry



38 Customer service at Hermes

A Kansas landscaping company adds a customer service manager to its staff, so that salespeople can concentrate on attracting new clients.

Jerry Roche

40 Choosing the right job to bid

A computer program called 'Work in Progress' helps keep this company's focus on long-term goals.

Kent Miller

44 Satellite office expansion

Branch or satellite expansion? The satellite office lets a company expand to a new market at a very reasonable cost.

Ed Wandtke



TECH CENTER

45 Degree-day method at work

The scouting method that relies on temperature readings helps to predict when insects might become a problem.

Terry McIver

46 Monitoring water in soil

A listing of terms useful in understanding soil and water relationships, accompanied by a handy chart.

LAWN CARE INDUSTRY

47 ChemLawn becomes a giant

A year or two on customers' lawns and ChemLawn specialists are ready for management. It's this 'people power' that fueled the company's growth.

Ron Hall



50 Groundsman a prize winner

This large landscape in Alabama is 'just like having another salesperson on the payroll,' Greg Bolton says.

Ron Hall

HOT TOPICS

55 2,4-D gets toasted

The turf herbicide 2,4-D was recently handed a setback by the powers that be. Also: On-the-job CPR saves a man's life; and speeding up nature with tissue culture.

55 Home-study course on the way

The Professional Lawn Care Association (PLCAA) and the University of Georgia will soon make available a 200-hour home-study course on turf-grass care and management.

DEPARTMENTS

1 As We See It

4 Ask the Expert

54 Jobtalk

60 Info-Center

60 Events

62 Product Review

63 Market Showcase

64 Classified

66 Ad Index

NEXT MONTH

Cover story: Certifying the green industry

LM Reports: Heavy equipment: backhoes, loaders, etc.

Establishing branch offices, by Ed Wandtke

Weed control strategies for athletic field managers

Lawn care industry's "Man of the Year" for 1992

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V BPA ABP

ASK THE EXPERT

DR. BALAKRISHNA RAO



Rhododendron borers and cankers

Problem: Some of our rhododendrons do not look good. They have canker or borer problems. What would be the best way to manage them? (Ohio)

Solution: Generally, borer insect and canker disease agents establish themselves on stressed and weakened plants. Some environmental stresses such as excess soil moisture (wet feet disorder) and nutrient deficiency resulting from improper pH, drought, or winter drying, can affect a plant's overall health. Under these conditions, rhododendrons will be more susceptible to borer and/or canker diseases such as *Botryosphaeria* canker.

Provide proper growing conditions as the first step in managing most of these problems.

Rhododendrons prefer well-drained soil with a low pH. For this reason, they are called acid-loving plants. If the pH is high (alkaline), the so-called micronutrients will be tied up, leading to nutrient disorders such as iron chlorosis.

Iron deficiency also can further decline plants. Materials containing iron and/or those which acidify the soil will help improve this situation.

For nutrient disorders, determine the deficient element through foliar analysis and provide proper treatment. Provide proper watering, fertilizing and mulching as needed to help improve plant health.

As far as borer management, insecticides such as lindane or Dursban can be used in mid-May. Treat the trunk and branches thoroughly.

For *Botryosphaeria* canker disease, prune and discard affected plant parts when dry. Disinfect pruning tools in Clorox disinfectant, rubbing alcohol or Lysol to prevent further spread of the disease agent. There are no known effective fungicide treatments for canker disease. Some reports suggest using copper-containing fungicides. Even in this case, the timing and number of treatments needed are not known.

The best method of managing these problems is to select proper plants for site conditions and maintain a good plant health care program.

Treating Dutch elm disease

Problem: Can Dutch elm disease be treated once the tree has been infected with the fungus? (Maryland)

Solution: The success in fungicide treatment depends on early detection and proper treatment.

Dutch elm disease management includes early detection, sanitation (pruning at least 10 feet into the healthy wood) and Arbotect fungicide injection.

In the past, insecticide treatments were recommended to manage bark beetles which spread the fungal spore during their feeding in crotch areas. Some researchers feel it is difficult to get a good coverage of the tree with insecticides and provide sufficient protection to deal with new generations of beetles. Another

concern is the potential of drift to non-target areas which would result in public and regulatory concern. Therefore, practitioners are now considering the feasibility of skipping the insect treatment and instead treating with Arbotect fungicide.

As far as fungicidal injection, reports indicate that better results can be obtained if the crown infection (flagging symptoms) is less than 5%. If the crown infection shows more than 10% of wilting and branch dieback, the chances for survival are much less.

If the dieback and wilt is 20% or greater, the tree cannot be saved. In this situation, it is better to remove the tree promptly.

Prior to removal, if there is a healthy tree within 40 feet of the diseased tree, Vapam fumigant (a soil sterilant) treatment between the two trees is recommended to prevent root graft transmission of the disease. When doing this, read and follow label specifications.

Reports indicate that a three-year rate of Arbotect fungicide injections made at or below ground level on the root flare would be beneficial for better distribution and protection of the tree. Along with this, follow good watering, fertilizing and pest management as needed to improve plant health. Read and follow label specifications for better results.

Roundup persistence

Problem: How long does Roundup last on the soil surface? Sometimes during no-till renovation, we may have to re-treat if the existing plants don't die. Will this cause accumulation of material in the soil? (North Carolina)

Solution: Regarding your first question: according to the Monsanto Co., manufacturer of Roundup, the Roundup will break down once it comes in contact with the soil. As a result, there will not be any soil residual. Therefore, the answer to your second question is "no." Roundup is not known to build up in soil. There will not be any problem of repeated application, if needed to manage the weed problem.

Roundup is a non-selective, post-emergence herbicide. Therefore, you can expect it to manage whatever weeds are growing at the time of treatment. New weeds may establish from seeds or often some of the rhizomatous weeds may present a problem if the Roundup did not translocate uniformly to underground parts. In this situation, a repeat application would be beneficial.

Dr. Balakrishna Rao is Manager of Research and Technical Development for the Davey Tree Co., Kent, Ohio.

Mail questions to "Ask the Expert," LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. Please allow two to three months for an answer to appear in the magazine.

**It's not only your job.
You live and breathe it.**

It could be something you realized a long time ago, when you were a kid looking out the classroom window wishing you were on the other side. Maybe it

was years later, when you couldn't wait for the weekend to come so you could get *out there*. Or maybe you just always knew. That, for you, forty hours a week stuck inside an office was no way to live.

So here you are, with a job that lets you be outdoors a good portion of every working day. And love for nature and the environment had a lot to do with it.

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Wasn't it love for nature that got you into this bu



feelings play a big role in the way you approach your job.

Of course you want beautiful turfgrass, but you want to protect the environment while

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So we're doing some things to help you out.

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free training materials for your staff, and free equipment that will help you handle and use pesticides more safely.

And, most important, we're sharing information that can help

re and the environment business in the first place?

now, we offer some of our products in water-soluble packets, and others in returnable containers.

We've also developed a research staff

you use pesticides more effectively, and in smaller amounts.

You'll find it in our free books on responsible pest management. We'd like to send you one. Return the coupon below, or call our toll-free number. It's the first of

many steps you can take to protect the environment.

Are We Doing This Just To Be Nice?

We've just published three books on how to use pesticides more responsibly. The question is, why? Well, we believe it's in our best interests to look out for your best interests. By helping you create an effective, responsible pest management program, we'll make a customer instead of just a sale. When that happens, everybody wins.

that's entirely devoted to turf and ornamental projects. Their work is leading to concentrated products that require less volume and fewer applications.

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In the South, where weeds are a problem most of the year, you don't get much of a break from using herbi-



cidicides. So Southern turf stays strong and healthy.

And Surflan lasts up to a month longer than other herbicides. Just two or three applications gives you year-

round control of more than fifty weeds, including goosegrass, crabgrass and *Poa annua*. That can help you put less chemical into the environment.

Surflan is also very gentle on off-target plants. In fact, it can be

People use a herbicide. Mild usually

So the milder your herbicide is to turfgrass, off-target plants and the environment, the better off you are.

That's why you should seriously consider Surflan® herbicide for your weed control program.



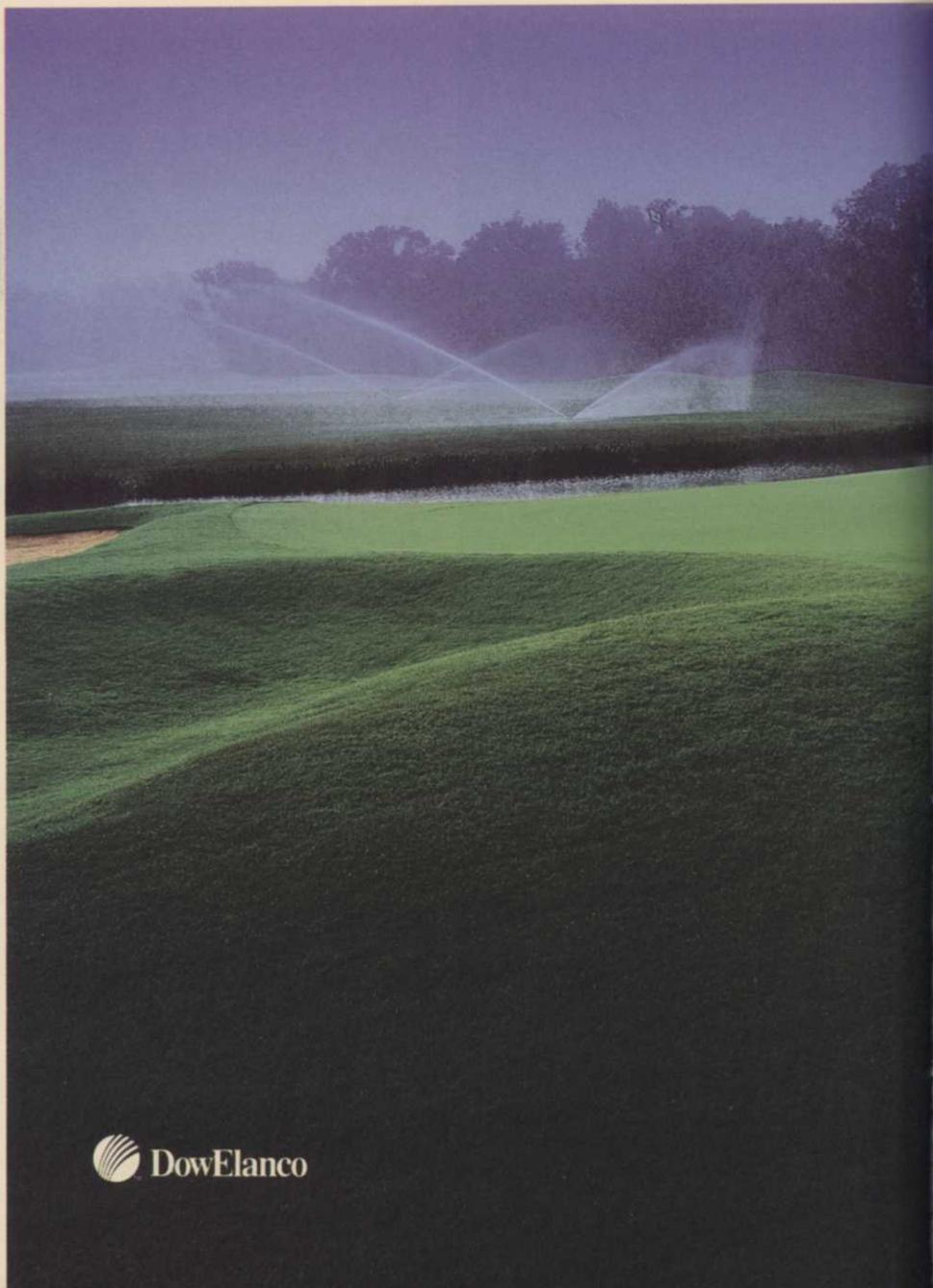
How To Keep Weeds From Sneaking Up On You.

University studies show crabgrass and goosegrass germinate when soil at 2" reaches the following temperatures for three consecutive days: loam 50-52°F, heavy wet clay 53-57°F, sand 49-51°F. Measuring soil temperature allows you to predict germination, and time your herbicide application for maximum control.



Soil Thermometer

Surflan is very mild on all warm season grasses. When used properly on established turf, university



sprayed over the top of delicate



ornamentals. So there's virtually no risk to nearby shrubbery, trees

Surflan stays where you put it. Even in heavy rainfall, it resists leaching into groundwater.

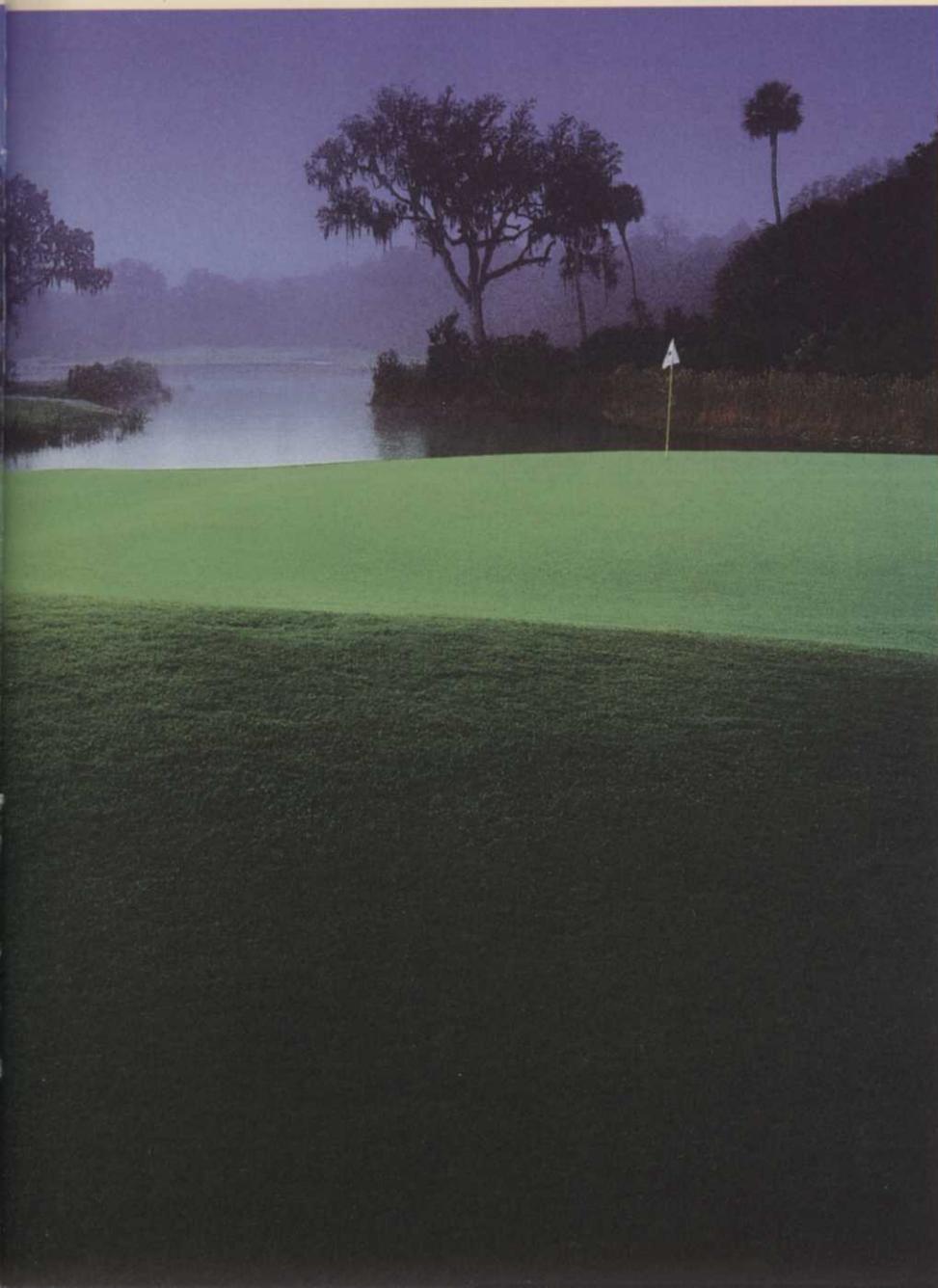
or flowers. Surflan is available as a sprayable and on fertilizer. If you prefer a granular form, there's XL* herbicide (it contains the same active ingredient



as Surflan).

You can put it down at the full rate, or use split applications to spread the load over the season. Either way, you'll get good results.

lot of words to describe isn't one of them.



Our 44-page book, The Turf Manager's Guide To Responsible Pest Management can tell you more. It contains comprehensive "how to" information you can use to control weeds more efficiently. It also gives you step-by-step tactics you can use to control



Bermudagrass Zoysiagrass St. Augustinegrass

insects and turf diseases more effectively and responsibly. If you'd like a copy, just return the coupon or call our toll-free number.

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Surflan is available as a sprayable or on fertilizer. Not labeled for use on greens.

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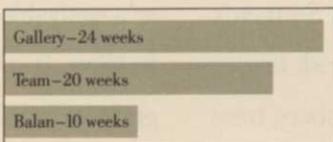
If applying herbicide is something you'd like to do less often, we have good news for you. We can show you how to make fewer herbicide applications and get weed

grass. And it's available on fertilizer or in a granular form for accurate application.

Of course, a herbicide that lasts all season won't

Pest Management can tell you

more. It contains information you can use to control weeds, insects and turf diseases more efficiently. For a free



Choose the length of control best for you.

The herbicides not applying herbicides

control that's as good or better than you're getting now.

Let's start with broadleaf weeds. It usually takes up to five herbicide applications a season to control them. But by using Gallery* herbicide (straight or on fertilizer), you can do it with one. It doesn't take much, either. Just 1/3 ounce per 1000 square feet.

A Story Straight From Crooked Stick.

By switching to Gallery the superintendent at Crooked Stick Golf Club in Carmel, Indiana, reduced herbicide applications on his fairways from five a year to one. The notoriously picky PGA officials who inspected those fairways for the 1991 PGA Championship raved about their outstanding condition.



Okay, now for grassy weeds. A single application of Team* herbicide gives you sixteen weeks of broad-spectrum control. It's very effective on crabgrass and goose-

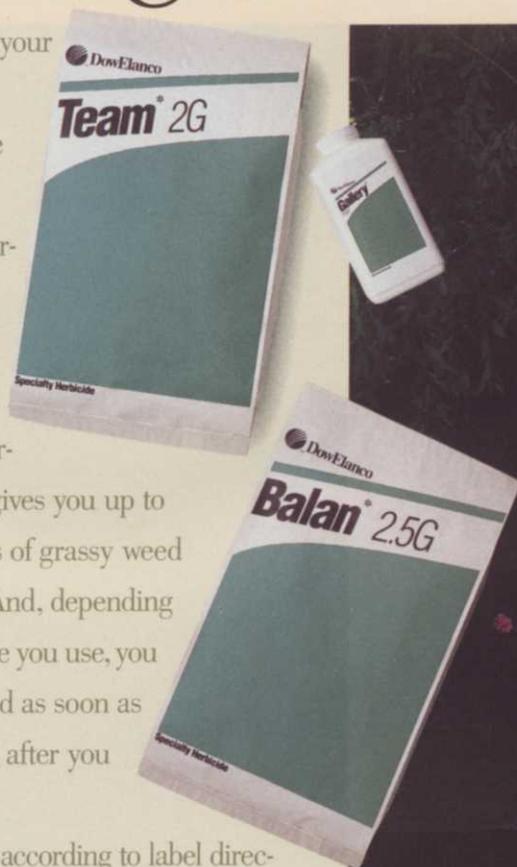
always fit your schedule.

That's the time for Balan* herbicide.

Available straight and on fertilizer, it gives you up to ten weeks of grassy weed control. And, depending on the rate you use, you can reseed as soon as six weeks after you apply it.

Used according to label directions, Gallery, Team and Balan are gentle on all major turfgrass species. University studies show they don't harm root systems. And they won't leach into groundwater or harm nearby ornamentals and trees.

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Goosegrass



Crabgrass

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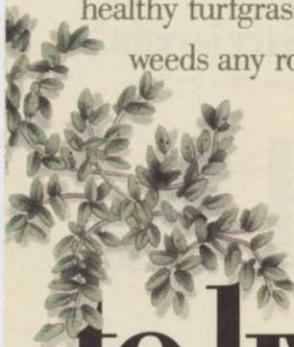
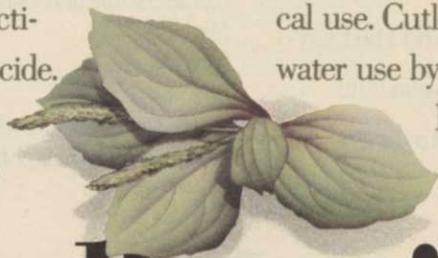
for people interested in



Nothing controls weeds in turfgrass better than turfgrass itself. That's because thick, healthy turfgrass doesn't give weeds any room to grow.

from insects and disease, you'll need less insecticide and fungicide. All of which means Cutless

can reduce your overall chemical use. Cutless also reduces water use by up to 30 percent. Makes turfgrass more drought-



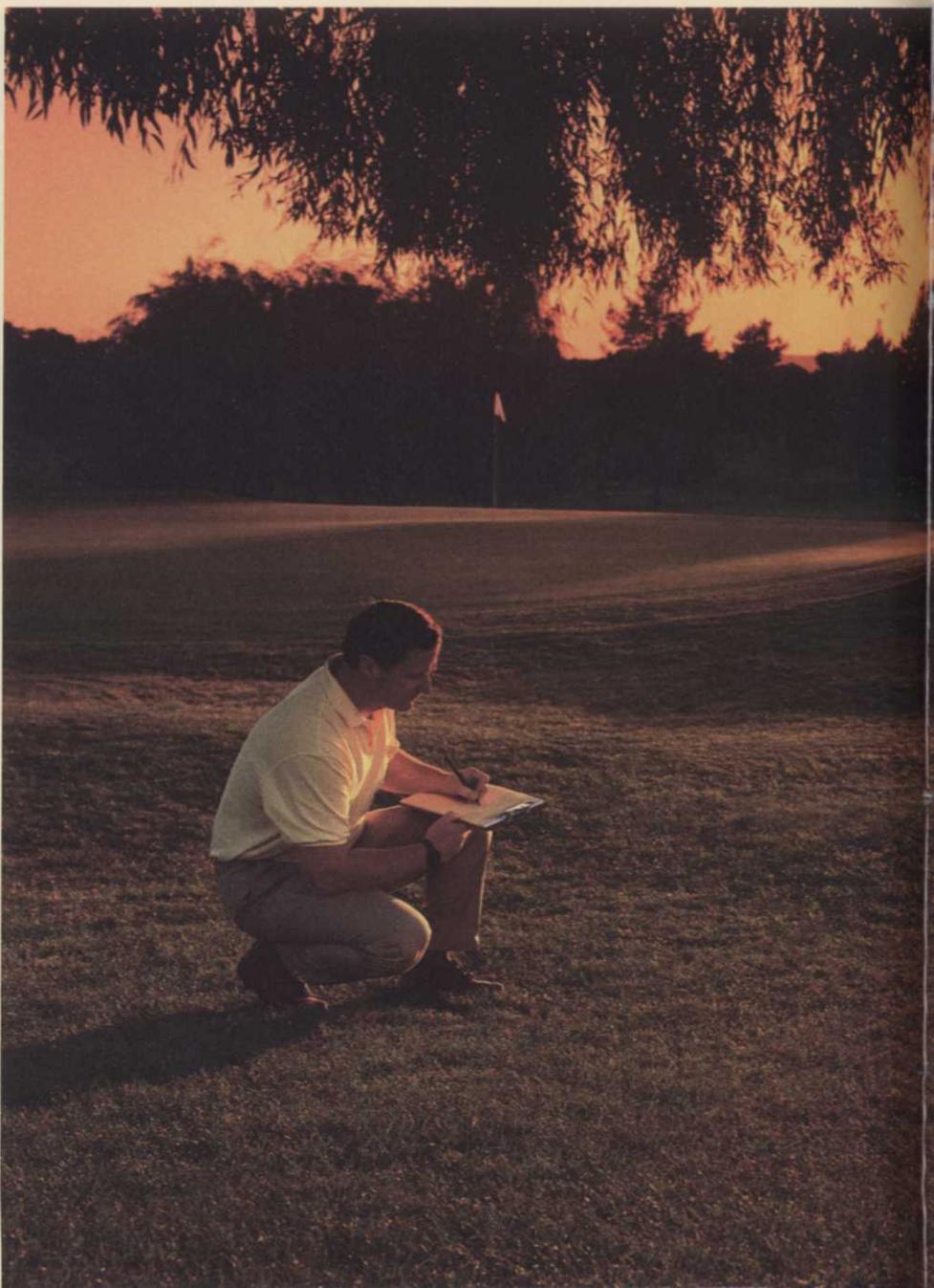
Why live with a few weeds to live with a few less chemicals

So, if you make your turfgrass thicker and healthier, you won't need as much herbicide.

One good way to do it is by adding Cutless® turf growth regulator to your maintenance program. Cutless makes turf thicker and more competitive by slowing its growth while encouraging more tillers and stolons. It also inhibits weed growth. This results in a gradual crowding out of weeds.



And because your turf is thicker, healthier turf will be more resistant to damage



tolerant. Reduces mowing by about a third. Cuts clippings by about two thirds. And makes



greens faster and fairways more playable.

Plus, Cutless can help you gradually convert *Poa*

80 percent *Poa* on his fairways to 90 percent bentgrass over a five-year period.

There are many things you can do to grow thicker, healthier

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annua to more desirable turf-grass species. It helped one golf course superintendent go from

turf. They're explained in our 44-page book, The Turf

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show you better

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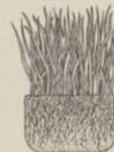
Because a thick

blanket of turf

doesn't need a thick

blanket of

chemicals.



Thicker turf crowds out weeds, reducing the need for herbicide.

chemicals.

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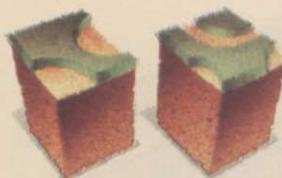


The chemistry is right.™

We're talking about a control program that's very hard on fungus, yet very easy on your turf-grass. Some things you can do to reduce turf stress, use less

fungicide and still get excellent control.

It starts with cultural practices. Like replanting disease-prone areas with resistant cultivars. Careful water-



Rubigan has broad spectrum control that makes diagnosis less critical.

ing. Providing adequate fertilizer. And removing thatch. They'll make your turf less susceptible to disease, which means you can use less fungicide to protect it.

Just imagine. A a stranglehold on fungus



Knowing when to use a fungicide is important, too. By watching for conditions in which turf diseases thrive (weather patterns and soil temperature provide some very



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reliable signs), you can put down fungicide with perfect timing, and make fewer applications.

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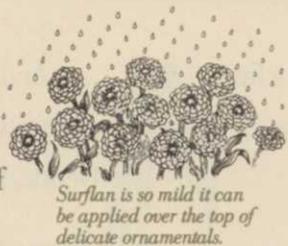


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Surflan is so mild it can be applied over the top of delicate ornamentals.

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Actually, the mo this picture is containi

germinating all season long. It can greatly reduce your use of post-emergence herbicides and hand-weeding in your ornamentals.

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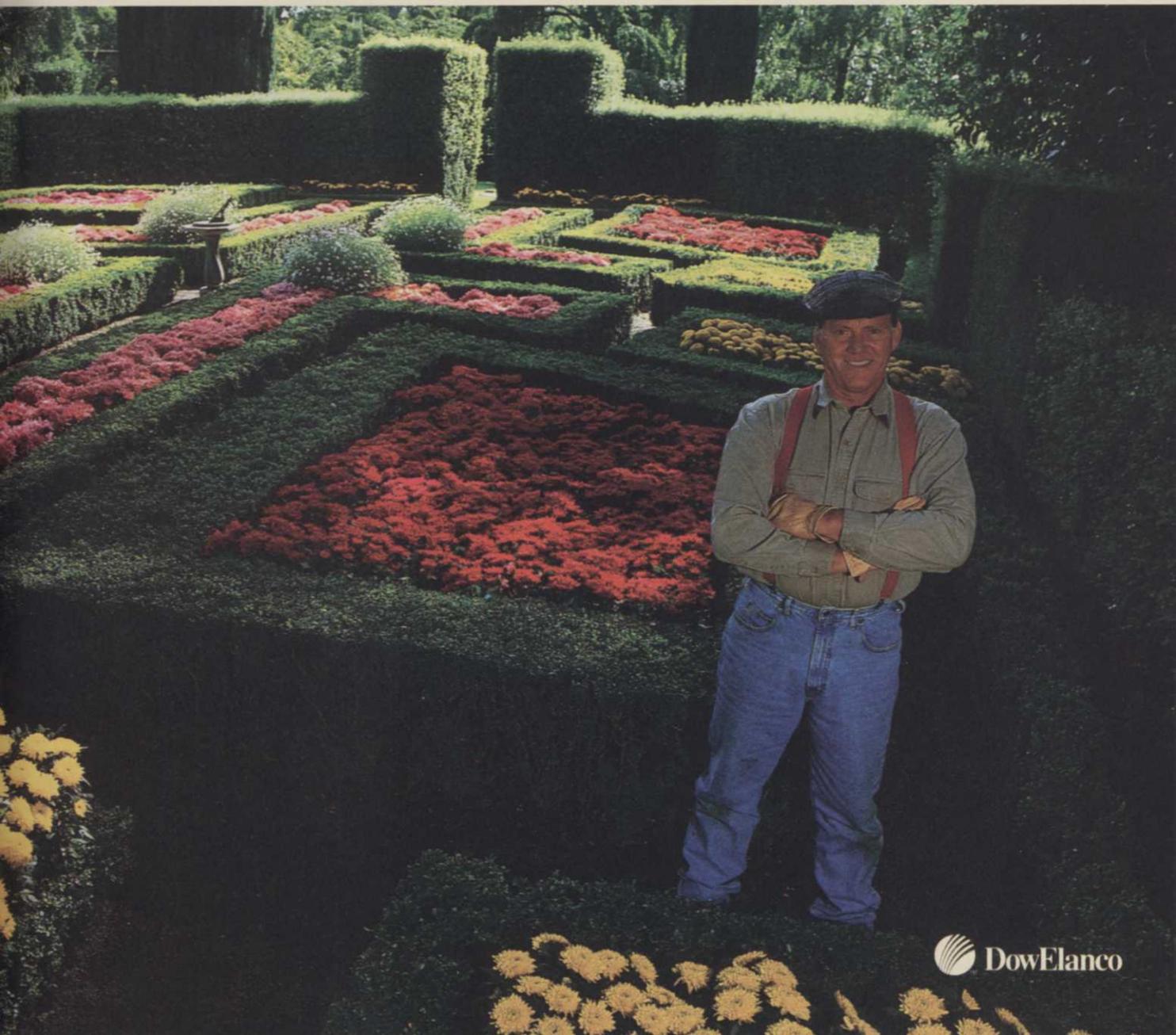
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st beautiful thing about ned in the top 1" of soil.





You might think using less insecticide means you'll have to put up with more insects. But that's not necessarily the case. Because *how* you use your insecticide is as important as *how much* you use. With

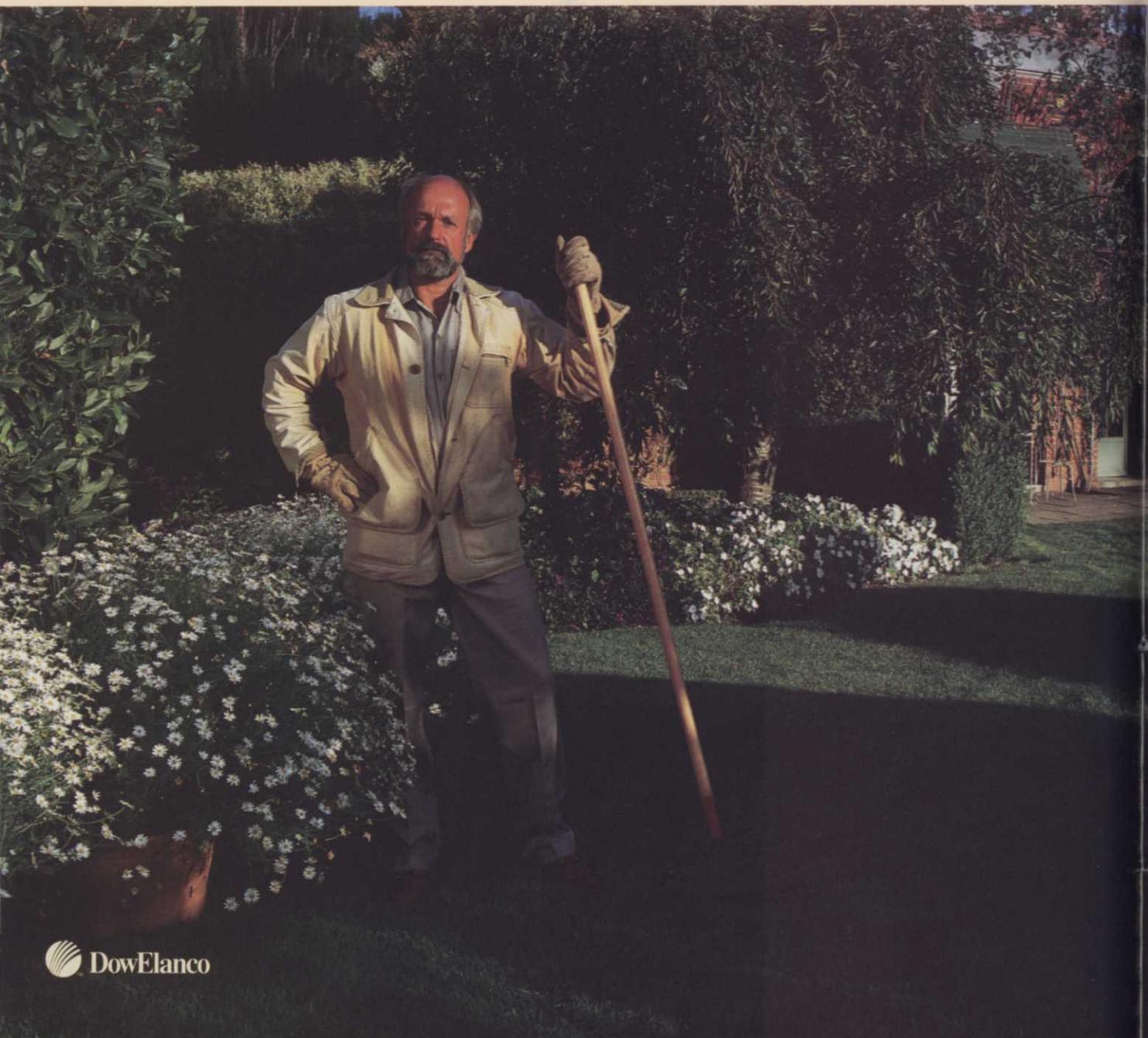
the right tactics, you can use a lot less and still get excellent results.

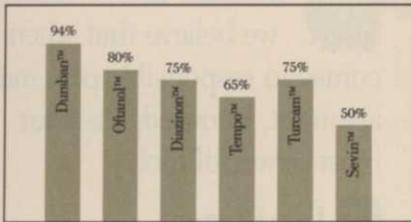
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about 50 percent. Soap controls most soft-bodied insects and mites. By adding insecticide, you'll also take care of tougher insects, like scales and worms. University studies suggest you may get better control



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gives you so much control at such a low rate. Dursban also controls fire ants. It's available in water-soluble packets. And it can be bio-monitored, which can reduce the likelihood of over-exposure.

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gallons of water and sprinkling it on a four-foot area of turf. If eggs have

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Mole Cricket

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What you've read on the preceding pages only begins to outline a responsible pest management program.

You'll find a lot more in our guides to responsible pest management (see

coupon on previous page), and in the literature listed below.

If you have questions on our products, call one of our technical specialists at 1-800-352-6776. We'll be happy to help you out.

Because at DowElanco, we believe that when it comes to responsible pest management, knowledge is your most powerful tool.

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If we've piqued your interest, keep reading.

The literature below is some of the best information you can get on responsible pest management. Check your state university or write the publisher to find out where it's available.

SUGGESTED READINGS:

• *Insects That Feed on Trees and Shrubs*

• *Turfgrass Insects of the United States and Canada*

Cornell University Press
124 Roberts Pl.
P.O. Box 250
Ithaca, NY 14851
607/257-7000

Orders to:
P.O. Box 6525
Ithaca, NY 14851
800-666-2211

• *Lawn Care: A Handbook for Professionals*

• *Turfgrass Management*

Prentice-Hall, Inc.
15 Columbus Circle
New York, NY 10023
800-922-0579

• *Diseases and Pests of Ornamental Plants*

• *Introduction to Insect Pest Management*

John Wiley & Sons, Inc.
605 Third Ave.
New York, NY 10158-0012
212/850-6000

Orders to:
Eastern Distribution Ctr.
1 Wiley Drive
Somerset, NJ 08873-1272
908/469-4400

• *Complete Guide to Pest Control With and Without Chemicals*

• *Nursery and Landscape Weed Control Manual*

Thomson Publications
P.O. Box 9335
Fresno, CA 93791
209/435-2163

• *Turf Management for Golf Courses*

Macmillan Publishing Company Inc.
866 Third Ave
New York, NY 10022
800-257-5755

Orders to:
Front & Brown Sts.
Riverside, NJ 08075
609/461-6500

• *Compendium of Turfgrass Diseases*

American Phytopathology Society
3340 Pilot Knob Rd.
Saint Paul, MN 55121-2097
612/454-7250
800-328-7560

• *Ornamental Insects: Recommendations for Managing Insects on Shade Trees and Shrubs*

Purdue University
West Lafayette, IN 47907
317/494-6794

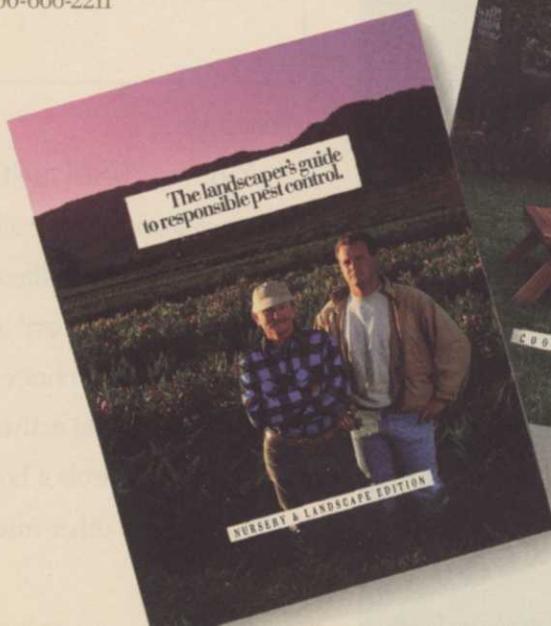
• *Insect Phenology and Integrated Pest Management*

Journal of Arboriculture
303 W. University Ave
Urbana, IL 61801-1745
217/328-2032

• *1991 Chemical Weed Control in Commercial Nursery & Landscape Plantings*

Ohio University PR.
Scott Quadrangle
Athens, OH 45701
614/593-1155

Orders to: C.U.P. Services
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Ithaca, NY 14851
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LANDSCAPE MANAGEMENT

INCORPORATING LAWN CARE INDUSTRY

Bargain prices: an industry headache



Andrews: some prices based on competitor



McGuire: putting up with part-timers



Weirichs: issue is service and value

Seven lawn pros tell us that part-timers are pesky. But a massive marketing push by a national company would be downright scary.

■ Bob Andrews says price cutting in his market is accelerating.

"I get the sense, from time to time, that what they charge for their product is based more on what they think their competitor is charging rather than any actual cost factor involved in running their business," says the owner of The Greenskeeper in Carmel, Ind.

While a couple of lawn care companies in his area appear to be trying "to buy" market share, he believes some of the smallest, newest ones don't yet know how to price their services.

Pricing was one of the topics Aug. 2 when seven independent lawn application company owners discussed their industry with LANDSCAPE MANAGEMENT Publisher Jon Miducki and Senior Editor Ron Hall in Charleston, S.C.

The participants, all either PLCAA board members or officers, were: Andrews; Neal DeAngelo, Lawn Specialties, Hazleton, Pa.; Daryl Johnson, All American Turf Beauty, Van Meter, Iowa; Ed McGuire, The Lawn Co., South Dennis, Mass.; John Robinson, Green Drop Lawns Ltd., Calgary, Alberta, Canada; Lou Weirichs, Pro-X Systems Lawn Care, Appleton, Wis.; and Joe Williams, Lawn Master, Pensacola, Fla.

(For the record, all or almost all the roundtable LCOs—judging from the chorus of protests when we suggested they'd reached a pricing plateau—say they raise their prices regularly.)

The price squeeze—Andrews says, on the one hand, a national lawn care company has the

resources to bombard a targeted area with telemarketing. "They'll call these people back five, six, seven times until they close the sale," says Andrews. On the other, the newest companies in a marketplace try to lure customers by unrealistically low prices.

These things, Andrews says, makes it difficult to raise prices very much in his market area.

"You can put up with the part-time guy, the guy who's mowing lawns and then he's putting down applications," says McGuire, owner of the largest lawn care company on Cape Cod. "It's when you get national companies that have marketing techniques that are vast."

"The little guy is going to peck away at you. He's going to take 20, 25 customers," cuts in Andrews. "But it's when you're sitting there dealing with a phone bank and a national strategy..."

Value or price?—Weirichs, a former ServiceMaster franchisee who's now an independent operator, says the issue always boils down to service and value. But it may take a while for customers to realize they want value rather than lowest price. "They realize they're not getting the service for the dollars they're spending," he says of customers of cut-price, cut-rate lawn operations. "It might take a year or two, but they do come back."

"The biggest fear we have is that the customer *won't* come back," responds Andrews quickly.

"If you treat a lawn for three or four years with a good program, you're going to have that lawn in good shape and it can go for a year with pretty much next to nothing unless something happens like a drought or a grub infestation. It's in that second year that the disgust factor begins to set in—when the service calls aren't answered."

McGuire says that in the past many LCOs built their pricing schedule around ChemLawn pricing. "It's got to be in the ballpark," he says of the price of any company trying to compete in a ChemLawn

marketplace.

Diversification—Weirichs says he isn't bashful about raising prices, particularly if the increases are based on rising business costs. "I set my prices at the level I think I can get. When I get it (higher price), I take it," he says.

"Our prices are more than double what they were 10 years ago," adds DeAngelo.

"What's happened too is that everybody has diversified and added more services. Our dollars per customer continues to go up, but it's through offering more services.

"People have a set dollar amount they're going to spend on their lawns. So maybe you can't raise your price per application, but you are getting more

money out of your customer."

Williams, a native Floridian and longtime LCO in Pensacola, says he thinks it's not a good idea for any company to aspire to be the lowest-priced in any market. "I think a lot of us don't necessarily want to be the cheapest. I know we don't," he says.

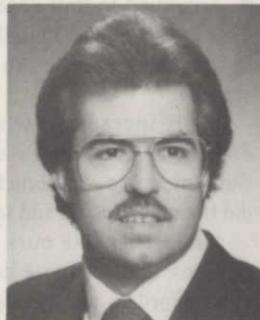
"We're the most expensive in our market," says DeAngelo.

"We're second, next to Barefoot," adds Weirichs.

Robinson, whose Calgary-based Green Drop Lawns operates in several large Canadian cities, says he doesn't want to be the highest-cost service either. "It's hard to grow in your market if you're the highest priced, particularly in a flat economy," he says.

—Ron Hall

**More
'pricing'
features
continued
on page 30**



DeAngelo: prices more than double now



Williams: don't try to be lowest-priced

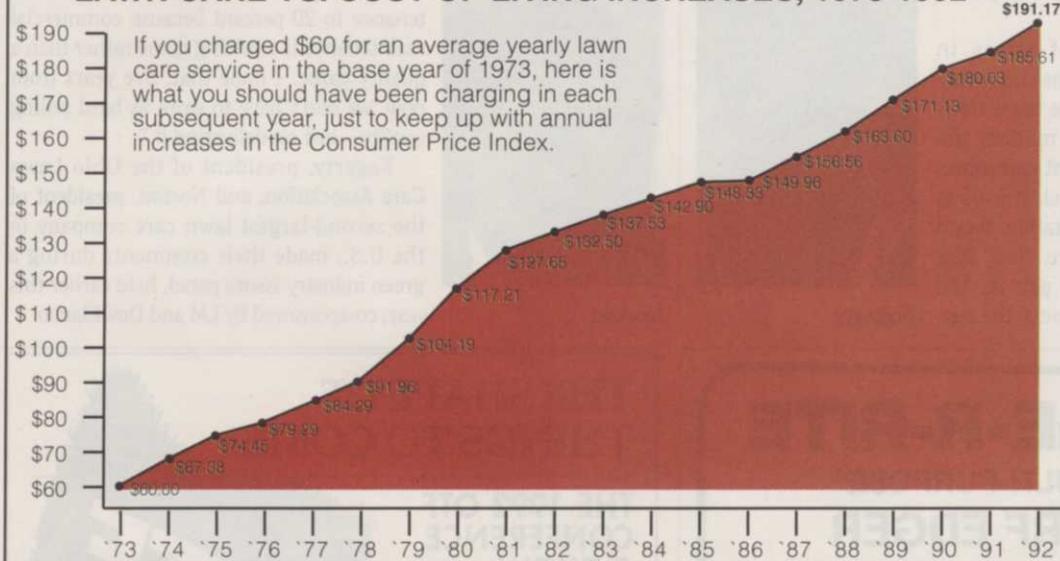


Robinson: don't try to be highest-priced



Johnson: cost of business a factor

LAWN CARE VS. COST-OF-LIVING INCREASES, 1973-1992



Want real cheap? Do it yourself

■ Iowa State grad (a few years ago) Daryl Johnson says lawn professionals have to keep in mind that many potential customers can still do their own lawn care much cheaper than a professional service. "It used to be that Scott's 5,000-square-foot program was about \$50. Now you can buy somebody else's four-application program for \$20-something bucks," says Johnson.

There are a lot of people doing it themselves now," adds Neal DeAngelo. "Talk to anybody who sells fertilizer and they'll tell you how much the do-it-yourself market is back up."

Weirichs says some of these do-it-yourselfers are finding out they can't get the results they want.

"We had five calls last week. They said, 'hey, we thought we could get along without it (pro-

fessional service).' Then they came back," says Weirichs.

"The problem is, this (lawn care) is still an inexpensive business to get into," says DeAngelo. "You don't have to come up with any money to support cash flow. Buy a pickup truck with a skid mount unit for a couple thousand bucks and you're in business."

Says Johnson: "I can spend a lot of money educating our people, making sure they go to all the turf conferences and somebody can go into business down the street. They can hire somebody that doesn't know the difference between diazinon and Trimec and they can go out and beat our price. They don't have near the cost of doing business."

—R.H.

Are you 'doing things for the same price as five, six years ago?'

■ According to Phil Fogerty of Crowley Lawn Care in Cleveland, Ohio, the price of lawn care hasn't gone up since the mid-80s, in some cases.

"It is incredible, when you look at it," Fogerty observes, "how you are doing things for the same price—or sometimes less than—you did them for five, six and seven years ago."

"Industries like ours have the best profit margins, and yet those have been shrinking each year because we can't afford to raise prices," Crowley tells LANDSCAPE MANAGEMENT.

Pat Norton of Barefoot Grass in Worthington, Ohio, has the same concerns.

"On the one hand, you have these (low-ballers) doing the residential market, and then you have the management companies running the commercial market. It used to be that, if you had a good reputation, they'd pay you 10 or 15 percent more. Now, they have 10 bids and the low bid gets it. And then, when they go out of business, the cus-



Fogerty



Norton

tomers gets 10 more bids the following week."

"We've gone from 80 percent lawn maintenance to 20 percent because commercial maintenance is a pricing game rather than a quality game. I hope that, five years from now, we don't have to work as hard selling quality—just on delivering it."

Fogerty, president of the Ohio Lawn Care Association, and Norton, president of the second-largest lawn care company in the U.S., made their comments during a green industry issues panel, held earlier this year, co-sponsored by LM and DowElanco.

DID YOU INCREASE PRICES FOR THIS YEAR?

YES=37.3%

NO=62.7%

DO YOU PLAN TO INCREASE PRICES NEXT YEAR?

YES=65.1%

NO=34.9%

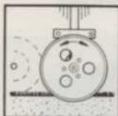
Source: LM State of the Industry survey

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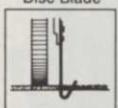
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Circle No. 115 on Reader Inquiry Card

Use wetting agents, cultural procedures to reduce dry spots

Localized dry spots appear in hot, dry weather as varied patterns of brownish or tan turf. As the condition worsens, the turf begins to wilt or take on a bluish color. Water runs off the turf, and the underlying soil is dry.

Localized dry spots are often caused by fungi which coat the soil and repel water, or hydrophobic/hydrophilic thatch or soil.

In research conducted at Ohio State University from 1989 to 1991, Drs. Robert Hudson and Karl Danneberger noticed that soils with localized dry spots had greater amounts of organic matter fractions than wettable soils. The only structural difference observed was from dry spots that occurred on three-year-old greens, and this was only detected following an initial extraction with methanol.

According to Hudson and Danneberger, there is a "unique structure, or interaction between several structures," occurring in the dry soils, and this serves as a priming agent. The syndrome is worsened by continued drying cycles. The researchers report that the origin of the organic compounds could not be determined, but say it is probably derived from bentgrass roots, soil microflora, or both.

Proper treatment ideally starts with prevention, which is difficult since dry spots are difficult to predict.

Hudson and Danneberger suggest the following treatment:

- Topdress with sand containing a minimal amount of fine particles. Small particles may tend to aggravate the problem over time.

- Core aerate in spring and fall.

- Use wetting agents to reduce the surface tension of water. These are best used in a preventive program.

- Eliminate thatch buildup as a preventive measure.

(Syringing greens serves only to lower the canopy temperature, and rarely solves the problem.)



Danneberger: Use wetting agents as a preventive measure.

...for nutrient uptake, thatch penetration

Wetting agents are often effective in increasing foliar uptake of nutrients like iron and nitrogen. By spreading water over the leaf tissues and wetting the waxy cuticle, greater stomatal and cuticular absorption can occur. In some instances, herbicide and fungicide activities may also be enhanced by wetting agents.

On sloped areas where thatch contributes to water run-off, a wetting agent can allow rapid wetting of the thatch and better water infiltration. Thatch tends to become hydrophobic (water repellent), and wetting agents are effective in correcting these conditions for one to two weeks after

to page 32

WETTING AGENTS FOR IRRIGATION MANAGEMENT

COMPANY	PRODUCT NAME	NOTES	CIRCLE NO.
Aquatrols Cherry Hill, N.J.	Aqua-Gro	Increases efficiency of pesticides and PGRs; aids herbicide penetration.	300
W.A. Cleary Somerset, N.J.	Super-Wet/ Super Wet 15-G	Non-ionic; 15-G is a granular, formulated for golf course use.	301
Grace-Sierra Milpitas, Calif.	Hydraflo	Blended non-ionic; less required; reduces leaf wetness and dew-related problems; also in granular.	302
Kalo, Inc. Overland Park, Kansas	Hydro-Wet	Can be metered into injection systems; available in ready-to-apply and granular forms.	303
Lesco, Inc. Rocky River, Ohio	Accu-Wet	Non-ionic; can help reduce irrigation needs by half.	304
Loveland Ind., Inc. Greeley, Colo.	LI700	Non-ionic/biodegradable; extends activity of insecticides and fungicides.	305
Parkway Research, Inc.	Wet Foot	Can be used on all types of turf, trees, shrubs, potted plants, soil mixes; rates as low as 16 oz./acre.	306
PBI/Gordon Kansas City, Mo.	Aqua-Zorb	Non-ionic/biodegradable; can be used in nurseries, on mulch, peat moss, balled trees.	307
Precision Labs, Inc. Northbrook, ILL.	Paragon	For dew removal, phytotoxicity reduction, soil moisture retention, evapotranspiration reduction.	308
Roots, Inc. New Haven, Conn.	Noburn	Tank mix compatible with liquid fertilizers/pesticides; does not need watering in.	309

Source: LM phone/mail survey, Sept. 1992

NUTRIENT from page 31 application.

For one to two weeks after applying a wetting agent, less dew is evident, as it spreads over the leaves and thatch instead of forming droplets.

On golf course greens or high maintenance turfgrasses, wetting agents can inhibit diseases. However, on home lawns this side benefit is not solely important enough to warrant applying a wetting agent.

On hydrophilic (wettable soils), which are the vast majority of turfgrass soils, wetting agents have sometimes been applied to improve drainage, structure, rooting and/or aeration. These benefits of wetting agents on hydrophilic soils have not been consistently documented in research studies, nor is there reason to believe any significant benefits would occur.

—Dr. Robert Carrow, University of Georgia, writing in the "Georgia Turfgrass Association News."

Types of adjuvants

■ An adjuvant is a material which, when added to another material, aids or modifies the action of the principal ingredient.

Adjuvants fall into several categories:

1. Surfactants, including wetters, wetting agents, spreaders. These products lower the surface tension of the spray solution. As a result, spray droplets will "flatten" and cover a larger area. They are used for general improvement in spray material coverage. Pesticides with contact modes of action are most appropriate for use with this kind of adjuvant.

2. Penetrants are adjuvants that enhance the uptake of the pesticide into the target. Thus, the pesticide is made more immediately available to do the job for which it was intended.

3. Anti-foamer/de-foamer products are used for preventing or eliminating foam from the spray mixture.

4. Compatibility agents make it possible for combinations of pesticides or pesticide/fertilizers to be mixed and applied concurrently. They also may allow you to salvage materials that have become incompatible.

5. Suspension agents are products which enhance suspendability and re-suspendability of pesticidal materials.

6. Crop oil concentrates were originally developed for use with post-emergence herbicides. They enhance coverage and improve penetration or uptake.

7. Stickers, with true adhesive properties, are used to enhance retention of the spray deposit on the target. They also increase the initial deposition of the pesticide. The idea is to retain the chemical material long enough to do its job.

8. Drift reduction agents reduce the number of very small droplets produced by a spray nozzle. Larger droplets are thus heavier so they tend to fall more directly to the target.

9. Tank and equipment decontaminants remove residues from equipment following use. Product that remains in the spray equipment may interfere with material used later. Many pesticide manufacturers specify methods of removing residues from equipment following use.

—Bob Reeves, technical services mgr, Loveland Industries, Inc., Greeley, Colo.

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BUDGETING: How much to ask for in 1993?

If increased expenditures are proposed, revenues must increase proportionally to ensure financial balance, says this park manager.

by Greg Petry
Waukegan Park District

■ It's time again to prepare and present your budget proposal for the 1993 fiscal year. Whether you work for a government agency or a privately-owned enterprise, budget battles are never fun.

First and foremost, look at the "big picture." Keep in mind our national economic climate. Analyze your local economy and your own facilities' status in comparison to the nation's, and keep this in mind when preparing your budget.

Even solid enterprises, operating profitably, seem cautious and apprehensive about the future. Less stable facilities are scrambling to stay afloat. Everyone is scrutinizing operations to eliminate waste and increase efficiency.

Next, you must pro-

vide sound justification. Show clearly why you are going to do what you propose. Verify what you are doing, who you are serving and why you are serving them.

Be prepared to justify maintaining your existing level of financing. Also, justify the need for any planned expansion projects. Why are they necessary? What do they accomplish? If approved, what impact will they have on the level of service and financial status of your facility?

Research the short- and long-term ramifications of any new projects for 1993. Justify each part of the proposed project in terms of what it will do for those you serve and how it will affect the financial picture. (This may not be the time to take on risky projects. It must be the time to sit tight and hold the fort.)

Honesty is a key. By showing what has

been a cost drain, as well as what has been worthwhile, and explaining the reasons behind each outcome, you're establishing a visible record of your overall operation.

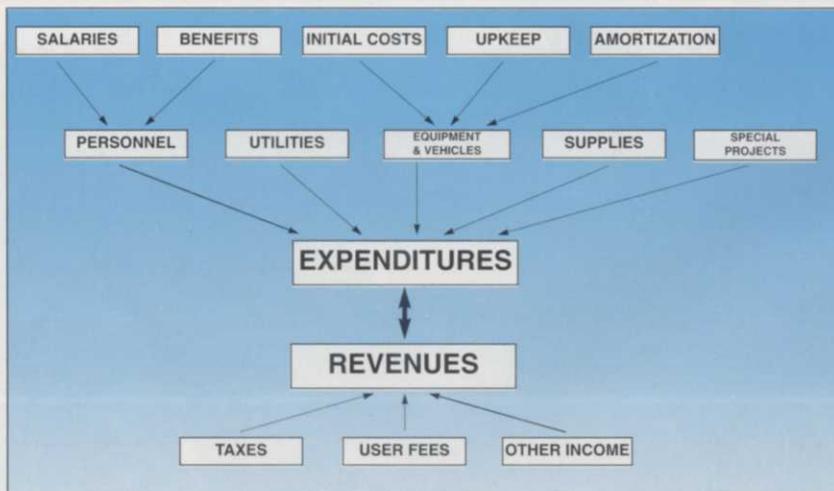
Document all costs—Keep track of labor, equipment and material/supply costs. Compile similar information on all of your equipment and vehicles, and on any outside rental equipment brought in for specific procedures or to supplement out-of-service units.

Know the complete cost figure for each one of your full- and part-time personnel—not only salary, but the costs of their tax and benefits package as well. Know the costs of contract labor and outside service firms you might use. Have these figures available as a yearly total, yearly total per individual, and also broken down by work hour per person.

Assemble data on each procedure your staff performs. Be able to supply the information on each procedure as a separate cost center.

There are two major parts of the budget: revenues and expenditures. If increased expenditures are proposed, revenues must increase proportionally to ensure financial balance.

One way to increase revenues in the next fiscal year is to increase fees and charges and field rental rates. (With the low inflation rate and short dollar supply, consider holding the



Budgeting tips

1) Establish a photographic record. Show the equipment and procedures that save money, both those that reduce the actual output of funds and those that result in a cutback of personnel hours. Show what wastes valuable resources.

2) Solicit support or testimony from user groups such as the youth baseball or soccer association. After all, budgeting is a political process as well as a mathematical process. Letters from these special interest groups can help justify that the services you provide are those that people want and need. Ask these groups to send representatives to public hearings and board meetings, where appropriate.

3) Check with vendors for the availability of donations of materials and/or supplies. Try setting up demonstration areas as a "show place" for products or programs.

4) Ask soccer or baseball organizations if they can fund specific capital improvements or subsidize a specific procedure. Most of these groups understand the budget crunch and are willing to provide support.

5) Pay bills early to take advantage of regular term discounts and anticipation discounts. Ask your suppliers if greater discounts are available, perhaps for volume purchases or for working from a yearly master order.

6) Look closely at utility costs. Lighting and irrigation are major budget items. Reduce consumption where you can. Investigate utility savings from every angle, including special pricing from volume and non-peak period use.

—G.P.

line on user fees. If rates must increase, keep them very minimal.)

Consider soliciting donations or tap the user groups for more financial support.

The labor factor—Personnel costs, which make up a large portion of the annual budget, are sure to be closely examined. In this economic climate, management raises will probably be rejected. Today, no one is irreplaceable. Try, however, to get a raise for the people below you, if the added costs can be justified.

Cost-of-living adjustments are being reduced or eliminated. Merit increases, based on performance, are shrinking. People are being asked to work harder at the same pay rate. Right now, the reward is having a job.



Greg Petry: back to the basics

General benefits are being cut back also. The out-of-pocket funds employees are asked to pay for health benefits is increasing. And, health care costs for the employer have skyrocketed.

Where possible, cut material, supply and equipment costs.

Be realistic throughout the budgeting process. Undoubtedly, you will be called on to tighten your belt. Support the mission of your organization or company. Be part of the solution, not part of the problem. Avoid pie-in-the-sky ideas and projects. Instead, go back to the basics with proven, documented results.

Your budget may take a beating in the next fiscal year. As bad as it may be, it can get worse. But it can get better. Those who manage their operation well, budget wisely, and produce results will be rewarded. Those who live day-to-day with no vision of long-term results and production will find themselves facing deep cutbacks.

—Greg Petry is superintendent of parks for the Waukegan (Ill.) Park District and president-elect of the national Sports Turf Managers Association.

The effects of price-cutting

■ Seldom do business-owners think through what real effect a price cut will mean to the company's profitability and ultimate market survival. This chart will give you some indication of what price-cutting means to you:

Price off	Selling price	Dollar profit	% increase in \$ vol for same \$ profit	\$ sales needed for same \$30 profit
0%	\$100	\$30	—	—
-1%	\$99	\$29	3.45%	\$102.42
-2%	\$98	\$28	7.14%	\$105.00
-3%	\$97	\$27	11.11%	\$107.78
-4%	\$96	\$26	15.38%	\$110.76
-5%	\$95	\$25	20.00%	\$114.00
-10%	\$90	\$20	50.00%	\$135.00
-15%	\$85	\$15	100.00%	\$170.00
-20%	\$80	\$10	200.00%	\$240.00
-25%	\$75	\$5	500.00%	\$450.00

Source: American Sod Producer's Association

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When Atlanta based landscape contractor, Scapes Landscape Management, wanted to improve efficiency in mowing

the award winning Northpark Town Center Rooftop Park, they found Walker fit the job. Steven Coffey, owner of Scapes, told us:

We were surprised to find the Walker gave a better quality cutting job on the Zoysia turf grass than the walk behind reel mower we had been using. In fact, the building management asked us to continue using the "new" mower on their project after the first week we used Walker. Best of all, while improving quality, we cut our job time with the efficiency of the Walker rider. And Walker fits the job because it was compact enough to fit in the service elevator to ride to the third floor park.

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Circle No. 144 on Reader Inquiry Card

CUSTOMER SERVICE:

Words with meaning at Hermes Landscaping

■ Hermes Landscaping in Lenexa, Kansas, has built a reputation on customer service. But it's not resting on its laurels.

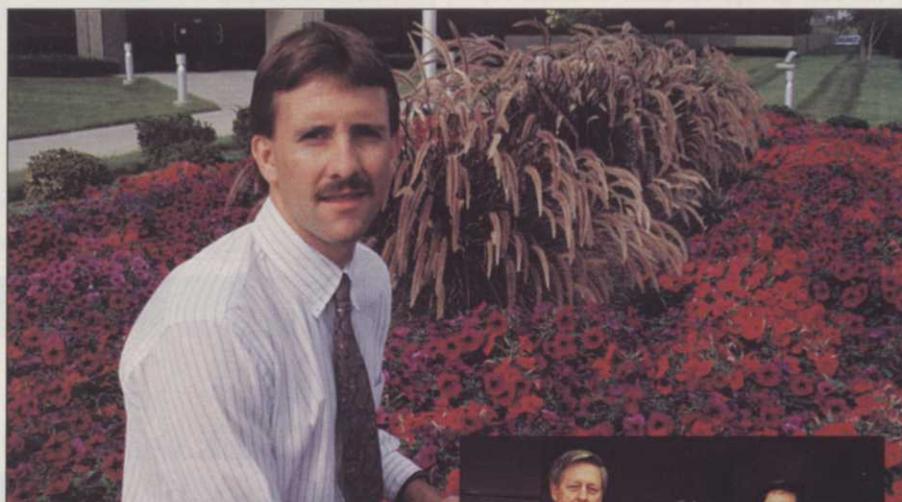
So that salespeople can more fully concentrate on attracting new clients to the Hermes fold, a customer service manager will be soon added to the landscape management division.

"Our service needs to be better...quicker," says division supervisor Randy James. "Our sales should be at \$2 million. We've been at \$1.2 million too long."

James admits that his salespeople, in this recessionary economy, are so focussed on servicing accounts in the true Hermes tradition that they don't have adequate follow-up time to sell additional accounts.

"We feel we have to go this route," James says. "That way, we can justify salespeople making more sales."

According to James, the customer service manager—who will take over an account after about 30 days—will be available at a customer's beck-and-call. "The customers are always amazed that the salesperson comes out for service calls anyway," James observes.



Randy James (above) says his division would like to grow from \$1.2 million to \$2 million soon. Founder John T. Hermes, James and president Dalton Hermes (right inset) helped the company win Lenexa's '1990 Small Business of the Year' award.



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Circle No. 274 on Reader Inquiry Card

Job One—With some auto manufacturers, “quality is job one;” but at Hermes, “service is job one.”

All 60 trucks are equipped with radios. Managers and salespeople are also equipped with car phones.

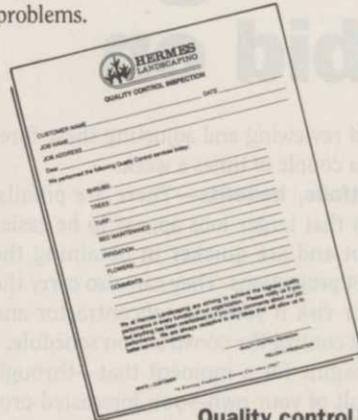
“We can do anything,” says James. “Our niche, though, is taking on the jobs that need immediacy. Some people want it, some don’t, but there are enough customers who are willing to pay 10 to 15 percent more for it.”

An example of Hermes’ responsiveness came just this past July. The company won the contract to landscape the Buffalo Soldier’s Memorial at Fort Leavenworth. Time was so compressed that workers were scrubbing boulders the night before Gen. Colin Powell, Chairman of the Joint Chiefs of Staff, appeared at the dedication.

Said Powell: “This magnificent monument is a dream come true. Artists such as...the designers at Hermes Landscaping devoted thousands of hours to the difficult task of creation.”

Corrective action is so prompt that problems are never documented on paper—they’re simply not around long enough to be written up. “I’m most proud of our responsiveness,” says Dalton Hermes, who began

with the company as a youth pulling weeds. “I’ve got a good intuitive sense about where problems are and aren’t, and I act quickly. I try to identify problems before they become problems.



Quality control forms help Hermes Landscaping service its customers more effectively.

“Complaints sometimes float up, too, and I’ve taken those calls. Not only are our managers always available, but I am, too.”

Two other ways the company makes sure customers are properly serviced:

- Management holds regular meetings to discuss cancellations and to make sure accounts aren’t being lost because of lack of service.

• The company distributes customer satisfaction questionnaires to its client list and pays close attention to the responses.

Fighting through—Excellent customer service notwithstanding, the recessionary economy has been felt.

“We want to hang in there and fight through this economy,” notes Hermes. “The decline in commercial landscaping & sprinkler sales is not unexpected but unappreciated. There hasn’t been an office building start here for a couple of years.”

Yet, expansion in the other three divisions—landscape management, residential landscaping & sprinkler, and at the nursery—has held steady. “The three divisions (not including commercial) will continue to do well, so we’ll try to put our eggs in those baskets,” Hermes continues.

The company’s growth spurt lasted from 1986-91. A seasonal color department was begun in 1989. Hermes has also added residential low-voltage lighting and paving installation services, and greatly enhanced its native and perennial lines, and its sprinkler services.

Concludes James: “We have a bunch of good guys who are young and energetic. That’s what makes the company work.”

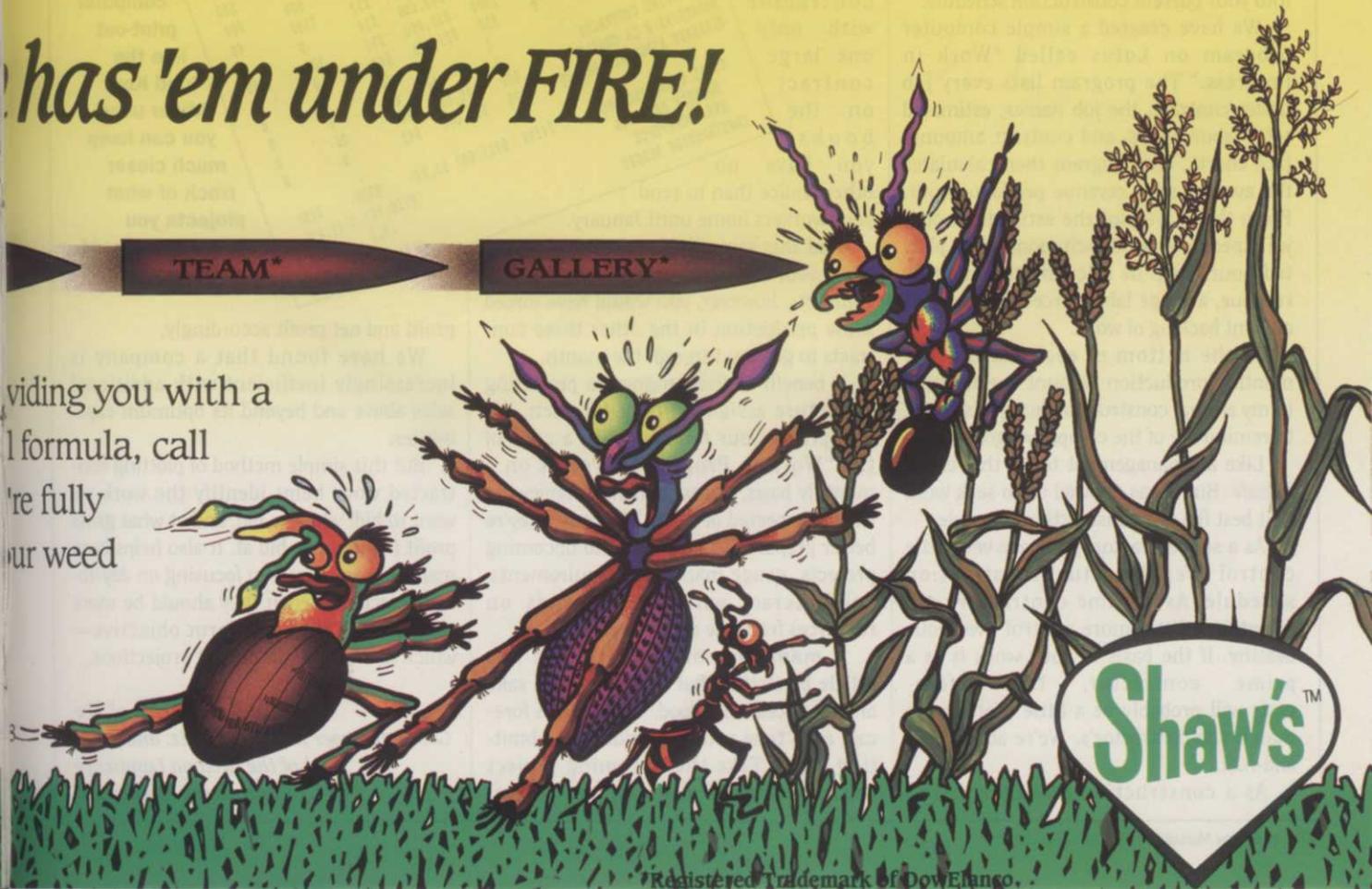
—Jerry Roche

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Choosing the right projects to bid on

A computer program called 'Work in Progress' helps keep this company's focus.

by Kent Miller

■ Sales for sales' sake are not necessarily good for anyone. How does one decide what to bid, when to bid, and at what gross profit it should be bid at? There are no simple answers to these questions.

What you decide to bid is influenced by many factors, among them:

- your expertise;
- current resources;
- current work under contract;
- other bidders; and
- market conditions.

A simple management tool for plotting when production will occur has been very useful to our organization. Based on budget and current backlog of contracts, it's easy to see if a project that is out to bid fits into your current construction schedule.

We have created a simple computer program on Lotus called "Work in Progress." The program lists every job under contract, the job names, estimated total labor hours, and contract amounts (see chart). The program then calculates the average sales revenue per labor hour. From there, we plot the estimated hours we expect to expend each month. The plotted hours help us calculate the monthly revenue, average labor force required, and current backlog of work.

At the bottom of each month, the monthly production amount I've targeted in my annual construction budget is listed, to remind me of the company's goals.

Like all management tools, this is not failsafe. But it has allowed us to seek work that best fits our construction schedule.

As a subcontractor, you have very little control over the actual construction schedule. As a prime contractor, you maintain a little more control over your destiny. If the basis of your work is as a prime contractor, these forecasts will probably be a little more stable than a sub-contractor's. We're about half-and-half.

As a construction manager, I find

myself reviewing and adjusting these forecasts a couple of times a week.

Pitfalls, benefits—There are pitfalls: one is that larger jobs appear to be easier to plot and are quicker in obtaining the budget projections. They can also carry the greater risk if you're a subcontractor and do not control the construction schedule.

Imagine for a moment that—through no fault of your own—you forecasted production in the month of December at \$200,000 on a state highway job. On November 30th, the inspector rejected the installation of the primary water source that was a key to starting your work. Your work is delayed 30 days while the water source work is being corrected. As a specialty subcontractor with only one large contract on the books, you have no other choice than to send your workers home until January.

Had this same thing occurred to you when your sales consisted of four \$50,000 contracts, however, you would have forced some production in the other three contracts to get you through the month.

A benefit of this program is projecting the future assignments of foremen. We also provide our foremen with a copy of the "Work in Progress" forecast on a monthly basis, to assist them in reviewing what is expected of them. That way, they're better prepared to look ahead to upcoming projects, gauge manpower requirements, and interact with the demands on resources from the other foremen.

A management tool—I began this article by stating that "sales for sales sake are not necessarily good." Review this forecast each time you're considering submitting a bid. Take the upcoming project you're bidding and plot it on your current

"Work in Progress" forecast. It's a quick test to see if you really want the work, and how it will fit in among your current budget projections. After that comparison, then place a value on the gross profit the work deserves, based on your needs.

This management tool will allow you to monitor and react to the day-to-day changes of field work. In most cases, it'll put you on notice to take action.

If it's 60 days from when you run out of work and you need to win a contract on a job that's going during that time frame, you submit your lowest bid.

If you're bidding the same job and you've got your budget covered, you should increase your direct costs, gross

'Work in progress'

REVISED		DATE: AUGUST 1, 1992		EXPENDED	
"TUCSON" JOBS		FOREMAN'S INITIAL		HOURS	
JOB	EST HRS	CONT. AMT	\$/HOUR	AUG 92	
COUNTY ANNUAL CONTRACT	J	600	\$25,000	\$42	0
RODEO GROUNDS MAINT.	J	1200	\$35,000	\$29	50
CITY IRRIGATION REPAIRS	J	1500	\$60,000	\$40	100
100 STREET LANDSCAPE	J	8528	\$295,371	\$35	0
SOFT BALL FIELD/COLLEGE C	T	1	\$0	\$0	1200
UNIVERSITY BUFFER	T	2200	\$150,000	\$68	0
WALNUT SHOPPING CENTER	T	500	\$15,000	\$30	0
CARSON MIDDLE SCHOOL	T	2942	\$90,000	\$31	500
DUFFY ELEMENTARY SCHOOL	T	1700	\$54,765	\$32	0
MODULAR SCHOOL	T	1300	\$43,600	\$34	500
HOSPITAL ADDITION	T	1000	\$30,000	\$30	800
PENDING CONTRACTS	T	550	\$22,871	\$42	40
FOUNTAINS @ SA CHOLLA	T	1	\$0	\$0	0
PLEASANT RIDGE RETIREMENT	T	1	\$0	\$0	700
TOTAL HOURS/BACKLOG		800	\$0	\$0	0
MONTHLY REVENUES		1325	\$35,000	\$44	0
AVE. WORKFORCE			\$55,000	\$42	0
CONSTRUCTION BUDGET		24150	\$911,607	37.74	0
				3330	3890
				\$110,965	\$142,415
				18.1	23.2
					\$125,000

With a computer print-out like the kind Kent Miller uses, you can keep much closer track of what projects you should and should not bid on.

profit and net profit accordingly.

We have found that a company is increasingly inefficient with additional sales above and beyond its optimum capabilities.

But this simple method of plotting contracted work helps identify the work we want to bid, when to bid, and at what gross profit it should be bid at. It also helps keep managers and foremen focusing on day-to-day objectives, when they should be more attentive to the long-term objective—which is meeting our budget projections.

—Kent Miller is owner of The Groundskeeper in Tucson, Ariz. and president of the Arizona Landscape Contractors Association.

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Expanding your business via a satellite operation

The satellite office lets a company expand to a new market at a very reasonable cost.

by Ed Wandtke

■ Even in a static economy, many green industry companies have opportunities to grow. But their home office may be at its capacity, or the new business is nowhere near the office. So they are faced with the challenge of expanding by opening a branch or satellite office.

Here are some evaluation factors, as they apply to satellite offices:

1. Where are your new customers located?

Often, growth is available only in "pockets of opportunity." These may be in your main market or in adjacent cities. As these pockets become larger, the company needs to evaluate the amount of time it takes to drive from the main office to service each of these customer pockets. Your initial target business may have been right near the office, while your new and growing business is located some distance from the office.

2. Who should consider a satellite office?

If you can say yes, to any of these questions, you should start to consider a satellite

office:

- Is your business becoming more mature?
- Is your current office located close to new market growth?
- Will you be marketing to this area heavily next year?
- Would you be one of the first companies to locate in the new growth area?

Also, determine the size of the opportunity in the new growth area.

3. What financial factors need to be considered?

In setting up a second service location, it is important to determine how long you expect to operate in this new location. What appears to be the right market now may not be the right market in as little as two to three years.

One method of avoiding an expensive investment in a property purchase is to enter into a one- or two-year lease with limited space. This may be merely a facility to store equipment and serve as a source of supplies or materials.

4. When do you open a satellite office?

The time to open a satellite office will vary, but is most often based on some of the following:

- Business in the new market is growing faster than nearer the home office.
- Travel time from the home office to the new market is resulting in more than two

hours of "windshield time" each day.

● Traffic to and from the new market is heavy, and opening a satellite office would allow crews to avoid long delays.

● Customer service calls are becoming less cost-efficient, and it's harder to maintain service excellence.

● There is not enough room at the main office to handle more equipment or service personnel.

Determining the exact costs to open a satellite may be time-consuming, but you need to carefully compare benefits. I have seen a mowing company as small as \$750,000 operate out of two locations due to traffic, proximity to customers, and the opportunity to allow an employee to assume management duties.

5. Why choose a satellite over a branch?

Many company owners believe that a(nother) branch is needed in order to expand to a new market. But in this era of computers and sophisticated telephone systems, the need to open an office in an expansion city is not always necessary. As a matter of fact, many companies are closing some locations. They are thus able to centralize their administrative operations at one location. Other companies are renting service bays with limited to no office space to help with service delivery and route efficiency.

Next month: How about a branch office?

—The author is a principle at Wandtke & Associates Management Consultants, 2586 Oakstone Dr., Columbus, OH 43231. For more information, phone (614) 891-3111.

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TECH CENTER

Degree-day method of pest control shows it can work in Pennsylvania

The scouting method that relies on temperature readings can help predict when insects might become a problem.

Landscapers, golf course superintendents and horticulturists in Pennsylvania are using the "growing degree-day" (GDD) method of insect scouting on ornamentals, resulting in better-timed and more efficient control product applications.

Eric Vorodi, an extension agent for Lehigh and Northampton counties in southeastern Pennsylvania, compiles information recorded by 17 horticulturists in eight counties who track degree-days every spring. Information on pest sightings is then supplied, via a weekly pest report, to ornamental professionals who pay an annual fee of \$25 for the service.

(For an earlier report on the degree-day method of insect scouting, see *LANDSCAPE MANAGEMENT*, February 1992.)

Vorodi decided to give the GDD method a try after listening to a presentation on Integrated Pest Management (IPM) by Dr. Warren Johnson of Cornell University. Vorodi, Dave Suchanic, a regional nursery agent, and Jeff Jabco, superintendent of grounds at Swarthmore College, formed the Southeastern Pa. IPM Research



Vorodi: Degree-days reveal best time to scout for pests.

DEGREE DAYS FOR SOD WEBWORMS AND WHITE GRUBS

Target pest	Base 50° F
Larger sod webworm (1st generation)	1050-1950
Larger sod webworm (2nd generation)	2600-3010
Bluegrass sod webworm (1st gen.)	1250-1920
Bluegrass sod webworm (2nd gen.)	2550-3010
Cranberry girdler	1700-2750
Northern masked chafer (1st adult)	898-905
Northern masked chafer (90% adults)	1377-1579
Southern masked chafer (1st adults)	1000-1109
Southern masked chafer (90% adults)	1526-1679
Japanese beetle (1st adults)	1050-1180
Japanese beetle (90% adults)	1590-1925

Source: Dr. David Sheltar, Ohio State University

Group to provide education and information about Integrated Pest Management to the area's ornamental horticulture industry.

The spring activity of most temperate plants and most insects is based on the accumulation of thermal units called degree-days. Degree-days for any given 24-hour period are calculated by averaging the highest daily temperature (T max) and the lowest daily temperature (T min) and subtracting a threshold temperature (Tt).

The threshold temperature is defined as the cardinal temperature below which no morphological development occurs.

To obtain data, the scouts use an Omnidata biophenometer—a small, battery-operated microcomputer. The device measures temperature and calculates, accumulates and stores GDD information.

Each Tuesday after 4 p.m. or before 10 a.m. Wednesday mornings, the scouts

record the accumulated degree days, insects observed over the past week, which host plant the insect was occupying, and the insect's stage of development (egg, larvae, nymph or adult) and any seasonal diseases such as powdery mildew or apple scab.

The scouts also use phenological indicators—for example, a plant at bud break or in bloom—to determine when a pest might be expected to appear. "If you don't have any way to measure growing degree-days, you can use the stage of plant development (as a guide)," says Vorodi.

Since timing is so important, the information is same-day faxed to the extension office and the results mailed to 230 subscribers, including arborists, nurserymen, landscapers and golf superintendents.

The program has grown from 30 subscribers in 1991 to 230. Another 200 joined after realizing the benefits of the reports.

to page 46

ELSEWHERE

Examining water content in soil, page 46

Water, fertilizer not critical to plant health, page 46

DEGREE from page 45

"If subscribers scout on their own," says Vorodi, "this information keys them in to the best time to scout for pests; it tells you when they may be emerging."

"If someone in Allentown knows that a pest was sighted some distance to the south, then he can know when it will be time to scout. He'll know he can expect to see *this* pest on *this* plant, *this* week."

Vorodi likes the discipline built into degree-day monitoring. "It forces people to keep records, which they can have for

the following year," he says. However, he further notes that the information should be used only as an estimate, since sightings can change from year to year.

The program does require more scouting time. Each cooperator now spends six hours per week scouting, up from 3.5 hours per week before they began using the degree-day method.

According to the research group, degree-days are not 100 percent reliable. They use only ambient air temperature, and do not take into account the warming

effect of solar radiation on solid surfaces. Also, degree-day information is not yet available for all insect pests, and the ranges for certain pests can be functionally too broad.

But the benefits of growing degree-days—disciplined record-keeping; a more accurate assessment of possible insect populations; and less indiscriminate spraying—at least to Vorodi and his associates in Pennsylvania, far outweigh the limitations.

—Terry McIver

Important to monitor water in your soil

■ The movement of water in soil significantly influences plant development and demand for irrigation. The following terms are useful in understanding soil and water relationships:

Gravitational water: water pulled out of large pores by gravity after rain or irrigation. As the water is pulled out, it pushes out toxic gases and a new oxygen supply moves into the soil.

Capillary water: adheres to a soil particle the same way a film of water adheres to any object. This film of water moves, by way of "capillary attraction" from one soil particle to another. The smaller particles, such as clay, have greater, exposed capillary surfaces. As a result, water will rise higher in a one-inch tube containing clay than in a one-inch tube containing sand.

Hydroscopic water: a very thin film of moisture that "sticks" to each soil particle. Even in very dry soil, some hydroscopic water is present. The only way to remove all of the hydroscopic water from a soil sample is to bake the sample in an oven for a long time. Hydroscopic water is so tightly bound to the soil that roots cannot absorb it.

Field capacity: the maximum amount of water that a particular soil can hold; the amount of water remaining after gravitational water has been pulled out.

For a guide to estimating moisture content of soil, see the accompanying chart.

—Source: "The Virginia Gardener"

A Guide for Estimating Moisture Content of Soil

% of field capacity	Influence on plant growth	Response to physical manipulation		
		Loamy sand, sandy loam	Silt loam, loam	Silty clay loam
100+	Saturated soil. Too much moisture and too little air in the soil; persistence can damage plants.	Free water appears on soil when squeezed.	Same as sandy loam.	Same as sandy loam.
100	Excess moisture has drained into subsoil after rainfall or irrigation, and optimum amounts are available in rootzone for plant growth.	When squeezed, no free water appears on the surface, but it leaves a wet outline on your hand. Forms weak ball; usually breaks when bounced in hand; will not stick.	Same as sandy loam, but forms a very pliable ball that sticks readily.	Same as sandy loam, but ribbons out (can be formed into thin strand when rolled between thumb and forefinger) and has slick feeling.
75	Adequate moisture for plant growth. Lower moisture is marginal.	Tends to ball under pressure, but breaks easily when bounced in hand.	Forms a ball, somewhat plastic, that sticks slightly with pressure.	Forms a ball, ribbons out between thumb and forefinger; has slick feeling.
50	Inadequate moisture for plant growth.	Appears to dry; will not form a ball with pressure.	Somewhat crumbly, but holds together with pressure.	Somewhat pliable, balls under pressure.
25	Moisture in soil is unavailable for plant growth.	Dry, loose, falls through fingers.	Powdery, sometimes crusty, but easily broken down into a powdery condition.	Hard, cracked, difficult to break down to powdery condition.

Source: C.L. Craig, "Agriculture Canada," 1976

Water, fertilizer not crucial for some woody plants

■ Research published by the Horticultural Research Institute (HRI) in its June 1992 issue of the *Journal of Environmental Horticulture* (JEH), said frequency of irrigation and fertilization had only "minor impacts" on plant growth and survival of five selected drought-tolerant woody landscape plants.

The results suggest that if the total volume of water is within the tolerances of the species, the frequency and duration (frequent shallow or infrequent deep applications) are "not critical," says researcher

T.D. Payne of the University of California at Riverside, where the study was conducted.

Plant species included:

- the Carmel creeper (*Ceanothus griseus* var. *horizontalis*),
- Santa Ana (*Ceanothus griseus* var. *horizontalis* 'Santa Ana'),
- California coffeeberry (*Rhamnus californica*),
- Eve Case (*Rhamnus californica* 'Eve Case') and
- Fraser photinia (*Photinia fraseri*), the only plant in the study that was not native

to California.

Noting a high mortality rate due to root pathogenic fungi, the researcher also suggested that, in addition to visual appeal, care should be taken to preserve disease and insect resistance when selecting cultivars for propagation and sale.

For a copy of the complete study as it appears in JEH, send \$15 to HRI, 1250 I St., NW, Suite 500, Washington, DC 20005. For more information, phone (202) 789-2900.

—Terry McIver

LAWN CARE INDUSTRY

'People power' fuels ChemLawn rise

A year or two on customers' lawns and ChemLawn specialists think they know it all—or at least enough to be a manager.

■ "A circus," says Rick Knepper, grinning enormously. "But I would do every bit of it again."

Consider the former nomadic existence of one-time ChemLawn employee Knepper: 1973, Toledo, Ohio; 1975, Findlay, Ohio; 1977, Pittsburgh; 1978, Buffalo, N.Y.; 1980, Detroit; 1981, Columbus, Ohio.

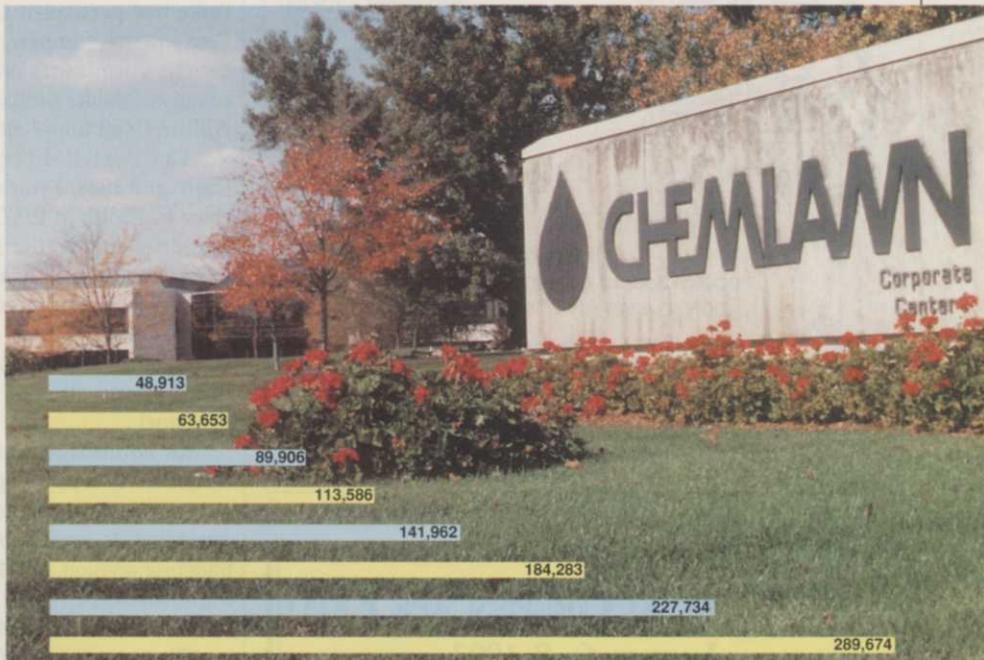
Many former ChemLawn co-workers agree with Knepper. The company's business explosion in the middle to late 1970s colored their lives with the kaleidoscopic excitement of a circus: the next brass ring being no farther away than the next big city with suburbs and lawns.

ChemLawn employees, confident that their efforts would be recognized and rewarded, fed off their own momentum. First opening markets in the Mideast. Then the East Coast and the Northeast.

"ChemLawn 'MacDonaldized' the market here. It changed the face of lawn care in the Northeast," says one longtime independent Connecticut operator.

"We would take the trucks and move the guys to the next city ourselves. Load them up, and get the guys moved in," recalls Willie Vorn Holt, a 20-year ChemLawn employee.

Up the ranks—The combined career paths of Knepper and Vorn Holt hopped-scotched through a dozen Mideast and



ChemLawn's sales (in thousands of dollars), between 1977 and 1984.

Eastern cities. Starting as entry-level "lawn specialists" they rose to management jobs—Knepper in Columbus, Vorn Holt on the East Coast. (Knepper is now a franchise consultant in Columbus. Vorn Holt, in Baltimore, will be marketing a dry cleaning franchise system with several partners soon.)

"The strength of the ChemLawn organization was its focus on the individual," recalls Mark Cruse, 17 years with ChemLawn, vice president of operations 1980-85. "There were times when we had more opportunity than people."

Tad Grubbs in just eight years, for instance, worked in Columbus, Minneapolis, Buffalo, Toledo and Pittsburgh before becoming Detroit Regional Manager in 1981.

"I thought it would be a valuable experience, being a part of so many different marketplaces," says Grubbs, now national sales manager for C&S Turf Care Equipment, Canton, Ohio.

"Also, I think we enjoyed working with

a lot of different people. We were having fun."

Dick Duke himself probably didn't foresee the wildfire he'd ignite.

Could he have foreseen that when he climbed aboard his first lawn care tank truck in Troy, Ohio, in 1969 ("Gertrude") he'd tossed a pebble into the American business pond that would ripple outward for another 15 years. Years, in fact, after his death.

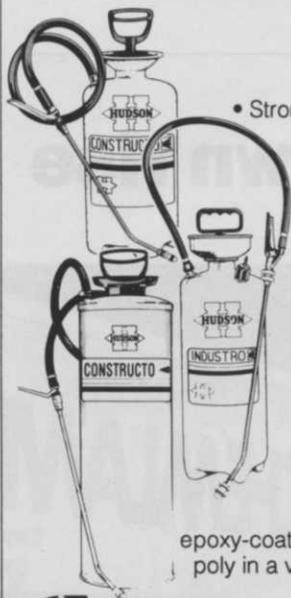
Responsibility—This was partly due to a management system that Duke constructed. Or, perhaps more accurately, he allowed to evolve. Duke couldn't imagine that most people didn't crackle with the same fire to succeed that he did. He willingly—gladly almost—surrendered responsibilities to others, if they displayed any willingness to accept them at all.

"As a manager you felt you had the opportunity to use your own skills and your own judgment as long as you stayed within the confines of the people and service philosophies that Dick Duke had start-

This is part two of a three part series by senior editor Ron Hall outlining the rise and eventual disappearance of the ChemLawn Corporation from the lawn care industry.

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ed the company with," says Grubbs.

Duke's judgment of people, in hindsight, now seems almost uncanny.

Two additions to ChemLawn's original management family—a group that remained basically intact through ChemLawn's first decade—sustained the company's unparalleled growth following Duke's unexpected death on August 23, 1977.

Several years before his death, Duke had persuaded Larry J. Van Fossen, the company lawyer, to become ChemLawn's president. The company founder similarly recruited William Grant from Johnson Wax.

(Van Fossen directed ChemLawn until 1988, a year after its purchase by Ecolab in 1987. Grant, vice president of operations, remained seven years before leaving the industry for personal business interests in Atlanta.)

No crisis—Duke's sudden death (heart attack) stunned ChemLawn personnel.

But no management crisis ever materialized, even though the company had, just months earlier, begun expanding its services by starting a franchise division, and test marketing ChemScape tree & shrub care and commercial maintenance.

"The reason why ChemLawn didn't miss a beat was because Dick Duke had already empowered people with responsibilities," says Cruse.

"Jack (Van Fossen) came in, he helped re-organize the company, and set us off on the next stage," says Vorn Holt. "It became very obvious he knew how to run the show. And the same thing was very true for Bill Grant. If you had a new idea on how to do something, he was all ears."

ChemLawn topped a hectic 1977 (26 new branches, \$49 million in sales) with \$63.6 million in sales in 1978: this after a numbing winter and late spring in the Mideast, ChemLawn's stronghold.

By the end of the 1980 season, ChemLawn, now also firmly established in the Mid-Atlantic and Northeast, eclipsed the \$100 million sales mark. In that year it opened 22 additional branches (16 in new market areas), 11 new ChemScape locations and five more commercial sales offices.

Decentralized—It did this with basically the same structure it had always relied on: branches operating on a profit center basis with branch managers responsible for sales, expenses, and for producing a profit,

continued on page 50



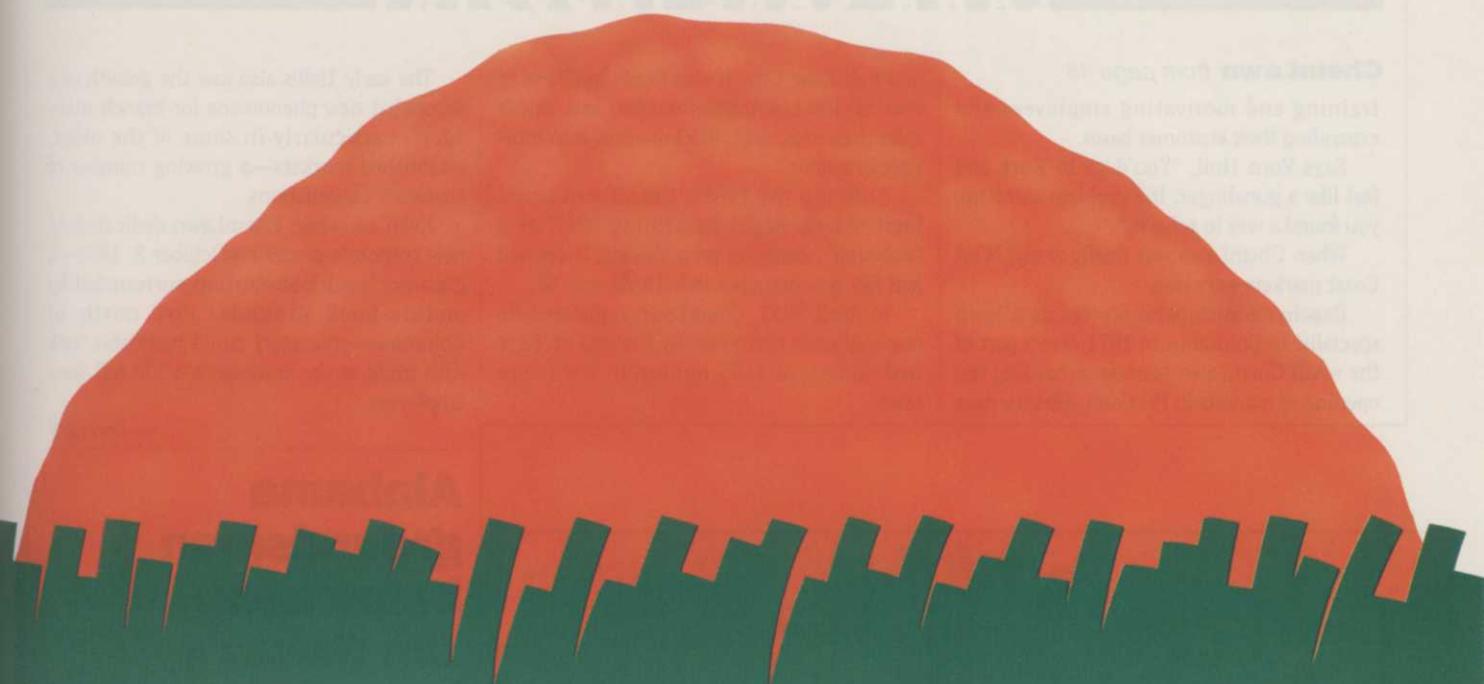
Knepper: "We didn't know how big it could get, we didn't know when to say stop."



Beecher Smith was part of ChemLawn's westward expansion.



Grubbs: Skills acquired in one market were used in opening the next.



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Growing Better Through Technology

ChemLawn from page 48

training and motivating employees and expanding their customer bases.

Says Vorn Holt, "You'd go to work and feel like a gunslinger. If a problem came up, you found a way to solve it."

When ChemLawn was finally ready, West Coast markets were ripe.

Beecher Smith, who started as a lawn specialist in Columbus in 1971, was a part of the small ChemLawn team spearheading the opening of markets in Portland, Albuquerque

and Salt Lake City. It was heady business as markets like Los Angeles and San Jose, under sales pressures, split, like amoebas, into multiple branches.

Entering the 1980s, ChemLawn could legitimately begin describing itself as a "national" company even though it opened just five new branches in both '81 and '82.

In April 1982, ChemLawn registered its one millionth customer. By the end of '82 it had registered \$165 million in lawn care sales.

The early 1980s also saw the growth of a somewhat new phenomena for branch managers, particularly in some of the older, established markets—a growing number of customer cancellations.

Even so, when ChemLawn dedicated its new corporate center on October 8, 1982—a glass-enclosed lobby/atrium surrounded by picture-book grounds, just north of Columbus—managers could justifiably look with pride at the company's 3,200 full time employees.

— Ron Hall

Alabama groundsman helps keep Jim Nabor's hometown a prize winner

Groomed, flowering landscape is 'just like having another salesperson on the payroll,' grounds manager says.

■ Sylacauga, Ala., is grounds manager Greg Bolton's hometown. Both Greg and Sylacauga are glad it is.

Sylacauga (pronounced sil-a-cog'-a) is also:

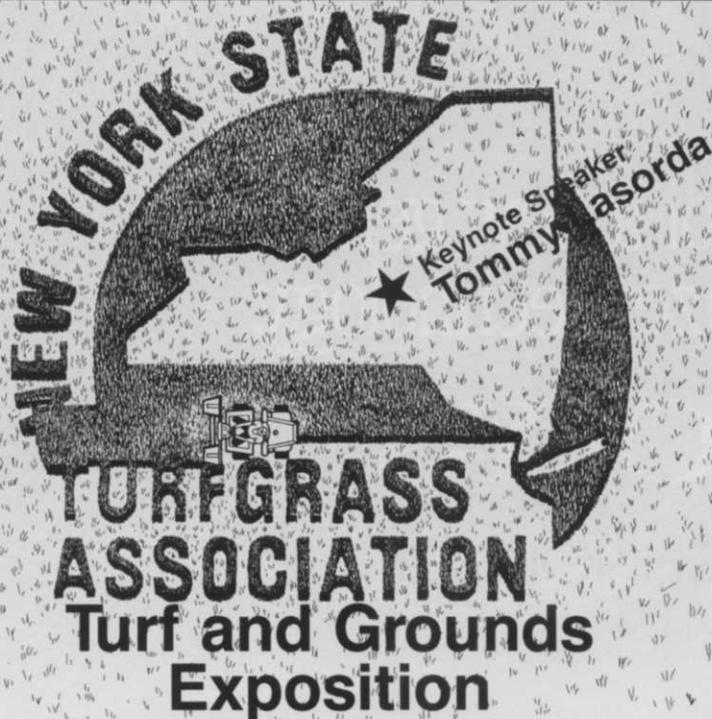
- Jim Nabors's hometown (Gomer Pyle). Gollllleeey!
- The location of quarries that produce the whitest marble in the world.
- The only town where a person was known to have been hit by a falling meteorite. (She survived.)

This city of about 13,000 people prospers in the low, green hills of east central Alabama. It's a quiet but industrious town with four sizeable industries either in or around it—textiles, paper, fertilizer, and marble quarries. Pine and oak trees cool Sylacauga's pleasant streets and provide shade for homes that are neat but, for the most part, modest.

"A man sure would be sorry if he couldn't find work here," comments local fishing guide William Davis, Bolton's lifelong friend and an employee at the nearby

continued on page 52

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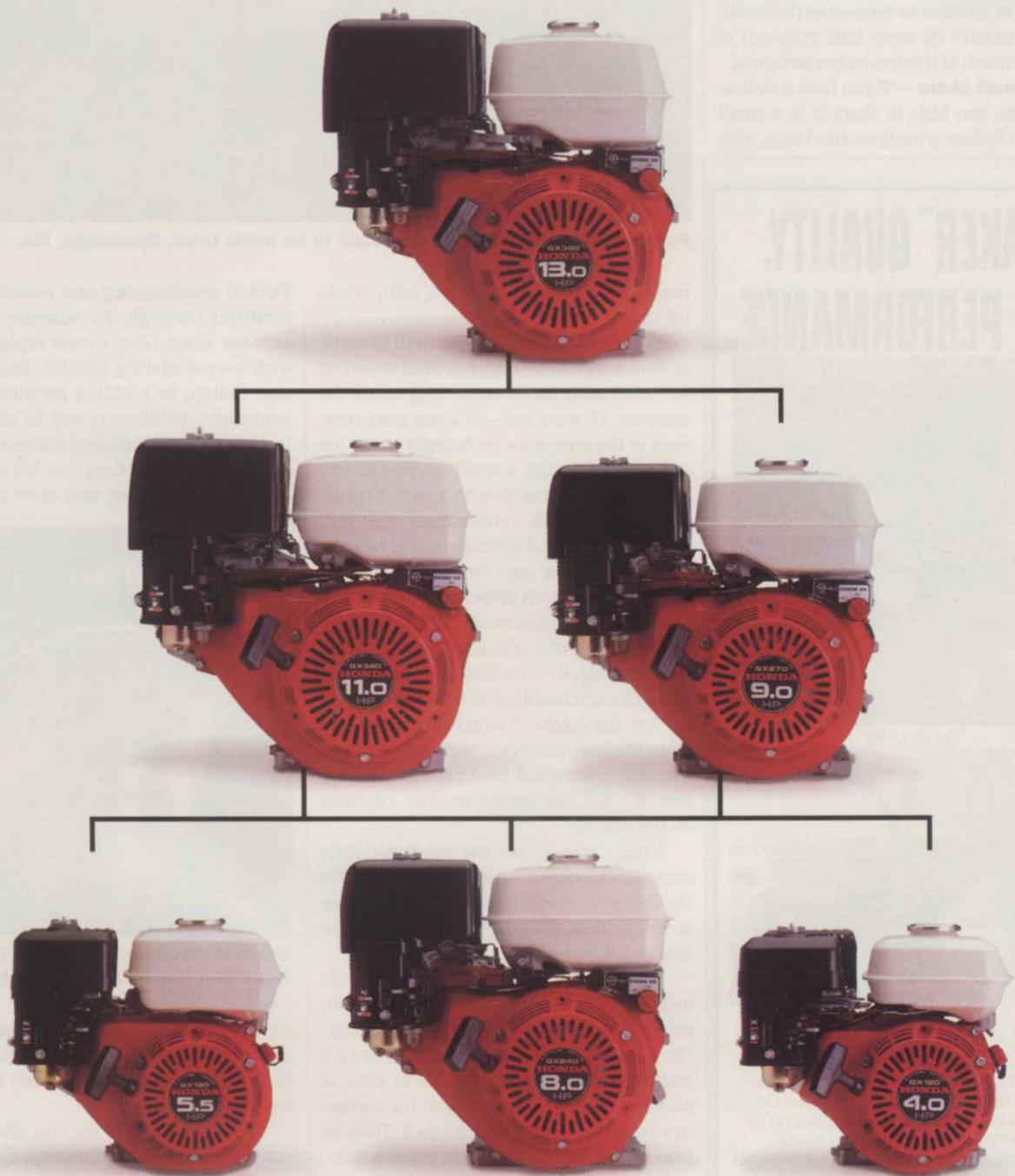
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Alabama from page 50

Kimberly-Clarke plant.

Landscape manager Bolton and his employer, fertilizer manufacturer Pursell Industries, do their part in making Sylacauga an even nicer city. Greg donates time and expertise, and his employer provides fertilizer and other material when it's needed. Greg does this in addition to overseeing the condition of Pursell's 80 acres (and growing) of property, much of it intensively maintained.

You must share—"If you have a skill or knowledge, you have to share it in a small city," says Bolton, a medium-sized man, with



Pursell Industries shows its best face to its home town, Sylacauga, Ala.

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hazel eyes and a sun-reddened, softly freckled face.

Pursell Industries, known until recently as Parker Fertilizer Co., has been a part of the community for 88 years. Greg joined the company 10 years ago—as a one-man crew. Most of the experience he brought to the job came from farming, a small nursery he had started, and some work with a local landscaper. Today he heads a crew of four other full-time employees and several seasonal helpers. "I consider all my guys foremen because we take care of so much property," he says.

Greg's department is virtually autonomous within the company, preparing its own budgets, recording and monitoring all expenses, scheduling its own activities.

"On the books, I suppose what we do looks like pure overhead," says Bolton, "but I feel that a beautiful landscape is a selling tool. It's just like having another salesman on the payroll."

Greg's crew mows the predominantly zoysiagrass grounds at least weekly, but it's the flowers, ornamentals, and trees, particularly the trees, that really excite Bolton, an avid and experienced outdoorsman.

Trees that fit—Bolton favors 3- to 5-inch caliper trees—which he establishes with extreme care—for new landscape plantings. He wants the landscape to evolve into a mature and natural appearance as soon as possible. (Bolton does almost all the company's landscape design work himself. Trees he likes to use include magnolia, maples, oaks, and river birch.)

"I want trees that are going to fit into the area around here, that look natural here, trees that aren't going to require a lot of pruning or spraying. I don't like those poodle-dog trees that you've always got to be trimming," Greg says.

Beds of begonias brighten entrances to

Pursell warehousing and manufacturing facilities through the summer and into October when Greg's crew replaces them with over-wintering pansies. Increasingly, says Bolton, he's adding perennials to his landscapes. Wildflowers will be seeded into less intensively maintained fescue areas.

But, as busy as Greg and his crew stays on company premises, they never turn down



Grounds manager Bolton won't plant trees that require much trimming.

a chance to help, if asked, with the grounds at local schools, or at the large modern library downtown, or the property surrounding the city building.

"The appearance of the city, after all, is a reflection on all of us, the company and even myself," says Bolton.

Greg and others in Sylacauga are apparently doing something right. Sylacauga, Ala., is a perennial National Beautification Award winner. And, the grounds at Pursell Industries, are just as regularly chosen by a city committee as the most attractive in the community.

—Ron Hall

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JOB TALK

Design team borrows from nature's palette

The Nichols Institute of San Juan Capistrano was designed and built with the natural environment in mind.

■ Nestled in the middle of a serene desert wilderness, the corporate headquarters of the Nichols Institute in San Juan Capistrano, Calif., is an example of modern-day landscape design that blends in perfectly with its natural surroundings. The building is modern-day, but the landscape is as native as it gets.

The landscape, with its meandering walkways, ponds and outdoor seating areas, was designed to provide a campus-like atmosphere which would encourage discussion, study and thought.

To extend the natural look, curbs and sidewalks are either stained or poured with color concrete to match the existing soil.

According to landscape architect Charles Wilson, of the Mountain View, Calif.-based Wilson-Van Deirse, the landscape was hydroseeded for erosion control with a variety of indigenous plant materials, including needle-grass, California poppies, lupins, clover, coyote bush and lotus.

Much indigenous plant life was used in the design. There are 900 trees on site, including many oaks and sycamores, some from Dr. Nichols' private collection, which had been stored in area nurseries.

Fighting fire—One design challenge was posed by local fire department authorities, who thought the numerous dry native plants presented a fire hazard.

"(The fire department) wanted us to use more ice plants, which are naturally moist weed-like plants," says lead designer, David Pyle, of The Krausz Companies, San Francisco. On the other side of the issue were the county authorities, who wanted the predominantly indigenous plant life to remain. The compromise resulted in a four-zone design, with a gradual thinning of the native grasses combined with irrigated sod grasses. Some of the sage, buckwheat and other very dry plants were also removed.

According to Wilson, the innovative use of waste water is a trend in California, a state, long plagued by drought.

"We're seeing more and more reuse of waste water," says Wilson. "It poses a whole new set of problems related to sewage treatment and various biological components"

Irrigation throughout the landscape is a combination of drip and spray sprinkler systems.

One problem encountered during the final stages was due to overwatering of the newly-planted sod. As a result, nearby oaks were overwatered. Pyle said the excess water was pumped out and the trees saved.

Not so lucky were a few trees weakened by drought, which fell prey to marauding beetles.

Another of the design criteria was to minimize the visual



Goal of the Nichols Institute design and build teams was to incorporate a meandering campus-type look and an orderly arrangement of spatial relationships.

impact of automobiles on the site. To accomplish this design goal, the parking lot was placed on a plateau about 20 feet below the horizon of the building, and the concrete was burnished with a rock salt dusting for texture.

The institute—Completed in September 1991, Nichols Institute is a diagnostic testing facility that applies new medical technology to practical applications for patients, in collaboration with its Academic Associates, who are internationally acclaimed physicians and scientists.

The Institute is surrounded by 7600 acres of park land. It consists of a pair of two-story 98,000-sq. ft. structures of curved, linear design and reflective glass. Additional structures include a 33,000-sq. ft. warehouse, a recreation center and a water reclamation plant.

Dr. Albert Nichols, founder of the Institute, wanted the design to blend in well with the natural setting by preserving vistas and the natural vegetation. "And it was also critical for the structure itself to be flexible, modular and energy efficient," says Nichols.

"We spent six years in the planning process, and the result is an extraordinarily harmonious balance. We believe that with this site we have achieved our mission to provide a dynamic work place in which the efforts and achievements of our staff members are encouraged."

The building design allows it to blend in and reflect the surrounding terrain. The roof and exterior walls of the warehouse are patterned with redwood lattice covers, providing a camouflage effect that blends the structure into the hillside.

Between the buildings, hardscape and concrete were colored to match the adjoining hills. "We tried to keep away from a man-made look," says Pyle. "For example, the amphitheatre was shaped to match contours of the land."

All site preparation and utilities were included in the first phase of the project, which contains a 100,000-sq. ft. lab and office buildings, a warehouse and staff center.

The water system includes the well equipment, a three-mile pipeline, storage reservoirs, fire system, sewage treatment plant and a landscape pond.

—Terry McIver

HOT TOPICS

EPA, 2,4-D Task Force agree on new label and exposure reduction effort

WASHINGTON—The U.S. EPA and the 2,4-D Task Force recently agreed on new exposure-reduction language on the herbicide 2,4-D product labels.

The following measures will appear on the labels of 2,4-D turf products formulated after June 15, 1994, according to the negotiated settlement:

- Mixers/loaders/applicators must wear long-sleeved shirt, long pants, shoes, socks. Users of turf liquid products with "Warning" or "Danger" signal words must wear face shield or safety glasses.

- Users of turf liquid amine products must wear rubber gloves, and users of non-amine formulations must wear chemical-resistant gloves.

- Persons who pour from open containers of over 1 gallon (and less than 5 gallons) must wear overalls or chemical-resistant aprons.

- "Probe and pump" systems must be used to transfer the contents of containers 5 gallons or more in capacity.

- Maximum turfgrass application rates of 2 lbs./acre/application.

- Maximum of two broadcast applications per year per turfgrass site.

Further, the label will state that people (other than the applicator) or pets are not allowed on 2,4-D-treated turfgrass areas until sprays have dried or dusts have settled. The 2,4-D Task Force also agreed to develop a product education program for both professional and do-it-yourself users to further reduce human exposure. "We (2,4-D Task Force) will be testing to see if the message is getting through and whether it's being understood," says Pam Jones, a spokesperson for the task force. (The 2,4-D Task Force is composed of companies that manufacture and formu-

late 2,4-D.) The EPA also gave the 2,4-D Task Force members more time for required rodent carcinogenicity studies.

The EPA is convening, early in 1993, a 10-member panel of experts to review epidemiological data on 2,4-D. The panel will be "an advisory panel for the comprehensive evaluation of the carcinogenicity of 2,4-D," EPA says.

"The Agency (EPA) is trying to make a determination about whether the compound should go into special review and it intends to use that review to help it make that judgement," says Gary Hamlin, a spokesman for DowElanco, a task force member. Several farm worker studies have suggested a link between long-term 2,4-D use and a relatively rare form of cancer. These findings have not been corroborated by other evidence, claims the task force.

—Ron Hall

PLCAA, Univ. of Georgia plan home-study course

MARIETTA, Ga.—The Professional Lawn Care Association (PLCAA) and the University of Georgia are planning a home-study course on turfgrass care and management, to be available in early 1993.

The course is authored by Dr. Keith Karnok, professor of agronomy, and contains approximately 200 study hours of material. Topics are:

- turfgrass growth, development and establishment;
- fertilization, irrigation and mowing;
- weed/insect/disease control;
- control product regulations; and
- soil types.

A portion of the course will cover management practices used for alleviating

environmental stress, such as high and low temperatures, drought, and shade.

The course will also include discussions concerning pesticide use, regulations and safety as well as integrated pest management. Lawn care technicians who complete the course will be recognized as Certified Turfgrass Professionals by the PLCAA.

Karnok says the program allows LCOs to learn the technical aspects of turfgrass management without being restricted to a classroom.

"Along with the experience of working in the lawn care field, this course will provide valuable training on topics of real importance in today's industry," Karnok

says.

Ann McClure, PLCAA's executive vice president, thinks the diversity of topics is what makes the course special.

"The correspondence course can take people beyond the basic technician level toward being more knowledgeable, well-rounded turfgrass professionals," says McClure. "PLCAA believes this will mean a higher quality of service to the public."

PLCAA's other educational project is a joint venture with Responsible Industry for a Sound Environment (RISE): a three-part technician video program, which complements the University of Maryland's EPA-funded, six-part video series, "Using Pesticides Safely."

PLCAA has been advised by the EPA's certification and training branch and will continue to seek its input as the program progresses.

—Terry McIver

ELSEWHERE

**Californians
eye H₂O bill,
page 56**

**Landscapers
save a life,
page 58**

**Speeding up
Mother Nature,
page 58**

105 million trees planted in U.S. in 1991

WASHINGTON—One hundred five million landscape trees were sold for planting between Oct. 1, 1990 and Sept. 31, 1991, according to a survey of the nation's largest tree growers.

"The U.S. Landscape Tree Planting Survey," sponsored by the American

Association of Nurserymen, on a U.S.D.A. Forest Service Grant, was conducted to set a baseline for measuring tree planting activity in the U.S.

"For the first time ever, we have the opportunity to measure the tree planting impact of the urban and community forestry movement that is taking hold across the country," says Dr. Fred Deneke of the U.S. Forest Service.

Deneke added that the results show the private nursery industry is "capable of pro-

TREES SOLD IN U.S. 10/1/90 to 9/30/91

Type of tree	No. sold	%
Broadleaf and/or conif. evergreen	39,175,000	37
Deciduous shade	33,073,000	31
Deciduous flower	25,297,000	24
Fruit and/or nut	8,091,000	8

Source: AAN

ducing the 30 million additional trees called for U.S. cities and communities in Pres. Bush's 'America the Beautiful' initiative."

The statistics show a capability to expand production of finished trees by nearly 30 percent over three years to meet increased demand.

According to the study, 22 percent of the trees sold were through landscape contractors and an additional 4 percent were through municipalities or governments.

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California's water bill has tight controls

SACRAMENTO, Calif.—If you landscape in California, and have the stamina to comply with the state's new water efficient landscape ordinance, then you really belong in the business.

California's Model Water Efficient Landscape Ordinance goes into effect January 1, 1993, in all California cities and counties that do not adopt their own water efficient ordinance.

The bill is not light reading; dozens of irrigation-related definitions, qualifications and calculations are packed into 36 pages.

The bill contains provisions for new and rehabilitated landscapes, and requires estimations of total water use for an area, landscape design specifications, irrigation design plans, provisions for use of recycled water, irrigation schedules, maintenance schedules, grading design plans and soil analysis.

To obtain a copy of the ordinance, contact Marsha Prillwitz at the Water Conservation Office, 1416 Ninth St. Sacramento, CA 64236-0001. (916) 653-7366.

And good luck!

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maximum trimming capabilities far superior to a 72" even under trees and bushes.

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On-the-job CPR saves man's life

LOS ANGELES—Knowing how to perform the correct CPR (cardiopulmonary resuscitation) procedures helped two landscape contractors save a life this past summer.

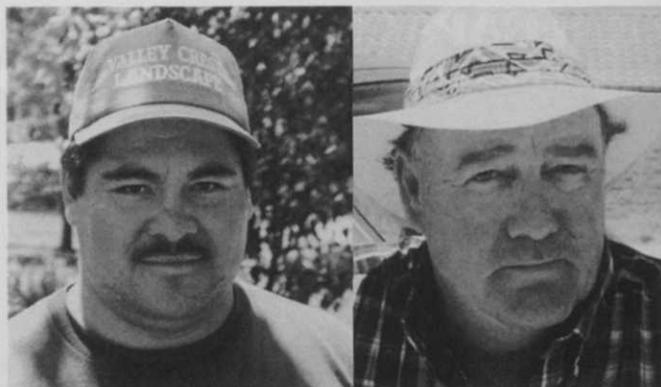
Superintendent Lloyd Lambert and foreman José Farias of Valley Crest Landscape, Calabasas, were working at Hollywood Park in Inglewood when they saw that Ed Blackwell of Moorpark had collapsed while digging postholes. Blackwell was not breathing.

They immediately started CPR procedures and continued until paramedics arrived.

As it turned out, not only did Blackwell need assistance, but so did the paramedics, whose ambulance battery had died. So Lambert and Farias then helped jump-start the vehicle so it could be on its way to Daniel Freeman Hospital with Blackwell inside.

According to the paramedics and staff in the hospital's Emergency Room, the CPR performed by the Valley Crest employees saved Blackwell's life.

Blackwell's wife Gloria wrote, in a letter to Burton Sperber of Environmental Industries (Valley Crest's parent company):



José Farias (left) and Lloyd Lambert put their CPR training to good use by saving a life while on the job.

"On July 2, I called Valley Crest and the receptionist informed me that it had provided CPR classes to all employees last November. Organizations such as yours that provide for the employees make it possible for the employees to provide for others. Thank you for providing these classes. Because you took the time to care, my husband is alive and recuperating today."

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Arizona plant scientists speed up Mother Nature

TUCSON, Ariz.—They're speeding up Mother Nature to provide desert-adapted plants for home landscapes.

Who are "they"? Gary A. Thompson, a University of Arizona plant scientist, and Jimmy Tipton, a U of A Cooperative Extension ornamental plant specialist.

The pair is developing a system to propagate desert-hardy woody plants using tissue culture techniques. They're also converting a laboratory process into one that a commercial nursery can use.

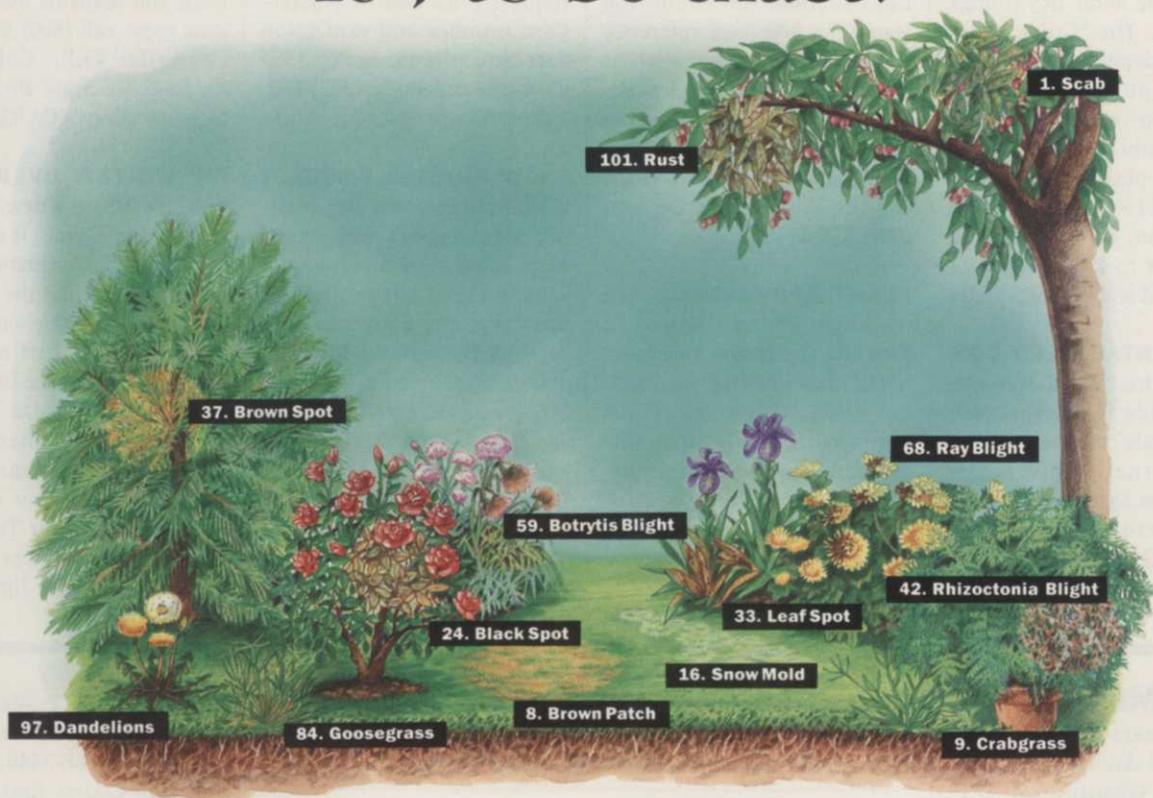
Though tissue culture is labor-intensive, the researchers can get as many as 60 new plantlets from each miniature plant and literally millions from the original plant tip—all exactly the same.

The Mexican rebud and many other woody plants with desirable characteristics are highly variable, with dormancy periods that make life difficult for commercial nurseries, Thompson says. "You see a gorgeous plant that looks just perfect for a suburban front yard, so you collect the seed. You won't know for six or seven years whether the young tree is going to look the same—and it may not."

Tipton and Thompson are beginning to work on similar systems for mesquite, landscape jojoba, red yucca and the bird-of-paradise plants.

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INFO CENTER

Useful literature and videos offered to LM readers

IRS HELP...The American Association of Nurserymen has a guide to determine whether an individual is an employee or independent contractor under IRS rules. The manual covers the title subject, IRS reclassification audits, the common law test, private letter IRS rulings, and more. The "Guide to the Use of Independent Contractors" is publication #A-2-40220. To order, send \$25 (AAN members) or \$50 (non-members) plus \$5 shipping to: AAN, 1250 I St., NW, Suite 500, Washington, DC 20005; or fax your order to (202) 789-1893. MasterCard and Visa accepted.

ORNAMENTAL WEED CONTROL...The "Weed Management Guide for Herbaceous Ornamentals" is now available from Cornell University's Cooperative Extension. The 12-page, chart-laden publication costs \$1.25. For a copy, send a check made out to Cornell University to: WeedFacts, Dept.

of Floriculture and Ornamental Horticulture, Cornell University, Ithaca, NY 14853.

GOLF COURSES & THE ENVIRONMENT...The United States Golf Association is publishing "Golf Course Management and Construction: Environmental Issues," a 900-page reference divided into chapters such as wildlife, water use and pesticide applications. Cost is \$72.25, including shipping and handling. To place your order, call the USGA Order Dept. at (800) 336-4446.

PLANT APPRAISAL...Five members of the Council of Tree and Landscape Appraisers (CTLA) have revised the original 1988 "Guide for Plant Appraisal." Copies are now available through the International Society of Arboriculture (ISA) and American Association of Nurserymen (AAN). To order through the ISA, members should send \$40,

non-members \$75 to ISA, P.O. Box GG, Savoy, IL 61874. To order through the AAN, members should send \$35, non-members \$70 to AAN Publications, 1250 I Street, NW, Suite 500, Washington, DC 20005. To order by fax, include request plus Visa or MasterCard number and expiration date and phone: (217) 355-9516 (ISA orders) or (202) 789-1893 (AAN orders).

SNOW PLOWING VIDEO....A 27-minute introductory training video covers everything from snow plow hook-up and vehicle check-out to possible problems and dangers. Also: various techniques for lots, drives and streets; ways to avoid excessive vehicle wear and tear. Send \$59.95 plus \$5 shipping: Progress Products, 8652 W. Progress Dr., Littleton, CO 80123.

TRAINING VIDEOS...A new catalog of landscape training

videos is available from California Polytechnic State University. More than 100 titles are featured in the free 24-page catalog, covering topics like pruning, fertilizing, irrigation installation and maintenance, turf management and pesticide use. To get your copy, call (800) 235-4146 or write VEP, California Polytechnic State University, San Luis Obispo, CA 93407.

ON WINTER OVERSEEDING...Turf-Seed's new "Winter Overseeding Guide" is aimed at golf course superintendents in the South. Among the sources for the booklet: Melvin Robey, director of the turf management program at the College of the Desert in Palm Desert, Calif., and Dr. James Beard, formerly of Texas A&M University. A copy may be obtained from your Turf-Seed products distributor or by calling Tom Stanley or Jim Enyart at (800) 247-6910.

NOVEMBER

7-10: American Society of Landscape Architects Annual Meeting, Washington, D.C. Phone: (202) 686-2752.

10-13: New York State Turfgrass Association Conference and Trade Show, Rochester Riverside Conv. Center. Phone: (518) 783-1229.

15-17: Golf Range and Alternative Facilities Development Conference, Newport Beach (Calif.) Marriott Hotel, Phone: (407) 744-6006.

15-19: Professional Grounds Management Society Conference, Indiana Conv. Center, Indianapolis. Phone: (410) 667-1833.

15-19: Landscape and Grounds Maintenance Conference, Indiana Conv. Center, Indianapolis. Phone: (703) 241-4004.

16: Wildlife Management and

Habitat Conservation, Myrtle Beach, S.C. (GCSAA) Phone (913) 832-4444.

16-18: Penn State Golf Turf Conference, Nittany Lion Inn, University Park, Pa. Phone: (814) 863-3475.

16-19: Professional Lawn Care Association of America Convention, Indiana Conv. Center, Indianapolis. Phone: (404) 977-5222.

16-19: Green Industry Expo, Indiana Convention Center, Indianapolis. Phone: (404) 973-2019.

19: Landscaping for the '90s (Ornamentals IPM), Holiday Inn, Toms River, N.J. Phone: (908) 349-1246.

19-21: Tree Care Industry

Expo '92, Baltimore (Md.) Conv. Center. Phone: (800) 733-2622.

20: Irrigation Association's Water Auditor Training Course, Desert Demonstration Garden, Las Vegas, Nev. Phone: (703) 524-1200.

30-Dec. 2: Illinois Turfgrass Foundation North Central Turfgrass Exposition, Pheasant Run Resort, St. Charles, Ill. Phone: (312) 616-0800.

30-Dec. 4: International Plant Propagator's Society, Eastern Region annual meeting, St. Louis Marriott Pavilion Downtown. Phone: (614) 292-5850.

DECEMBER

2-4: Rocky Mountain Turf

Conference & Trade Show, Currihan Hall, Denver, Colo. Phone: (303) 688-3440.

3-4: Golf Course Restoration, Renovation and Construction Projects, San Diego. (GCSAA) Phone (913) 832-4444.

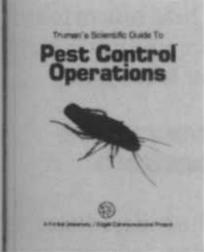
7-11: Michigan State University Turfgrass Management Short Course, Kellogg Biological Research Station, Kalamazoo, Mich. Phone: (313) 939-3636.

8-10: Georgia Turfgrass Association Conference and Trade Show, Georgia International Convention and Trade Center, Atlanta. Phone: (404) 975-4123.

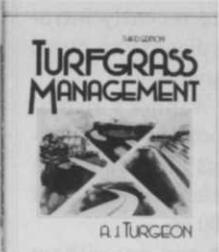
13-15: Sports Turf Managers Association Annual Conference and Exhibition, Indiana Convention Center and Hoosier Dome, Indianapolis. Phone: (312) 644-6610.

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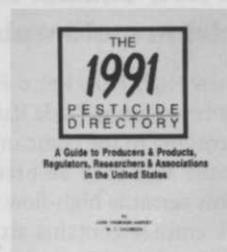
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PRODUCT REVIEW

By-pass device added to water conservation system

The Toro Company recently announced several improvements to its Toro Rain-switch, the company's water conservation tool that shuts down irrigation systems during rainstorms.

The most notable enhancement is a new optional by-pass switch which allows testing after installation and during operation, so homeowners can tell at a glance whether the unit is on.

The Rainswitch comes pre-wired, with 25 inches of wire, has an adjustable shut-off point from 1/8- to one-inch of accumulated rainfall, and has an improved universal mounting base.

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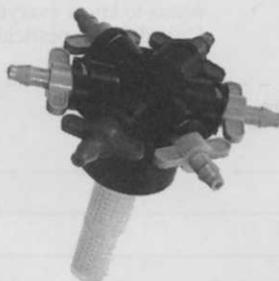
High-flow emitter allows precision multi-watering

A new High-Flow Retro-Fit Emitter has been introduced by Wade Rain.

According to the company, any plant or landscape area may be precisely watered with this versatile high-flow unit.

The emitter contains six separate outlets, and each outlet may be fitted with any one of the six flow-controlled connections which range in capacity from six to 20 gallons per hour.

Each outlet can be used as a standard drip emitter or to supply a mini-sprinkler or jet.



Wade Rain says the emitter can directly replace a landscape sprinkler by simply unscrewing the sprinkler and replacing it on the half-inch riser.

It works equally well above or below ground, and the company says the emitter provides sufficient water in a short period of time, so that it may be used with the same timing cycle as sprinklers.

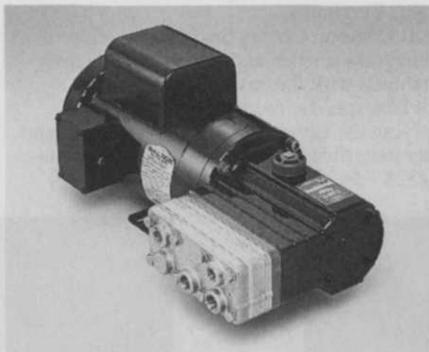
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Hydra-cell design available for lawn care industry use

Wanner Engineering recently introduced the M-03, a new diaphragm pump for use in the lawn care industry.

The pump features Wanner's Hydra-Cell design, which the company says eliminates all cups, packings and seals. The company says the unit offers smooth, quiet operation from 30 to 1200 psi.

The M-03 pumps can run dry without damage or overheating, and are very resis-



tant to abrasive wear.

Wanner says that by eliminating cups, packings and seals, undissolved fertilizers will not injure the pump.

The pump can be close-coupled to a gasoline engine, belt-driven or close-coupled to a metric or American standard electric motor.

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Irrigation line designed with western climates in mind

Xerigation is a new line of specialized low-volume irrigation products from Rain Bird Sales that is meant to offer relief to droughty areas, especially in the western United States.

The products are being distributed to Arizona, California, Nevada and Utah.

The line is composed of a variety of water-saving products designed to work together in creating water-efficient irrigation systems for all types of landscapes.

Xerigation products are available both for new systems and retrofit jobs. An array of control zone and distribution products are complemented by a selection of emission devices that apply water to plants in drips, sprays, streams and gentle mists.

The Xeri-Bird, an eight outlet emitter,

makes it possible to tailor each individual outlet to specific plant requirements.

A variety of retrofit products, which can quickly transform a spray head system to a low-volume system, also are available.

Circle No. 194 on Reader Inquiry Card

Spray indicator now comes in water soluble packets

Milliken Chemical has introduced Blazon E-Z Pak spray pattern indicator in water soluble packets.

Blazon E-Z Pak represents the superior solubility and non-staining of liquid Blazon and the convenience of water soluble pre-measured packaging.

The product complements Milliken's focused offering of spray pattern indicators designed to improve the quality and safety and reduce the cost of pesticide spray applications.

Each packet will treat 25 gallons or more of tank solution. Each case contains 50 Blazon E-Z Pak water soluble packets.

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Remote control products do valve, sprinkler checks



Remote Control Technology of Redmond, Wash., has recently released the TRC2 remote receiver, which can be added to new or existing irrigation controllers.

Irrigation zones can be activated or shut down with a hand-held transmitter.

According to the company, the TRC2 greatly simplifies syringe watering, performs electrical, valve and sprinkler checks, aids in blowing out lines and assists in fertilizing and other maintenance operations. The 32-station model features memory recall and the capacity to operate seven valves and a master valve.

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MARKET SHOWCASE

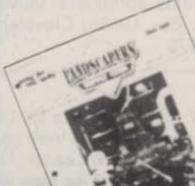
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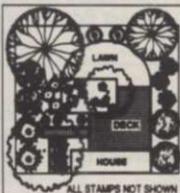
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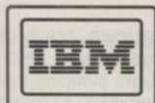
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Cemetery For Sale: 15 acre cemetery 1 hour Metro D.C. in W. Va. For information contact John Thompson. RE-MAX. 301-739-4800. 11/92

INCREASE YOUR BUSINESS & KEEP YOUR CUSTOMERS with a customized, professional newsletter. You choose the articles and title! **FREE** marketing tips and information! **Special introductory offer!** For free sample and details, call R. Turner Associates (800)432-5528. In Pennsylvania call (215)430-3960. 11/92

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FOR SALE: Jacobsen HF-5 1986 Diesel. Very good condition. \$6,000. (313)653-5695. 11/92

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BUCKET TRUCK: Hi Ranger 65', 57', 50'. Skyworkers with chip boxes. Asplundh bucket trucks with chip boxes. Asplundh brush chippers. Bean 55 gal. sprayers. Pete Mainka Enterprises, 633 Cecilia Drive, Pewaukee, WI 53072. 414-691-4306. TF

Finn Hydroseeders, Mulch Spreaders, Krimpers, Pit Burners, Fiber Mulch & Tackifiers. New & Used. Wolbert & Master, Inc., P.O. Box 292, White Marsh, MD 21162. 301-335-9300, 1-800-234-7645. TF

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EDUCATIONAL OPPORTUNITIES

GRAYSON COLLEGE, Denison, Texas: Two-year technical program in Golf Course and Turfgrass Management. 18-hole golf course on campus. Dormitories, placement assistance, financial aid and scholarships available. Contact: GCC, 6101 Grayson Drive, Denison, TX 75020. 903-463-8653. 5/93

Ohio State is offering **GOLF COURSE MAINTENANCE**, and **ATHLETIC FIELDS** short courses, January 11-15, and February 3-4, respectively. For more information, please call or write Ms. Bloetscher (614)292-7457, Dept. Agronomy, Kottman Hall, Columbus, OH 43210. 11/92

BUSINESS OPPORTUNITIES

Tree & Lawn Spray Co. - Long Island, N.Y. 1800 active Residential/commercial accounts. Annual sales volume approx. \$375,000. Late model fleet of trucks & equipment. Reply to LM Box 496. 11/92

ARE CHEMICALS KILLING THE CHEMISTRY BETWEEN YOU AND YOUR CUSTOMERS? If you're not growing, you might want to consider converting to or adding a NaturaLawn Franchise. We are the industry leader in organic-based lawn care. We offer reduced franchise fees to existing businesses with a minimum of \$50,000 in existing annual lawn care revenue. **NaturaLawn of America, Mike Catron, 1-800-989-5444 (C).** 12/92

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TO SELL A SUPERIOR QUALITY TACKIFIER. Used by Hydroseeders and Landscapers as the agricultural glue that holds seed in place and for erosion control. A perfect complimentary line for distributors selling equipment and seed to the Green Industry. Selected territories open. Send resume, product lines, & territory covered to PRS Materials, 882 S. Matlack St., Unit E, West Chester, PA 19382 (215)430-3960. 11/92

SOFTWARE

Route Manager System for scheduling and accounts receivable record keeping. Serving the Lawn Care Industry since 1982. List price \$350. Fortunate Computers, 46 N. 4th Street, Coplay, PA 18037. 800-275-0620. 12/92

AUTO*POST III+ an integrated business management system including invoices, statements, proposals, and inventory with job costing for \$249. Add our management module for \$299 and get payroll vendors, check writing and general ledger. Working demos \$10. **NEW SERV CO.** (513)829-1585. 12/92

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BUSINESS ENVELOPES: FREE CATALOG AND WHOLESALE PRICELIST of the most often used printed business envelopes in the Green Industry. **STOP** paying printer's retail prices. **CALL TODAY AND SAVE (219)865-8485.** 11/92

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Managers/Partners needed to help our company expand and establish branches in the following cities: Houston, Dallas, Orlando. You must have an attitude of excellence and a proven history of job stability, honesty, and integrity. The candidate should have the capacities for the following: ability to handle people, creativeness, planning ability, initiative, open-mindedness, cost consciousness, articulated, a knowledge of modern management methods, and the physical capacity and drive to maintain a constant follow-up and vigilance over the activities within your areas of responsibility. Progressive experience and education in all areas of landscape management and construction. Degree preferred but not essential. If you desire to, or already, live in one of the above cities and would like to be considered for this extremely challenging and rewarding position, we would like to review your resume. We are an award-winning, full service, landscape management company based in Texas. We offer a competitive salary, equity sharing, and a strong profit sharing program. Our senior partners should expect to earn in excess of \$100,000 in years 5 through 7. All inquiries strictly confidential. Reply to **LM BOX 497**. 11/92

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Become an important member of America's Neighborhood Lawn Care Team. Call Spring-Green at 1-800-435-4051

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Do you have several years of experience in the tree spraying industry or just a few, but would really like a positive change. Swingle Tree Company, a Denver tradition since 1947 is looking for an individual to join our team. Responsibilities would include crew motivation, supervision, equipment and program evaluation. A strong opportunity for advancement. Health, dental, disability, and pension plans available. Call Tom at (303)337-6200. 11/92

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ADVERTISER INDEX

NO.	ADVERTISER	PAGE NO.
101	Deere & Co., John	24-25
102	Deere & Co., John	24-25
	DowElanco	5-22
103	Enviro Gro Technologies	32
104	Foresight Products, Inc.	58
105	General Motors Corp.	CV3
106	H.D. Hudson Mfg. Co.	48
107	Honda Power Equipment	51
108	Howard Johnson Enterprises	43
280	Howard Price Turf Equipment	57
109	ISK Biotech Corp.	59
110	KLM Bio Systems	33
118	Knox Fertilizer Co.	38-39
111	Koos, Inc.	44
112	Lofts Seed, Inc.	CV4
113	Midwest Regional Turfgrass Assoc.	60
114	New York State Turfgrass Assoc.	50
115	Ohio Turfgrass Foundation	30
116	Roots, Inc.	56
117	Sandoz Crop Protection	34-35
125	Sandoz Crop Protection	34-35
119	Scotts & Sons, O.M.	49
120	Tee 2 Green Corp.	CV2
121	Terra International, Inc.	53
122	Tornado Products, Inc.	52
123	Turfco Manufacturing	30
144	Walker Mfg. Co.	37

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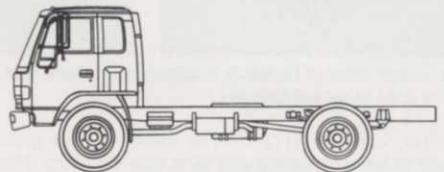
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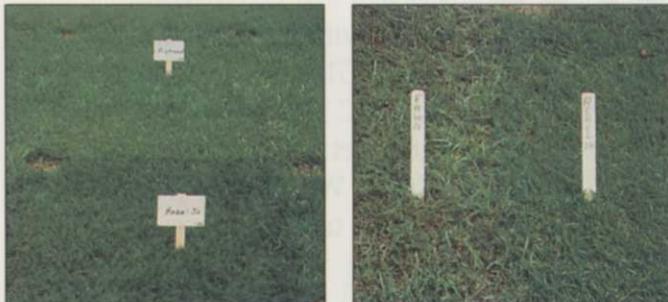
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Excellent Dark Color: When compared to other tall fescues, Rebel Jr provides the deep, dark color preferred by turf professionals.



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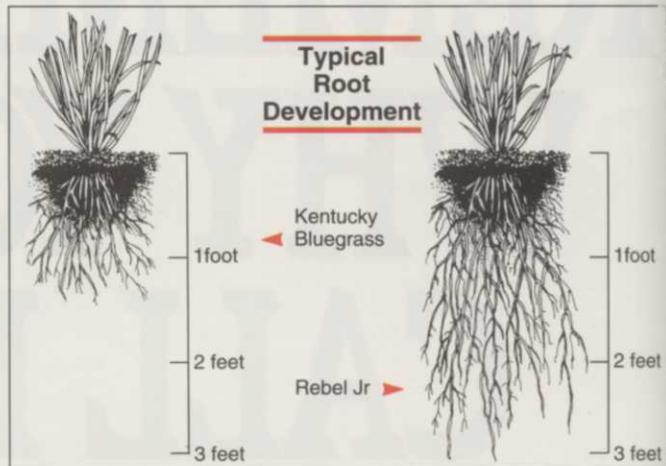
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Recommended Seed Mixtures for Sun or Shade

HOME LAWNS

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- or
- 90% Rebel Jr Tall Fescue
- 10% Baron or Nassau
- 10% Kentucky Bluegrass
- or
- 34% Rebel Jr Tall Fescue
- 33% Rebel II Tall Fescue
- 33% Tribute Tall Fescue

GOLF COURSE ROUGHS

- 90% Rebel Jr Tall Fescue
- 10% Georgetown Kentucky Bluegrass
- or
- 30% Rebel Jr Tall Fescue
- 30% Rebel II Tall Fescue
- 20% Tribute Tall Fescue
- 10% Palmer II Perennial Ryegrass
- 10% Georgetown Kentucky Bluegrass

ATHLETIC FIELDS

- 80% Rebel Jr Tall Fescue
- 10% Palmer II Perennial Ryegrass
- 10% Baron or Nassau Kentucky Bluegrass
- or
- 30% Rebel Jr Tall Fescue
- 30% Rebel II Tall Fescue
- 20% Tribute Tall Fescue
- 10% Palmer II Perennial Ryegrass
- 10% Baron or Nassau Kentucky Bluegrass

UTILITY TURF

- 100% Rebel Jr Tall Fescue
- or
- 34% Rebel Jr Tall Fescue
- 33% Rebel II Tall Fescue
- 33% Tribute Tall Fescue

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