

THE VOICE OF THE GREEN INDUSTRY

LANDSCAPE *management*

MARCH 1996 • \$4

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personnel
blues**

**Tall fescue:
Survival of
the fittest**

Weed control guide:

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LANDSCAPE

The advent of spring carries a soft whisper to our ear as we near a milestone birthday; a birthday many of us original Baby Boomers face with trepidation but confidence.

"You're never too old to learn something new," the voice tells us. And two weeks of travelling to various industry functions confirms that basic truism.

In the following months, you'll be reading more about our visits to the GCSAA national convention, the ALCA Executive Forum, the NAA annual convention, and more. But for now, we concentrate on some of the more memorable

moments.

► "Fifty percent of all the jobs that will be available in 10 years haven't been invented yet," Dr. Nate Booth told ALCA executives in Phoenix. He was making a point that your reaction to the unavoidable changes manifested in this era of high-tech will determine your ultimate success.

► "Every January, my wife and I get together with our appointment cal-

endars and block out time for each other," said Will Phillips of the Faust Management Corp. to ALCA members. "Maybe it's every Wednesday night for dinner, or maybe it's a long weekend; or a summer vacation. But we block the time on our calendars. There are occasions when we've got to cancel, but we always make sure to reschedule." The Booths have been married more than 30 years, and have three children: 30, 20 and 10.

► Randy Russell, manager of sports management for the city of Austin, Tex., told his golf course colleagues this:

"The older I get, the more I realize planning is the key. Every minute of planning saves seven minutes of execution and productivity."

Russell also extolled the virtues of continuous improvement. "Do not fall in love with your current practices, stay focused on the important, and remember that the best agronomic decision is not always best for the course."

► Dr. Booth, head corporate trainer at Robbins Research International, on the theory that actions speak louder than words:

"People who heard the Kennedy-Nixon debates on the radio say Nixon won. People who watched the debates on television say Kennedy won. It's becoming more apparent this year that Bob Dole needs a charisma transplant."

► Richard Norton of the National Golf Foundation, citing the results of a recent survey on the impact of the GCSAA and its members:

"The golf course superintendent has the opportunity to outreach and educate golfers about the course's possible impact on the environment."

► Phillips, again:

"If there is no gap between what you want and where you are, you're in trouble. The size of the gap indicates the energy for change. To close the gap requires that you actually solve some problems, and that's where we get stuck because that takes teamwork."

► Jerry Moland, owner of a small company in Phoenix, put an exclamation point everything we learned during our recent travels. Moland, a conscientious and empathetic veteran businessman, was forced to start a new career in landscaping at the age of 50. He reflects:

"After realizing I had to start over, I spent a few months laying on my back feeling like life was over. But that's not the way to do it. You have to realize that the American dream still does exist."

The little voices you hear as you go about your everyday routine are no less valuable than these introductory nuggets of wisdom. Write them down, remember them, learn from them, and live them. You'll be a better person for it. **LM**

Comments? Phone Jerry at (216) 826-2830 or e-mail him at 75553.502@compuserve.com

Need to plan ahead never goes away



Jerry Roche

JERRY ROCHE
Editor-in-Chief

INSIDE

THE VOICE OF THE GREEN INDUSTRY

LANDSCAPE *management*



FEATURES

10 THE 1996 EMERALD AWARDS!

Enter to win \$500, \$300 or \$200 in LANDSCAPE MANAGEMENT's 1996 Emerald Awards. Simply tell us which products you use to manage your clients' properties. The most popular products being used in the market will be the subject of a special Emerald Awards feature article in our August issue.

20 COVER STORY: WEED CONTROL, NORTH & SOUTH

Acceptable levels of weed populations and weed tolerance to control products are important factors to consider, whether you live in the North or South. But there are also many differences when controlling weeds in the different sections of the U.S.

TOM FERMANIAN, PH.D.

TIM R. MURPHY, PH.D.

30 DRUG TESTING

Americans use about 60 percent of the world's supply of illegal drugs. It's quite possible you work next to, or with, one of the many casual or recreational drug users unless your company has a drug-free policy. Chris Kujawa of K.E.I. instituted a drug testing program two years ago, and he's glad he did. The program in force at K.E.I. includes fair warning and a second chance, but those aren't the only options.

JOHN R. CALSIN, JR.



54 TALL FESCUE: SURVIVAL OF THE FITTEST

If the turf you're maintaining just doesn't seem to be able to stand up to extremes in either the weather or other environmental stresses, turf-type tall fescue may be an alternative, according to Dr. A.J. Powell of the University of Kentucky.

JERRY ROCHE

COLUMNS

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Ash dieback caused by construction

A number of 10- to 40-inch dbh ash trees are showing various degrees of dieback and declining symptoms. This area is a four- to five-year-old development. I think it is related to construction damage. What do you think is the probable cause, and how can it be corrected?

—MICHIGAN

Based on the information you provide, the problem does indeed sound as if it is related to construction activity. The dieback and decline symptoms you've seen could relate to some of the following factors:

1. Soil disturbance and root injury
2. Bark injury on trunk
3. Compacted soil caused by equipment traffic and poor aeration
4. Fill damage
5. Insect and/or disease activity

Fill damage is one of the major causes of tree decline. Generally, this would be more noticeable three to four years after the building is completed.

Often, it is too late. Ideally, the problem should be addressed before or during land development and construction. Where feasible, excess soil within the tree's dripline should be removed to the original grade. Install "wells" as needed and aerify compacted soil. Fill damage causes injury by suffocating the root system and changing water tables. Proper aeration, water, fertilizer and mulch should help improve

plant health.

Once the plants are weakened by the abiotic stress factors, the plants can be predisposed to a number of insect and/or disease problems. Among these, canker diseases and borer insect problems are the most common and destructive problems.

Inspect the affected trees closely for evidence of canker and/or borer problems.

Sunken and discolored areas with fungal fruiting bodies would suggest the possibility of fungal canker disease. Small exit holes or frass would suggest borer activity. If these problems are detected, promptly remove and discard affected plant parts.

Consider using a product such as Dursban for borers. There are no effective fungicidal treatments for cankers. To help plant vitality, be sure to water, fertilize and mulch as needed.

Systrex Nutrient, a systemic fungicide and micronutrient solution—it contains Bayleton fungicide and micronutrient—is made by Tree Tech Microinjection Systems in Florida. It is labeled for treating tree decline caused by several fungal agents.

Systrex can be injected into a declining tree with a microinjection delivery system, similar to microinjection of Alamo fungicide for oak wilt disease treatment.

Information on this treatment and its effect on declining trees is limited. Secondly, it is not clear whether the product can be used for ash decline.

Another cause of ash dieback and decline may be related to ash yellow disease caused by mycoplasma. However, at this time, there is no known effective treatment.

Products such as Tetracycline injection systems are being researched to determine the feasibility of managing this disease.

Read and follow label for better results.

Broadleaf weed control without 2,4-D?

Are there any herbicides which do not contain 2,4-D that can be used on lawns to control broadleaf weeds?

—NEW YORK

Gallery, a pre-emergence herbicide, can be applied before weeds germinate. The weed seeds will germinate, but the seedlings will not emerge out of the soil.

You can also use post-emergence herbicides such as Trimec Encore, which contains MCPA; MCPP and dicamba; or, Confront, which contains triclopyr and clopyralid. Some of these are slightly slower-acting than herbicide formulations which contain 2,4-D.

The slow response may cause customer dissatisfaction, so discuss a change in herbicide and control expectations with customers.

Apply post-emergence herbicides during active weed growth. **LM**



BALAKRISHNA RAO
 Manager of Research and
 Technical Development
 for the Davey Tree Co.
 Kent, Ohio

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LANDSCAPE MANAGEMENT magazine is offering a \$500 first prize to the winner of a random drawing to be held on June 21, 1996. Second prize is \$300 and third prize \$200 in cash. In order to be eligible for the drawing, simply fill out the questionnaire below and return it to LM's editorial offices.

Answers to the questions will be the basis for our "1996 Emerald Awards," to be revealed—along with the contest winner—in our August issue.

CONTEST REQUIREMENTS: Contestants must be owners or employees of landscape maintenance companies or lawn care companies; or maintenance employees of a golf course or country club, including superintendents and assistant superintendents; or an athletic field manager or member of an athletic field maintenance crew. Employees of Advanstar Communications and their families are not eligible.

All questions on this entry form must be completed, and all blanks filled. One entry per person. No more than five entries from any one employer will be allowed. Entry forms will appear in the March, April and May, 1992, issues of this magazine.

Completed questionnaires should be mailed to: Emerald Awards, LANDSCAPE MANAGEMENT, 7500 Old Oak Blvd., Cleveland, OH 44130. They must be received by noon, June 21, 1996.

A random drawing of all eligible entry forms will be held the afternoon of June 21, 1996. The winners will be notified within 24 hours.

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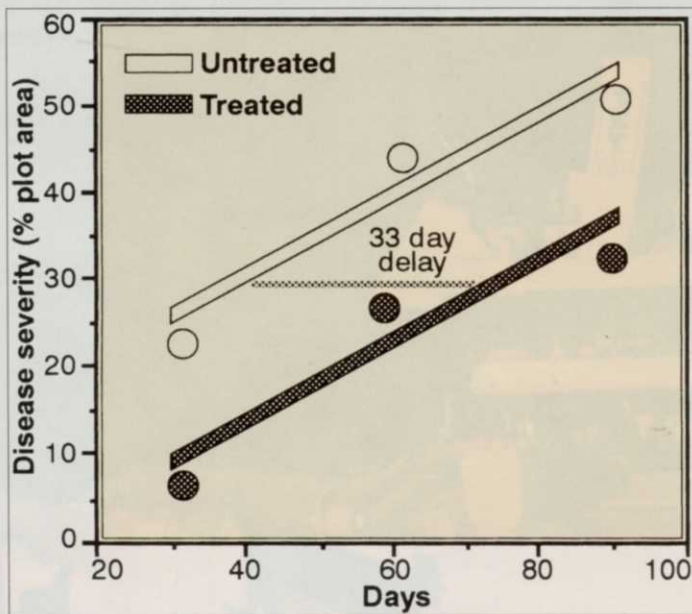
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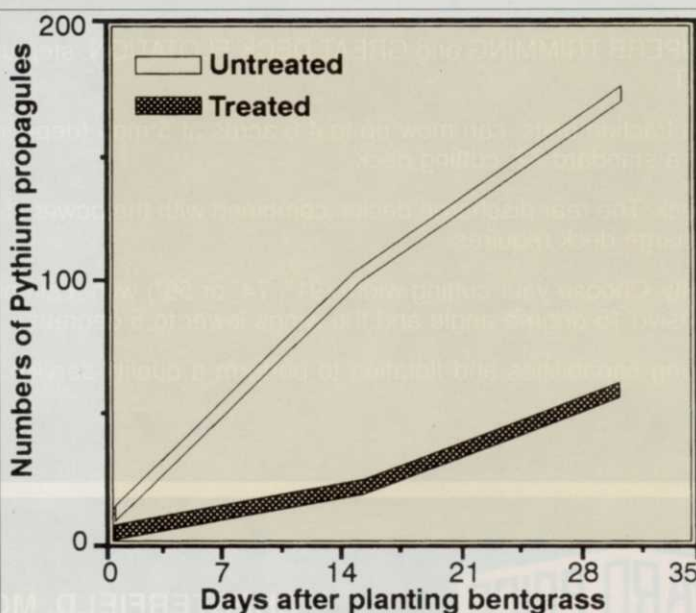
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by WANDA J. GARDNER and SANDRA E. KOWALLIS

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Control of Pythium levels in soil planted to bentgrass with Bio-Trek 22G™



SOURCE: DEPARTMENT OF HORTICULTURAL SCIENCES, DEPARTMENT OF PLANT PATHOLOGY, CORNELL UNIVERSITY.

The Environmental Protection Agency has approved the first biological turf fungicide, a highly effective strain of the fungus *Trichoderma harzianum* (T.h.), which is a natural component of soil microflora.

Developed by a team of Cornell University researchers, a hybridized strain of T.h. (T-22) is the active ingredient in Wilbur-Ellis's Bio-Trek 22G. It is a living organism that is dormant in dry granular form. The fungicide is appropriate for any high-value turf, such as commercially-managed lawns and sod farms.

The product is applied at a rate of 1.5 lbs./1000 sq.ft. Repeat applications can be two to four weeks later in soils with harsh chemical residues or poor growing conditions.

T-22 falls into the thatch where natural moisture is usually enough to activate the organisms; however, watering in ensures full activation.

When pathogens such as pythium, fusarium, *Rhizoctonia solani* or *Sclerotinia homeocarpa* attempt to move in, T-22 extends branching structures to entwine the hypha of its competition, drills into the hypha and secretes an enzyme to kill the pathogen, which then decomposes in the soil.

Bio-Trek prefers neutral or slightly acidic soil; however, the organisms will thrive in normal soil pH ranges suitable for turf, even in somewhat alkaline soil. Because they are sensitive to soil temperature and grow faster above 50 degrees F., populations may decrease through the winter.

In test plots monitored by Cornell University scientists, T-22 showed 20 percent less severity of *Sclerotinia homeocarpa* after a 60-day period, and its early use avoided a 33-day delay in beginning treatment. In similar tests, pythium levels measured in soil planted to bentgrass were significantly lower in the sample treated with T-22.

While Bio-Trek provides early defense against invading pathogens and, therefore, reduces appearance of surface symptoms, evidence of disease may eventually surface. At that point, chemical sprays should be applied, but you will not need as much product because of the early work of Bio-Trek. □

—The authors are public relations writers based in Fresno, Calif.

Bill Clinton's fear: a Dole/Powell ticket

If President Bill Clinton had his druthers, he wouldn't want to face a Republican presidential ticket of Bob Dole and Colin Powell, says Wolf Blitzer, CNN's White House correspondent.

While that scenario is not out of the question, it is premature, Blitzer pointed out to about 100 LCOs and industry suppliers in Washington D.C. on Jan. 29. The event was PLCAA's annual Legislative Day.

First, Blitzer said, Dole is hardly assured the Republican nomination (especially after what happened in the New Hampshire primary, which took place after Blitzer's speech). Also, Powell has studiously avoided tipping his hand about the vice president's job even though he declared himself a Republican last fall.



CNN Correspondent Wolf Blitzer, right, with Thomas Diederich of Orkin, center, and Norman Goldenberg, TruGreen/ChemLawn.

Blitzer. After all, since World War II, five vice presidents have gone on to serve as presidents: Harry Truman, Richard Nixon, Lyndon B. Johnson, Gerald Ford, and George Bush.

Blitzer said President Clinton's fondest wish for the November election would be the emergence of a strong third-party candidate like independent candidate H. Ross Perot in the 1992 election. Some White House staffers felt that Perot won just enough support to swing the presidency away from Bush and to Clinton, said Blitzer.

"Between now and November is going to be filled with unpredictability," said Blitzer. "There are so many wild cards out there that I wouldn't even attempt to try to guess what's going to happen."

While President Clinton's popularity was high in January, it could plummet if Bosnia erupted into fighting again with American casualties, or if the U.S. economy faltered, Blitzer said. □

Dursban lawsuits dropped

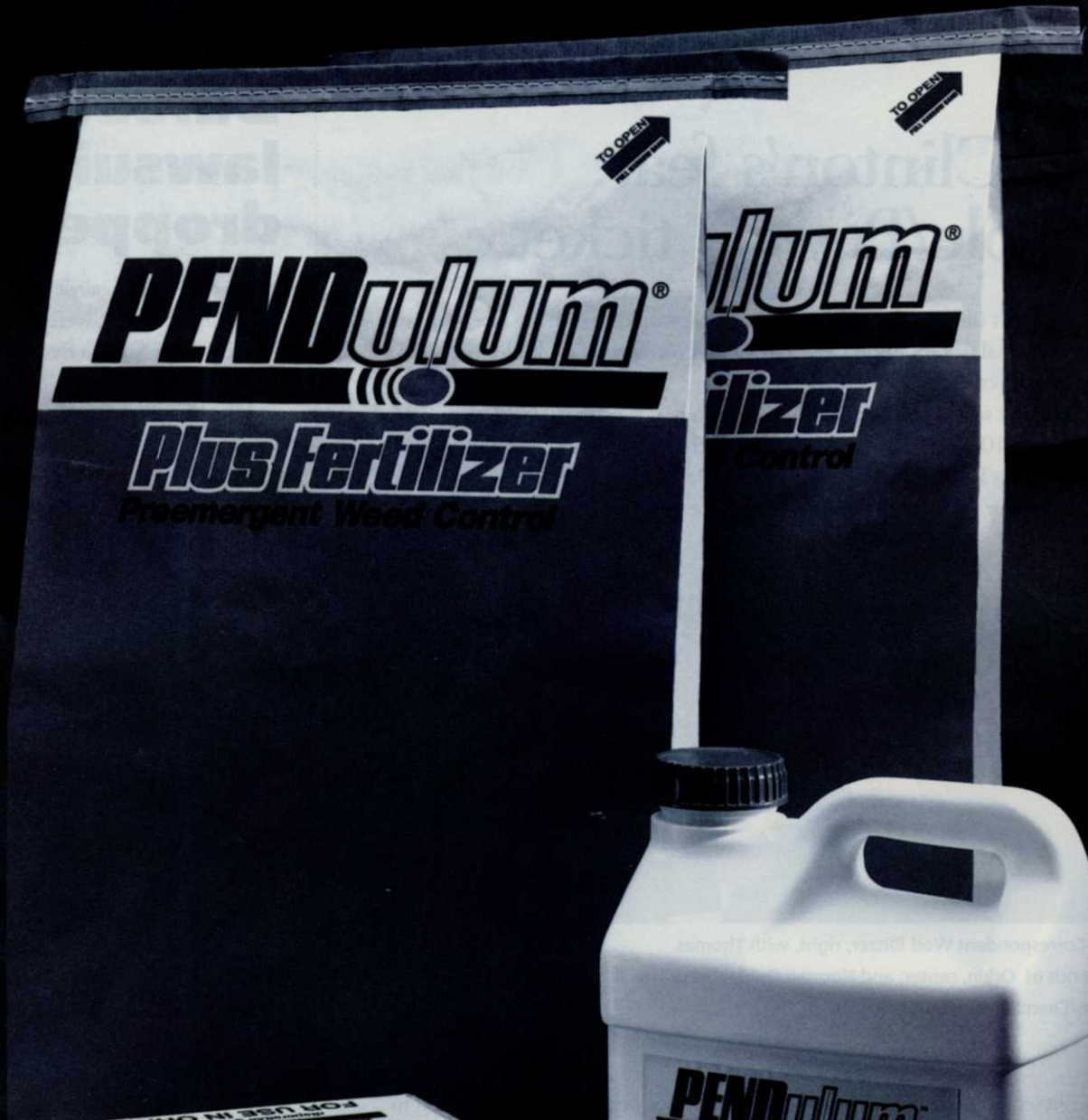
Two lawsuits against the turf insecticide Dursban that were spotlighted on CBS-TV's "Eye to Eye with Connie Chung" last year have been resolved, and the DowElanco product has been vindicated.

In *Jack Kahn vs. DowElanco*, Kahn's attorneys filed a motion to dismiss their case with prejudice—meaning that the case can never be re-filed. Kahn had claimed that Dursban had caused him to develop "chemical sensitivity" and "peripheral neuropathy." But when faced with a list of expert witnesses which the defendant was ready to call to the stand, Kahn's attorneys asked for the dismissal.

"This action is a complete victory for DowElanco and, we believe, an acknowledgment by Mr. Kahn and his attorneys that they simply did not have any credible evidence to support their allegations," said Dave Morris and Guy Relford of DowElanco in a letter to customers.

In *Apple vs. Tri-County North Local School District*, DowElanco was never sued—just a pest control operator, building architect, building engineer, contractors and various others. Recently, however, the students' and teachers' suit against the pest control operator was voluntarily dismissed.

"The results of these cases is not unusual," claimed Morris and Relford. "Neither Dow Chemical nor DowElanco has ever lost a Dursban personal injury lawsuit at trial. In these two lawsuits, the individuals attacking Dursban were simply unable to prove their allegations." □



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>HOT TOPICS

Battening the hatches for hurricane season

Hurricane season in the Gulf Coast states begins in June. Golf course superintendents there should have a preparedness plan designed for their golf courses, but Dan Jones of Banyan Golf Course in West Palm Beach, Fla., offers this general plan as a starting point:

Maintenance shop:

- ▶ Store all machines and equipment possible inside the maintenance building.
- ▶ Secure all loose material such as pipe, garbage cans, etc.
- ▶ Check stockade fence for loose boards; brace with two-by-fours from both sides.
- ▶ Turn off main breaker switcher at maintenance building and pump stations.
- ▶ Service two-inch pipe for possible

emergency.

- ▶ Install plywood over all glass windows.
- ▶ Store all damageable items above

ground level.

Golf course:

- ▶ Store all flags, ball washers, signs and moveable objects in maintenance shop.
- ▶ Clean all drainage inlets.
- ▶ Check flap gates for proper operation.
- ▶ Prop taller trees with two-by-fours in three directions.
- ▶ Have backhoe, front-end loader and trucks serviced and fueled.

Clubhouse:

- ▶ Store all golf cars at maintenance compound.
- ▶ Store all golf clubs in locker room.
- ▶ Put four-inch pump at top of cart storage.

- ▶ Put storm shutters on windows.
- ▶ Turn off all power except kitchen.
- ▶ Turn off main gas line.
- ▶ Fill kitchen pots with water.
- ▶ Store pool and snack bar furniture in locker room.
- ▶ Remove all outdoor potted plants.
- ▶ Remove all outdoor signs and moveable objects.
- ▶ Store all important records from temporary buildings in clubhouse.
- ▶ Store all water-damageable items off floor.
- ▶ Put sand bags against locker room and clubhouse doors.

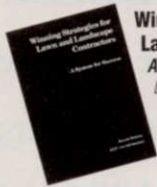
Tennis courts:

- ▶ Remove windbreaks from fence.
- ▶ Store all furniture in locker rooms.
- ▶ Remove all signs.

This information first appeared in *The Florida Green*, the magazine of the Florida Golf Course Superintendents Association. □

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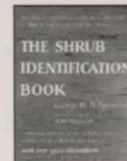
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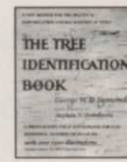
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Is it SAFE to use 'safe?'

Dr. Kirk Hurto of Tru-Green/ChemLawn says the worst four-letter word you can use starts with "S," as in "safe" when you're talking about pesticides.

"The media has helped raise safety concerns," Hurto notes. "The media will continue to associate pesticides with Agent Orange [the cancer-causing compound used in the Vietnam War]."

"Everything you say is considered advertising under the new Federal Trade Commission guidelines. So—even though you want to get the word out on your company

and how it uses pesticides—you have to be careful what you say."

Hurto says the public fears the unfamiliar (pesticides) or things over which they have no control.

"Everything we do in life has risk," Hurto says. "The goal of risk communication is to make the public understand risk so they can accurately weigh the benefits against the risks. So we have to instill confidence that the risks [of using pesticides] are negligible compared to the benefits, and that those risks are controlled."

Hurto lists the "5 C's" to effective risk communication:

1) **Concern:** recognize and respond to emotional concerns.

2) **Clarity:** communicate in non-technical language.

3) **Confidence:** be knowledgeable and credible.

4) **Competence:** be professional.

5) **Control:** take it by saying what you're doing to mitigate risks.

"Answer questions honestly," Hurto suggests. "Clearly address the issues." **LM**

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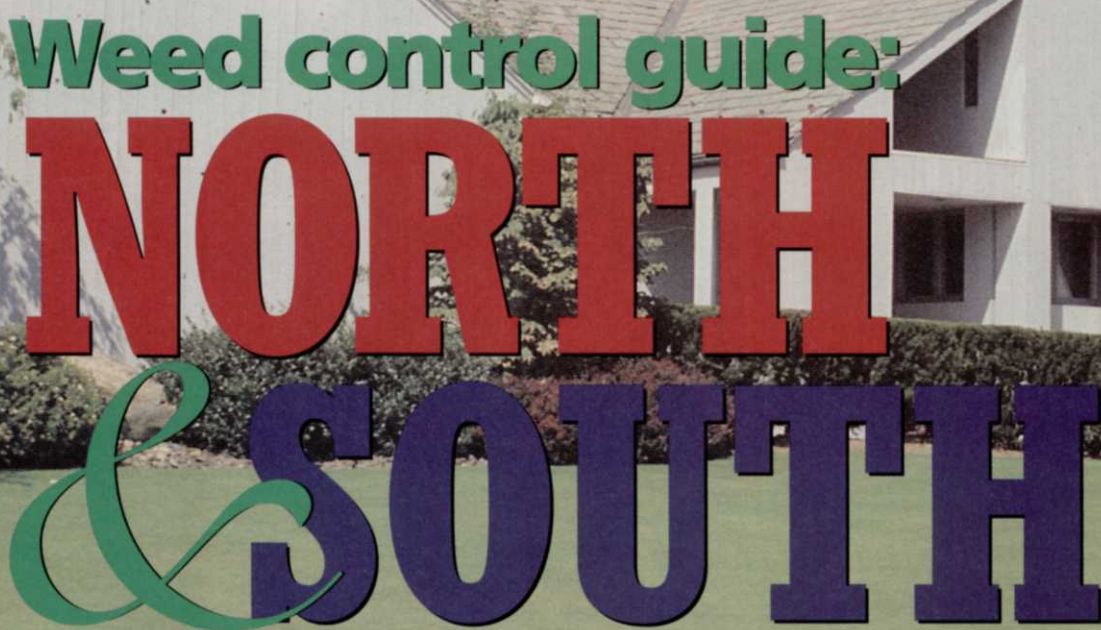
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Weed control guide: **NORTH** & **SOUTH**

Up North, you don't have to kill *all* the weeds

How many weeds will customers tolerate? That's a good question to ask when planning control strategies.

by TOM FERMANIAN, Ph.D./University of Illinois

The keys to weed control is deciding on a maximum number of weeds that are tolerable and designing a management system to achieve and maintain that goal. It is certainly possible to hold weed populations to about one or two percent of the turf area. For some turf areas, larger populations of four to 10 percent are more practical.

IPM

Integrated Pest Management is one way to control a variety of turf pests. IPM combines sound cultural practices with occasional herbicide applications to manage weeds. In an integrated program, primary care areas such as mowing, fertilization and irrigation should be designed to maximize the turf's competitive potential and minimize the most troublesome weeds. Secondary practices such as cultivation, mechanical control and sanitation can also be used to reduce or manage weeds.

Mowing

Unfortunately, the most persistent weeds have adapted to low mowing heights and frequent mowing. A mowing strategy should be developed to first minimize its impact on the turf and to reduce weed growth. Mower blades should be adjusted and sharpened to reduce potential stress on the turf.

Adjust mowing frequency to remove less than one third of the leaf blade surfaces, and to provide maximum turf regrowth. Mowing also affects other potential pests such as insects and diseases that might eventually thin the turf and allow weed development. Some weeds, particularly tough-

stemmed species such as chicory require extra careful mowing to remove them effectively.

Fertilization

Studies show a direct relationship between the development of several weed species and the general availability of soil nutrients. While accurate timely fertilizations will maximize turf development and provide a good competitor, too much fertilizer can promote weed growth.

Annual bluegrass (*Poa annua*), crabgrass and many other species grow rapidly after receiving high N levels.

Excess fertilizations, particularly with soluble N sources, can injure turf foliage. Even if the injury is short-term, opportunistic weeds can develop before the turf has a chance to replenish the canopy.

Irrigation—or soil moisture—also has a dramatic effect on the growth of many weeds. Nutsedge, annual bluegrass, crabgrass, goosegrass and many other weeds are better adapted to high soil moisture. Drying out turf or less frequent irrigation will help the turf gain a competitive advantage over these water-loving weeds.

Cultivation

Core aeration, vertical mowing, spiking, or slicing provide a more conducive rootzone for turf growth. This better growing environment allows the turf to compete strongly with weed populations.

These same practices can also move buried weed seeds to the surface and allow them to germinate. Topdressing might also introduce foreign seed and provide a new avenue to weed infection.

Mechanical devices or materials such as topdressing, mulch or similar items should be closely examined for any plant parts—particularly weed seed—that might be deposited into the turf. Many annual weeds are best managed by reducing their production of viable seed through timely mowings, using plant growth regulators or collecting clippings when seedheads are present.

Herbicides

In a well-designed IPM



Knotweed, left, and broadleaf plantain. Center of page, henbit, left, and purslane. Bottom of page, mower injury to leaf blades.

program, each cultural strategy is selected to reduce weeds. Practically, however, some weeds will always survive even your best management. Herbicides—particularly post-emergence herbicides—can be used to reach your desired weed management goals. Many materials are available for direct control of both annual grasses and broadleaf weeds.

The post-emergents

One of the original selective post-emergence herbicides was 2,4-D. This and other similar compounds—such as mecoprop, dichlorprop and dicamba—control a wide spectrum of broadleaf weeds.

Each controls a select group of weed species. Often, they are used in combination, which allows you to reduce their individual single use rates through a synergistic action. Double and triple combinations of these materials provide effective control for almost any broadleaf species found in turf. Likewise, the materials are formulated either as esters or amine based compounds, to provide more control or a higher level of turf safety (Table 1).

Two particular materials, triclopyr and clopyralid, are broad-spectrum post-emergence herbicides that can be targeted toward a wide range of weeds in many turfs. Triclopyr is often formulated by itself or in combinations with 2,4-D to broaden its effectiveness across a wider group of weeds.

Confront is a combination of both triclopyr and clopyralid, which is particularly effective with many tough-to-control broadleaf weeds, such as wild violets and creeping charlie.

Several additional materials are available for a smaller group of weeds or for special uses. Bromoxynil will not injure seedling turfgrasses and is often used as the



initial material for cleaning up newly-seeded turf. Several materials such as Basagran, Vantage and DCPA are targeted toward a small group of species. Manage and Basagran can be used effectively for controlling yellow and purple nutsedge.

Grassy weeds

For grassy weeds, particularly annual grasses, several products are available for selective control. Additionally, non-selective herbicides can be used for spot control of both annual and perennial weeds.

Ethofumesate, fenoxaprop and dithiopyr can all be used to control annual grasses after they have emerged. Each material has its own unique spectrum of species it is effective on. In general, each of these herbicides is most effective when applied to young grass seedlings. As with the broadleaf herbicides, the grass seedlings should be actively growing under good conditions.

Non-selective herbicides

For tough-to-control weeds or

cont. on page 25



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TABLE 1. HERBICIDES FOR BROADLEAF WEED CONTROL IN COOL-SEASON TURF

Common Name	Trade Name
2,4-D	AM-40; 2,4-D granular; 2,4-D L.V. ester, solution (Riverdale); 2,4-D amine 4; 2,4-D LV4; SEE 2,4-D LV4 (Riverside/Terra International); Weedone LV4 (Rhone Poulenc);
2,4-D+dicamba	81 Selective Weedkiller (Riverdale); Four Power Plus (Turfgo/United Horticultural Supply); Lawn Weed Killer (Bonide); Triple D Lawn Weed Killer (Rockland)
2,4-D+dichlorprop	2D+2DP Amine; Turf D+DP (Riverdale); Fluid Broadleaf Weed Control (The Scotts Co.); Weedone DPC Ester; Weedone Amine (Rhone Poulenc)
2,4-D+dichlorprop+dicamba	Strike 3 (Riverside/Terra International); Super Trimec (PBI/Gordon)
2,4-D+mecoprop	2D Amine + 2 MCP (Riverdale); 2 Plus 2 (ISK Biosciences); MCP-2,4-D (Cleary)
2,4-D+MCP+dicamba	Bentgrass Selective Weed Killer (Lesco); Brushfire; Brush-out; Brush-Whacker; HS-130; SNSW-2000 (NCH); Granular Broadleaf Weed Killer (Lebanon); MecAmine-D (Turfgo/United Horticultural Supply); Three-Way Lawn Weed Killer (Rockland); Three-Way Selective; Three-Way DG (Lesco); Trimec Bentgrass Formula; Trimec Classic; Trimec Southern (PBI/Gordon); Triplet Selective; Triplet Water Soluble (Riverdale)
2,4-D+MCP+dichlorprop	Dissolve; Triamine; Triamine Granular; Triamine Jet-Spray; Tri-Ester (Riverdale); Jet Spray 3-Way Weed Control (The Scotts Co.); Three-way Ester (Lesco)
2,4-D+MCP+MSMA+dicamba	Trimec Plus (PBI/Gordon)
2,4-D+triclopyr	Chaser (Turfgo/United Horticultural Supply); Turflon II; Turflon II Amine (Lesco)
DCPA	Dacthal (ISK Biosciences); Garden, Turf & Ornamental Herbicide 5G; Turf & Ornamental Herbicide (Bonide); HS-110 (NCH); Super Dacthal 686 (Rockland)
dicamba	Vanquish (Sandoz); K-O-G Weed Control (The Scotts Co.)
isoxaben	Gallery (DowElanco)
triclopyr	Turflon Ester (DowElanco; Monterey)
triclopyr+clopyralid	Confront (DowElanco)
All products listed—except DCPA—are labeled for selective, post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled by each product. DCPA provides selective, post-emergence control of creeping speedwell and pre-emergence control of selected broadleaf species.	

TABLE 2. HERBICIDES FOR GRASSY WEED CONTROL: COOL-SEASON TURF AND NON-SELECTIVE

Common name	Trade Names	Uses
bentazon	Basagran T/O (BASF); Lescogran (Lesco)	Selective post-emergence control of nutsedges and some broadleaf weeds.
chlorsulfuron	TFC (Lesco)	Selective post-emergence control of tall fescue in Kentucky bluegrass, fine fescues, bentgrass.
DCPA	Dacthal (ISK Biosciences); Garden, Turf & Ornamental Herbicide (Bonide); HS-110 (NCH, Irving, Texas); Super Dacthal 686 (Rockland)	Selective post-emergence control of creeping speedwell; pre-emergence control of selected broadleaf species.
diquat	Aquatate; HNS-210; Vegetrol; Watrol (NCH); Reward (Zeneca)	Non-selective, post-emergence contact product.
dithiopyr	Dimension (Lesco; Rohm and Haas)	Selective post-emergence control of annual grasses; pre-emergence control of selected broadleaf species.
DSMA	DSMA 4 (Riverside; Terra International); DSMA Slurry (Drexel); Methar 30 (Cleary)	Selective post-emergence control of annual grasses.
ethofumesate	Prograss (AgrEvo)	Selective pre- and post-emergence control of selected annual grasses and broadleaf weeds.
fenoxaprop	Acclaim (AgrEvo)	Selective post-emergence control of annual grasses.
glufosinate-ammonium	Finale (AgrEvo)	Non-selective post-emergence herbicide.
glyphosate	Avail (Lesco); HNS-220; Hoedown; Quick Claim; Trailblazer (NCH); Roundup Dry Pak; Roundup Pro (Monsanto)	Non-selective post-emergence herbicide.
halosulfuron	Manage (Monsanto)	Selective post-emergence control of sedges, such as yellow and purple nutsedge.
MCPA	MCPA-4 Amine (Riverdale)	Selective post-emergence control of annual grasses.
MCPA+MCP+dicamba	Eliminate (LESCO); Hat Trick (Turfgo/United Horticultural Supply); Tri-Power Selective Herbicide (Riverdale)	Selective post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
MCPA+MCP+dichlorprop	Triamine II; Tri-Ester II (Riverdale)	Selective post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.
mecoprop (MCP)	Certi-CM; Chemweed 265; HS-167; Milpro 360 (NCH); MCP (Cleary); MCP-4 Amine (Riverdale); MCP-4K (Turfgo/United Horticultural Supply); Mecomec (PBI/Gordon)	Selective post-emergence control of broadleaf weeds. See label for tolerant turfgrasses and species controlled.

SOURCE: DR. FERMANIAN

cont. on page 25

TABLE 2. CONT.

Common name	Trade Names	Uses
MSMA	Crabgrass Killer (Bonide); Daconate 6; Daconate Super (ISK Biosciences); Drexar 530 (Drexel); MSMA (Bonide; LESCO); MSMA Turf (Turfgo/United Horticultural Supply); 912 Herbicide; 120 Herbicide (Riverside/Terra International); Super Crabgrass Killer (Rockland); Weed Hoe (Monterey)	Selective post-emergence control of annual grasses.
MSMA+cacodylic acid	Broadside; Moncide (Monterey)	Selective post-emergence control of annual grasses.
sethoxydim	Vantage (BASF)	Selective post-emergence control of annual grasses in fine fescues.

cont. from page 21

perennial grasses, non-selective materials such as Roundup Pro or Finale can be used effectively. These products will remove both the unwanted weeds and any underlying turf. They should be made only during periods of the year when the weeds are actively growing and ample opportunity is available for renovating or re-establishing the turf.

General tips

Post-emergence herbicides should be applied when temperatures are moderate (less than 85 degrees F.) and growing conditions are good for both weed species and turf. Ide-

ally, early fall applications are most effective. This is a time when weed species are actively transporting materials to below-ground portions of the plant. Late spring or early summer applications can also be very effective. These applications should be made when soils are still moist and the weeds are actively growing. With the summer heat and possibly drought, the effectiveness of post-emergence herbicides will be much reduced.

Apply most post-emergence herbicides—and materials which contain phenoxy—judiciously around sensitive ornamental plantings. In spring and fall, many sensitive species can be injured through drift

or volatilization of these materials. Follow label instructions carefully to reduce the potential for non-target injury.

Cultural weed control programs can be developed to minimize the potential for weeds. Make herbicides one part of a comprehensive turf care program. Follow manufacturers' labeled instructions closely for best control and maximum safety with any selected material. □

—The author is an associate professor of turfgrass science at the University of Illinois Department of Natural Resources and Environmental Sciences.

Down South, control product tolerance a key

by TIM R. MURPHY, Ph.D. / University of Georgia

Proper turf nutrition and soil moisture will help you achieve maximum product efficacy.

Properly-maintained warm-season turfgrass is a good defense against strong weed competition.

Using correct fertility programs; following water requirements, mowing heights and schedules; and proper insect and disease control products all increase turfgrass vigor. They also improve the tolerance of warm-season turfgrasses to herbicides, and increase a weed control program's effectiveness.

Using herbicides without proper turfgrass management practices may control problem weeds, but will not produce high-quality turf.

Turfgrass managers in warm-season climates have a wide array of pre- and post-emergence herbicides that can be used to control weeds (Tables 1 and 2).

Tolerance factors

The single most important factor in se-

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lecting a herbicide is the tolerance of the turfgrass to the herbicide. Generally, most pre-emergence herbicides can be used on all established warm-season turfgrasses. There are exceptions. Ronstar is not labeled for use on centipedegrass or home lawns.

There is a dramatic difference in the tolerance of warm-season turfgrass species to post-emergence herbicides. Bermudagrass has good tolerance to MSMA and DSMA; however, carpetgrass, centipedegrass and St. Augustinegrass are severely injured by these herbicides.

Cultivars within a species may also respond differently to the same herbicide.

Post-emergence herbicides should be avoided when turfgrasses and weeds are stressed due to high air temperatures or drought. The tolerance of warm-season



Goosegrass germinates about two weeks later than crabgrass, at soil temperatures of 60-65 degrees F.



Southern crabgrass species germinate during February through April.

turfgrasses to post-emergence herbicides decreases at air temperatures greater than 90 degrees F., when turfgrasses are drought-stressed or when turfgrasses are growing under high soil moisture and high humidity.

Do not use post-emergence herbicides when turfgrasses and weeds are stressed by high air temperature or drought. Tolerance of warm-season turfgrasses to post-emergence herbicides decreases at air temperatures greater than 90 degrees F., when turf-

grasses are drought stressed, or when they are growing under high soil moisture and high relative humidity. Herbicides that contain 2,4-D, mecoprop, dichlorprop, imazaquin, MSMA and DSMA should not be applied at high air temperatures greater than 90 degrees F. because there is an increased risk of unacceptable turfgrass injury. Always follow the most restrictive warning that is shown on the label.

The tolerance of warm-season turfgrasses to post-emergence herbicides is generally lower during spring green-up than when the turfgrass is dormant or after full green-up. Research shows that the decline in turfgrass quality from the use of post-emergence herbicides during green-up is temporary and persists for two to six weeks after application. If a dense weed population dictates using a post-emergence herbicide during green-up, use only the lowest recommended rate or one-half the recommended rate to minimize herbicide injury to the turfgrass. If needed, the application can be repeated after green-up is complete.

Know the weed

Correct weed identification is a prerequisite for selecting an appropriate herbicide. After the weed has been identified, the herbicide label should be reviewed to determine if the herbicide will control the problem weed. Consult land grant university weed control guides for the effectiveness of herbicides in controlling weed species that are not listed on the herbicide label.

Application frequency

For some herbicides, particularly post-emergence products, a repeat application is necessary. For example, two applications of

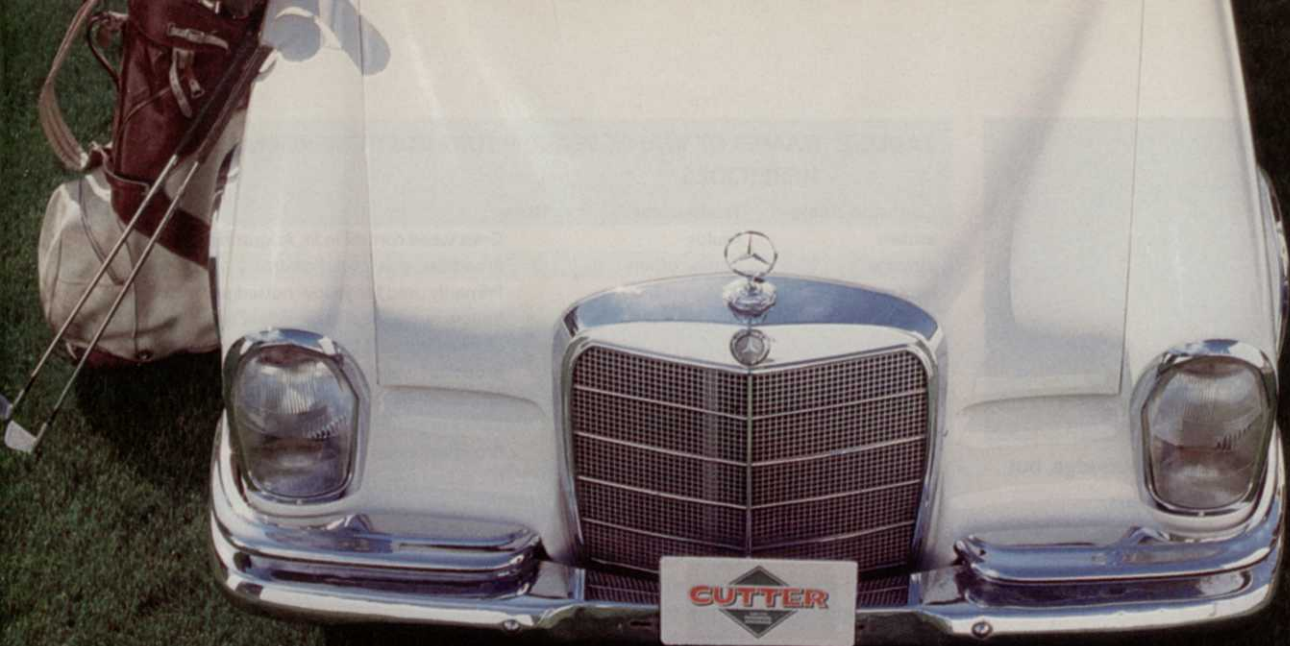
TABLE 1. COMMON AND TRADE NAMES OF WARM-SEASON TURFGRASS PRE-EMERGENCE HERBICIDES¹

Common name	Trade name	Uses
atrazine	Aatrex, others	Annual broadleaf weeds.
benefin	Balan, others	Annual grass; some annual broadleaf weeds.
benefin+oryzalin	XL	Annual grass; some annual broadleaf weeds.
benefin+trifluralin	Team, others	Annual grass, some annual broadleaf weeds.
bensulide	Bensumec, Betasan, others	Primarily controls annual grasses.
bensulide+oxadiazon	Goosegrass/ Crabgrass Control	Annual grass control.
DCPA	Dacthal, others	Annual grass; some annual broadleaf weeds.
dithiopyr	Dimension	Annual grass; some annual broadleaf weeds.
ethofumesate	Prograss	Annual bluegrass control in bermudagrass and overseeded perennial ryegrass.
fenarimol	Rubigan	Annual bluegrass control in bermudagrass-overseeded cool-season turfgrasses.
isoxaben	Gallery	Annual broadleaf weeds. Does not control established perennials; provides residual control of some species that reproduce by seed.
metolachlor	Pennant	Controls yellow nutsedge and annual sedge; some annual grasses.
napropamide	Devrinol	Annual grass; some annual broadleaf weeds.
oryzalin	Surflan	Annual grass and some annual broadleaf weeds.
oxadiazon	Ronstar	Annual grass and some annual broadleaf weeds.
oxadiazon+benefin	Regalstar	Primarily controls annual grasses.
pendimethalin	Pre-M, Pendulum, others	Annual grass; some annual broadleaf weeds.
proflaminate	Barricade, Regalkade	Annual grass; some annual broadleaf weeds.
pronamide	Kerb	Winter annual weed control. May be used 90 days prior to overseeding bermudagrass with a cool-season turfgrass to control annual bluegrass.
simazine	Princep, others	Winter annual broadleaf weeds.

¹ Refer to the herbicide label for a complete listing of tolerant turfgrasses and labeled application sites.

SOURCE: DR. MURPHY

cont. on page 28



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Use Image to control purple nutsedge, but not in bahiagrass or carpetgrass.

MSMA, at a 7- to 10-day interval, are needed to control crabgrass in bermudagrass.

In contrast, one application of Vantage will usually control crabgrass in centipede-grass. Pre-emergence herbicides may be applied either as full rate single applications, or as sequential repeated applications. With the sequential application program, one-half the maximum labeled rate is initially applied, with the remaining half applied 60 days later. With most pre-emergence herbicides, sequential applications tend to improve crabgrass and goosegrass control over the control achieved with a single application.

Application timing

Most pre-emergence herbicides control susceptible weeds during germination of weed seeds. Additionally, most pre-emergence herbicides require about one-half inch of rainfall or irrigation water to move the herbicide into the upper one to two inches of the soil profile.

A pre-emergence herbicide can undergo volatility losses and photodegradation the longer it remains on turfgrass foliage or thatch. Irrigation is advised unless a rainfall is anticipated within four to seven days of application.

Most species of crabgrass initiate germination when soil temperatures at the four-inch depth reach 53-58 degrees F. Depending on the geographical location, this will occur during February through April in the southern U.S.

Goosegrass germinates at a soil temperature of 60 to 65 degrees F., or approximately two to eight weeks later than crabgrass. On warm-season turfgrasses that are not fall-overseeded, pre-emergence herbi-

TABLE 2. NAMES OF WARM-SEASON TURF POST-EMERGENCE HERBICIDES¹

Common name	Trade name	Uses
asulam	Asulox	Grass weed control in St. Augustinegrass.
atrazine	Aatrex, others	Broadleaf, grass weed control.
bentazon	Basagran T/O	Primarily used for yellow nutsedge control.
bentazon+atrazine	Prompt	Yellow nutsedge and broadleaf weed control in centipede-grass, St. Augustinegrass, zoysiagrass.
bromoxynil	Buctril	Broadleaf weed control on non-residential turf.
2,4-D	Numerous formulations are available	Broadleaf weed control.
2,4-D+dicamba	Eight-One	Broadleaf weed control.
2,4-D+dichlorprop	Weedone DPC Amine, Weedone DPC Ester	Broadleaf weed control.
2,4-D+mecoprop +dicamba	Trimec Classic Trimec 992, Three-Way	Broadleaf weed control.
2,4-D+mecoprop +dichlorprop	Weedestroy Triamine, Weedestroy Tri-Ester	Broadleaf weed control.
dicamba	Vanquish	Broadleaf weed control.
diclofop-methyl ²	Illoxan	Goosegrass control in golf course bermudagrass.
diquat	Reward	Winter annual weed control in dormant bermuda.
DSMA	Numerous formulations are available	Grass weed control in bermudagrass and zoysiagrass.
ethofumesate	Prograss	Pre- and early post-emergence annual bluegrass control in overseeded bermudagrass; common bermudagrass suppression in St. Augustinegrass.
fenoxaprop	Acclaim	Annual grass control and suppression of bermudagrass in zoysiagrass.
fluazifop	Fusilade II	Bermudagrass control in zoysiagrass.
glyphosate	Roundup Pro	Winter annual weed control in dormant bermudagrass and bahiagrass.
halosulfuron	Manage	Controls yellow and purple nutsedge
imazaquin	Image	Purple nutsedge and wild garlic control in warm-season turfgrasses (except bahiagrass); controls certain annual broadleaf weeds.
mecoprop	Mecomec, Lescopex	Broadleaf weed control.
mecoprop+2,4-D +dicamba	Southern Trimec, Trimec Bent	Broadleaf weed control.
MCPA+mecoprop +dicamba	Trimec Encore, Encore DSC	Broadleaf weed control.
MCPA+mecoprop +dichlorprop	Weedestroy Triamine II, Weedestroy Tri-Ester II	Broadleaf weed control.
metribuzin	Sencor Turf	Goosegrass control in bermuda; prostrate spurge and numerous winter annual broadleaf weeds.
MSMA	Numerous formulations	Grass weed control in bermudagrass and zoysia. are available
MSMA+2,4-D+ mecoprop+dicamba	Trimec Plus	Grass and broadleaf weed control in bermudagrass and zoysiagrass.
pronamide	Kerb T/O	Annual bluegrass control in bermudagrass.
sethoxydim	Vantage	Annual grass control and suppression of bahiagrass in centipede-grass.
triclopyr+clopyralid	Confront	Broadleaf weed control in bermudagrass, centipede-grass and zoysiagrass.

¹ Refer to the herbicide label for a complete listing of tolerant turfgrasses and labeled application sites
² Diclofop-methyl has a state label for use in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee and Texas.

cides control annual bluegrass and certain annual broadleaf weeds. Annual bluegrass germinates at soil temperatures of around 70 degrees F. Apply the pre-emergence herbicide early in fall.

Post-emergence herbicides should be applied to small, actively-growing weeds. Perennial and annual weeds that grow

under good soil moisture conditions at moderate air temperatures are easier to control than weeds that are stressed due to adverse environmental conditions. **LM**

—The author is an agronomist in weed science at the University of Georgia Cooperative Extension Service.

SOURCE: DR. MURPHY

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Circle No. 132 on Reader Inquiry Card

Drug testing:

'We have to do it'

Chris Kujawa of K.E.I. instituted a drug testing program two years ago, and he's glad he did.

by JOHN B. CALSIN, JR.

KE.I. of Cudahy, Wisc., is a \$4 million landscape management company with design/build and interior landscape divisions. Owner Chris Kujawa realizes the need to have a drug-free workplace.

"Drug usage is prevalent not only in society, but in our particular industry," Kujawa observes.

When his company initiated a drug testing plan, it chose to do pre-employment screening, random testing and mandatory testing after major accidents. K.E.I. chose this rather than instituting a "wholesale" policy.

The tests began with owners and supervisors to show the rest of the workforce that the company was serious about having no drugs in the workplace. K.E.I. employs up to 85 people depending on the time of the year.

That was nearly two years ago.

Since then, two people have tested positive.

Two strikes, you're out

K.E.I. employees who test positive are immediately suspended. They may return to work if they take another test and there is a clean report. The employee must pay for the follow-up test. Second offenses result in dismissal.

The type of users that company drug policies generally unmask are "casual or recreational drug users," says agent Tom Childers of the Drug Enforcement Administration in Phoenix.

Childers said that Americans use about 60 percent of the world's supply of illegal drugs. Yet only 20 percent of that is consumed by hard-core, clinically dependent people.

So who uses the remaining 80 percent?

Childers said it's quite possible you work next to, or with, one of these casual or recreational drug users unless your company has a drug-free policy.

Facing the problem

"Quite honestly, we want to help our employees. We are not out strictly to catch people doing drugs," says Kujawa.

"Our employees are an extension of our family. But, as with any family, there may be problems that must be faced and then addressed head-on." K.E.I. does have a partial employee assistance

program (EAP).

Experts say that K.E.I.'s approach is a sound one. Rather than trying to scare or intimidate employees, it communicates care and concern. While not every company can afford to cover the costs of treatment

for drug abuse (including alcohol abuse), they can, at least, encourage employees to seek outside help and make it clear that help is available.

That help can be in the form of an employee assistance program (EAP) designed to assist employees with personal problems that affect their job performance. Although some EAPs focus primarily on alcohol and other drug problems, most address a wide range of employee problems: stress, marital difficulties, financial trouble and legal problems.

Most EAPs offer a range of services: employee education, individual and organizational assessment, counseling and referrals to treatment. In general, the more comprehensive the services, the

cont. on page 32

Get your drug program reviewed by a professional

Thomas K. Schindler writes drug testing policies for companies.

"The law in this area is evolving. It's an active area of the law," says Schindler, a member of the law firm of Lamb, Windle & McErland, West Chester, Pa.

He says it's tough to generalize about testing and test-base employment decisions, but some observations are appropriate:

▶ A private employer has

greater latitude to act than a public employer.

▶ A non-union employer has greater latitude to act than a unionized employer.

▶ Any employer, either public or private, has a greater latitude to act concerning applicants for employment, as compared with existing employees.

▶ It's vital that a company publicize the existence of a testing program; make it clear

cont. on page 32

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PROGRAM *cont. from page 30*
at the outset what the test will disclose and stick to it.

▶ Any employer increases its risk of liability if it uses a testing program that is broader than necessary to address a problem that the employer had identified, and in which he/she has a legitimate interest. In the case of green industry employers, certainly, safety is a concern, because

power equipment used by employees under the influence of some drug can cause injuries. (Testing labs can test for prohibited drugs but not also test for pregnancy or HIV.)

▶ Any employer increases its risk of liability if it fails to administer an otherwise lawful program in a careful and confidential manner. Confidentiality is absolutely essential.

▶ A company must have a clear, consistent policy, known

to the employees, that a positive test will result, for example, in discharge.

▶ Additional policy criteria are required of private contractors working for the government.

The length of the general policy is usually 15 to 20 pages because of what must be covered. Due to recent case law, being specific about what is being covered is important.

Have employees sign off on

the policy at the time of their hire or at the time the policy is instituted.

Schindler and other experts recommend using an attorney to either write your company's policy or, at the very least, review and recommend changes that will keep your company within the laws of your particular state.

—J.C.

Drug Testing *cont. from page 30*

more the EAP provider will charge for them.

Info on EAPs

Currently, there are no national licensure programs for EAP providers. Two professional associations, the Employee Assistance Professionals Association (EAPA) and the Employee Assistance Society of North America (EASNA), have developed certification procedures for EAP providers. Telephone EASNA at (313) 545-3888 or EAPA at (703) 522-6272.

Consider the following possibilities:

▶ Join with other employers and contract with an EAP provider. Consult your Yellow Pages, contact your Chamber of Commerce, or call the Workplace Helpline for the Center for Substance Abuse Prevention in Rockville, Md. at (800) 967-5752.

▶ Contact local hospitals and ask about EAPs.

▶ Talk with other employers who advertise they are a drug-free workplace or those who have successful EAPs.

Whether a company has an EAP or not, a drug testing program is essential, says Kujawa, who describes it as an "effort to provide a safe workplace for everyone concerned. We're working with machines capable of a lot of destruction."

Also, the fact that the industry relies on young and sometimes relatively low-paid laborers, might suggest that drugs are a problem. But Kujawa doesn't think the problem in the green industry is any more serious than in society itself.

"It is a problem that has to be addressed with a strong, stern but measured approach," he says.

As far as drug testing itself, Kujawa repeated, "We have to do it." **LM**

—John Calsin, Jr., is a freelance writer living and working in West Chester, Pa.

CHART 1

POTENTIAL COST OF DRUG ABUSE IN THE WORKPLACE

Obvious direct costs	Payment for treatment of substance abuse, including mental health care and detoxification programs
Hidden direct costs	All medical care expenses for illnesses arising, at least in part, from substance abuse, but which are not solely or directly associated with such abuse
Obvious indirect costs	Absenteeism Productivity losses Employee turnover Waste Accidents
Hidden indirect costs	Blows to corporate image Declining morale Bad decisions Diverted or unproductive supervisory time
Disciplinary and grievance actions	Damage to equipment and products Potential legal liability
Other measurable costs	Disability claims Corporate theft

CHART 2

DRUG USE IN THE U.S. WORKPLACE

Employment status /Age	Any drug in past month	Marijuana in past month	Cocaine in past year
Full-time workers			
18-25 years	18.7%	16.9%	14.0%
26-34 years	13.0%	11.2%	8.8%
35+ years	2.4%	1.3%	1.4%
all, ages 18+	8.2%	6.8%	5.7%
Part-time workers			
18-25 years	16.7%	14.2%	10.8%
26-34 years	13.0%	9.8%	5.9%
35+ years	3.6%	2.7%	n/a
all, ages 18+	9.4%	7.5%	4.5%

THE CLUB

Troubled worker needs friendship, for starters



Terry McIver

TERRY McIVER
Managing Editor

This month's issue contains an article about testing employees for drug use. Drug or alcohol use is no longer just a problem for the worker; it becomes *your* problem when it occurs on the job. If the employee finds a way around the tests, you have two options. One is to try to be a positive influence on that troubled employee.

(No, I know you're not running a counseling center, but read on.)

We chuckle when we hear of a drunk or drugged person stumbling around the shop, yelling at the boss or fighting with co-workers; but we also realize it's a serious matter, as the article on page 30 attests. But there's more to that kind of behavior than meets the eye.

Experts say self-abuse is used to replace something that's missing from a person's life. They want attention, perhaps, and the misbehavior might be a call for help, or an attempt to escape from personal pain or boredom.

As is being done at K.E.I. in Cudahy, Wisc., it's important that you show care and concern for the employee. I like to think that if I were an employer, and one of my people began to arrive at work under the influence of drugs or alcohol, I would of course first insist that it stop, and then try to find out what's gone wrong in the employee's life. What's the void that the employee has chosen to fill with drugs or drink?

I would be that person's friend first, and employer second; find a way to reach out to that person, and maybe even talk to people who are close to him or her and see what they can tell me.

I would stage some sort of crew contest and fix it so that employee wins. The prize would be a membership at a health club, or something else to hopefully redirect the employee's life.

GOLF/GROUNDS

PAGE 4 G ▶
It's a war zone out there...

PAGE 10 G ▶
Smart mole cricket control

PAGE 14 G ▶
Solutions to heat stress

PAGE 16 G ▶
The problem with part-timers

PAGE 20 G ▶
Showcase that outfield fence!

I would never talk in a way that encourages drinking as "cool" or "getting wasted" as humorous, and I would ban alcohol from all company functions if it encourages irresponsible drinking.

Of course, you can't let an unruly employee make a fool out of you and disrupt your business, either. That's when your own discernment comes in. If your efforts don't work, and the behavior continues or gets violent, then certainly, your second option is to suspend or fire the employee.

Am I right or wrong? I've never actually been in that situation. I only know what my conscience would tell me to do. Maybe you've tried compassion—to no avail—and would tell me I'm all wet.

But don't think firing the worker will put the problem forever out of sight. Because, if the trend of not being able to find good employees keeps up, and you're not able to draw the "best" people away from the fast-food jobs, you'll probably see more broken people walk through your door.

Which might not be so bad, after all. Perhaps you'll be able to change a life! **LM**

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Circle No. 107 on Reader Inquiry Card

Golfers want a clear view of the hole they're playing. The photo at right is an obstructed view before selective pruning. The photo below right shows the result after pruning.



'It's a war zone out there'

by TERRY McIVER / Managing Editor



A successful major golf course renovation requires thorough planning and clear communication with members, long before you turn that first shovelful of dirt, says golf course architect Jan Beljan, of Fazio Golf Designers, Inc., Jupiter, Fla.

"Let the players know it's going to be a war zone out there; an organized war zone, but a war zone nonetheless," advises Beljan, who promises that—at least at a private club—it shouldn't be too difficult to get the word around.

But don't rely on word-of-mouth as your only line of communication. Formal notification is important, and something you can't get around. Some members (but not *too* many, if you value your sanity) will, of necessity, be on a renovation committee to approve and budget any major changes.

You've got to satisfy just about every golfer who frequents your course, the low- and high-handicappers alike. To cover all the bases, Beljan suggests you have a representative from all levels of play on the

renovation planning board.

"Thorough communication is essential," says Beljan, "since it is the superintendent who will take the heat for any design flaws."

Scope of renovation

"In long-range planning, start with the things that will make an immediate improvement in the appearance of the golf course," says Beljan. An immediate solution might be as basic as "opening up" the course layout.

"Know the long-term goals and short-term priorities, and above all, remember that the character of the course must not be changed," unless that is one of the predetermined goals.

One or two holes or tee areas are simpler jobs. But the full-blown, entire-course renovations require intense planning and communication. A "renovation panel" at a private course will likely include a greens committee chairman, club president, and any consultants who might be involved.

cont. on page 6G

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Circle No. 122 on Reader Inquiry Card

cont. from page 4G

"If you plan to have a conference with all members," says Beljan, "put all comments on paper. You might even prioritize the issues. Then discuss these with your designer, and consider all agronomic and play-related issues."

You'll also have to explain how the course will play after the renovation, which is especially important to the players who have "easy pars" on certain holes.

Communicating the urgency for a renovation "might require the most explanation to golfers," suggests Beljan, "since 70 percent of golf course design problems are underground, whether it's the root system or irrigation or drainage. They don't see those problems; they see whether the turf is cut a quarter-inch higher or if there are lots of ball marks on greens or uncut hedges.

"It's a strange fact of golf course life that superintendents aren't always recognized as the skilled and qualified people they are," admits Beljan.

"However, [the superintendent's] agronomic knowledge is unique, and must be given full weight when members suggest something be done to 'improve the course.'"

Beljan believes the best way to explain why a renovation is needed is to "show the problem, but without trotting the masses onto the golf course." Give the renovation panel a tour of the problem areas, *not* the entire membership.

Use photographs, slides, videos, even aerial photography if possible, to best explain what is wrong and how it can be fixed. Visuals will also be valuable as a permanent record for flood insurance or other insurance purposes.

Work with the club pro

The club professional can be the superintendent's best political ally when it comes to communicating with—and earning the trust of—members. When something is going on at the golf course, the members ask the pro about it, often because he or she is the first person they see at the clubhouse in the morning.

You may also have to convince the pro that the renovation will help the course.

"If there is something you want to do

that the pro feels will not help get more rounds or keep members happy, it's not easy," says Beljan. "Inform him in as much detail as possible how it will help him do his job better and keep the members happier." Solicit his ideas when planning.

Cost estimates must, of course, include materials and labor, and should take into account any lost income from reduced play during construction and grow-in. As you calculate your financials, don't forget to include the money you will save from reduced maintenance or fewer worker injury claims that were a result of poor design.

"Explain to members that the big dollars will 'go underground' and be spent on drainage and irrigation and grading for positive surface flow," says Beljan.

Members will want to know what effect construction will have on play. Which nine holes will you renovate first? In other words, which nine would the members rather play twice? If you renovate all 18 holes in one season, try to establish a reciprocal play agreement with a neighboring golf course.

Regulatory concerns

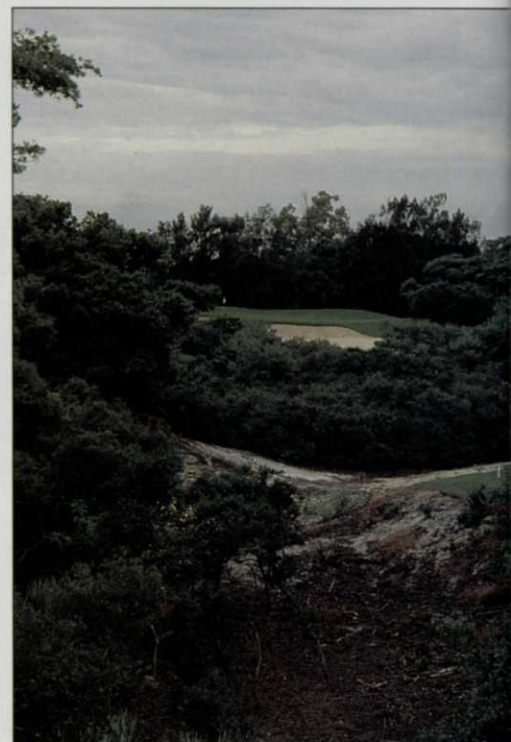
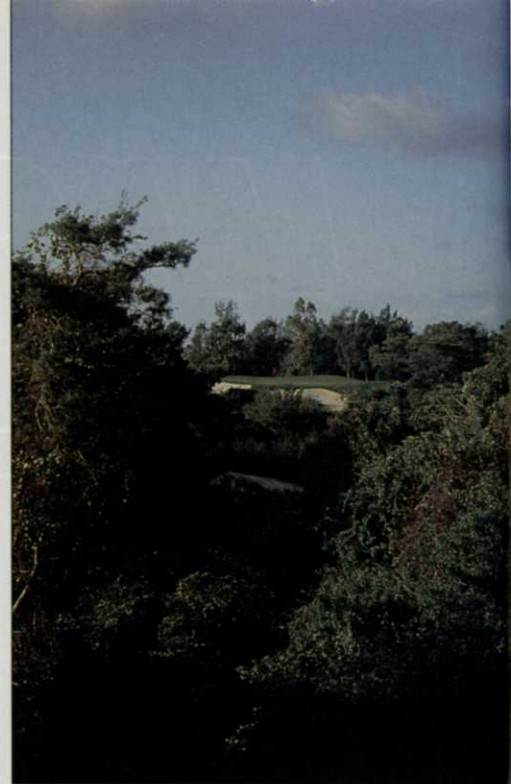
Consider the impact a renovation might have on wetland areas or other protected habitats.

"If you're redoing the entire golf course, regrassing greens, tees, fairways, roughs," advises Beljan, "this may impact areas which are under the jurisdiction of your water management district, or your department of natural resources."

Labor concerns

Determine any risks you might incur if the golf course crew does the work rather than the contractor's people. If possible, compare the skill level of your people to that of the contractor's crew. It's also important to know whether or not product warranties are nullified if your people complete the project.

A golf course designer or turf consultant can be invaluable in helping with the more extensive renovations, from start to finish. The renovation will go much smoother if you have architectural and agronomic experts on hand.



Before (top) and after: Another example of improving the view from the tee. Golfers now play this hole with more confidence, yet the challenge remains.

Finally, don't view a renovation as a cure for slow play. "Of the seven or eight reasons for slow play," says Jan Beljan, "the design is least-often the cause." □

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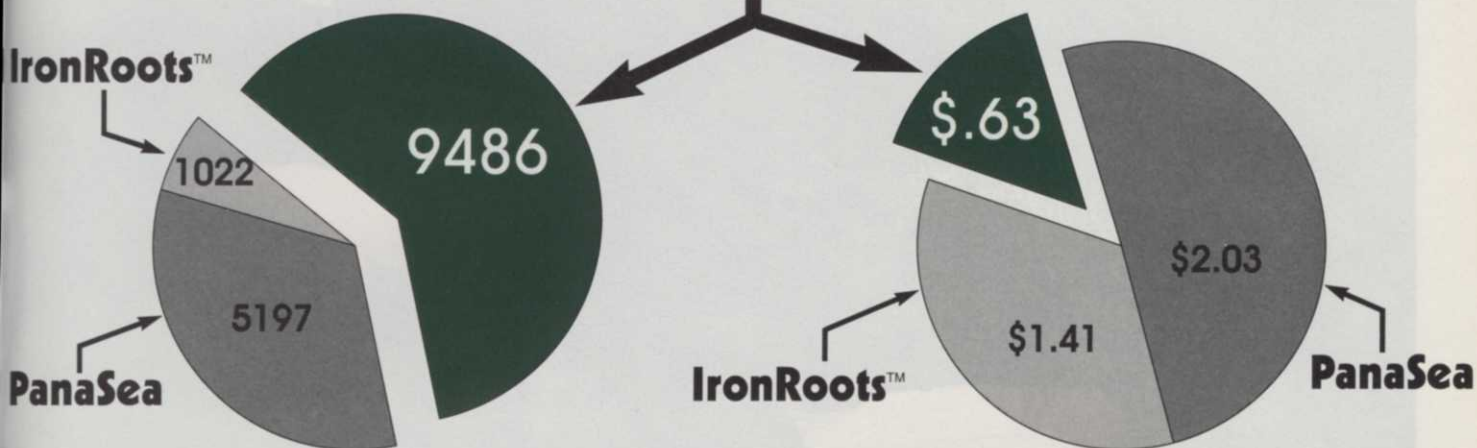
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Relative Rooting Index*

Use Cost Per 1000 ft.²/Month



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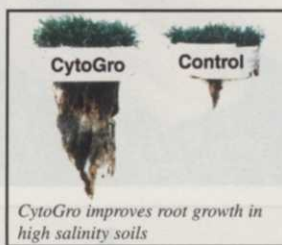
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CytoGro® is available as a highly concentrated liquid with or without iron, and will also soon be available in Water Soluble Packets (WSPs) to further simplify application. CytoGro® WSP will also contain calcium to aid in stimulating root growth in high-saline environments.

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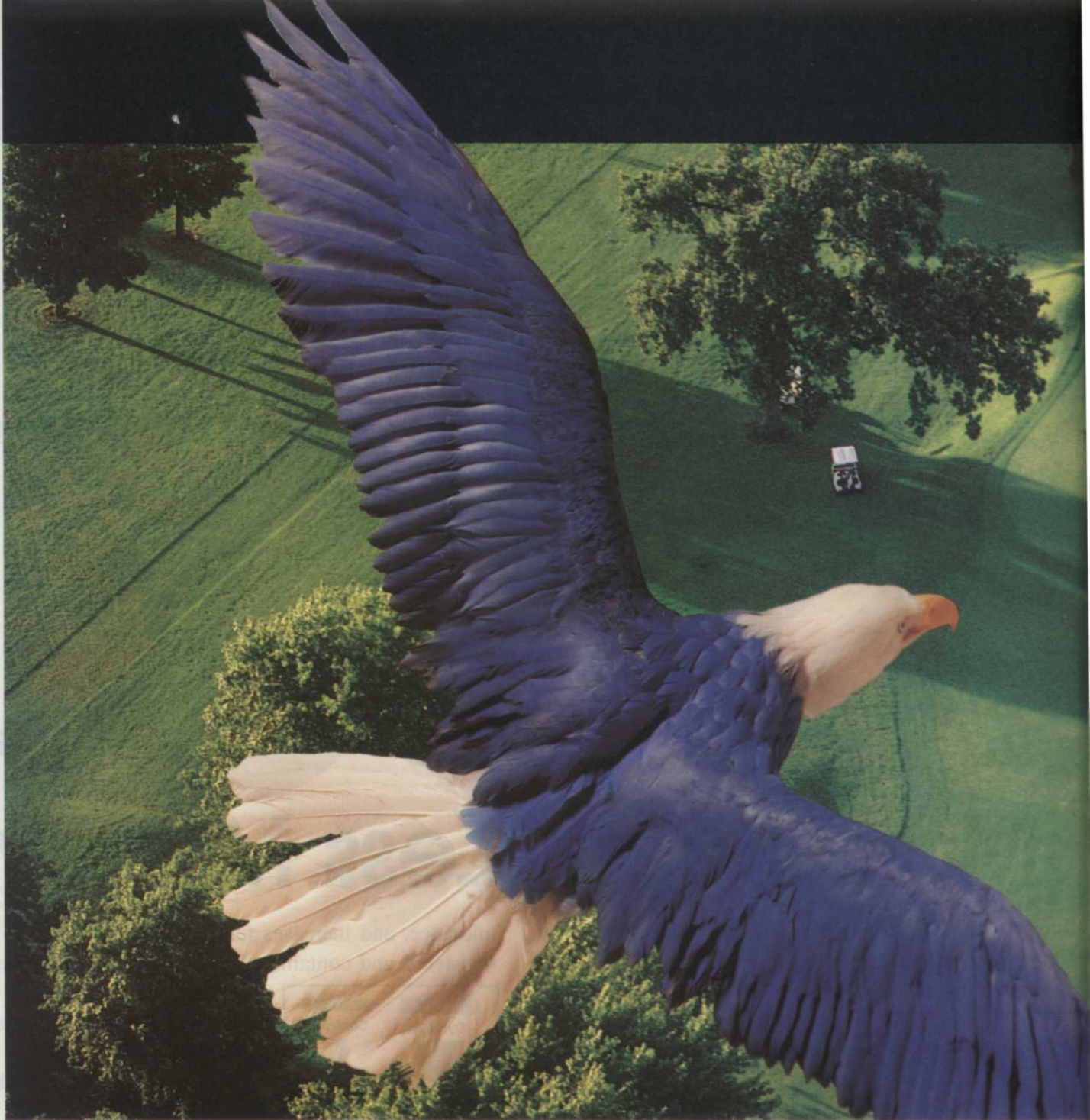
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* Relative Rooting Index is calculated using the EPA accepted Mung Bean Bioassay technique.

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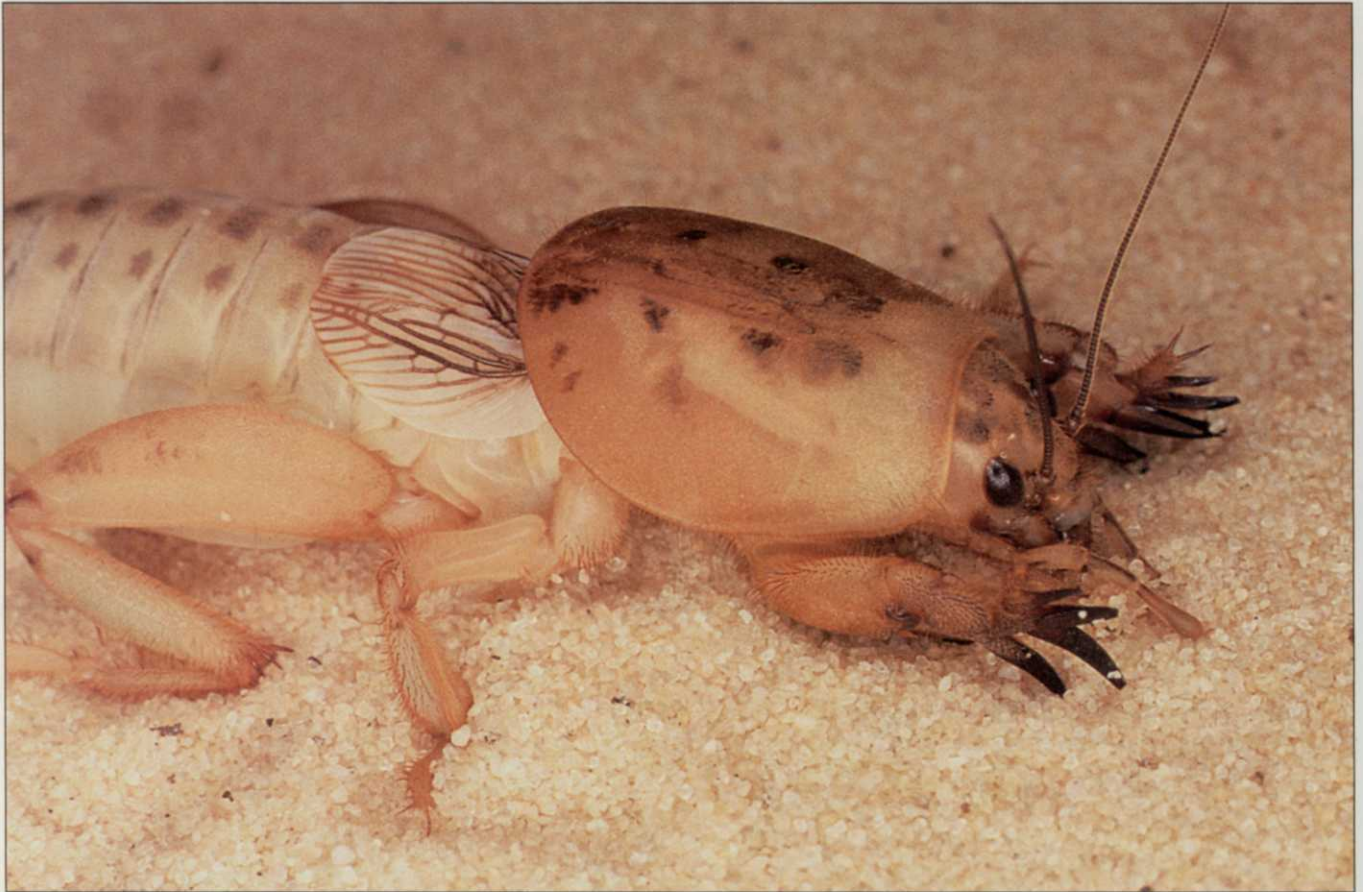


TO-160

2/96

Are biologicals smart mole cricket control?

by HOWARD FRANK / University of Florida



Most turf managers try to control mole cricket pests with a bait, or granules or liquid containing something that kills them. That "something" may be chemical materials (a chemical pesticide) or living biological materials (a biopesticide).

Some of the newer chemical materials, called "biorationals," are synthetic chemicals that, for example, mimic the action of insects' growth hormones to interfere with development.

The biological materials may be insect-killing nematodes (now available commercially) or fungal or bacterial pathogens (being tested experimentally).

These products can be placed exactly where they are needed. In general, the chemical pesticides work

faster than the biopesticides, but the biopesticides affect a narrower range of non-target organisms and are more environmentally acceptable. The "biorational" chemicals are somewhere in between, because they tend to work more slowly than the traditional chemicals, and to have less effect on animals other than insects.

Natives not pests

The 10 mole cricket species in the U.S. and its territories (including Puerto Rico and the Virgin Islands) differ in appearance, distribution, behavior and pest status.

In fact, the native mole crickets are not pests. Our pest mole crickets are immigrant species.

The three species that arouse the ire of turf man-

agers in the southeastern states all belong to the genus *Scapteriscus*. They came from South America, arriving at the turn of the century in ships' ballast. They are the short-winged mole cricket (*Scapteriscus abbreviatus*), the southern mole cricket (*Scapteriscus borellii*), and the tawny mole cricket (*Scapteriscus vicinus*).

The southern mole cricket lives in low-land areas of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana and eastern Texas.

Recently it turned up on a golf course near the Arizona/California border.

The tawny mole cricket has a similar but narrower range and may not yet have spread west of the Louisiana/Texas border. The short-winged mole cricket in the contiguous states is almost entirely in coastal areas of peninsular Florida.

When they got to the U.S., these pest species began to spread, and they continue to spread today. One reason they have been successful here is that the natural predators that control them remained in South America.

Natural enemies

Introducing the specialist natural enemies from South America to the southeastern states is a possible solution. This kind of activity, called classical biological control, has been partially accomplished in Florida.

First, the biological control agents were observed in South America and identified. Then some of them were brought under federal permit to a quarantine facility in Florida for study.

It had to be learned how to culture them, and also how to culture mole crickets as year-round food for them. Only agents shown to be harmless to non-target organisms were cleared for release. These had to be produced in large numbers for release in Florida, then releases were made.

Populations of them became established at various places, then spread to nearby counties. The spread of populations had to be tracked, and the effect on mole cricket populations had to be evaluated. The details differ widely from species to species. For example, a parasitoid fly was



The life cycle of the short-winged mole cricket. This pest is found in coastal regions of the Florida peninsula.

released by the thousands, at multiple sites, and quickly spread throughout south and central Florida. A predatory beetle has not yet been released.

Encouraging results

Mole cricket populations have been monitored for over 15 years at three trapping stations in Florida. Mole crickets trapped at the southwestern station over the last three years number on average less than an eighth of what they averaged in the years before releases were made. The same two biological control agents are established near the two stations in north Florida, where mole crickets trapped over the last three years number on average about a third of what they were before releases were made.

In north Florida, one of the two biological control agents occurs only in small numbers and probably has little effect; however, a third agent has just become established and its effect should increase.

These biological control agents are achieving area-wide biological control of pest mole crickets. There are more kinds of biological control agents yet to be researched and released.

The big questions to ask are: how low can we suppress mole cricket populations with classical biological control agents, and to what degree can we reduce the use of pesticides? □

Call up 'Mcricket' for answers

How can you tell the 10 species of mole crickets in the United States apart?

It's much easier to identify the adults than the young (nymphs) to the species level.

One way to identify them is to use a computerized knowledge base called *Mcricket*.

This knowledge base not only has graphics that let you identify the mole crickets, but it also has information about their life cycles and behavior. It also has information about control methods, including tutorials.

Mcricket was developed by University of Florida entomologists Tom Fasulo, Howard Frank and Don Short with extension agents Harold Jones and LaRue Robinson. Other than that, any IBM-compatible PC with 3.3 MB of hard disk space, 640 KB of RAM, and one floppy drive will do.

Mcricket: Alternative Methods of Mole Cricket Control including the software (three diskettes, Program 089) and manual (Circular SW-089) can be purchased as a package from: University of Florida, IFAS Software Support, P.O. Box 110340, Gainesville, FL 32611-0340. Phone: (352) 392-7853. *Mcricket* costs \$30 for Florida residents (add sales tax) and educational institutions, \$40 for all others. Prepayment by check or Visa/MasterCard is required. Checks should be made out to the University of Florida.

However, if you know how to surf the World Wide Web from your computer, you can access *Mcricket* free at:

<http://gnv.ifas.ufl.edu/~ent1/mcricket/index.html>



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Heat stress 'solutions' can hurt

by TERRY McIVER / Managing Editor

Bentgrass—regardless of the variety—is naturally prone to heat stress. Well-intentioned management that is performed to defend the turf against the heat can often get in the way of healthy turf.

Speaking at the North Carolina Turf Conference in January, Dr. Milt Engelke of Texas A&M reminded superintendents that different species of turfgrasses have biological strengths and weaknesses that influence how they survive in the golf course setting.

"Natural environmental conditions we are concerned with include temperature extremes, moisture extremes, disease and traffic," says Engelke, "and to help the turf withstand those conditions, we manipulate the environment to compensate for the biological deficiencies of the cultivar.

Mowing heights are tricky. If they're too high, stressed roots have more turf to support. ▼

Large fans help circulate air around greens surrounded by many trees. ▼



Engelke's heat-stress tips:

1. Use adapted, heat-resistant cultivars.
2. Maintain good soil/water ratio.
3. Promote deep, extensive rooting.
4. Provide adequate drainage.
5. Avoid excessively saturated soil.
6. Maintain proper mowing height.
7. Pull soil profiles often to view rootzone depth.
8. Flush greens periodically.
9. Use Toro Hydroject on dry greens, NOT on wet greens.
10. Try using star tines on your aerator. They give turf about 30% more surface area in which to lose moisture. With 3/8-inch diameter tines, you can actually dry a green out in 24 to 36 hours, Engelke says.

—T.M.

"The attitude has developed that there is a specific way we have to manage bentgrasses. We have to get off of that a little bit. Syringing is an example. That process cools the plant but it's just one of many cultural practices.

"Your management scheme should be to manage to the weakness of the grass, and take advantage of the strengths," says Engelke.

"Turf variety is important, but management is the key."

Syringing in high temperatures, for example, creates humidity in the turf crown. The high temperature, high humidity and fertilizer combine to create a perfect environment for disease, Engelke explains.

"Water management can be a wonderful tool," agrees Engelke. "We just tend to use 'a little bit of water' a lot!"

There are ways to help the plant to *cool itself*, and thereby cut back on the "environmental manipulation." One solution is to aerify rather than syringe.

Summer aerification creates large pores for water and oxygen circulation in the rootzone, the most important area of the turf.

Lost any greens collars lately? Was it after you raised the mowing height? That's because as soil temperature rises in hot weather, root growth stops.

"So if you raise the height of cut in the summer, you're taxing roots that are already weakened by heat." □

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Part-time personnel, full-time headaches

by PHILIP M. PERRY

Motivating full-time employees is hard enough. But part-time and temporary workers pose a special challenge.

How do you light fires under people who are often saddled with low-level work, blocked from climbing the career ladder, and treated like "outsiders" by the full-time staff?

"Contingency" workers now account for 20 percent of America's workforce. That number is expected to rise to 30 percent within a decade.

"Part-time and temporary employees have become vital tools for keeping labor costs under control," says Carl Johnson, president of Princeton Employee Relations, Princeton, N.J.

Unmotivated contingency workers, however, are dangerous. Feeling demoralized, they perform listlessly and neglect customers. That threatens your profits. Worse, disenchanting part-time workers are apt to quit for greener pastures. That saddles your business with the costly task of training replacements.

Here's some good news. You *can* motivate these employees. The secret is to avoid common errors that "turn off" temporary help:

TIP #1

► **Don't give them the cold shoulder.**

Give them a warm welcome and introduce them to the staff. Make them feel a part of the family.

Bonus tip: Avoid confusion and hurt feelings by clearly identifying the chain of command to the new employee. Who is authorized to give orders?

TIP #2

► **Don't turn them loose without orientation.** "Cover the basic things: what are the policies of the firm? What are overtime policies?," says Bruce Steinberg, spokesperson for the National Association of Temporary and Staffing Services, Alexandria, Va.

Bonus tip: Plan ahead. "Don't just assume that when people show up, you will get everything ready," says Steinberg. "Prepare their tools and anything else."

TIP #3

► **Assign a mentor.** "A mentor is a tremendous motivational tool," says Don Schackne, president of Personnel Management and Administration Associates, Delaware, Ohio. "Select someone who is willing to teach and is patient. You can also assign a few permanent people as roving mentors."

Bonus tip: The mentor will feel good about the added responsibility.

TIP #4

► **Don't exert too much control.** You'll never find out if there is "a better way" if you don't give the new worker the freedom to use creative problem-solving.

"When contingency workers believe they are making a difference in an organization, they feel better about being there," says Ian Jacobsen, a Sunnyvale, Calif.-based consultant.

Bonus tip: Encourage everyone to think creatively by recognizing new ideas publicly.

TIP #5

► **Don't load down part-timers with "grunt" tasks,** those jobs no one else wants to do. Remember that everyone feels good about improving skills. What challenging tasks can you assign to the new employees? Ask them what skills they would like to acquire. There's nothing wrong with assigning low-level tasks. But make sure to *add* some specialized jobs to spark loyalty and enthusiasm.

Bonus tip: Rotate the mundane tasks among all employees to keep boredom to a minimum.

TIP #6

► **Don't overlook work well done.** That's devastating. "The recognition of a job well done is even more important for contingent workers," says Dr. Peter Spevak of the Center for Applied Motivation, Rockville, Md. "Their own identity with the company is not as strong, and they need to be reinforced."

Bonus tip: Consider giving a plaque to the part-time "Worker of the Month."

QUOTABLE QUOTES

Positioning ourselves

▶ "[The environmental debate] is a very robust discussion now. We've come out from all the bashing and we've started to posture ourselves as environmentalists in our own right."

—Dr. Frank Rossi,
University of Wisconsin-Madison

TIP #7 ▶ Do not allow conflicts with full-time employees, who may feel threatened by part-timers, fearing for their own jobs. So explain to current workers why you are bringing in outsiders; communicate that the new people do not represent a threat to the jobs of full-time staffers.

Bonus tip: Reward successful referrals with cash bonuses.

TIP #8 ▶ Do not omit temporary workers from business activities. Invite them to workshops and seminars, employee lunches, parties, and any other normal activities.

Bonus tip: Hold a party for every temp's birthday.

TIP #9 ▶ Don't overlook financial incentives. Times are changing: bonuses are not reserved for permanent staffers any more. "Develop some kind of a bonus plan," says Schackne. Perhaps insurance coverage or vacation time after a certain number of successful work hours.

Bonus tip: Pay contingent workers a little more per hour than competing businesses. This will keep competitors from raiding your workers after you have invested in their training.

TIP #10 ▶ Don't insist on rigid hours. Many part-time and temporary workers do not want to be tied down to 8-to-4 hours. Capitalize on that. If you allow for flexible hours, you will encourage employees to stay with you.

Bonus tip: Avoid panic situations by encouraging employees to let you know in advance of any anticipated scheduling conflicts.

"In the past...temporary workers came, performed menial functions and left with little interaction," notes Marc Silbert of Robert Half International, Menlo Park, Calif. "Now, they serve virtually all aspects of the workplace. They should be recognized as the professionals they are."

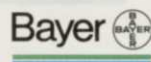
—The author is a freelance business writer based in New York City.

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Tank-mix BAYLETON with ProStar® for enhanced control of brown patch. Or include Daconil® in your tank-mix to control leaf spot. And add Subdue® to BAYLETON to tackle *Pythium*. With BAYLETON in your tank, not only will you be able to control these diseases, but you'll also get unsurpassed control of course-threatening diseases like summer patch, dollar spot and anthracnose.

No other fungicide offers as much versatility. In addition to giving you numerous tank-mixing options, you can also treat ornamentals to get outstanding control of powdery mildew, rust



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Dollar Spot



Anthracnose



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and other diseases. And you can apply BAYLETON over your entire course to keep golfers from tracking disease from your fairways to your greens and tees.

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Water-soluble packets reduce applicator exposure.

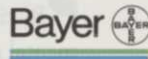
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Circle No. 106 on Reader Inquiry Card

SHOWCASE

that outfield fence!

by RON HALL / Senior Editor

Jeff Moser turns the outfield fence at the College of Wooster varsity baseball field into something special each summer.

By ringing an outfield fence with flowers, ornamental grasses and small trees, other schools and communities can showcase their top ballfields, too. The effort provides a functional and pleasing backdrop against which to highlight baseball or softball.

Moser is one of nine crew members on the staff of grounds superintendent Phil Williams. He and co-worker Leroy Boulton maintain the college's athletic fields. Other crew members maintain the school's golf course and campus.

The College of Wooster is a private college of 1578 students located in the heart of Amish country in north central Ohio. The campus is as neat and pretty as a picture postcard.

Here's how Moser, basically on a shoestring, perks up the outfield fence:

Each spring, he and Boulton run a string one-foot inside and outside of the outfield fence, and apply Roundup non-selective herbicide.

Then, when the college grounds crew picks up its 60 to 100 flats of annuals for the golf course and

campus, Moser sets aside 6 to 8 flats for the 5-foot-wide, 120-foot-long curve just outside of the baseball fence.

He began the project when he joined the staff almost seven years.

"Every year, I make it a little bit longer and add more plants," says Moser.

Because the ornamental grasses (a variegated miscanthus) that he planted around the fence grow so prolifically, he splits them often. This provides new plants as he expands the beds.

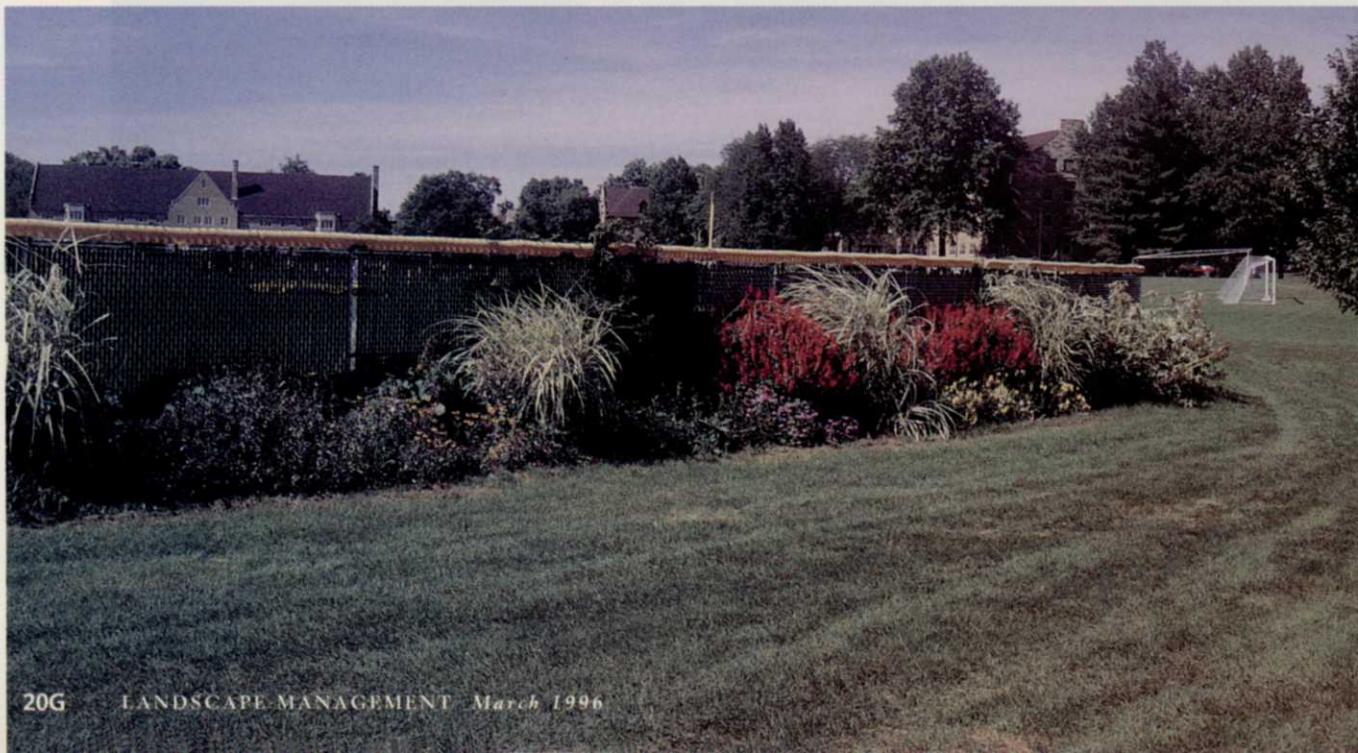
Moser says he and Boulton are so busy mowing and fertilizing the college's athletic fields in the spring, that they often have to wait weeks before rejuvenating the outfield fence, a project they do, basically, on their own.

It takes them about a day to pop out the grasses, rototill the beds, plant the grasses and flowers, and spread about two inches of shredded bark mulch. He says his most pleasing combination of flowers, to date, has been blue salvias massed with white sweet alyssum.

Although the spring baseball season is over by the time the garden looks its best, golfers—particularly senior citizen league golfers—really appreciate the view. The outfield fence is adjacent to the club house and golf carts.

"Phil Williams has done wonders for the campus grounds for years. He's the one that deserves the credit for the things we do," says Moser. "He gives us some freedom to do these things as long as we get our daily tasks done." **LM**

Flowers make the outfield fence at the College of Wooster's varsity baseball field something special.



Gradually, our message is heard in Washington



Ron Hall

RON HALL
Senior Editor

Washington D.C. is the most powerful city containing the most powerful people that the world has ever known. . .so, where were you January 28th and 29th?

Those were the dates for the annual Day on the Hill put on by PLCAA and sponsored by top industry suppliers.

About 80 or 90 of us were there. But we know that there are thousands of others of you just like us. You use fertilizers and other chemical products responsibly. And because you do, you make our landscapes a lot better places to live, play and work in.

The relatively tiny number of us told our respective legislators and their aides just that. We also informed them about the number of people we employ. And about the taxes we pay.

We emphasized the public's overwhelming acceptance and support for our services. We also provided supporting data, and told them that they can contact us should they need any other information about our businesses, or our industry.

All of this we crammed into about 10 to 15 minutes a visit.

This is the same information that we've been offering to our respective legislators year after year after year. This is the seventh year in a row that some of us have been there.

We're starting to see the results of our work. It's a continuing educational process that's working.

During our legislative visits a couple of weeks ago, there were no controversies to address.

Lawmakers weren't considering any legislation that could be considered industry threatening, not like the anti-lawn care legislation that Sen. Joseph

[LAWN/LANDSCAPE]

PAGE 4 L ▶
Optimum scheduling

PAGE 6 L ▶
Who are your customers?

PAGE 10 L ▶
Ten lighting tips

PAGE 12 L ▶
The problem with part-timers

PAGE 16 L ▶
An operating efficiency survey

PAGE 20 L ▶
'Pushing' motivation

Leiberman (D-Conn.) proposed six years ago, anyway.

The weight of our previous visits is partly responsible, although the governmental impasse over the U.S. budget and the fact that 1996 is an election year overshadowed everything else in Washington D.C. late in January.

Even so, legislators and their staffs received us cordially. More and more of them, or their staff members, know us from previous visits. That's encouraging.

Next year make plans to attend the Day on the Hill. You won't find yourself alone. There will be a small, but experienced group of colleagues that will show you the ropes in short order.

After making your visits, you'll probably agree with them that it's the single most important industry event of the year. You'll see for yourself how much difference you can make. **LM**

Comments? Phone Ron at (216) 891-2636 or e-mail him at 75553.502@compuserve.com





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Because the only thing that belongs on your customers' lawns in high concentrations are their children.



Since we must go to customers, rather than they to us, your time management is essential. Visits must be scheduled so that customers are serviced in an organized and efficient manner. Here are some hints:

1) **Clearly designate** routes or service zones. Except in very special cases, begin each year by treating all lawns in each zone in some type of order. Before the route is run for the first time, put these addresses in sequence by neighborhood, street, and number. Insist that they be treated in

that order the first time out.

2) **Include clear directions** to the site on each invoice. It may not always be possible to have the same person treat the lawn each round. Make sure a substitute has clear directions to the property.

3) **Take time** to acquaint new employees with the routes. Simply giving them a street map doesn't help much. Drive the routes with them and

provide written instructions on locations of specific subdivisions and new developments. Providing each truck with a Graphic Street Guide is also very helpful and quickly pays for itself in time saved.

4) **Clearly note** special customer requests on the invoice. Is this a "call-ahead" customer? Is there a locked gate? How about outdoor pets? Is the numerical address clearly shown on the house? If not, how do we identify it? Does the property have odd boundaries we need to remember?

All such information should be reviewed by the turf specialist before they leave your office, not while they are parked in front of the lawn.

5) **Give the turf specialist** a few more invoices than they are expected to treat. Despite our best

planning, there are often occasions when we simply cannot treat a scheduled lawn. By giving the specialist back-up invoices, you will save the time of having them return to the shop for additional work.

6) **Track invoices** and invoice scheduling. You should be able to tell, at any given time, the status of any given invoice. By keeping track of invoices, you will service customers according to the schedule you have set.

7) **Follow up** on a as scheduled route the day it is treated. This does not mean you distrust your employees. It is "quality control."

8) **Service new customers** as soon as possible. Later adjustments in schedules can be made after the lawn has been treated for the first time.

9) **Put customer needs** before your schedule. Most LCOs require their turf specialists to also respond to service calls in their respective routes. Whatever your service policy, be it one day, two or three, respond in that time frame by scheduling the service call in with the turf specialist's production route.

These are ways to efficiently service customers and avoid wasteful "windshield time." We understand the need for production sales goals, but we must also understand the need for quality work. Proper routing and scheduling of your service calls, and thus your employee's work day, will allow you to be more successful in meeting both objectives. **LM**

We must understand the need for both sales goals and quality work, too.

Scheduling for optimum effectiveness



BOB ANDREWS
Contributing Editor

BIG

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Who are your customers...really?

You've got to get into their heads to effectively increase sales to both existing and potential clients, say these two experts.

Do you know enough about your customers or competitors to remain profitable? Or to grow your company?

That's the challenge every landscape contractor must meet, say Judith Guido and Edmond Laflamme of Laflamme Services, Bridgeport, Conn.

If you can't provide an accurate profile of your best customers, it's time to start asking lots of questions, says Guido.

Adds Laflamme: "Market research is gathering relevant information about current or potential customers to allow you to specifically focus on cus-

Judith Guido and Edmond Laflamme of Laflamme Services in Bridgeport, Conn., pinpoint their customers so that they can focus their marketing.



tomers who will most likely buy your service. Find out as much as possible about their mindset."

Begin with current customers. Find out who the decision-makers are. When do they budget? How do they buy? What's important to them?

In fact, you can't learn too much about either customers or potential customers, says Guido who, for example, joined a corporate purchasing agents' association.

She says she wanted to find out what made purchasing agents tick. She wanted to understand why they buy (or don't buy) landscape services. She wanted to discover how they budget for these purchases.

"I learned what they need," she explains. "I'm creating services to help them."

While you're profiling your customers, study your competitors too, says Laflamme, who started his own landscape company in 1970 with a pair of mowers. Laflamme Services now does more than \$5 million annually.

Can you name your top three competitors? Their top three accounts? Why your competitors have those accounts instead of you?

Other information you should know: Is your competitors' personnel more qualified than yours? What are their market areas? Their pricing strategies? How do they advertise?

Don't be afraid to ask customers and potential customers what they think of your competitors.

"Many times they will tell you," says Laflamme. "Ask them, where are they strong? Where are they weak?"

"Tell them why you want to know, because you want to improve your company. Nine times out of 10, they will tell you the truth."

Guido says you should match your company's strengths to your competitors' weaknesses. "In areas where you're weak against the competitors' strengths, you have two choices: get up to a competitive level or not compete."

Major domestic trends that could affect your sales

- ▶ More home-based computers, allowing the workforce to spend more time at home.
- ▶ Widespread availability of information systems (like the Internet and the World Wide Web) and computers.
- ▶ Environmentalism and the "green movement."
- ▶ Globalism and international business.
- ▶ "Networking," "partnering" and "outsourcing."
- ▶ Increasing business ethics and values; "honesty is a big part of business today," Edmond Laflamme notes.
- ▶ Not just satisfied customers, but satisfied-*plus* customers.
- ▶ Downsizing.

Guido offers these seven marketing tips:

1) **Define your product and service.** Write it down. Develop a "menu" of services. "How else do your employees know what you're doing? How does the public know what you're doing?" asks Guido.

2) **Identify your target market.** "You can't be everything to everybody," says Guido, who claims that "20 percent of your customers provide 80 percent of your revenues." Find more customers just like that 20 percent.

3) **Identify your pricing strategy.** "Can all of your employees answer the question: Why are you more expensive? Or, why are you less expensive?" asks Guido.

4) **Make your service accessible.** Is it easy for your customers to get in touch with you?

5) **Create customer awareness by get-**

ting your name into the marketplace.

Write articles for local newspapers. Speak at local clubs.

6) **Transfer ownership.** Is it easy for your company to get your services to your customers?

7) **Follow up and get feedback.** Don't let seven business days go by before following up a direct mail promotion. Either contact the potential client with a call or letter. Tailor your follow-ups on a case-by-case basis, but don't stop until you get feedback.

In addition to offering landscape services, Laflamme and Guido are partners in Grassroots Marketing, a consulting firm for small to mid-size companies. □

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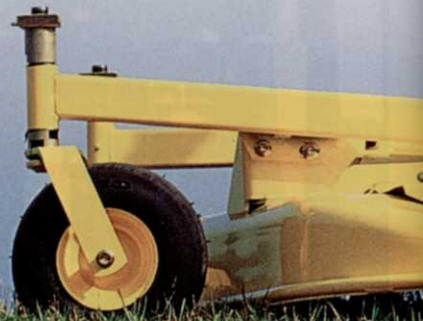
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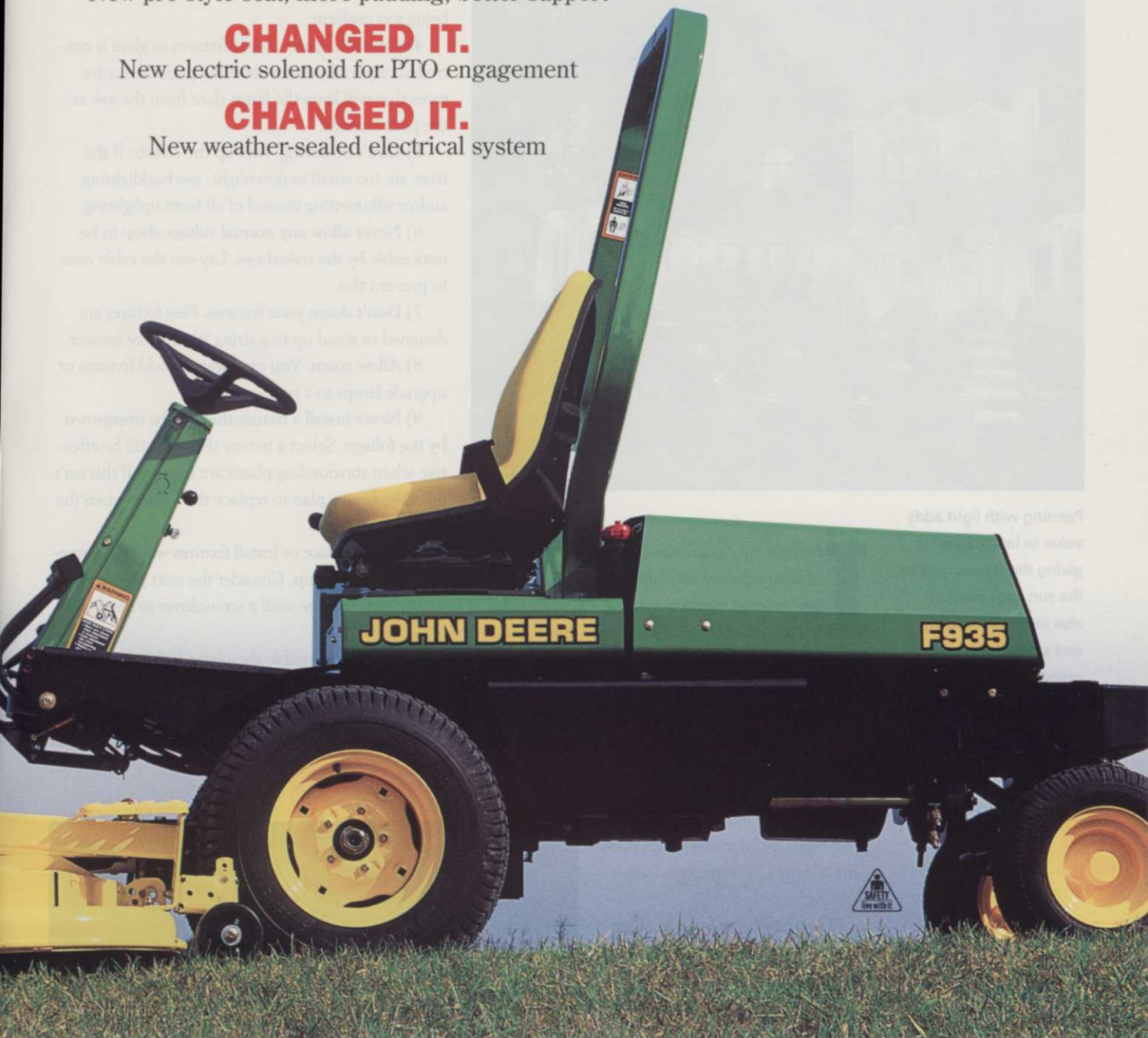
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10 BRIGHT lighting tips



Painting with light adds value to landscapes by giving them beauty after the sun goes down. It also increases security and safety for homeowners.

Increase your residential customers' enjoyment of their outdoor surroundings by providing professional outdoor lighting. Outdoor lighting increases security and safety. But it can also add beauty and mystery to gardens, pools, decks and patios—in all seasons.

Some contractors refer to this as landscape lighting and, indeed, they do illuminate trees and shrubs. But they also light driveways, steps, entrances and other parts of properties.

Here are 10 landscape lighting tips from Clay Martenies, vice president sales of California Landscape Lighting:

1) Never allow a lamp to shine directly into the eyes. If the effect you select will produce this, use another angle. If this is not possible, use another way to light.

2) Don't over-light. Allow the dark areas to accent what you light by varying amount of light, or not lighting everything.

3) Let the airports have the "runway" lights. Place your path-

lights where they are the most effective without being too uniform.

4) Consider glare. Shield fixtures so glare is controlled, especially on an elevating path. Select fixtures that will keep the lamp glare from the eye as the path ascends.

5) Don't be boring. Mix up the effects. If the trees are too small to downlight, use backlighting and/or silhouetting instead of all front uplighting.

6) Never allow any normal voltage drop to be noticeable by the naked eye. Lay out the cable runs to prevent this.

7) Don't doom your fixtures. Few fixtures are designed to stand up to a string trimmer or mower.

8) Allow room. You may want to add fixtures or upgrade lamps to a new system.

9) Never install a fixture that will be overgrown by the foliage. Select a fixture that will still be effective when surrounding plants are mature. If this isn't possible, have a plan to replace the fixture when the plants are mature.

10) Don't place or install fixtures where it's overly difficult to relamp. Consider the next person who must climb the tree with a screwdriver in hand. □

—These tips appeared in the winter 1996 issue of California Landscape Lighting's newsletter, Lite Tips. For more information, write: California Landscape Lighting, 31260 Cedar Valley Drive, Westlake Village, CA 91362.





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NEW HOLLAND

Part-time personnel, full-time headaches

by PHILIP M. PERRY

Motivating full-time employees is hard enough. But part-time and temporary workers pose a special challenge.

How do you light fires under people who are often saddled with low-level work, blocked from climbing the career ladder, and treated like "outsiders" by the full-time staff?

"Contingency" workers now account for 20 percent of America's workforce. That number is expected to rise to 30 percent within a decade.

"Part-time and temporary employees have become vital tools for keeping labor costs under control," says Carl Johnson, president of Princeton Employee Relations, Princeton, N.J.

Unmotivated contingency workers, however, are dangerous. Feeling demoralized, they perform listlessly and neglect customers. That threatens your profits. Worse, disenchanted part-time workers are apt to quit for greener pastures. That saddles your business with the costly task of training replacements.

Here's some good news. You *can* motivate these employees. The secret is to avoid common errors that "turn off" temporary help:

TIP #1 ▶ **Don't give them the cold shoulder.** Give them a warm welcome and introduce them to the staff. Make them feel a part of the family.

Bonus tip: Avoid confusion and hurt feelings by clearly identifying the chain of command to the new employee. Who is authorized to give orders?

TIP #2 ▶ **Don't turn them loose without orientation.** "Cover the basic things: what are the policies of the firm? What are overtime policies?," says Bruce Steinberg, spokesperson for the National Association of Temporary and Staffing Services, Alexandria, Va.

Bonus tip: Plan ahead. "Don't just assume that when people show up, you will get everything ready," says Steinberg. "Prepare their tools and anything else."

TIP #3 ▶ **Assign a mentor.** "A mentor is a tremendous motivational tool," says Don Schackne, president of Personnel Management and Administration Associates, Delaware, Ohio. "Select someone who is willing to teach and is patient. You can also assign a few permanent people as roving mentors."

Bonus tip: The mentor will feel good about the added responsibility.

TIP #4 ▶ **Don't exert too much control.** You'll never find out if there is "a better way" if you don't give the new worker the freedom to use creative problem-solving.

"When contingency workers believe they are making a difference in an organization, they feel better about being there," says Ian Jacobsen, a Sunnyvale, Calif.-based consultant.

Bonus tip: Encourage everyone to think creatively by recognizing new ideas publicly.

TIP #5 ▶ **Don't load down part-timers with "grunt" tasks,** those jobs no one else wants to do. Remember that everyone feels good about improving skills. What challenging tasks can you assign to the new employees? Ask them what skills they would like to acquire. There's nothing wrong with assigning low-level tasks. But make sure to *add* some specialized jobs to spark loyalty and enthusiasm.

Bonus tip: Rotate the mundane tasks among all employees to keep boredom to a minimum.

TIP #6 ▶ **Don't overlook work well done.** That's devastating. "The recognition of a job well done is even more important for contingent workers," says Dr. Peter Spevak of

cont. on page 14L

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innovative design (patent pending) allows more cutting time by allowing the operator to respond to changing conditions without downtime.

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cont. from page 12L

the Center for Applied Motivation, Rockville, Md. "Their own identity with the company is not as strong, and they need to be reinforced."

Bonus tip: Consider giving a plaque to the part-time "Worker of the Month."

TIP #7 ► Do not allow conflicts with full-time employees, who may feel threatened by part-timers, fearing for their own jobs. So explain to current workers why you are bringing in outsiders; communicate that the new people do not represent a threat to the jobs of full-time staffers.

Bonus tip: Reward successful referrals with cash bonuses.

TIP #8 ► Do not omit temporary workers from business activities. Invite them to workshops and seminars, employee lunches, parties, and any other normal activities.

Bonus tip: Hold a party for every

temp's birthday.

TIP #9 ► Don't overlook financial incentives. Times are changing: bonuses are not reserved for permanent staffers any more. "Develop some kind of a bonus plan," says Schackne. Perhaps insurance coverage or vacation time after a certain number of successful work hours.

Bonus tip: Pay contingent workers a little more per hour than competing businesses. This will keep competitors from raiding your workers after you have invested in their training.

TIP #10 ► Don't insist on rigid hours. Many part-time and temporary workers do not want to be tied down to 8-to-4 hours. Capitalize on that. If you allow for flexible hours, you will encourage employees to stay with you.

Bonus tip: Avoid panic situations by encouraging employees to let you know in

advance of any anticipated scheduling conflicts.

"In the past...temporary workers came, performed menial functions and left with little interaction," notes Marc Silbert of Robert Half International, Menlo Park, Calif. "Now, they serve virtually all aspects of the workplace. They should be recognized as the professionals they are." □

—The author is a freelance business writer based in New York City.

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PLCAA's 1995 Operating Efficiency Study allows LCOs to compare their operations against others across the nation. This is the first PLCAA study of its kind in 10 years. It was prepared by Wall-Bruning, Columbia, S.C. Its author was Lewis Browning.

We talked with owners of two companies participating in the PLCAA study. Both said it showed them areas they could improve in their operations.

(The names of the companies and owners are fictional, but the details—as far as the owners are comfortable sharing them—are true.)

Ken Careful runs a 10-year-old franchise of Lawn & Order, Inc. The franchisor has multiple locations, mostly in the East, but is moving into the Midwest, too. Ken owns an office, warehouse and 11 trucks with 22 to 24 employees including the office and telemarketing staff.

L&O Inc. is split 90/10 turf/tree respectively, with about 70 percent of \$1.1 million in gross sales from commercial accounts.

Ken's a nuts-and-bolts operator, serious and quiet. He

works out daily, eats healthy, and gives his three veteran managers freedom to run most operations.

Ken studied accounting in college, then started entry level at the then-fledgling L&O. The new company set its sights on overtaking older and more settled competitors through aggressive telemarketing.

It didn't take Ken to recognize the importance of numbers, and he quickly rose to branch manager for one of L&O's largest branches. Both he and the branch profited. Now he runs his own franchise.

Grate Funn, by contrast, is flamboyant, free

wheeling and, on occasion, free spending. Because he sometimes spends more than he should, his company's growth has been erratic, occasionally plateauing while he paid back debt.

His Superior Lawn Care, Inc., targets high-end residential and is known for high-quality service. Gross sales are split almost evenly between turf and tree/shrub with an emphasis on consulting.

Grate's company isn't as large as he'd hoped when he started it almost 20 years ago. Nor is it as profitable. Even so, by most standards it's successful, and it still retains its friendly, small-company culture.

Also, unlike Ken—who has little debt and whose company has grown steadily—Grate runs most day-to-day operations himself, including purchasing, promotions and sales.

He counts on a highly-paid commission system to motivate his four, sometimes five, technicians.

Another notable difference between the two companies is that Ken's strong telemarketing presence keeps sales strong, but its 45 percent cancellation rate (20 percent unhappy), more than doubles both of Superior's rates.

The PLCAA study is divided into categories analogous to those found in a standard General Accounting report. All companies were ranked by profits. The most profitable were called "upper quartile" and the second and third quartiles were averaged to arrive at the "typical" company.

Browning, the study's author, says this provides a usable set of averages from which can be derived comparative information which will balance financially as opposed to "median" data which can be thrown off by abnormally high or low performances.

The study reinforced Ken's belief that bigger is better. Companies with more than 4,000 accounts and \$1 million in sales fared better than smaller companies like Grate's.

It also pointed out some advantages of a franchise since almost 30 percent of the participants were part of a larger parent company. This affiliation brings with it an established name, and training to help licensees avoid pitfalls.

Also, the franchise did better in the cost of materials. The larger companies in the upper quartile reported spending 10.7 percent while typical companies spent 15.7 percent. The larger size helped, but perhaps the buying power of the parent company

A tale of 2 LCOs

Here's how two lawn care companies in similar-sized markets stack up in PLCAA's first Operating Efficiency Study in 10 years.

by DICK BARE / Arbor-Nomics Lawn Inc.

Breaking through business barriers

Dr. Nate Booth, head corporate trainer at Robbins Research International Inc., San Diego, told members of the Associated Landscape Contractors of America that all they need to break through their barriers is "confidence and competence."

Booth, speaking to about 200 landscapers at ALCA's Executive Forum, urged them to "transform changes into challenges" by using these four keys:

- ▶ have an empowering belief system;
- ▶ put yourself in a peak state;
- ▶ use the right strategy; and
- ▶ be on a team that supports you.

Also speaking at the Forum was Will Phillips, a trainer with Faust Management Corp., San Diego, who led participants through the steps of team building.

ALCA's 1996 officers are: President David Minor, Minor's Landscape Services; President-Elect Judson Griggs, Lied's Landscape Design & Development; Vice-President Cynthia Peterson, CCLP, McCaren Designs; and Secretary, Steve Glover, CLP, L&L Landscape Services. □

PLCAA recognizes substance abuse

PLCAA offers "Working Partners," a video training program dealing with substance abuse in the workplace.

Developed by the U.S. Department of Labor, the program includes a video, a trainer's manual and a participant's manual. Different types of substances including marijuana, inhalants, alcohol, steroids, crack, cocaine, ice and hallucinogens are discussed. The video "America in Jeopardy" and interactive group sessions are key parts of the program.

"Working Partners" is \$50 for PLCAA members and \$75 for non-members. Contact PLCAA at (800) 458-3466.

Comparing Companies

"Lawn & Order, Inc."		"Superior Lawn Care, Inc."
franchise	..... type of company	individually owned
serious and quiet	..... owner's demeanor	flamboyant free-spender
commercial	..... target market	high-end residential
90% turf, 10% tree	..... type of accounts	50% turf, 50% tree/shrub
three managers	..... key employees	four or five technicians
aggressive telemarketing	..... sales ploys	commission system
loose routes	..... productivity	high dollars per stop
low	..... debt	high
45%	..... cancellation rate	20%
10.7% of revenues	..... cost of materials	15.7% of revenues
31% of revenues	..... payroll costs	18% of revenues
15.2%	..... owner's salary	28.2%
18%	..... bottom-line profit	7%

helped, too.

But Grate Funn's independent operation won on other points, the study showed. In the Direct Payroll category, he was a clear winner, for instance.

The upper quartile and typical companies averaged 31 percent while his, due mainly to the commission system, was just 18 percent.

Grate's productivity led significantly. Although he didn't say so, it's likely his trucks command a greater dollar amount per stop, and his routes are tighter.

All companies were relatively the same in production vehicles and equipment, although Grate topped out a tad on the high side due to his "company" BMW.

Grate's big salary shot him into space, in this category, 13 percent higher than Ken's more sober 15.2 percent. (Grate justified his pay by pointing out that his beautiful second wife's favorite book is "Dun & Bradstreet.")

Ken's operating profit matched those of other upper quartile companies, almost 18 percent. Grate's was about 7 percent, equivalent to the typical company.

On the balance sheet, Ken and the typical companies were similar in assets and liabilities, while Grate had enough debt to send the SBA running.

Both men said the study revealed areas that they needed to strengthen.

Ken vowed to improve his hiring process and start a technician training program. He's also experimenting with new ideas to inject excitement and enthusiasm into his workers.

Grate decided to cut his salary and pay himself what he would pay a manager, then bonus himself at the end of the year according to the company's performance. He's also implementing a plan to get his company out of debt.

Lewis Browning, the study's author, said that neither man was right or wrong, but both had differing personal styles that made their companies very different. □

—Dick Bare is owner and operator of Arbor-Nomics Turf Inc., Norcross, Ga. To order a copy of the study, contact PLCAA, 1000 Johnson Ferry Road, Suite C-135, Marietta, GA 30068-2112. Telephone: (800) 458-3466. Cost is \$150 for PLCAA members; \$395 non-members.



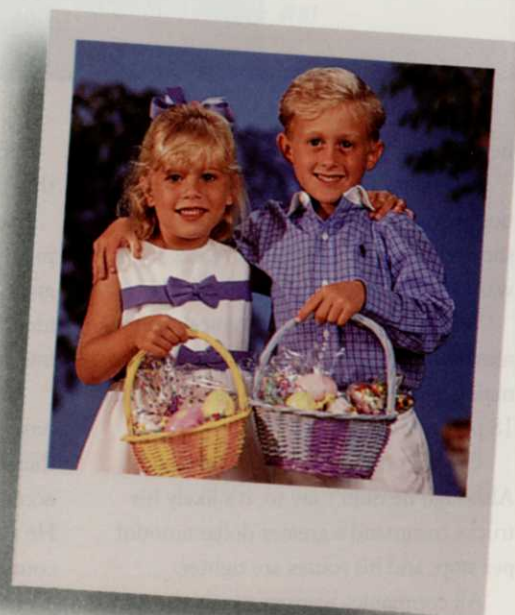
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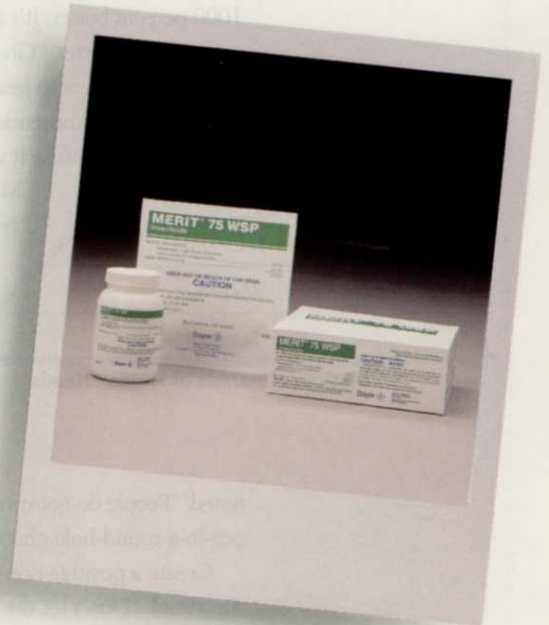
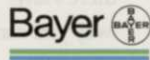
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“‘**P**ull’ is a way we drag people—sometimes kicking and screaming—into performance. What we need to create is that internal push—that idea that they can have an impact on the organization.”

That was the way Loree Olsen of Career Track started a mesmerizing presentation on motivation at the annual conference of the Associated Landscape Contractors of America last November.

She said that employers and supervisors “cannot do things the way we did 10 years ago. You’ve got to have non-monetary ways to motivate that are creative and exciting.”

Perched atop psychologist Albert Maslow’s “Triangle of Human Needs” is self-actualization.

Below that, in

order, are: esteem, belonging, security and—at the bottom—survival, the basest need.

Morale, she said, is not about doing one thing 1000 percent better. It’s about doing 1000 things 1 percent better. “Give your employees something new to learn, not just more to do,” she recommended. “Take the ordinary and infuse it with the extraordinary.”

Most of all, you can’t treat employees with a cookie-cutter approach. Each must be treated differently.

“I don’t know that there’s any way you can create a system,” she

noted. “People do not mesh well with that square-peg-in-a-round-hole philosophy.”

Create a positive non-critical environment, she suggested. “Don’t let the dominant-submissive wars take place. Synergy is increased by recognizing the value of the differences in people.

“Yet one of the most important motivational factors is the power of shared experience and the bonding and buy-in that comes with it,” Olsen said, “We

need to treat employees the way we want employees to treat customers: with respect and consideration. And we need to let employees know there’s someone behind them who wants them to succeed.”

Olsen said that everyone at your business should be having some fun at work. When there’s a breakdown of fun, a breakdown of enjoyment, she noted, there’s a breakdown of performance.

The 10 characteristics of an optimal experience, she said, are:

- 1) excitement: the job must be exciting;
- 2) involvement: the employee must feel involved with others or with the company’s mission;
- 3) action: the job must not be static;
- 4) fulfillment: the employee must get a sense of accomplishment from the task(s);
- 5) freedom: employees must feel like they’re on their own;
- 6) appropriateness: something for the employee to do that the employee is capable of doing;
- 7) meaningfulness: the employee must feel that, when the job is done, it’s going to mean something;
- 8) control: the employee must feel in control of his or her destiny;
- 9) challenge: the task must stretch the employee’s abilities; and
- 10) understanding: the supervisor must understand the employee’s point of view.

If you have an apathetic worker, Olsen suggests you tell him or her:

“Jim, I can see that you don’t like the job. What can I do to make that job better?” Because “it costs five times more to fire, rehire and retrain than to make good use of the staff you’ve got.

“Play to your employees’ strengths. Positive information generates positive action; negative information generates negative action.”

If other problems arise, Olsen continued, you must supply “instant corrective and non-judgmental feedback in the form of challenge, competition, choice and creative solutions.”

The key is not trying to stop a bad event from happening, she observed. It’s how quickly you can regain your “balance,” land on your feet, absorb the shock and walk away.

“Switch your focus from what doesn’t work to what works. Make the job an optimal experience—magic,” she said. “Your life is too darned short to do without the magic any longer.” **LM**

Motivation: a push, not a pull

by JERRY ROCHE / Editor-in-Chief





JAGUAR 3
TURF-TYPE TALL FESCUE

This Cat's Making Quite an Impression.

Nothing holds back the performance of new JAGUAR 3.
Not heat. Not shade. And certainly not brown patch nor fusarium patch.
It's the grow-anywhere tall fescue that beats all others.¹
Insist on JAGUAR 3. It makes a great impression.

¹ NTEP 1993 Results—Mean Scores,
JAGUAR 3 vs. all entries

- First in overall quality
- First in brown patch resistance
- First in summer density
- First in fusarium patch resistance



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Circle No. 139 on Reader Inquiry Card

Tall fescue: survival of the fittest

by JERRY ROCHE / Editor-in-Chief

If the turf you're maintaining just doesn't seem to be able to stand up to extremes in either the weather or other environmental stresses, turf-type tall fescue may be an alternative.

Whether the turf is high maintenance or low maintenance, tall fescue can work, according to Dr. A.J. Powell of the University of Kentucky.

"Tall fescue is sort of the IPM grass," Powell contends. "If you had no pesticides to use, I think you might choose tall fescue. It has the ability to survive many situations.

"We're seeing new tall fescues almost by the week, and they're looking better all the time. Turf breeders have really done a fine job [in the areas of] texture and color. Most of the newer types are not as yellow as their predecessors in late May and early June, and texture is only something you see up close, so many times it's less important."

Some drawbacks to tall fescue as your turf of choice:

1) Brown patch is a major problem, and it's increasing.

2) It doesn't do well in thatchy areas, because thatch pulls the moisture from the seed.

3) New sod has to be watered even more than Kentucky bluegrass.

4) It's difficult to get slit-seeded into ryegrass.

5) Other, very minor, problems: white grubs, armyworms, drought/heat thinning, seedling freeze-out, seed dormancy, allelopathy.

Powell has tested brown patch on tall fescue. "If you can bring your mowing height down and increase your frequency, I guarantee that you'll have fewer brown patch problems," he says.

"You're also going to have more of a problem when you have higher nitrogen rates.

But where we could irrigate it when it was under stress, there was less brown patch."

Powell notes that dwarf-type tall fescues and what are known as "double-dwarfs" grow less tall.

"There are several reasons I'm not completely sold on them, though," he observes. "First, they are generally even more susceptible to brown patch. They don't germinate as quickly, and they are slower to start in the spring and slower to establish." They also generally don't grow as long into the autumn, Powell says.

Academic description

According to the texts, the closer you grow tall fescue cultivars to the transition zone, the better off you will be. In cooler parts of the country, it is susceptible to low temperature injury, which causes it to gradually thin out.

Tall fescue is fairly heat-tolerant compared to most cool-season grasses, and its drought and wear tolerance is very good.

Generally speaking, tall fescues respond very nicely to occasional watering, though they do not demand irrigation.

In the early days of turf-type tall fescue development, they generally had very coarse leaves and lacked the color qualities of, say, bluegrass or ryegrass. That made early cultivars perfect for sports fields, playgrounds and roadsides.

However, the newer cultivars exhibit much better color, and many rival bluegrass and ryegrass in that respect. Leaves are also not quite as coarse and thick, mak-

1994 NATIONAL TALL FESCUE EVALUATIONS (NTEP)

ENTRIES, MEAN RATINGS, SPONSORS (LSD=0.1)

6.2 Jaguar 3 (Zajac)

6.1 Houndog V (International), Falcon II (Burlingham), Southern Choice (Burlingham), Gen-91 (Genesis), Crossfire II (Pickseed West), Coyote (Zajac)

6.0 Finelawn Petite (Finelawn Research), Pixie (Jacklin), MB-22-92 (Burlingham), Lancer (Lesco), Rebel Jr. (Lofts), Coronado (Pure Seed)

5.9 Lexus (Barenbrug), Empress (Zajac), Marksman (Burlingham), Apache II (Pure Seed), Toma-hawk (Turf-Seed), Grande (Seed Research), Debutante (Willamette), Micro DD (Turf Merchants), Pyramid (Olsen-Fennel), Duster (Pennington), Gazelle (Zajac), Starlet (Burlingham), Virtue (Pennington)

5.8 Titan 2 (Smith), Silverado (Turf-Seed), Montauk (Cascade), Palisades (Olsen-Fennel), Rebel 3D (Lofts), Duke (Cascade), Adobe (Scott's), Guardian (Roberts), Bonsai Plus (Turf Merchants), SR8200 (Seed Research), Trailblazer II (Lesco), Shortstop (Pickseed West), Vegas (Barenbrug), Eldorado (Turf-Seed), Cochise (Ampac), Alamo (Medalist), Safari (Turf-Seed), Leprechaun (Roberts), SR8300 (Seed Research), OFI-ATK (Olsen-Fennel)

5.7 Avanti (Davenport), Finelawn 88 (Finelawn Research), Austin (Barenbrug), Kittyhawk (Smith)

5.6 Bonsai (Turf Merchants, standard entry), Monarch (Turf-Seed), Olympic II (Turf-Seed), Aztec (Scott's), Astro 2000 (Green)

5.5 Phoenix (Barenbrug/Normarc), Bonanza (standard entry)

5.3 Arid (Jacklin, standard entry), Twilight (Turf Merchants)

5.2 Falcon (Burlingham, standard entry)

5.1 Anthem (Green)

4.4 KY-31 without endophyte (standard entry)

4.3 KY-31 with endophyte (standard entry)

ing newer cultivars a very good choice for home lawns in both cool-season areas and, especially, in the Mid-Atlantic states and other parts of the transition zone. □

TOP CULTIVARS AT SELECTED EVALUATION SITES

ALABAMA

Kittyhawk	5.7
Gazelle	5.6
Cochise	5.6
Pixie	5.5
Shortstop	5.5
Leprechaun	5.5
Shenandoah	5.5
Bonanza	5.5

ARKANSAS

Coyote	8.5
Shortstop	8.1
Lancer	7.9
Coronado	7.9
Lexus	7.9
Gazelle	7.7
Crossfire	7.6
Empress	7.5
Leprechaun	7.5

ARIZONA

MB-22-92	6.8
Jaguar 3	6.6
Gen-91	6.4
Pyramid	6.4
Crossfire II	6.3
Grande	6.3
Coronado	6.1
Empress	6.1
Tomahawk	6.1
Monarch	6.1

BRITISH COLUMBIA

Empress	6.1
Adobe	6.1
Bonsai	6.1
Lexus	6.0
Pyramid	6.0

CALIFORNIA

Jaguar 3	7.4
So. Choice	7.4
Lancer	7.4
Micro DD	7.4
Pyramid	7.4
Gazelle	7.4

DIS. COLUMBIA

Arid	4.4
Jaguar 3	4.1
Anthem	3.9
Titan 23	3.7
Guardian	3.5
Alamo	3.5
SR8300	3.5
OFI-ATK	3.5
Phoenix	3.5

GEORGIA

Silverado	5.1
MB-22-92	5.0

Marksman	5.0	SR8300	6.6
Adobe	5.0	Shenandoah	6.6
Twilight	5.0		

MICHIGAN

Jaguar 3	7.2
Finelawn Petite	7.2
Phoenix	7.1
Shenandoah	7.0
Gen-91	6.9
Titan 2	6.9
Trailblazer II	6.9
Safari	6.9

MISSOURI

Rebel Jr.	7.7
Lexus	7.6
Jaguar 3	7.5
Gen-91	7.5
Apache II	7.5
Eldorado	7.5
Leprechaun	7.5
SR8300	7.5
Phoenix	7.5

NEBRASKA

MB-22-92	6.8
Falcon II	6.7
S. Choice	6.7
Lexus	6.7
Bonsai	6.7
Finelawn Pet.	6.6
Lancer	6.6
Houndog V	6.5
Marksman	6.5
Grande	6.5

NEVADA

Montauk	6.6
Lancer	6.4
So. Choice	6.3
Safari	6.3
Bonanza II	6.3
Falcon II	6.2
Austin	6.2
Gen-91	6.1
Alamo	6.1
Kittyhawk	6.1
Bonanza	6.1

NEW JERSEY

Crossfire II	6.2
Houndog V	6.1
Jaguar 3	5.9
Coronado	5.7
Falcon II	5.5
So. Choice	5.5
Coyote	5.5
Pixie	5.5
Gen-91	5.4
Lexus	5.2
Marksman	5.2

NEW YORK

Astro 2000	5.4
Marksman	5.1
Olympic II	5.1
Titan II	4.8
Vegas	4.9
Austin	4.8
Phoenix	4.8
Houndog V	4.6
Pixie	4.6
MB-22-92	4.6
Bonanza	4.6

PENNSYLVANIA

Houndog V	7.8
MB-22-92	7.8
Marksman	7.8
Jaguar 3	7.6
S. Choice	7.6
Grande	7.6
Montauk	7.6

RHODE ISLAND

So. Choice	6.3
Aztec	6.2
Jaguar 3	6.1
Coyote	6.1
Alamo	6.1
Finelawn 88	6.1

SO. DAKOTA

Coyote	6.5
Jaguar 3	6.4
MB-22-92	6.4
Titan 2	6.4
Pyramid	6.2
Coronado	6.1
Tomahawk	6.1
Silverado	6.1
Eldorado	6.1
Leprechaun	6.1
Finelawn 88	6.1
Arid	6.1

TEXAS

Marksman	7.2
Phoenix	7.2
MB-22-92	7.1
Cochise	7.1
SR8300	7.1
OFI-ATK	7.1

USDA-MD.

(high maint.)	
Houndog V	7.8
Falcon II	7.8
Crossfire II	7.8
Jaguar 3	7.7
Pixie	7.6
So. Choice	7.5
Coyote	7.5
Gen-91	7.4
Lexus	7.4
Tomahawk	7.4

USDA-MD.

(low maint.)	
Gen-91	7.1
Finelawn Petite	7.0
So. Choice	6.8
Lexus	6.7
Houndog V	6.6
Coyote	6.6

VIRGINIA

Crossfire II	5.8
Duster	5.8
Houndog V	5.7
Falcon II	5.7
Apache II	5.7
Gazelle	5.7
Gen-91	5.6
Coronado	5.6
Jaguar 3	5.5
So. Choice	5.5
Silverado	5.5

WASHINGTON

Finelawn Petite	6.0
Lancer	6.0
Gazelle	6.0
So. Choice	5.9
Gen-91	5.9
Empress	5.9

WISCONSIN

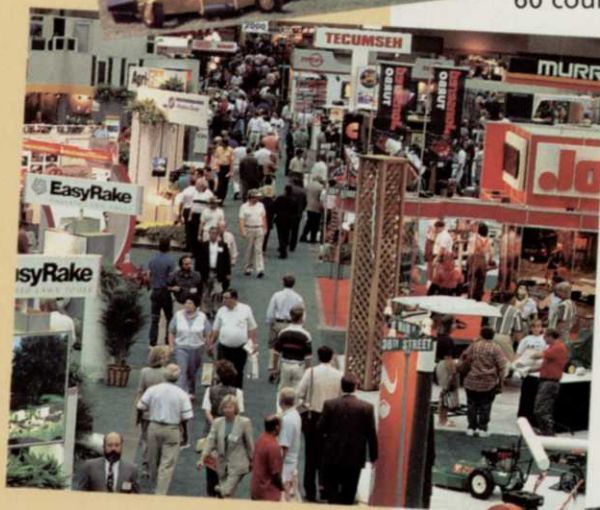
Lexus	8.1
Gazelle	8.0
Coyote	7.9
Finelawn Pet.	7.8
Coronado	7.8
Marksman	7.8
Tomahawk	7.8

Evaluation sites listed

above: Auburn University, Ala.; Fayetteville, Ark. (full sun); Tucson, Ariz.; Vancouver, B.C.; Santa Clara, Calif; District of Columbia; Griffin, Ga. (high pH); Urbana, Ill.; West Lafayette, Ind.; Wichita, Kans.; Lexington, Ky.; USDA, Beltsville, Md.; Deerfield, Mass.; East Lansing, Mich.; Mississippi State, Miss.; Columbia, Mo.; Lincoln, Neb. (high maintenance); Reno, Nev.; North Brunswick, N.J.; Ithaca, N.Y.; University Park, Pa. (medium maintenance); Kingston, R.I.; Brookings, S.D.; Dallas, Tex.; Blacksburg, Va.; Pullman, Wash.; Madison, Wisc.

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Joystick control a joy to operate

The new Snapper Z-Rider mowers have fingertip maneuverability due to a single-lever joystick control that enables point-and-go steering.

A pivoting front axle and 20-inch rear tires provide maximum traction and stability on uneven terrain while 13-inch swivel caster wheels allow maximum maneuverability, according to Snapper. Both the 48- and 60-inch models are also equipped with flip-up

seats and floor pans facilitating maximum maintenance accessibility.

The 48-inch Z-Rider has an 18 hp OHV Kohler Command engine; the 60-inch model a 22 hp engine.

For more information, phone (404) 957-9141 or fax (404) 957-7981 and tell them you saw it in **LANDSCAPE MANAGEMENT** magazine.

Circle No. 300

Skid-steer loader has six-foot turning radius

The Bobcat 751 skid-steer loader is the newest member of the mid-size Bobcat 700 C-

Series family.

Like its popular counterpart—the Bobcat 753—the



751 offers a compact footprint for a mid-size loader with a turning radius of less than six feet. The 751 has a 1,200-lb. operating capacity, using a 116-cu. in. Peugeot XUD9 diesel engine, and many standard Bobcat C-Series features, including a dependable transmission with heavy duty drive chains that never need adjustments and the exclusive Bobcat Interlock Control System.

For more information, phone (701) 241-8700 and tell them you saw it in **LANDSCAPE MANAGEMENT** magazine.

Circle No. 302



New stump-cutter is user-friendly

The most recent addition to Vermeer's line of rugged stump cutters is the new 252 SC. It has an uncluttered control panel to prevent distractions while operating hydraulic controls to precisely feather the cutter's sweep for optimum results.

It also has Vermeer's exclusive Auto Sweep system, designed to make stump cutting easier by maximizing available power, increasing efficiency and reducing machine stress.

The 252 SC also comes with a detachable front-hitch assembly, allowing for crating and front-wheel options. Measuring 35 inches in width, it is narrow enough to fit through most gates.

For more information, phone (800) 829-0051 and tell them you saw it in **LANDSCAPE MANAGEMENT** magazine.

Circle No. 301

New perennial rye has great green color

The Scotts Company has released Divine perennial ryegrass, an exceptionally dark green cultivar.

Divine also provides reduced clipping yields and a high level of endophyte for good insect resistance. It can be used alone, in mixtures, or overseedings for all areas in which perennial ryegrass is adapted.

For more information, phone (800) 543-0006 and tell them you saw it in **LANDSCAPE MANAGEMENT** magazine.

Circle No. 303

>PRODUCT REVIEW



Standard Golf has designed a new "Environmentally Sensitive Area" sign, clearly communicating to golfers that an area is off-limits. The sign refers players to the local rule.

Enforcing rules on sensitive turfgrass areas

The 12-by-12-inch white aluminum sign is lettered in green. It's designed for use with Standard Golf's 40-inch signpost. Green-capped hazard markers (also available from Standard Golf) should be used to mark the perimeter of an environmentally sensitive area.

For more information, phone (319) 266-2638 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 304



Dethatcher comes in 46-, 60-inch widths to better aerate soil

Tine-Rake Dethatcher attachments are now available for all Grasshopper zero-radius out-front mowers. Both 46- and 60-inch models feature spring steel, double-looped tines that are angled forward to increase tension as the rake advances, removing large amounts of thatch and aerating the soil to improve root development.

A stabilizer tube keeps tines aligned for unified raking action. Because the Dethatcher is front-mounted, it allows you to vacuum debris at the same time using any Grasshopper Quik-D-Tatch Vac Grasscatching system.

For more information, phone (316) 345-8621 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 305



Choice of engines for more efficient mowing production

A choice of three more powerful engines gives Jacobsen's new generation of Turfcut out-front rotary mowers a wide range of power and traction drive options.

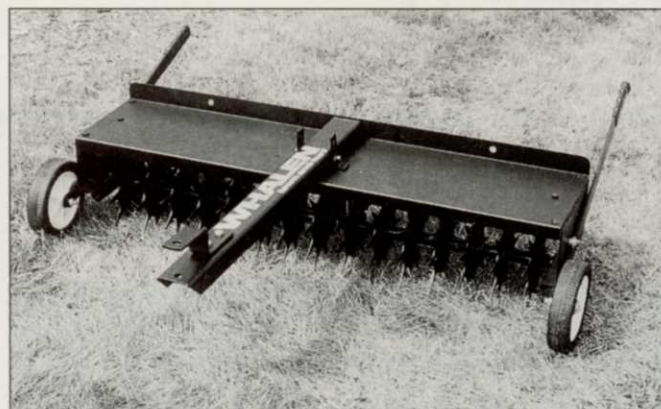
Turfcut models now feature a Kubota 23 or 28 hp diesel engine, a 45 hp Ford gas engine, and two- or four-wheel drive.

Operators can now mow at up to 6 mph in low range. And transport speeds in high range up to 10 mph get the Turfcut between jobs faster.

The Turfcuts also feature contoured seats and easy-to-reach controls.

For more information, phone (414) 637-6711 or fax (414) 637-4465 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 306



Spike aerator is 'towable'

Whalen Lawn and Turf's spike lawn aerator can be towed behind lawn tractors, all-terrain vehicles and other types of utility vehicles.

It hooks up with a standard pin-type hitch. Other features: adjustable depths, all-steel frame construction, seven-inch transport tires, nine-inch steel, spike wheels making a path 36 in. wide.

For more information, phone (800) 447-5777 or fax (309) 776-3222 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 307

New plastic shield protects applicators

The Applicators Friend shield limits exposure to granular turf products during spreader operations.

The shield attaches to Lesco, Agri-Fab and Scotts spreaders in minutes with minimal tools and will not affect spreader operations or spread patterns whatsoever. It is made of high-tech non-corrosive material and is mounted with stainless steel hardware and non-corrosive frame hangers.

For more information, phone (800)



595-2774 or fax (607) 729-3435 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 308



Treat dry, wet spots with no burn concern

Aqueduct Soil Surfactant by Aquatrols gives golf course superintendents an effective tool for treating localized dry spots, wet spots and other water-related problems with no concern of burn.

Through its dual mode of action—enhancing water penetration and reducing hydrophobicity in the soil profile—Aqueduct promotes turf recovery.

For more information, phone (800) 257-7797 or fax (609) 751-3859 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 309

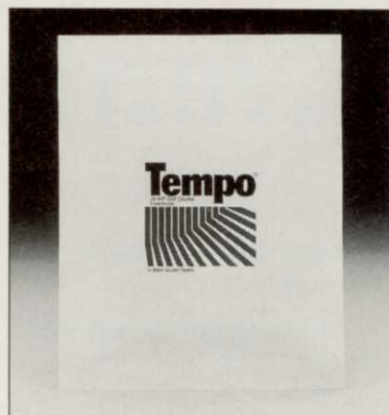
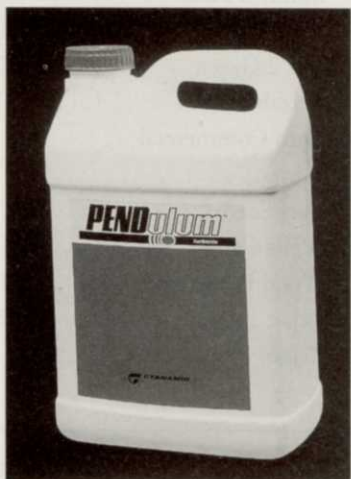
Pre-emergent now registered in Calif.

Pendulum 3.3 EC turf herbicide is now registered for use in California, the last state to register it.

Pendulum is safe on a wide variety of cool- and warm-season turfgrasses and many trees, shrubs, groundcovers and perennials. It controls most annual grasses and many broadleaf weeds, including crabgrass, goosegrass, foxtail, *Poa annua*, henbit, chickweed, oxalis and spurge. The new formulation is available in 2.5-gal. jugs.

For more information, phone (800) 545-9525 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 310



Insecticide registered for golf course use

Tempo insecticide, an advanced generation pyrethroid insecticide that controls a broad spectrum of turf and ornamental pests, is now registered for use on golf courses, according to Bayer Corp.

It can be used as a spray to control surface-feeding insects such as armyworms, cutworms, ants, mole crickets, ticks and fleas, among others. Tempo has low mammalian toxicity, low use rates, fast knock-down and long residual, according to Bayer. It is, however, a Restricted-Use Pesticide.

For more information, phone (816) 242-2000 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 311

Dormant oil controls tree and shrub pests

Riverside Dormant Oil 415 for mite and insect pest control in shade trees is available through Terra International. Insects controlled: aphids, spruce gall aphids (adelgids), certain caterpillars, gall mites, lace bugs, leaf beetle larvae, mealybugs, spider mites; and immature plant bugs, psyllids, sawfly larvae and whiteflies.

Dormant Oil 415 can be used as a carrier for *B.t.* when applied through a mist blower or cold fog machine.

For more information, phone (712) 277-1340 or fax (712) 233-3648 and tell them you saw it in *LANDSCAPE MANAGEMENT* magazine.

Circle No. 312

Events

MARCH

15: Shigo on Trees, Nashville, Tenn. Phone: (402) 474-5655.

15-16: Tree Health Management, Climbing and Rigging, Portland, Ore. Phone: Larry Campbell, (800) 635-4294.

20: Responsible Industry for a Sound Environment (RISE) "Multiple Chemical Sensitivities" seminar, Atlanta. Phone: (202) 872-3860.

20: Aerial Rescue Training, Testing & Timing, Southfield (Mich.) Civic Center. Phone: Ann Ashby, (517) 482-5530.

21: Building with Trees seminar, Greensboro, N.C. Phone: (402) 474-5655.

21-24: Associated Landscape Contractors of America's Student Career Days, San Luis Obispo Campus, Calif. Phone: (703) 620-6365 or (800) 395-2522.

22-23: International Society of Arboriculture New Jersey Chapter, Frelinghuyser Arboretum, Morristown, N.Y. Phone: David C. Shaw, (908) 431-7903.

23-27: International Society of Arboriculture Southern Chapter, Callaway Garden Resort, Pine Mountain, Ga. Phone: Rae Ann Ham, (803) 654-8265.

26-April 1: American Society of Golf Course Architects Annual Meeting, Pinehurst, N.C. Phone: (312) 372-7090.

28-29: Dr. Alex L. Shigo Lecture, location pending. Phone: John Kirkland, (503) 254-0482.

29-30: Florida Certified Landscape Contractor Exam, Edgewood Children's Ranch. Phone: Lynne Rue, (407) 345-8147 or (800) 375-3642.

APRIL

2, 3, 4, 10, 11: Alabama Irrigation Association Spring Short Course, Mobile, Dothan, Montgomery, Birmingham and Huntsville. Phone: Rebecca Nixon, (334) 826-9797.

8-10: The Show at Augusta Interactive Golf Expo, August, Ga. Phone: (617) 248-0021.

9, 10, 11: Sports Turf & Grounds Maintenance Seminar, Elyria, Massillon and Vandalia, Ohio. Phone: (407) 351-9381.

13-17: American Planning Association National Conference, Walt Disney World Dolphin, Orlando, Fla. Phone: (312) 431-9100.

22: Envirotron Golf Classic, World Woods Golf Resort, Homosassa Springs, Fla. Phone: Florida Turfgrass Association, (800) 882-6721.

25-26: Sports Turf Management for Professionals course, University of California, Davis, Calif. Phone: (800) 752-0881 or (916) 757-8777.

27: Landscape and Lawn Seminar, Sea World, San Diego. Phone: Southern California Chapter, Sports Turf Managers Assn., (619) 432-2421.

27-May 1: New York State Recreation and Park Society annual conference/exhibition, Hotel Syracuse and ONCenter Exhibition Hall. Phone: Rob Marchiony, (518) 584-0321. **LM**

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134	Turf Seed	31
135	Wells Cargo	14L
136	Wood Equip Co	15L
138	Zajac	15G
139	Zajac	53

This index is provided as an additional service. The publisher does not assume any liability for errors or omissions.

LANDSCAPE management

Every month the Market Showcase offers the readers of Landscape Management a complete and up-to-date section of the products and services you're looking for. Check it out every month, or you might miss out.

FOR ADVERTISING INFORMATION AND AD PLACEMENT, CONTACT:

Dan Hoke, 216-891-2762
1-800-225-4569 (ext. 762)
Fax 216-826-2865

For all ads under \$250, payment must be received by the classified closing date. VISA, MASTERCARD, & AMERICAN EXPRESS accepted. Send to: Advanstar Marketing Services, 7500 Old Oak Blvd., Cleveland, OH 44130.

Send blind box replies to: Landscape Management, 131 W. First St., Duluth, MN 55802 (Include box number in address.)

FOR SALE

COMMERCIAL INSURANCE FOR LAWN CARE FIRMS "GREEN INDUSTRY SPECIALISTS"

M.F.P. Insurance Agency is dedicated to providing comprehensive insurance programs to the Green Industry at competitive prices. We back up this dedication with a staff of professionals who understand every facet of your business, from marketing to customer service. We know how to properly insure your company whether you're a sole proprietor or a multi-state operation.

Just as your customers look to you for lawn care advice, people come to us for insurance advice because they do not want to become insurance experts themselves. If you want good advice, the right coverage, and competitive rates, please contact:

Richard P. Bersnak, President

Jill A. Leonard, V.P.

1-800-886-2398
FAX: 614-221-2203

M.F.P. Insurance Agency, Inc.
50 West Broad Street, Suite 3200
Columbus, OH 43215-5917

Circle No. 301 on Reader Inquiry Card

FOR SALE

Landscape maint. co. servicing S.E. FL for over 20 yrs. \$800,000 + gross extensive inventory, owner relocating, serious inquiries only:

Landscape, P.O. Box 1853,
Pompano Beach, FL 33061

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1987 3/4 ton GMC van with 300 gal. tank plus 30 gal. saddle tank. Has a fiberglass bulkhead & floor in the spray compartment. Runs great. Needs body work. Asking \$7,900.

Call 708/932-8839 • Ask for Jerry

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PEST CONTROL COMPANIES FOR SALE

NE Georgia.....	Gross: 185,000.00
Florida.....	SOLD Gross: 4,000,000.00 Plus
Broward County, FL.....	Gross: 110,000.00
Central Florida.....	Gross: 1,200,000.00
Charlotte County, FL.....	Gross: 500,000.00
Clay County, FL.....	Gross: 170,000.00
Dade County, FL.....	SOLD Gross: 2,000,000.00
Manatee County, FL.....	SOLD Gross: 180,000.00
Martin County, FL.....	SOLD Gross: 220,000.00
Pinellas County, FL.....	SOLD Gross: 100,000.00

Are you considering selling? Do you know what your business should sell for? Where do you find "qualified" buyers? We will work confidentially, but very hard to find the best deal for you.

If your Lawn Spray Company grosses \$30,000 to \$30,000,000.00, we can sell it for you!

All Calls Are Confidential.

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Benicia, CA 94510

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Time is money—The "BARREL CADDY" saves the average landscaper approximately 1 hr/day. No more physically transporting grass catchers and heavy dumping barrels to and from the truck. Mount the BARREL CADDY to any commercial walk behind mower and let it transport excess grass clippings.

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- Heavy Duty Plastic Receptable Bin
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- Easy rubber latch removal
- Kits available for front exhaust mowers

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by Fredric R. Haskett

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Find out how to prepare your company for the scrutiny of government regulators. Learn how your operation can comply with new regulations. Understand the legal implications of compliance versus noncompliance. Discover the difference between the cost of recycling finished product residues and the cost of disposal.

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Train at home; master up-to-date turfgrass management practices and procedures. Covers 14 topics for all regions of U.S. Certification by The University of Georgia and PLCAA.



Contact Karen Bishop,
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Georgia Center, 191,
Athens, GA 30602-3603, for a brochure.

Circle No. 302 on Reader Inquiry Card

Learn LANDSCAPING

TRAIN AT HOME for an exciting hobby or profitable career. Start your own spare or full time contracting business, work in the garden/nursery field or landscape your own property - we show you how. Diploma awarded. **FREE BROCHURE** describes opportunities. No salesmen. 1047

Write or call today! 1-800-328-9221

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216-826-2865

LANDSCAPE management

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- Faster germination
- Lower seeding costs
- 1 man operation
- No messy straw
- Units start @ \$1295

FOR A FREE HYDRO SEEDING INFO PACK CALL

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800-822-3437

Reach over 21,000 key market decision makers in the new

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Call Dan Hoke at 800-225-4569 ext. 762 or reach him by fax 216-826-2865.

LANDSCAPE
management

CLASSIFIEDS

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BOX NUMBER REPLIES: Mail box number replies to: LANDSCAPE MANAGEMENT, Classified Ad Department, 131 W. 1st St., Duluth, MN 55802-2065. Please include box number in address.

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OUR GROUP IS HARD WORKING, TALENTED, AND UNDERSTANDS QUALITY AND CUSTOMER SERVICE.

IF YOU SHARE OUR VALUES, CONSIDER BEING A PART OF OUR FUTURE.

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Attn: Personnel Dept.



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FLORAPERSONNEL, INC. In our second decade of performing confidential key employee searches for the landscape/horticulture industry and allied trades worldwide. Retained basis only. Candidate contact welcome, confidential, and always free. 2180 W. State Rd. 434, Suite 6152, Longwood, FL 32779-5013. PHONE (407)682-5151. FAX 682-2318. 12/96

Fastest Growing Company in Southern Florida seeks Management and Supervisory Personnel for Pest Control, Lawn, and Termite Control. Excellent growth potential. Full benefits package. All replies strictly confidential. Send resume to: P.O. Box 7011, West Palm Beach, FL 33405-7011. 12/96

LANDSCAPE FOREMAN opportunity with well-established, full-service Florida firm. Seeking experienced, self-motivated individual with strong interpersonal, communication and technical skills. Enjoy South Florida's tropical lifestyle while working in an excellent environment with strong growth potential and competitive salary and benefits package. Minimum 3-5 yrs experience in lawn maintenance supervision. Send resume to **Stiles Landscape Service Co., 1080 SW 12th Avenue, Pompano Beach, FL 33069** or fax to (954)783-1980. Equal Opportunity Employer. 3/96

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Leading, well established, full service, landscape company located in Atlanta, GA has a position for an experienced Project/Installation Mgr. to coordinate and manage high-end residential and commercial landscape installation projects. Position is responsible for managing project installations from start to finish; scheduling; client contact; and employee management. Must be a professional with good communication skills. Landscape Architect/design background a plus. BS in Landscape Management/Design or related field required. Competitive salary, comprehensive benefits package, bonus program, etc.

Send Resume to: Project Manager; 4497 Windsor Oaks Drive; Marietta, GA 30066.

Landscape Production/ Division Manager

Well-established, full-service company seeks ambitious, quality oriented person for scheduling, managing men and equipment, purchasing and maintaining quality of landscape maintenance division. Excellent working conditions, wages, benefit package. The salary ranges for these positions are based on experience:

PRODUCTION MANAGER \$27,000 to \$33,000
DIVISION MANAGER \$33,000 to \$67,000

Mid-western candidates preferred. For confidential consideration, send resume with salary history to Panoramic Landscape Management, Inc., Human Resources, 1470 Industrial Drive, Itasca, IL 60143, (708) 285-0300.

FLORICULTURE MANAGER

Come join one of the leading award winning landscape companies in North Carolina. We need a floriculture manager with a minimum of 5+ years experience. This exciting position located in Raleigh and the Research Triangle Area, is responsible for all floriculture in the commercial grounds management division of an established 20 year old firm. The applicants must have good computer skills, production/management experience, sales ability, and a college degree in floriculture or related fields. We offer competitive salary and excellent benefits.

Send resume to:

Bland Landscaping Co., Inc., P.O. Box 727, Apex, NC 270502 or fax to 919-387-0690.

Atlantic Plantscapes Opportunities: We are currently seeking key people to work interior and/or exterior. We offer competitive salary, excellent benefits and unlimited opportunities in our: Richmond, VA; Hampton Road, Virginia Beach, VA; and Research Triangle, Raleigh, NC offices. Please call, fax or mail us a resume. Atlantic Plantscapes, 1400B Nowell Rd., Raleigh, NC 26717. Phone 919-233-2930. Fax 919-233-2941. 5/96

Harder Tree and Landscape Service, a 74 year old full service tree and landscape company is seeking qualified individuals for the following positions:

- ☐ **Tree care sales**, must have 5 yrs. experience in residential tree sales. Knowledge of integrated pest management a plus.
- ☐ **Landscape Architect/designer**, must possess strong organizational and communication skills. Landscape architecture or horticultural degree desired.
- ☐ **Landscape maintenance manager/supervisor**, Minimum 5 yrs. experience in turf management, strong supervisory skills needed. Competitive salary and benefits based on experience.

Send or fax resume to:

HARDER TREE AND LANDSCAPE SERVICE
63 Jerusalem Av., Hempstead, NY 11550
Fax: 516-481-8846 EOE

Grounds Maintenance and Enhancement Supervisors & Managers

Become a part of one of Washington's fastest growing team of landscape professionals. Come and work for a company that recognizes quality as a daily occurrence and knows that customer satisfaction is a successful driving force.

Positions are full-time with exceptional compensation, benefits, and advancement opportunities. Mail or fax your résumé today to: **Tom Davis**, Bozzuto Landscaping Company, 15127 Marlboro Pike, Upper Marlboro, MD 20774, Fax No.: 301-627-7011.

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Lucky Lawn Service, Inc. is seeking an individual who is self-motivated, dependable, hardworking and is serious about making a career in lawn care. This person must be able to communicate with customers, sell our program, do paperwork and be safety conscious. A college degree and/or turfgrass knowledge would be helpful but is not necessary. We offer competitive wages and benefits. Call or send resume to:

Resume, P.O. Box 1153, Enterprise, AL 36331,
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LANDSCAPE MANAGEMENT CONSULTING A growing firm requires experienced leadership and management, even though current size may prohibit the cost of hiring a full time senior-level manager. Provide your company with a resource for needed improvements in the areas of training, budgeting, field performance, estimating, and personnel morale and motivation. Utilizing our experience reduces costs substantially, and enhances profitability. T. D. Morland/HBMC (608) 832-6401 3/96

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SPYDERS- New/Used/Rebuilt. Full line of replacement parts and update kits. Kubota, Ruggerini, and Kohler engines & parts. Nichols-Fairfield torque hubs. We repair and rebuild Spyder hydraulic pumps and motors. **FAST SERVICE.** Call or write: Mobile Lift Parts Inc., 5402 Edgewood, Crystal Lake, IL 60012. (800)397-7509, FAX (815)455-7366. 12/96

FOR SALE

FERTILIZER UNIT-Need to sell ASAP. Less than 100 hrs. on unit. Honda 5.5 engine, 300 ft. Synflex hose w/Chemlawn gun, electric hose reel, jet agitation, two hundred gallon tank. Asking \$2,850.00. (Chicago Area) 219-322-5296 4/96

BUCKET TRUCK: Hi Ranger 65', 57', 50'. Sky-workers 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. 800-597-8283. 12/96

Free Catalog 150+ Pages of Mower Parts. Engines, Blades, Tires and Tons of other Turf Supplies! Call Toll Free 24hrs 1-800-428-8004. Our 11th Year! 3/96

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LEASE any type equipment for your business. Call AmeriNet Financial (216)543-3800. 3/96

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For Sale or Lease: Nursery Greenhouse, Landscaping - Central Wisconsin, Est. 1983 - High potential. Owner will help finance if nec. **Phone** 715-823-6540 **Fax** 715-823-6191. 4/96

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May 1996	4/8
June 1996	5/8
July 1996	6/6
August 1996	7/8
September 1996	8/8
October 1996	9/6
November 1996	10/8
December 1996	11/6

(Please call Sales Rep to confirm dates.)

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For more information call: 1-800-225-4569 or 216-891-2762, Fax: 216-826-2865.

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LANDSCAPE
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MARCH 1996

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TITLE _____
FIRM _____
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PHONE (____) _____ FAX (____) _____

I would like to receive (continue receiving)

LANDSCAPE MANAGEMENT each month: Yes no

Signature: _____ Date: _____

1. MY PRIMARY BUSINESS AT THIS LOCATION IS: (check only ONE in either A, B or C)

A. LANDSCAPING/GROUND CARE AT ONE OF THE FOLLOWING TYPES OF FACILITIES:

- | | |
|---|--|
| 01 <input type="checkbox"/> 05 Golf Courses | 08 <input type="checkbox"/> 40 Private/Public Estates & Museums |
| 02 <input type="checkbox"/> 10 Sport Complexes | 09 <input type="checkbox"/> 45 Condominiums/Apartments/Housing Developments/Hotels/Resorts |
| 03 <input type="checkbox"/> 15 Parks | 10 <input type="checkbox"/> 50 Cemeteries/Memorial Gardens |
| 04 <input type="checkbox"/> 20 Rights-Of-Way, Maintenance for
Highways Railroads & Utilities | 11 <input type="checkbox"/> 55 Hospital/Health Care Institutions |
| 05 <input type="checkbox"/> 25 Schools, Colleges & Universities | 12 <input type="checkbox"/> 60 Military Installations & Prisons |
| 06 <input type="checkbox"/> 30 Industrial & Office Parks/Plants | 13 <input type="checkbox"/> 65 Airports |
| 07 <input type="checkbox"/> 35 Shopping Centers, Plazas & Malls | 14 <input type="checkbox"/> 70 Municipal Government/Municipal Facilities |
| | 15 <input type="checkbox"/> Other (please specify) _____ |

B. CONTRACTORS/SERVICE COMPANIES/CONSULTANTS:

- | | |
|--|---|
| 16 <input type="checkbox"/> 105 Landscape Contractors (Installation & Maintenance) | 20 <input type="checkbox"/> 125 Landscape Architects |
| 17 <input type="checkbox"/> 110 Lawn Care Service Companies | 21 <input type="checkbox"/> 130 Land Reclamation & Erosion Control |
| 18 <input type="checkbox"/> 112 Custom Chemical Applicators (Ground & Air) | 22 <input type="checkbox"/> 135 Extension Agents/Consultants for Horticulture |
| 19 <input type="checkbox"/> 120 Tree Service Companies/Arborists | 23 <input type="checkbox"/> 140 Irrigation Contractors |
| | 24 <input type="checkbox"/> Other Contractor or Service _____ |

C. SUPPLIERS:

- 25 210 Sod Growers, Turf Seed Growers & Nurseries
26 215 Dealers, Distributors, Formulators & Brokers
27 220 Manufacturers

2. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR TITLE? (check ONE only)

- 28 10 EXECUTIVE/ADMINISTRATOR: President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
29 20 MANAGER/SUPERINTENDENT: Arborist, Architect, Landscape/Ground Manager, Superintendent, Foreman, Supervisor
30 30 GOVERNMENT OFFICIAL: Government Commissioner, Agent, Other Government Official
31 40 SPECIALIST: Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
32 50 OTHER TITLED AND NON-TITLED PERSONNEL: (please specify) _____

3. SERVICES PERFORMED: (check ALL that apply)

- | | |
|--|---|
| 33 <input type="checkbox"/> A Mowing | 41 <input type="checkbox"/> I Landscape/Golf Design |
| 34 <input type="checkbox"/> B Turf Insect Control | 42 <input type="checkbox"/> J Turf Weed Control |
| 35 <input type="checkbox"/> C Tree Care | 43 <input type="checkbox"/> K Paving, Deck & Patio Installation |
| 36 <input type="checkbox"/> D Turf Aeration | 44 <input type="checkbox"/> L Pond/Lake Care |
| 37 <input type="checkbox"/> E Irrigation Services | 45 <input type="checkbox"/> M Landscape Installation |
| 38 <input type="checkbox"/> F Turf Fertilization | 46 <input type="checkbox"/> N Snow Removal |
| 39 <input type="checkbox"/> G Turf Disease Control | 47 <input type="checkbox"/> O Other (please specify) |
| 40 <input type="checkbox"/> H Ornamental Care | |

4. WHAT IS YOUR ANNUAL BUDGET FOR EQUIPMENT, CHEMICALS, SUPPLIES? (please check one)

- | | |
|---|---|
| 48 <input type="checkbox"/> 1 Less than \$50,000 | 51 <input type="checkbox"/> 4 \$250,001-500,000 |
| 49 <input type="checkbox"/> 2 \$50,000-\$100,000 | 52 <input type="checkbox"/> 5 More than \$500,000 |
| 50 <input type="checkbox"/> 3 \$100,001-\$250,000 | |

101	119	137	155	173	191	209	227	245	263	281	299
102	120	138	156	174	192	210	228	246	264	282	300
103	121	139	157	175	193	211	229	247	265	283	301
104	122	140	158	176	194	212	230	248	266	284	302
105	123	141	159	177	195	213	231	249	267	285	303
106	124	142	160	178	196	214	232	250	268	286	304
107	125	143	161	179	197	215	233	251	269	287	305
108	126	144	162	180	198	216	234	252	270	288	306
109	127	145	163	181	199	217	235	253	271	289	307
110	128	146	164	182	200	218	236	254	272	290	308
111	129	147	165	183	201	219	237	255	273	291	309
112	130	148	166	184	202	220	238	256	274	292	310
113	131	149	167	185	203	221	239	257	275	293	311
114	132	150	168	186	204	222	240	258	276	294	312
115	133	151	169	187	205	223	241	259	277	295	313
116	134	152	170	188	206	224	242	260	278	296	314
117	135	153	171	189	207	225	243	261	279	297	315
118	136	154	172	190	208	226	244	262	280	298	316



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MARCH 1996

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HAVE A SALES REP CALL ME 18 (A)

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LANDSCAPE MANAGEMENT each month: Yes no

Signature: _____ Date: _____

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|--|--|
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| | 15 <input type="checkbox"/> Other (please specify) _____ |

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|--|---|
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| 19 <input type="checkbox"/> 120 Tree Service Companies/Arborists | 23 <input type="checkbox"/> 140 Irrigation Contractors |
| | 24 <input type="checkbox"/> Other Contractor or Service _____ |

C. SUPPLIERS:

- 25 210 Sod Growers, Turf Seed Growers & Nurseries
26 215 Dealers, Distributors, Formulators & Brokers
27 220 Manufacturers

2. WHICH OF THE FOLLOWING BEST DESCRIBES YOUR TITLE? (check ONE only)

- 28 10 EXECUTIVE/ADMINISTRATOR: President, Owner, Partner, Director, General Manager, Chairman of the Board, Purchasing Agent, Director of Physical Plant
29 20 MANAGER/SUPERINTENDENT: Arborist, Architect, Landscape/Ground Manager, Superintendent, Foreman, Supervisor
30 30 GOVERNMENT OFFICIAL: Government Commissioner, Agent, Other Government Official
31 40 SPECIALIST: Forester, Consultant, Agronomist, Pilot, Instructor, Researcher, Horticulturist, Certified Specialist
32 50 OTHER TITLED AND NON-TITLED PERSONNEL: (please specify) _____

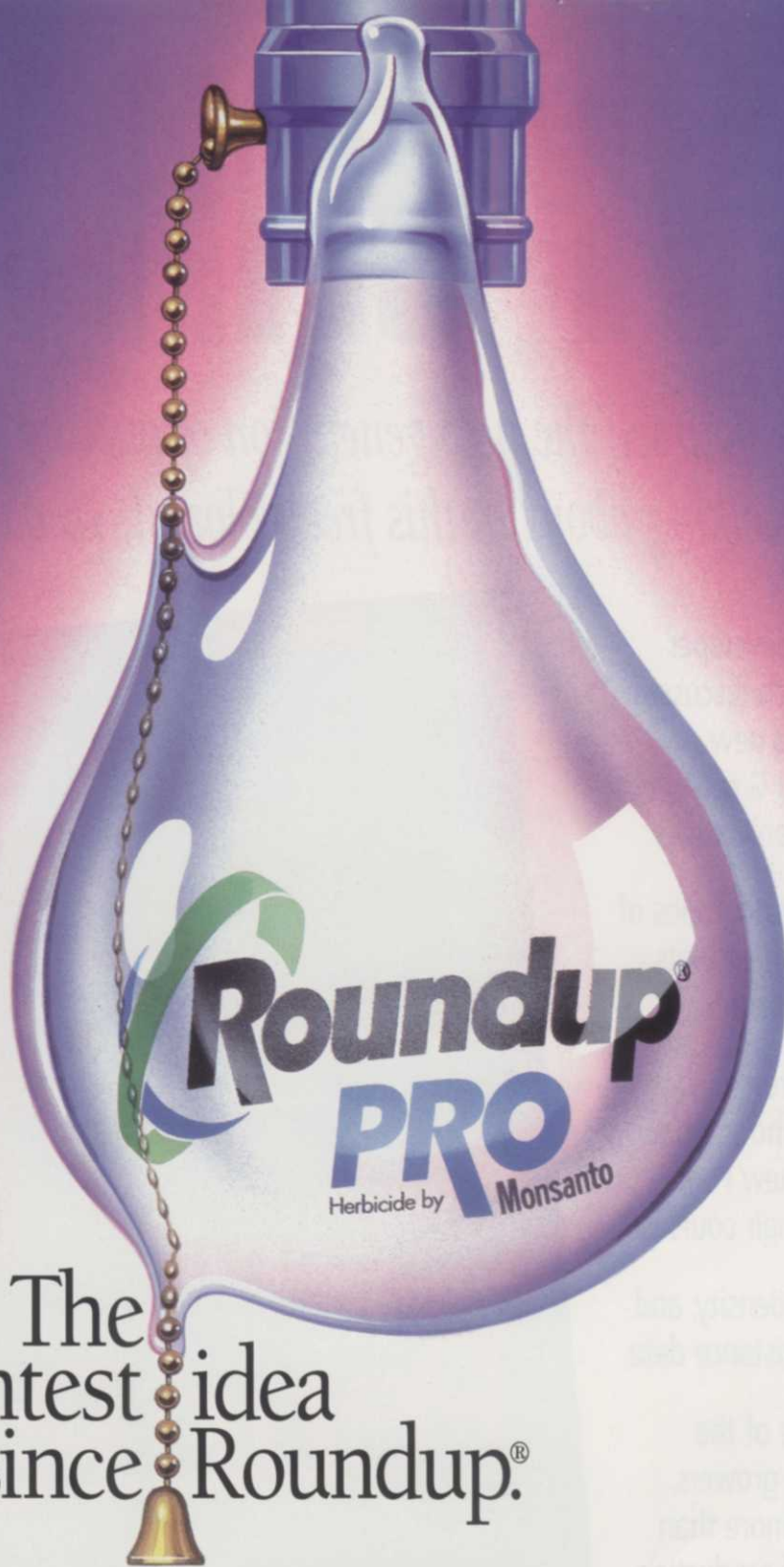
3. SERVICES PERFORMED: (check ALL that apply)

- | | |
|--|---|
| 33 <input type="checkbox"/> A Mowing | 41 <input type="checkbox"/> I Landscape/Golf Design |
| 34 <input type="checkbox"/> B Turf Insect Control | 42 <input type="checkbox"/> J Turf Weed Control |
| 35 <input type="checkbox"/> C Tree Care | 43 <input type="checkbox"/> K Paving, Deck & Patio Installation |
| 36 <input type="checkbox"/> D Turf Aeration | 44 <input type="checkbox"/> L Pond/Lake Care |
| 37 <input type="checkbox"/> E Irrigation Services | 45 <input type="checkbox"/> M Landscape Installation |
| 38 <input type="checkbox"/> F Turf Fertilization | 46 <input type="checkbox"/> N Snow Removal |
| 39 <input type="checkbox"/> G Turf Disease Control | 47 <input type="checkbox"/> O Other (please specify) _____ |
| 40 <input type="checkbox"/> H Ornamental Care | |

4. WHAT IS YOUR ANNUAL BUDGET FOR EQUIPMENT, CHEMICALS, SUPPLIES? (please check one)

- 48 1 Less than \$50,000
49 2 \$50,000-\$100,000
50 3 \$100,001-\$250,000
51 4 \$250,001-500,000
52 5 More than \$500,000

101	119	137	155	173	191	209	227	245	263	281	299
102	120	138	156	174	192	210	228	246	264	282	300
103	121	139	157	175	193	211	229	247	265	283	301
104	122	140	158	176	194	212	230	248	266	284	302
105	123	141	159	177	195	213	231	249	267	285	303
106	124	142	160	178	196	214	232	250	268	286	304
107	125	143	161	179	197	215	233	251	269	287	305
108	126	144	162	180	198	216	234	252	270	288	306
109	127	145	163	181	199	217	235	253	271	289	307
110	128	146	164	182	200	218	236	254	272	290	308
111	129	147	165	183	201	219	237	255	273	291	309
112	130	148	166	184	202	220	238	256	274	292	310
113	131	149	167	185	203	221	239	257	275	293	311
114	132	150	168	186	204	222	240	258	276	294	312
115	133	151	169	187	205	223	241	259	277	295	313
116	134	152	170	188	206	224	242	260	278	296	314
117	135	153	171	189	207	225	243	261	279	297	315
118	136	154	172	190	208	226	244	262	280	298	316



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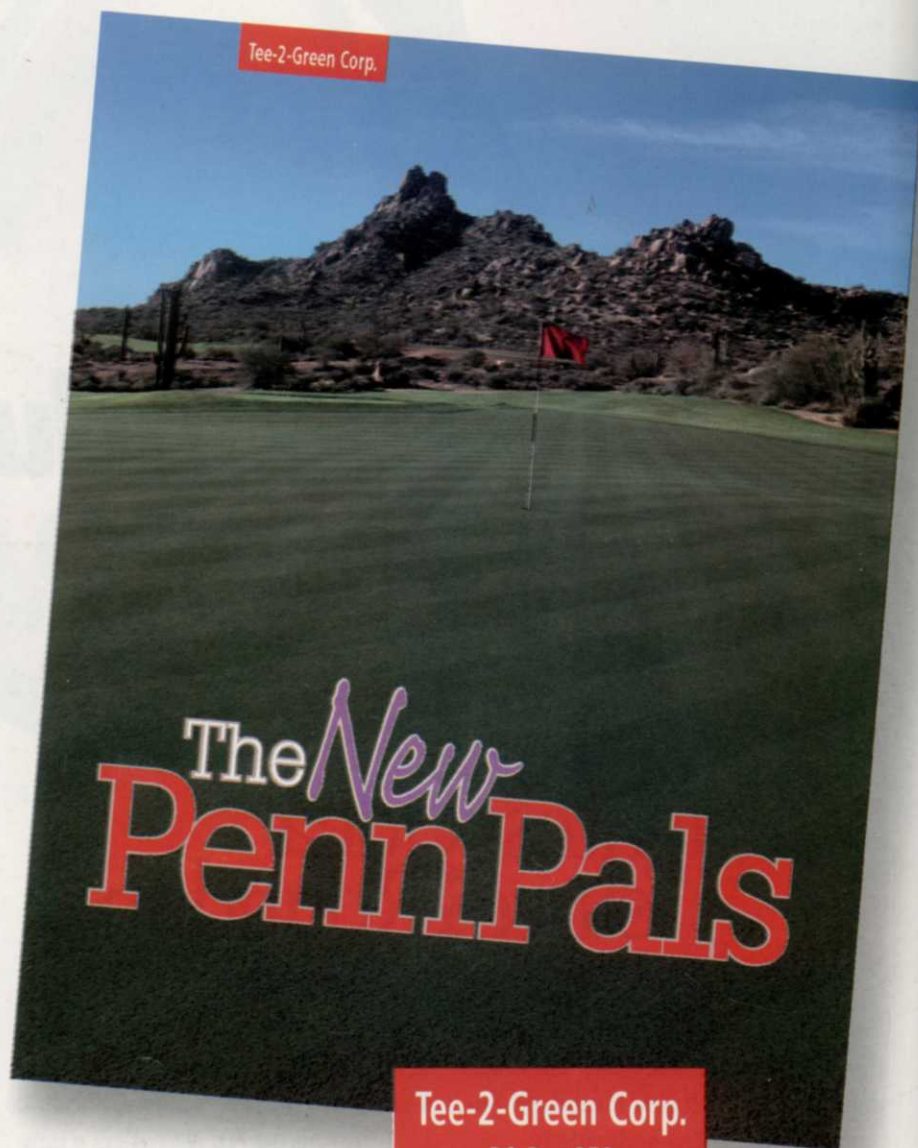
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