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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.



Professional Grounds Management Society, 120 Cockeysville Rd., Suite 104, Hunt Valley, MD 21031; (410) 584-9754.



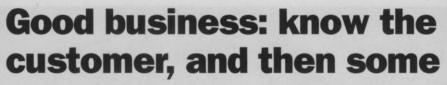
Professional Lawn Care Association of America, 1000 Johnson Ferry Rd., NE, Suite C-135, Marietta, GA 30068-2112; (404) 977-5222.

Responsible Industry for a Sound Environment, 1155 15th St. NW, Suite 900, Washington, D.C. 20005; (202) 872-3860.



Sports Turf Managers Association, 401 N. Michigan Ave., Chicago, IL 60611-4267; (312) 644-6610.

Turf and Ornamental Communicators Association, 8400 Normandale Lake Blvd., Suite 500, Bloomington, MN 55437; (612) 832-5000.



Not surprisingly, I own a car. More accurately, the bank owns a car that I occasionally drive.

AS WE SEE IT

JERRY ROCHE, EDITOR-IN-CHIEF

This particular vehicle was assembled in America, though the automaker is decidedly non-American.

Do I want my hard-earned cash siphoned from this country, into the pockets of some fabulously wealthy foreigner? I'm not ecstatic over the idea. But it's happening.

Seeing my dollars turned to yen (or marks, or whatever) before they reach their final destination, you see, is the lesser of two evils. A worse scenario would have me stuck on a back country road some night with a piece of equipment that refus-

es to awaken from a mid-winter's nap. It doesn't matter that I'm paying \$19,000 for a machine that probably cost a fraction of that in parts and labor on the assembly line. /I'm quite willing to pay extra for peace of mind.

What blows my mind is that carmaker apparently knew this a long time ago!

The carmaker also knew

when needed a new car, I would seek the advice of friends and acquaintenances.

The carmaker knew that I would be willing to pay extra for resale value.

The carmaker knew that I would gladly pay a little extra for first-rate maintenance service, as long as the personnel at the dealership were respectful, prompt, efficient and knowledgable.

Somehow, I'm thinking, this particular carmaker knew exactly what I wanted before I wanted it!

So, you see, I don't feel bad about giving him my business, no matter where he lives. The people at his company are on the ball, and I reward them for it. They may not be American, but they certainly value American business.

The point to this whole story is that the American consumer, with whom you deal, is not as fickle as you might be led to believe. His or her loyalty can be bought, just like you can buy anything else in this great country of ours.

When I refer to "customer." of course. I'm referring to the people who view and/or use the landscapes you maintain. In some cases, they are homeowners; in some cases they are golfers; in some cases they are the parents of Little Leaguers. But in all cases, they are the people who give you the license to make a living.

The key is knowing what customers want, and how they want it-before they want it, if possible. When you can determine that—hey—the selling part is easy.

A Here's the nut, then: talk to your customers (and prospective customers) regularly. In some business circles, this is known as market research:"

 Before the season starts, send them a questionnaire like Jack Robertson told us in last month's issue (mail surveys).

• Invite key dustomers to your place of business. Buy them lunch. Talk about the arvices you are providing (focus groups).

A • Make phone calls regularly, at least once a month, to as many customers as you can fit into your schedule (phone surveys).

• Visit homeowners between applications. Watch golfers and Little Leaguers play their games (personal visitation),

Most of all, be visible. And always, always be asking questions.

As George Toma told the Sports Turf Managers Association at its annual meeting late last year: to be truly successful, you need to do your job-"AND THEN SOME."

All Praise Pe

dimethalin.

All across America, people are saying beautiful things about pendimethalin.

Jim Miller of Emerald Green Lawn Care tells us, "When we compare preemergent results with price, we always return to pendimethalin."

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Always read and follow label directions.

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JANUARY 1994 VOL. 33, NO. 1

COVER FEAT

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11 Seeing the future

Communications, water and the environment, and safety. These are the future of golf course management, according to superintendent Michael Tellier of La Quinta Hotel Golf and Tennis Resort, La Quinta, Calif.

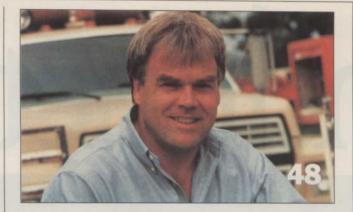
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Versatility is the key to this super-efficient maintenance agency in Gainesville. Ga. The city's parks and athletic fields are thus kept pristine.

20 Rainy day training

Video training sessions may not be as entertaining as 'Tool Time,' but-when properly conducted-are much more informative. Jerry Roche

24 Selecting an accountant

Rule No. 1: There are no set ratios for what you should pay. It depends on your location and volume of work. Shop for value.

Dan Sautner

28 Time-saving PGRs

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29 Making the cuts

Landscaping maintenance budgets everywhere are being cut. But in the upscale Upper Arlington, Ohio school system, public support and versatile crews help stretch shrinking dollars. Jerry Roche

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Imagine being able to fertilize an entire golf course or commercial landscape overnight with no labor. Imagine prescription feeding turfgrass with a predictable degree of efficacy and efficiency. Imagine fertigation. Ed Nash

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Great for its salt tolerance, this sub-tropical grass can answer water restriction woes. It does, however, have a problem resisting some weeds.

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To win commercial accounts where there are in-house crews, stress the low cost, high efficiency and high level of expertise you can offer. *Terry McIver*

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It took Doug Tyrrell 10 years to build a lawn care company, and it almost ended in an instant on July 10th of last year. *Ron Hall*

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Ken Gerlack Contra Costa Landscaping Martinez, Calif.

Twyla Hansen Nebraska Wesleyan University Lincoln, Neb.

Tim Hiers Collier's Reserve Naples, Fla. Bill Prest Springvale Country Club North Olmsted, Ohio

Mark Schlossberg Pro-Lawn Plus Baltimore, Md.

Brian Storm Terrascaping Inc. Birch Run, Mich.



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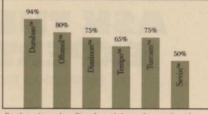
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ABP

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.

Here's an example. Mixing insecticide with insecticidal soap can reduce the amount of insecticide you need on your ornamentals by 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 than you get with insecticide alone.

A few ways to bala with your love for the en



Studies show that Dursban delivers better chinch bug control at lower rates than other insecticides.

Knowing exactly when to apply insecticide helps, too. One way to monitor mole crickets, chinch bugs, webworms and cutworms is by mixing 11/2 oz. of dish soap in two gallons of water and sprinkling it

even controls fire ants.

And Dursban also gives you plenty of application flexibility. It's available as a liquid, dry flowable, wettable powder in water soluble packets, granule, fertilizer or bait. Now, we realize you probably

ce your hate for insects on a four-square-foot area of have some questions. That's why ent. turf. If eggs have hatched, we created The Turf Manager's

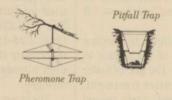


this soapy mixture will flush insects to the surface. and you can apply insec-

ticide accordingly. Your insecticide itself can also make a difference. After all, different insecticides work at different rates. Which is why Dursban* insecticide could be your best choice.

Why Adults Should Spend Time Catching Bugs.

If you want better results from the insecticide you use, insect traps can help. They allow you to find out when certain pest insects are present and time your insecticide applications accordingly. Insect traps are inexpensive, easy to use and they'll help you get greater control using less insecticide.

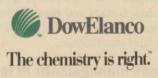


Just one pound active ingredient per acre gives you the most consistent broad spectrum insect control available at such a low rate. Dursban Guide To Responsible Pest Management. It's 44 pages packed with comprehensive information on the latest techniques for controlling insects, weeds and turf diseases. For a free copy return the coupon, or call our toll-free telephone number. Because when you apply a little knowledge, you don't need to apply as much insecticide.



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Curing fire blight

Problem: We have been seeing fire blight disease on a number of rosaceous plants in our area. Please provide a list of resistant or tolerant plants for planting. (Kentucky)

Solution: Fire blight disease caused by bacterium is a serious problem found on commercial and residential properties on a number of rosaceous plants. Dr. John Hartman from the University of Kentucky reports that landscape plants such as brambler, cotoneaster, crabapple, flowering pear, hawthorn mountain ash, pyracantha, serviceberry and spirea are susceptible to fire blight disease in your area. Dr. Hartman suggests using the following plant materials obtained from different sources to prevent losses to fire blight:

Resistant/tolerant cotoneasters: Cotoneaster adpressus, C. adpressus praecox, C. adpressus praecox 'Boer', C. apiculatus, C. bacillaris, C. dielsiana 'Elegans', C. dielsianus, C. distica, C. foveolatus, C. franchetii, C. harroviana, C. integerrimus, C. microphylla, C. newryensis, C. nitens, C. salicifolius repandens, 'Emerald Spray', C. simonsi, and C. zabelii.

<u>Resistant/tolerant crabapples:</u> Baskatong, Bob White, Centurion, David, Dolgo, Donald Wyman, Henry Kohanke, Liset, Naragansett, Professor Sprenger, Robinson, Sentinel, Strawberry Parfait, Sugartyme, Tschonoskii, White Angel, *Malus baccata*, 'Jackii,' *M. hunnanensis* 'Veitchii,' and *M. sargentii* 'Tina.'

<u>Tolerant ornamental pears:</u> Alfred, Autumn Blaze, Bradford, Capitol, Cleveland Select, Fauriei and Whitehouse.

<u>Resistant pyracanthas:</u> Apache, Fiery Cascade, Mohave, Navaho, Pueblo, Rutgers, San Jose, Shawnee, Teton, *Pyracantha coccinea* Sensation, *P. koidzumii* Santa Cruz Prostrata.

Resistant spirea: S. prunifolia (bridal wreath).

Chipco Aliette WDG received an EPA label approval for management of fire blight disease on ornamental pear, pyracantha and hawthorne as of March 29, 1993. At this time the label did not include other important landscape ornamental plants such as crabapple or mountain ash, which are also susceptible to fire blight disease.

(Rhone Poulenc's Aliette WDG lists fire blight suppression "to plants such as ornamental pear, pyracantha and hawthorne." It is not currently registered in California.—Ed.)

The foliar applications should be made in conjunction with a strict sanitation program to reduce the spread of the disease to uninfected plants. Mix 25 lbs. of the product in 100 gal. of water for treating the foliage. It works as a preventive treatment. Therefore, it is important to apply the treatments early around pre-bloom stage and repeat at seven-day intervals until bloom period ends. Aliette is not registered in California. Read and follow label specifications.

Moss management in lawns

Problem: How is moss managed in lawns? We have tried insecticidal soap on golf greens without any luck. (*Pennsylvania*)

Solution: Establishment of moss and algae is generally associated with factors such as low fertility, poor drainage, too much

shade, soil compaction, wet conditions, poor air circulation or a combination of these factors. There are more than 13,000 types of mosses, with about 50 common in your area. Some appear to be associated with acidic soil and some others associated with alkaline soil conditions. Most species grow under a wide range of soil reactions. The insecticidal soap you have used is not labelled to manage moss.

However, Mycogen Corporation (in San Diego; 619-453-8030) has another fatty acid chemistry-based material called DeMoss, which is designed to manage moss on golf greens and other high value turfgrass. DeMoss contains potassium salts of fatty acids which are extracted from plant and/or animal sources. DeMoss acts upon contact by disrupting the cuticle and cellular membranes of moss, resulting in drying and death. It is active only while in solution, therefore it is important to have proper coverage and contact with most plants to be effective.

This material may foam while mixing; therefore, use a defoaming agent.

To manage moss, identify the primary reasons why moss is growing in a particular location and provide corrective measures.

Ammonium sulfate (10 lbs./1000 sq. ft.) applied on actively growing moss plants has reportedly been effective. Ammonium sulfate can also help the turf fill in as the moss thins out.

Copper sulfate (3 tbsp. in 5 gal. water/1000 sq. ft.) can also be used to manage moss problems. Copper sulfate can stain and is difficult to remove from clothing, so wear protective clothing and gloves.

The DeMoss herbicide is another option. Along with chemical management, it is important to make conditions favorable for the turfgrass to be more aggressive and fill in open bare spots. In some situations, consider overseeding if the lawn is thin.

Need a liquid slow-release fertilizer

Problem: Is there a liquid slow-release type of fertilizer for turf and ornamental plants?

Solution: Cleary's FLUF can be used. FLUF stands for flowable liquid urea formaldehyde. The analysis is 18-0-0. It can be used for turfgrass, in a nursery or trees on a program basis. The W.A. Cleary Chemical Corp. is in Somerset, New Jersey; (800) 524-1662. FLUF provides a continuously uniform and moderately slow release of nitrogen. It contains 7.2% methylene urea nitrogen, 4.5% water-insoluble nitrogen and 6.3% urea nitrogen.

There are anumber of other liquid sources of fertilizer with low burn qualities, but they are not slow-release. FLUF is the only flowable available in the turf and ornamental markets.

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.

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Technology, communications, our changing society-all will have an impact on 'the keeping of the green.'

As the decades pass, our pace of life is accelerating, almost exponentially. Consider these trends in technology and communications:

**Just 150 years ago, it took weeks for news to travel from coast to coast via the Pony Express. About 100 years ago, it took minutes, via the Marconi wireless. But in 1951, on the television show "See It Now," Edward R. Murrow visually linked the East and West coasts for the first time. Today, physicists can see live pictures from deep space, millions of miles away.

**Just 150 years ago, the fastest speed reached by man was a mere 36 miles per

hour, in a steam locomotive. In 1947, Col. Chuck Yeager reached a speed of 700 mph in an experimental X-1 jet plane. In 1969, the Apollo 10 space capsule plummeted back to Earth, from the moon, at a speed of 24,791 mph.

Following the trend-In the 1990s and beyond, golf course maintenance promises to follow this trend: technology and communications will explode, and superintendents will have to be more knowledgeable than ever before.

"Golf course superintendents will have to have an incredible love of the business because of the things they'll be subjected to," says Tim Hiers of Collier's Reserve, Naples, Fla. He thinks efficiency will be the key to the golf course of the future.

AUTO 60 mph AUTO 300 mph "Efficiency in water use, pesticide use, integrated pest management," he says. "And it's not just going to be the superintendent-it's going to be the secretaries and dust broom guys helping out, too."

Hiers also thinks that:

1) The superintendent will have to be a better time manager and a better personnel manager because of the competition for good employees.

2) More "fuel-efficient and lighter-weight equipment" will be developed.

3) Community relations will play an even bigger role in the job description.

"I see the superintendent getting involved in the local community defending golf courses. Even today, we're starting to walk elementary kids through the courses to show how we're helping the environment."

Techno-golf-Dr. Jeff Nus of the Golf Course Superintendents Association of America sees a boom in technology that will show the way toward "micro-environment manipulation."

"The level of sophistication in equipment is increasing by leaps and bounds," Nus notes.

"You'll see equipment used to manipulate the environment, specifically to grow bentgrass outside its normal environment." Fans that can circulate either warm or cool air, as needed, and soil warming systems will take the forefront, Nus believes. In the Midwest, for instance, these innovationswhich are already being used in the South-may even lengthen the golfing season past the

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Strengton and

GOLF COURSE MAINTENAN

THE SPEED