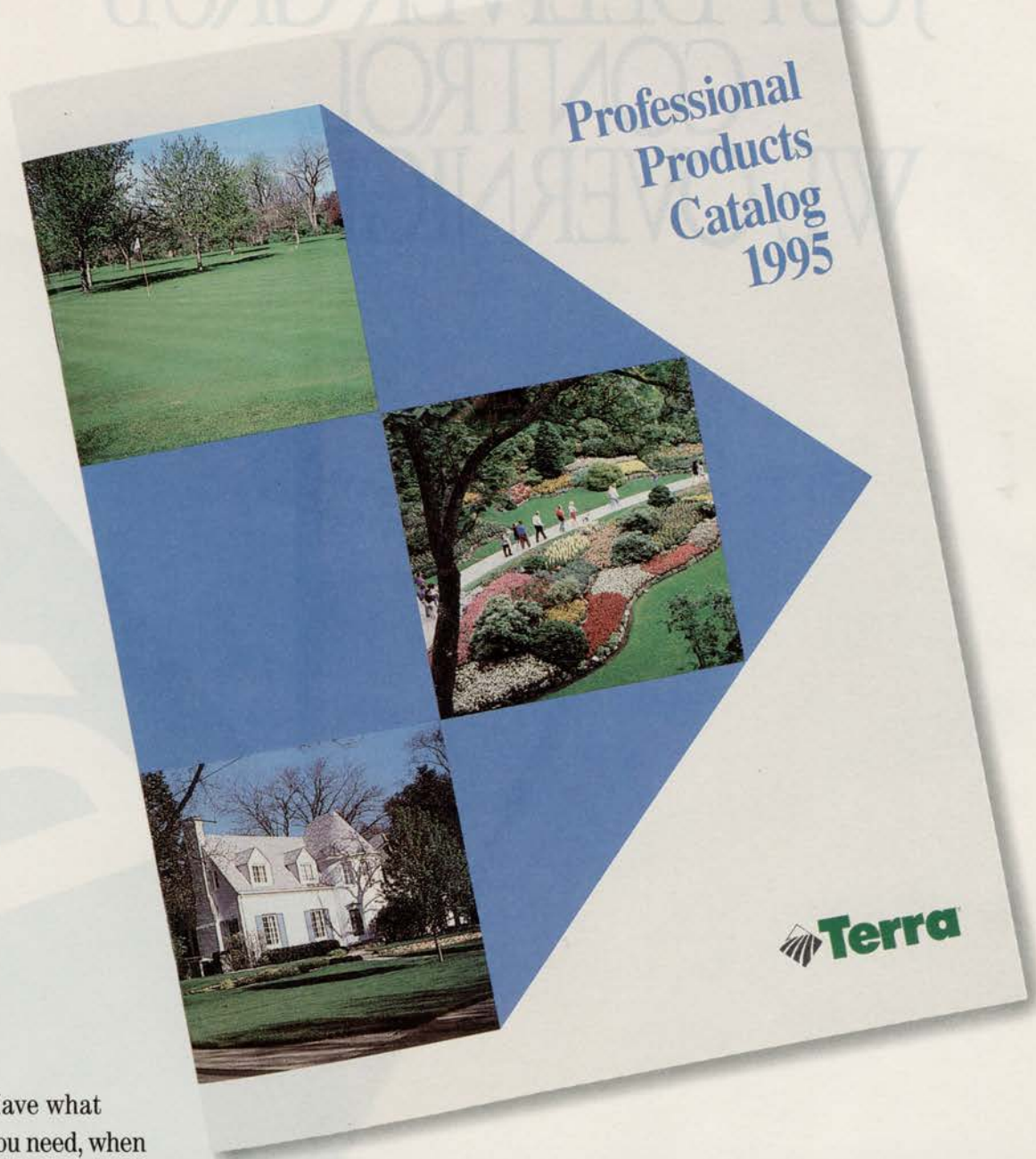


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DeWitt's interlocking landscape "timbers" made from recycled plastic.

■ Everybody talks about added value, and there *is* something you can do about it.

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How do you sell hardscaping? Start from square one and make it part of the initial sale, advises Daniel Zwier, ASLA,

president of PermaLoc Corporation, Holland, Mich..

Zwier realizes, however, that the landscaper often has to juggle budget variables, and sometimes hardscaping is put on hold.

"The budget determines how far past the 'green' material you can go," he says, as does location or trends. In some parts of the country, for instance, irrigation is considered a more important, and necessary, add-on.

"It falls to the contractor, or design/build professional to place a high enough emphasis on edging," explains Zwier. "A lot of salesmanship goes into it."

Hardscaping—even an element as simple as aluminum edging, can be erased from the blueprint once people start shopping for price. As Zwier notes, "when shopping for price, it's the aesthetics that suffer."

The challenge, says Zwier, is to achieve a balance between the homeowner's goals as perceived by the contractor and the potential the site has to offer.

Zwier encourages landscape contractors to imagine and communicate to the customer "the full potential the site has to offer," from the edging to the paving stones, to the number of chairs or tables placed around the site. Avoid the "I can do it for less" debate.

"Paint the picture for them," says Zwier, to help customers see what you see in a landscape."

If you know they're eventually going to spend the money on edging, but can afford to buy it now, encourage them to act sooner rather than later.

This month's LM Reports is meant to provide you with the names of some of the companies that provide edging or paving materials to the professional landscape contractor/specifier.

—Terry McIver



PermaLoc edging is the final touch to this residential walkway.



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continued on page 16

LM REPORTS

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Versa-Loc
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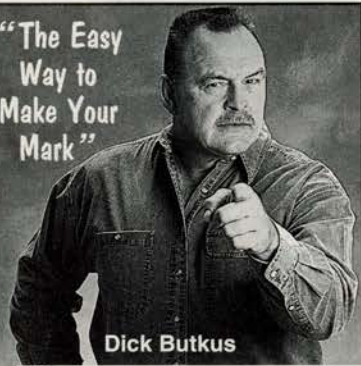
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GOLF & ATHLETIC TURF

BUILDING A POSITIVE IMAGE THROUGH PUBLIC EDUCATION

by Greg Petry
Waukegan (Ill). Park District

■ Image is formed not so much by what we do, but by the *public perception* of what we do. For sports turf managers, as for many other turf- and landscape-related professions, what the public sees is but a small portion of what they get. It's up to us, as professionals with an important role to fill, to provide the education that brings public perception closer to reality.

Sports turf managers develop and maintain playing surfaces for athletes that range from the youngest amateurs to the most highly-skilled, highly-competitive professionals. In the pursuit of this goal, we wear many hats. We plan, budget, schedule and implement procedures. We deal with financial entities, facility owners, team managers and coaches, players, other facility users, the media and the general public—as well as our own personnel, equipment supplies, physical facilities and facility requirements.

Sports turf management is not just a job. It's a career and a lifestyle.

The first criteria for building a positive image is self-examination. The better your skills and talents match the demands of your position, the more successful your performance will be, and the higher your credibility and "image" within that position among those you work with, your community and the profession as a whole.

Those willing to make that 100 percent commitment will gain the required educational background. Many of today's positions require a degree in a turf-related field—but that's just the starting point in what amounts to a life-long educational

process.

Professional associations, such as the Sports Turf Managers Association and GCSAA, help individuals grow by providing a forum to increase their knowledge and skills. These associations offer a network of information and human resources for the members. The more each member puts into an association, the more they gain in terms of overall understanding of the profession and in greater efficiency and effectiveness in everyday problem solving.

We must always strive to do our best. Awards programs, such as the STMA Fields of the Year, energize those within the profession by demonstrating that sensible management and hard work accomplish success at all levels, from the small community to the pro-level fields.

Safety is the prime concern of the sports turf manager at every level of play. The second priority is providing a highly-playable surface that gives all athletes the opportunity to concentrate on their game.

Sports turf managers consider the preservation and improvement of environmental conditions an integral part of all construction and maintenance practices. We know that each field and facility is a piece of nature. We're sensitive to the ecosystem and how it is impacted by our actions. A healthy ecosystem produces the healthy grass that results in a safe playing surface which protects the health of the athletes.

Sports turf managers realize that field quality and the environmental health of that property affect not only those who actually play on their fields, but the entire



community. More often than not, the sports turf managers' responsibilities extend to the entire facility: the parking lot, surrounding landscape, stadium or bleachers, concession and restrooms, fencing and lighting, dugouts or changing rooms, and press boxes, as well as the fields themselves. At the very least, sports turf managers are consulted on how playing conditions affect these other components of the facility. Therefore, the concern for environmental integrity and overall safety extends to athletes, officials, coaches and staffs, workers and volunteers, the spectators and the community at large.

Finally, aesthetics brings the total pic-

continued on page 4G

ELSEWHERE

**Golf courses as
good neighbors,
page 4G**

**Secrets to
green speed,
page 7G**

**Green renovations
require planning,
page 10G**

**Zebra mussels
reach golf courses,
page 12G**





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PETRY from page 1G

ture into focus. As the spectators and the athletes enter the facility and view the field, the stage is set for their experience. The spectators'—and the athletes'—perception of a good or bad game are linked with their perception of the quality of the field, and thus connected to their "image" of those who care for the facility.

In today's world, the sports turf manager also must be conscious of how environmental "correctness," safety and playability affect the liability situation. Sports turf managers must set standards for the highest level of quality and establish procedures to ensure that those standards are being met. When deficiencies are found, they must be defined and action documented to show corrections are taking place. It's an ongoing cycle.

It takes foresight to look at your facilities critically and perceive the things that could go wrong. Sports turf managers must watch for trends that might lead to potential problems and take the initiative

to correct conditions before those problems become a real danger.

And finally, the sports turf manager must communicate the essence of all this to the community, through reports and press releases, through contact with the media, booster clubs and community groups, and always through common-sense working relationships with the people.

Sports turf managers must take the time to explain why we do what we do, and why we don't do certain other things. We must be open, honest and straightforward. If we've made a mistake, we must admit it and take actions to correct it. We must analyze why mistakes occurred and prevent them from happening again.

If we establish a good working relationship with the community, and keep engaging in conversation, even when a difference of opinion exists, we're working on developing that positive image. We're building our image when we say we'll do "x, y and z" and then do x, y and Z; when we promptly comply with a community request that is sensible and reasonable.

We're building a positive image when we make sure that every member of our staff understands what they are doing, why they are doing it, and how it affects the overall good of the facility.

We're building a positive image when we explain our current financial and labor limitations, then develop specific plans of action and ask for volunteer contributions of funds, equipment or labor to accomplish those goals.

We're building our image when we work with facility users to develop workable alternatives to fill their needs and keep the fields safe and playable.

Sports turf managers must be willing to exert extra effort to achieve the best possible facilities and clearly communicate their role to the community, in order to create and maintain the highest professional image.

—Greg Petry is executive director of the Waukegan, Ill. Park District and president of the Sports Turf Managers Association.

Golf courses as 'good neighbors'

by Ron Hall,
Senior Editor

■ Here's another hat for golf course superintendents to wear—the hat of the goodwill ambassador to your communities.

More of you need to share the good news about golf to friends and neighbors. No, you don't need to tout the game itself. The growing ranks of beginning golfers suggest that's not the problem. You've got to shine a more pleasing light on the properties on which the game is played. Nobody knows more about them than you.

You realize that the courses you maintain are not green islands within your communities. They can't afford to be perceived as being isolated. Not any more.

There are too many lingering misconceptions by the public that golf courses are not good neighbors. A surprising number of people, including some golfers, see golf courses as water wasters and polluters. (see April '95 LM, page 6G)

Superintendents realize that there's little basis for these concerns. You understand that the impact of a golf course in a community is overwhelmingly positive.



The Tampa Palms course earned an Audubon certification in 1993.

You can tick off a half dozen benefits—more if you think about it—of having a properly maintained golf course in your communities. Some of you, in fact, do an excellent job of alerting your communities

to the positive environmental benefits of your courses.

But a lot of the public apparently never hears this message. When it does, it
continued on page 6G

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NEIGHBOR from page 4G

responds enthusiastically.

At St. Charles—The local artists arrive at the bend in the wooded lane. They spread easels on the mossy ground, then direct their attention to capturing on canvas the colors and textures of nature.

The artists aren't in a wilderness; they're guests of St. Charles Country Club. They're in a corner of 68 acres of woods and meadows surrounding the golf course in St. Charles, Ill., about an hour's drive west from Chicago's skyscrapers.

Peter V. Leuzinger, CGCS, is pleased that artists find beauty near the golf course. "We picked a nice spot for them next to the stream. There's an old bridge, a couple of fallen logs, and some pretty flowers in spring," he says.

He's equally happy when delighted fourth graders make their annual nature field trip to these same woods. Or when a course co-worker brings Scouts to these 2 1/2 miles of trails and paths.

"We appreciate the opportunity to be able to send a good message out into the community," says Leuzinger. "These people are going to talk to their friends, and they'll have good things to say about us."

A brochure that Leuzinger prepared describes some of the natural attractions found along the St. Charles trails which, until the club's crew widened them, had been deer paths. Leuzinger also recommends investing in good signage to identify, using common and scientific names, trees and plants.

"Let the public come out to your property as long as they don't get onto the golf course," urges Leuzinger who was superintendent at St. Charles for 20 years before switching to the nearby Ivanhoe Club this past year.

These and other similar good neighbor efforts are coming none too soon, not just in Chicagoland but nationwide.

Educator Dr. Winand Hock says that National Golf Foundation surveys indicate that 25 percent of U.S. golfers believe that golf course chemicals pollute lakes and streams. The surveys also suggest that just 25 percent of non-golfers believe golf courses are "good" for the environment.

"Clearly we haven't done a good job of communicating the facts that a good chemical management program does not cause environmental problems," says Hock, director of the Pesticide Education Program at Penn State University.

He adds: "We need to get the word out

Letting your communities know

■ Need some ideas to get your community more aware of the value and beauty of your golf course? Consider these:

—**Allowing bird watching** on off seasons or days. Sponsoring an annual Christmas bird count.

—**Partnering with a garden club** in helping you identify unusual or threatened plants at your course.

—**Working with schools** on field trips, or helping with student science projects that deal with environmental matters you're familiar with.

—**Inviting community leaders** to the

course to show them special programs, like wetlands preservation, water conservation, and state-of-the-art pesticide storage, mixing and recycling systems.

—**Joining and/or speaking** a local service organization. Explaining just what you do.

—**Sponsoring an annual photo contest** involving your golf course.

You and your staff should be able to come up with more. When you do, please let us know. Write to us at: *Landscape Management Magazine*, 7500 Old Oak Boulevard, Cleveland, Ohio 44130.



A visit to St. Charles by local students on a field trip was a wonderful promotion for the country club.

about who we are and what we're doing."

At Tampa Palms—Greg A. Plotner, CGCS at Tampa Palms Golf and Country Club course, is another example of how that can be done.

The 8-year-old course he maintains earned certification as an Audobon Wildlife Cooperative Sanctuary course in 1993. It was recertified the past two years. Plotner's crew maintains the course to provide wildlife with excellent nesting and feeding habitat while also providing golfers with the best possible playing conditions.

Admittedly, he has a lot to work with. Of the 250-acre parcel of land, only 90 acres is turf, 40 acres is lakes and the remaining 120 acres is forested wetlands areas rife with wildlife.

Also, Tampa Palms has the talents of David Coogan, a trained landscape technician, who has a unusual knowledge and interest in aquatic plants. The aquatic garden that Coogan installed next to the fourth hole is so unique that Plotner creat-

ed a simple brochure describing the eight different major plants it contains and their usefulness to area wildlife.

Other wildlife-friendly features of the course include bird nest boxes, manmade brush piles in out-of-play areas, and—in one instance—a large artificial perch into a waterway which has become so popular that it's first-come-first-serve among the turtles, herons and other critters.

But Plotner's efforts are more far reaching than habitat enhancement. They include integrated pest management and ambitious water protection and conservation efforts, too.

For instance, Tampa Palms maintains buffer zones around all of its lakes and ponds. The buffers—including other naturalized, out-of-play areas—do not receive fertilizer or irrigation.

"We have found ways to keep these water bodies pristine. There's no reason to have low-cut turf on some areas of the golf course," says Plotner.

By installing low-volume water fixtures in the clubhouse, and by freely offering lawn watering information to golfing members, the golf course staff reinforces its concern and helpfulness.

"All too often, golf courses only promote the virtues of golf. This, of course, is important. But it ignores the natural beauty and the environmental qualities of the course," adds Hock at Penn State. "What we need to do is more than just place a

value on the tees, greens, fairways and clubhouse.

"Is your course environmentally friendly? I say, of course it is," says Hock.

"But have you told anybody?"

Greg Plotner, CGCS, Tampa Palms Golf & Country Club says a good first step is the formation of a "resources committee." The committee at Tampa Palms includes several staff members, a Hillsborough



Plotner: keeps turf at a higher cut than most.

County (Fla.) Extension Agent, and a fertilizer expert.

"You're going to bring in some people from the outside who are going to have a lot of expertise and talent," adds Peter V. Leuzinger, CGCS, St. Charles Country Club, near Chicago. "Combine them with the staff and talent that you have and you're going to have one heck of a program."

On-going communication, both within your course and

within community, is equally important.

Plotner suggests seeking opinions and member involvement with bulletin boards in the clubhouse or in the locker rooms. Leuzinger suggests newsletters and press releases.

"Don't be bashful about what you have. Tell your local communities" admonishes Dr. Winand Hock, director of the Pesticide Education Program at Penn State University.

"You the golf course superintendent is a local environmental expert. You know more than most of the people in your community about environmental conservation," he adds.

What price speed?

Superintendent Mark Kuhns reveals how his crew keeps historic Oakmont's greens so fast and true.

by Ron Hall,
Senior Editor

■ Few of us maintain greens as fast as those at the championship course at Oakmont Country Club, Oakmont, Pa. Nor should we.

But not many of us host a U.S. Open either, as Oakmont did in 1994, its seventh Open. Or have an annual budget of about \$1 million. (Actually there are two courses at Oakmont.) Or have *Poa annua* greens. Not *Poa annua* like many of us know it as a pesky annual weed grass, but perennial strains of *Poa annua*.

Okay, okay, enough already, we know—Oakmont does.

Certainly, green speed is not as vital for us as it is on a course that doesn't want to be brought to its knees by the likes of a Jack Nicklaus or a Greg Norman. Nonetheless, it's fascinating to hear how Mark



Kuhns: plays greens to check their speed.



The Greens at historic Oakmont Country Club are mowed twice, first with a riding mower then with a walking mower.

D. Kuhns, CGCS, makes the Oakmont greens so fast and true. He told fellow superintendents just that at the GCSAA Conference this past winter.

Kuhns says he tries to check each green daily, usually with a stimpmeter in one hand and a putter in the other.

"I like to see the ball roll on the green," he says. "I like to see if the ball is bouncing or if it's wavering left or right. Also, it gives me an indication, even without a stimpmeter, how fast a green is." And he's not afraid to roll greens to make sure putting conditions are consistent around the course.


Oakmont members like their *Poa annua* greens fast, real fast. Most members, in fact, are willing to sacrifice color

and lushness for a hint of brown if it means more speed.

Obligingly, Kuhns keeps the greens on the dry side. "The only reason we have the irrigation system is just to get by between rainfalls in my climate," he says. With only four inches of rootzone to work with anyway, he feels the turfgrass responds best to light, frequent watering, usually by hand.

Twice each season his crews aerify the greens with a Cushman Ransomes Ryan GA 60 unit with $\frac{3}{8}$ -inch four-inch tines. Once the Oakmont crew pulls the plugs, it turns the greens almost white with a top-dressing of pure sand. It's almost a week before the greens can be mowed again. The *Poa annua* is so tight, little of the

continued on page 10G



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Then, just apply BAYLETON, and the rout is on.

MILES 



SPEED from page 7G

sand works down. Instead the grass grows through the sand. Oakmont has followed basically the same regimen since the mid-1970s.

"This is the sacrifice our members have to pay for the fast conditions that we try to maintain," explains Kuhns.

Crew members usually mow the greens twice daily, first with a Toro 3100, then with a Toro 1000 walker.

Although Kuhns says Oakmont is committed to using less chemicals, some preventive spraying is needed on the greens "for certain diseases." Other insect and disease controls are sprayed "as needed."

Kuhns estimates Oakmont's greens get 3½ to 4 lbs. of N per year. The greens are fed as they're aerified each spring and fall. This is supplemented by several liquid, foliar applications during the season. As Thanksgiving approaches, Kuhns puts



Galleries arrive early, even as the pins are being set, when Oakmont hosts a U.S. Open. It's been the scene of seven Opens.

down an application of Milorganite.

"If the demands of members are fast, fast, fast, it costs a lot of money and takes

a lot of time," admits Kuhns, who came to Oakmont about four years ago from Laurel Valley.

Renovating golf greens without wrecking careers



Prepare temporary greens well in advance of a renovation, according to James F. Moore and other golf course experts.

USGA Green Section suggests not forcing it down peoples' throats.

by Ron Hall,
Senior Editor

■ A major greens renovation project can be one of the most rewarding times in a superintendent's career. Or it can become a nightmare. How thoughtfully the superintendent prepares and educates the club's leadership often spells the difference between the two outcomes.

James F. Moore of the USGA Green Section offered suggestions about how a superintendent—more precisely his or her career—can survive a major greens renovation. About 300 superintendents listened to Moore, a former superintendent himself, at the GCSAA Conference this past winter.

"The number one reason why projects fail is because people don't take the time to get on the same page before the project starts," says Moore.

He admits that his observations are colored by some of the club membership squabbles and hard feelings that he's witnessed concerning the topic of greens renovations. In fact, the decision of whether to renovate or not can split a club's mem-

bership into unfriendly camps, and put the unwary superintendent in a precarious position.



Moore: Tread softly with members. Let them decide the answers to some of your problems.

Moore's common-sense guide to renovations:

1) Determine the need for a renovation. Seek the assistance or professional outside of your club. Document the need.

2) Determine the scope of the proposed renovation. Again, document your recommendations.

3) Prepare financially. (Perhaps this should be the first step.) Major renovation is expensive.

4) Assemble a pre-construction team to help uncover any potential stumbling blocks. The team might include an agronomist from the extension service, the contractor, an architect, key people from the club's membership, and a "clerk of the works," somebody whose sole function will be overseeing quality control of the renovation. The clerk could be your capable assistant.

5) Educate the club's leadership and members. Take them (particularly the most skeptical ones) to the greens and dig holes to show them what's going on. Moore suggests starting the education process about two years prior to actual work.

6) Provide the club with the professional documentation that you and your team have assembled. Then, get out of the way. Let them make the decision.

7) Start preparing suitable temporary greens as soon as practical after the club decides that it wants to renovate.

"A lot of clubs get into trouble when they try to force it (renovation) down the members' or the players' throats," says Moore. "If you try to run this thing through, all you're going to do is alienate half the people that pay your rent."

And, stresses Moore, never forget—"If the project goes good, the superintendent will often get credit for it. If the project goes bad, the superintendent will *always* get credit for it."

You could face a renovation sooner than you think

■ Is a greens renovation in your near future? In all likelihood, yes.

Most superintendents will undertake a greens renovation within the next five to 10 years, believes James F. Moore of the USGA Green Section's Mid-Continent Region.

"We've got a lot of old greens that have somehow survived all the changes in the game of golf because we've got better superintendents, we've got better irrigation, we've got better chemicals and we've got better equipment," he says.

"After a while our talent is not going to be enough to bring these old greens through and we're going to have to do something."

But Moore also points out that not all ailing greens necessarily need renovation. Some greens, in fact, can be improved by removing nearby trees and opening the greens to more sunlight and air movement. Aggressive core aerification to break up layers caused by previous mismanagement can bring others back to health. A water injection unit may help too. "You want to look at all the options," says Moore.

Even so, here are forces that are driving courses toward major renovations, says Moore:

—**Increased play.** Clubs that averaged 25,000 rounds a season a generation ago now host 30,000 to 35,000 rounds. Municipal courses can exceed 60,000 or 65,000 rounds. (Moore believes all superintendents should know the number of rounds their courses host each season.)

—**Rising expectations.** "People are more mobile now. It was one thing when all they did was play on your course," says Moore. "Now they go on vacation and play in places that are absolutely breathtaking. Then they come back they want to know why your course isn't breathtaking."

—**Environmental pressures.** "Right now you can go out and spray pretty well anytime you want to," says Moore. "That probably won't continue."

—**Lessening water quality.** The use of treated wastewater on courses continues to increase and is mandatory on many new courses.

—**Improved grass varieties.** "You can't knock Penncross, but you've got to remember it was delivered to us in 1956," says Moore. "It's carried us for a long time. There are at least six or eight new bentgrasses out there that are better than what we've relied on."

—**The possible loss of methyl bromide** as a soil fumigant. Methyl bromide allows the conversion of a green from one grass to another because it kills everything in the rootzone, including seeds of unwanted varieties. Methyl bromide is alleged to be an ozone destroyer. It's being scrutinized by regulators.

Weighed against these reasons to renovate are two powerful reasons discouraging major renovations—cost and down time for the golfers.

Moore estimates a cost of somewhere between \$4 and \$6 per square foot, and an expense of as much as \$500,000 for an entire course. "A lot of clubs don't think they can afford that," he says.

A superintendent can help solve the problem of down time by preparing temporary greens well in advance of renovation, Moore believes. Some clubs even offer special incentives for members and guests when temporaries are in play. Some schedule fun events, and actually pick up new members who can see that these clubs are serious about offering quality golf, as evidenced by the renovation.

"You can understand why some people in your club don't want the greens rebuilt," says Moore. "They're just so happy playing golf, they'd like to be able to play golf any time they want to."

A third but, maybe, less common objection to a needed renovation may be membership's reluctance to change "classic architecture."

Moore admits that this is a tough call, but he maintains that courses built for previous generations of golfers weren't intended to host as many rounds as they do today.

—R.H.

Zebra mussels muscling their way onto golf courses

By James E. Guyette,
Contributing Editor

■ Zebra mussels are muscling their way onto golf courses throughout the United States. These water-borne pests are found in ponds and other sources of untreated irrigation water. They make their presence known to golf course superintendents by clogging irrigation systems and rendering them inoperable. Among the available control methods are chlorination and filtration.

"It's become a real problem over the past three to five years," says Dave Davis of Davis Associates, an irrigation consulting firm headquartered in Rancho Cucamonga, Calif. "You never know where it's going to pop up, but when it does it's a pain in the neck. You've got small devices that you're putting the water through, and these devices are going to clog up."

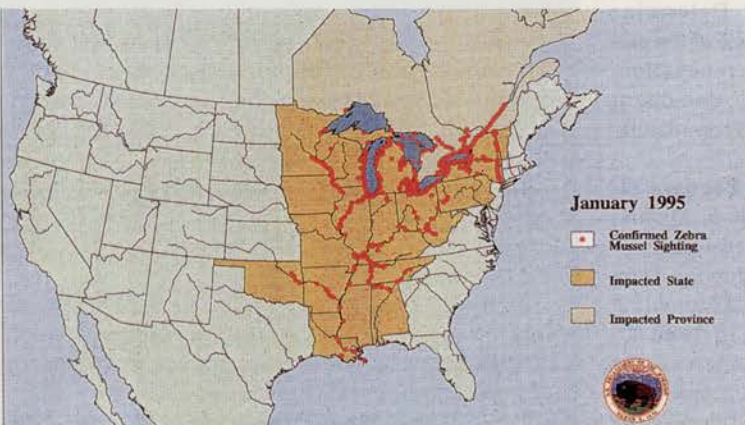
"If the mussels get into the system, it's either pay me now or pay me later," says Steve Springer, vice president at Amiad Filtration Systems, Van Nuys, Calif. "You can have literally miles of pipe clogged because they set up a colony inside there, and they can literally shut off the flow in one growing season."

A 36-inch intake pipe can become so infested that the flow area is reduced to just eight inches. (A golf course irrigation system typically has an intake pipe no larger than 12 inches.)

"That's a major problem, especially for smaller intakes," warns James C. Schmidt, vice president of sales and marketing at Applied Biochemists Inc., Milwaukee, Wis. Once the zebra mussel hits a region, it spreads rapidly to other water supplies. "They can survive hanging onto the side of a boat. These buggers can attach themselves to anything, including water fowl, aquatic plants and even plant fragments."

It is believed that zebra mussels first

came to the U.S. in the late 1980s as they stowed away in bilge water carried by an eastern European freighter. When the water was discharged the zebra mussels infested the Great Lakes and have been moving inland ever since. The massive Midwestern floods of 1993 assisted the



Orange shaded area in map above shows greatest areas of zebra mussel infestation in the United States.

zebra mussel in its migration.

"Every tributary off the Mississippi is contaminated," claims Springer. The beast has been spotted from St. Paul to New Orleans, plus it hits points east to Pittsburgh and points west to Tulsa. (The West also contends with a similar situation spawned by the Asiatic freshwater clam.)

Intakes at water treatment plants for industry and municipalities are especially plagued by the pest, and a golf course that takes its water from an untreated source is likely to have similar problems.

"It can create problems with the sprinklers and valves," Davis explains. "You find it all over the country."

Superintendents in New York have been battling the zebra mussel for a while. "We've got an awful lot of golf courses that



This retrieved golf ball shows the clinging tenacity of zebra mussels.

siphon water from the Erie Canal," points out Chuck O'Neill, coastal resources specialist with the New York Sea Grant. The contaminated canal was especially rocking

the boat at Rochester's prestigious Locust Hill Country Club, where PGA golf tournaments were threatened by a clogged irrigation system. "That got the attention of a lot of golf courses," O'Neill recalls.

Locust Hill was eventually able to control the problem.

"We chlorinate the water coming from the canal," explains superintendent Rick Slattery. "It doesn't take much chlorine to kill them," he notes. "There's a recharge pump that pumps from the canal to the irrigation pond," and a chemical feed metering pump was used to distribute the proper dosage levels. About 50 gallons of chlorine is used per season.

The two most common methods of zebra mussel control are chlorination and filtration. O'Neill notes also that iron can be used to adjust the pH of the water. "It's possible to push the pH too high or two low for the zebra mussels."

The choice between chlorination or filtration depends upon a number of factors, and superintendents or other landscape managers facing irrigation problems should choose a method that is geared toward their operation.

"Every area is a little different in what you have to do," Davis cautions. "A solution that works in Florida may not work in California. We even see it in well water in the Southwest."

Check with your county agent, water treatment companies, chemical suppliers, filtration system manufacturers, irrigation consultants or swimming pool contractors.

Chlorination "is no different than irri-
continued on page 14G

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Professional Products Team

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gating with city water," says O'Neill, referring to piped-in potable water. "It's not hurting the turf if you keep the chlorine residual down low." (No more than one-fourth part per million.)

"Once the chlorine hits the air it breaks down before it hits the turf," says Slattery. A drip irrigation system may require closer monitoring to protect fragile plant materials.

Because zebra mussels die when deprived of water, baked in the sun or exposed to freezing temperatures, at Locust Hill the pond is drained each winter and all the pipes flushed in the spring. Dead or alive zebra mussels have to be removed from sprinkler heads and other parts by dipping in a bucket of chlorinated water and using fingers to pick them out.

A chemical feed metering pump can be purchased off the shelf, and this type of system can generally be implemented for under \$15,000, according to O'Neill. "It's not something that's going to break the bank."

A chlorine treatment strategy can be washed up if there are any concerns over chemicals coming in contact with sensi-



Zebra mussels die when left in freezing temperatures (left) or high temperatures, or the sun, say biologists. Actual experiences of landscape and golf course irrigation managers in the field attests to it.

tive wildlife or other environmental issues. Landscape managers at parks and some golf courses may find themselves faced with a public relations problem that needs to be addressed.

"It may become necessary to add really fine levels of filtration to the water sources," says Davis. A filtration system can cost from \$15,000 to \$30,000 on top of the initial pump station installation.

"The variables get to be so broad," Springer points out. It depends on what level of control is acceptable. It is relatively inexpensive to control the larger adult

zebra mussels. For complete control of zebra mussels, a 40 micron absolute filter is needed, while a typical golf course irrigation algae screen is in the 200 to 300 micron absolute range.

The best control strategy is to take into account local conditions when battling zebra mussels. "No two sites are exactly the same," Davis warns. Zebra mussels are a formidable opponent "They breed faster than rats," Springer notes. "They're just nasty little critters."

Annual bluegrass biology and control

by Nancy D. Williams
and Joseph C. Neal, Ph.D.,
Cornell University

■ Annual bluegrass (*Poa annua* L.) is one of the most persistent and troublesome weeds of high-maintenance turfgrasses. It is well adapted to close mowing, high nitrogen fertilization, frequent irrigation and compacted soils. It is a primary invader in damaged or open areas.

Consequently, it is sometimes maintained as a monoculture (if you can't beat it, join it) but requires intensive maintenance and frequent fungicide treatments.

Annual bluegrass is generally considered a weed because it is a prolific seed-head producer; susceptible to heat, drought and many diseases; and is unsightly when mixed with other grasses.

Lifecycle—Clearly, the most important difference affecting control decisions is the difference in the lifecycle: annual (*Poa annua* ssp. *annua*) versus perennial (*Poa annua* ssp. *reptans*) subspecies.

The perennial subspecies is more difficult to control because of its ability to survive summer heat and drought (which would kill the annual subspecies) by entering a summer dormancy and resprouting when weather is more conducive to growth.

Another difference is seed dormancy. Seed of the perennial subspecies can germinate at any time of the year while seed of the annual biotype germinates in the late summer or early fall (and sometimes early spring).

Cultural control—Weed management via cultural methods requires careful planning, close observation and patience. The five steps for reducing annual bluegrass competition are:

1) Prevent or reduce compaction.

Excess moisture and traffic induce compaction and shallow rooting, conditions which favor annual bluegrass. Using lightweight mowers, reducing traffic and core cultivation will relieve compaction. Good soil structure will provide better

drainage and water and air penetration, which encourages better root growth and competition in the desired species.

2) Avoid excess irrigation.

Proper irrigation alleviates excess moisture, providing better soil aeration and consequently better root growth. Less irrigation in the spring and fall may reduce annual bluegrass seed germination.

3) Avoid excess N fertilization.

Reduced nitrogen fertilization is the key to reducing annual bluegrass competition. In some situations, iron (Fe) may be used for turf "green-up" instead of higher N rates. Under certain conditions, low phosphorus rates have reduced annual bluegrass growth by reducing its ability to compete with desirable turfgrass species.

4) Mow at proper height.

Annual bluegrass can adapt to a wide variety of conditions, including mowing heights from 1/8 to 3 inches. Higher mowing heights will tend to favor the more

continued on page 16G

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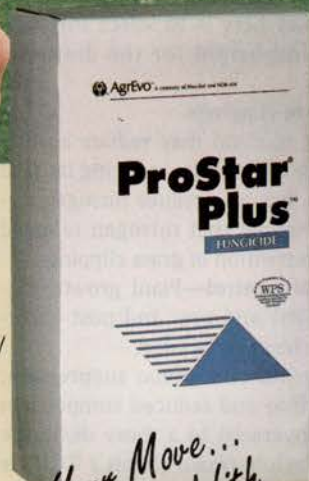
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AND DESIRABLE TURFGRASS SPECIES

	POA ANNUA SSP.	CREEPING BENTGRASS	KENTUCKY BLUEGRASS	PERENNIAL RYEGRASS
MOISTURE	wet	moderate	moderate	moderate
SOIL CONDITIONS	compacted	uncompacted	uncompacted	uncompacted
CORE AERATION	decreases competition relative to desirable species	increases competition relative to annual bluegrass	increases competition relative to annual bluegrass	increases competition relative to annual bluegrass
N FERTILITY	high ≥4 lbs./1000 sq. ft./yr.	moderate 2-3 lbs./1000 sq. ft./yr.	low to moderate 1-3 lbs./1000 sq. ft./yr.	high ≥ 4 lbs./1000 sq. ft./yr
MOWING HEIGHT	lower than recommended ht. for desirable species	low (5/32 to 1/8 inch)	high (2 to 3 inches)	moderate to high (1/2 to 2 1/2 inches)
CLIPPING REMOVAL (POA SSP.)	decreases competition relative to desirable species	increases competition relative to annual bluegrass	generally, no effect	generally, no effect
pH	6.0—7.0	5.5—6.0	6.0—7.0	6.0—7.0

desirable turfgrasses over annual bluegrass. The key here is to select the optimum mowing height for the desirable grass.

5) Remove clippings.

Clipping removal may reduce annual bluegrass competition by reducing its seed reservoir. It may also reduce nitrogen fertility by removing that nitrogen released by the decomposition of grass clippings.

Chemical control—Plant growth regulators (PGRs) and pre- and post-emergence herbicides can be used.

PGRs provide *Poa annua* suppression, cover reduction and reduced competition to allow conversion to a more desirable turfgrass. Paclobutrazol (Scott's TGR) is the only PGR registered in New York state for annual bluegrass suppression in creeping bentgrass. It may discolor desirable turf when applied incorrectly or at the wrong time of year. Injury can also occur when heavy rain or irrigation have moved the granules to puddles, thus concentrating the herbicide in a small area. Using the lower labeled rate at the spring application will minimize discoloration.

Pre-emergence herbicides work well on

Poa annua ssp. *annua* but have been ineffective on *Poa annua* ssp. *reptans*. For this reason, they are rarely used for annual bluegrass control in the Northeast.

Post-emergence herbicides control seedling annual bluegrass, reduce seedhead production, suppress established plants, or provide total vegetation control.

Prograss (AgrEvo) is labeled for controlling seedling *Poa annua* in perennial ryegrass, Kentucky bluegrass and creeping bentgrass. It also can suppress established annual bluegrass. Best results have been obtained in perennial ryegrass with higher rates. Rates high enough to control established annual bluegrass in one season, however, will injure other turfgrass species. In Kentucky bluegrass or creeping bentgrass, multiple applications of Prograss at 0.75 lb. A/A or less, applied in the fall and carried out over several years has adequately suppressed annual bluegrass.

Calcium arsenate applied at high rates controls established annual bluegrass, but it is currently only registered in New York and Indiana. Disadvantages to it include: high rates necessary for control, sudden loss of poa, and long-term adverse effects

on soil phosphate fertility.

Mefluidide (Embark) may be used for annual bluegrass seedhead suppression in Kentucky bluegrass, perennial ryegrass or fescue. Some discoloration of desirable turf may occur, less at lower rates.

Where annual bluegrass comprises more than 50 percent of the turf, complete renovation with glyphosate (Roundup) is often the best recourse.

Biological control—*Xanthomonas campestris* pv. *poannua* bacterium is currently being investigated as a potential biocontrol agent for *Poa annua* by Mycogen Corp.

This bacterium only kills plants when the conditions are favorable for disease development. Plant death is caused by a vascular wilt as the bacterium plugs the xylem, stopping the flow of water and nutrients. It is more effective on annual *Poa annua* species than perennial species.

—The authors are members of the Department of Floriculture and Ornamental Horticulture at Cornell University. This article is excerpted from Cornell University Turfgrass Times's Spring 1993 edition.

LAWN & LANDSCAPE INDUSTRY

IMPROVE YOUR COMPANY'S IMAGE!

by Ed & Aaron Wandtke

■ Your company's image depends on the behavior of your front line: the service providers. In this era of environmentally-concerned consumers, companies need to become more conscious of the image portrayed by their employees.

Your employees' image determines how much your company cares about the customer, his or her property, and the world we live in.

A strong company image is critical for your success and continued viability. Take a close look at companies you believe to have a strong image. What is the secret? What should you be doing to improve the image of your company to customers, the community and the industry?

Customer image—People form perceptions about your company's quality, reliability, competence and integrity through the image you display on properties. For most of you, employees and vehicles are the only opportunity to create a company image, based on:

- how employees look;
- how they act on a property;
- how professionally they are viewed in the community; and
- the appearance of vehicles and equipment.

Dirty uniforms (at least at the start of the day), faulty equipment, perennially damaged vehicles all have an impact on your company's image.

With the green industry under close scrutiny by customers and the media, it is imperative that extra care be exercised in

order to present the best possible image at all times.

If a company can't afford a large advertising or promotional program, the professional appearance of personnel and vehicles is a necessity.

I recently observed a landscape maintenance employee operating a backpack blower without ear or eye protection. He then proceeded to blast the air at another employee. If it was a property I was involved with, I would have fired the company on the spot. Safety in working on a property is critical, and there is no place for horseplay on any job. The equipment and materials your employees use must be handled carefully for customer safety, too.

Human safety and environmental consciousness need to be the focus of every employee as they work for every customer. The image you have developed over time can be destroyed by one careless employee who is observed by the wrong customer.

Community image—How is your company perceived in the community? Are giving back a portion of the benefits you get from the community?

Every year, members of the Metropolitan Detroit Landscape Association (MDLA) donate personnel, materials and creative talents to improve a long-term project on the grounds of Cobo Hall in Detroit. More than 86,000 square feet of gardens, waterfalls, ponds and bridges with thousands of trees, shrubs and flowers are maintained and improved through the efforts of MDLA.

IN THE PUBLIC EYE



The image created by this ongoing project benefits the community in which the companies work, and reinforces the value of the services which the companies provide.

Involvement with the Chamber of Commerce, the local small business association and other community-based service clubs is an excellent way to contribute to the community and receive recognition. And contributing to the community should not be limited to the company owners. Employees should be urged to participate in church groups, parent-teacher organizations and other similar groups to demonstrate your company's commitment toward improving and maintaining the community in which you live and work.

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ELSEWHERE

**Using advertising
to educate clients,
page 4L**

**Computer software
product update,
page 5L**

**Family businesses
ponder future,
page 7L**

**Tax refunds
can be yours,
page 11L**





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IMPROVE from page 1L

Too often, the positive contributions made from green industry people are not reported because the actions are not controversial or sensational. So you should work to get your efforts recognized publicly.

Industry image—Each company in an industry contributes to the industry's general image. As new companies continue to proliferate, it is imperative that local

groups organize to protect that image.

Because most states do not have barriers to entry into the green industry, existing owners and employees need to police, maintain and improve the industry's image. Being an activist doesn't mean being a thorn in people's side, but it can make a difference: possible unwarranted regulations may be thwarted, and adversarial visits from federal and state regulators may be avoided.

The image your company has developed

or is developing takes time to mature. Staying active in the community while maintaining a professional, quality service will not only help your image but it will also improve the image of the industry. Take the little extra time to make sure your company is working on it.

—The authors are owners of *Wandtke & Associates*, a green industry business consulting firm located in Columbus, Ohio. To contact them, phone (614) 891-3111.

Using your advertising to educate customers

by Judy Good

■ "Diplomacy" is telling someone where to go in a way that they actually look forward to getting there. And using education in advertising is like diplomacy: it's putting your ad in front of someone so that they actually look forward to seeing it there.

I would like to encourage each of you to educate the public about our industry through the advertising or publicity you use to promote your company.

A few years ago, I suggested that J.B. Good develop a direct mail technique of marketing our tree services by mailing educational flyers to our local customers four times a year. We looked at the costs and thought it would be expensive. We didn't know if we could afford it, but we went ahead anyway.

We bought the postal permit, we paid our yearly fee, and we developed our first educational piece (which was pretty crude compared with the things we're using today). Here's what we used *then*: low-cost paper, one color, my crude graphics, printed 100 at a time. Here's what we use *today*: glossy paper stock, four-color photos, professional graphics, printed 100,000 at a time.

Why? Because educational advertising works. It not only tells people you want their business, but it tells them what to ask for. The phone rings and they'll either ask for some outdated practice or they'll ask for what you've taught them to ask for.

Nobody else is going to educate your market for you. Especially if you plan to stay on the leading edge of the industry. New information is coming out all the time and your customers are always going to be two or three steps behind you.



An example—A few years ago, we were contacted by the local government to bid the pruning of a set of trees. The specs said that all pruning cuts must be painted with an approved tree wound paint, even though current arboricultural practices do not include painting tree wounds. Yet the government wouldn't omit this portion of the specs because they were afraid of getting too many complaints.

The leading edge of the industry is the hardest to educate people about. You must lead by example, and educate those who question what you are doing. This does two things:

- 1) When people learn what you are saying is correct, they respect you.
- 2) It's a great way to "soft-sell" your services.

One of the things to remember about educational advertising is that it's more important to educate than it is to be fancy about it. As your company grows, and as you see the benefit of shunting dollars out of big display ads and into education, then your publications can get fancier.

Positive reinforcement—People tell

us that they've created files containing our advertisements. They may want to refer to some of our information.

We walk into houses and, lo and behold, they have one of our educational postcards magnetized to their refrigerator.

We walk into the local city parks shop and they have one of our postcards posted on their bulletin board.

We drive up to our bank teller and there on the window is one of our arboriculture calendars.

It takes the average person seven



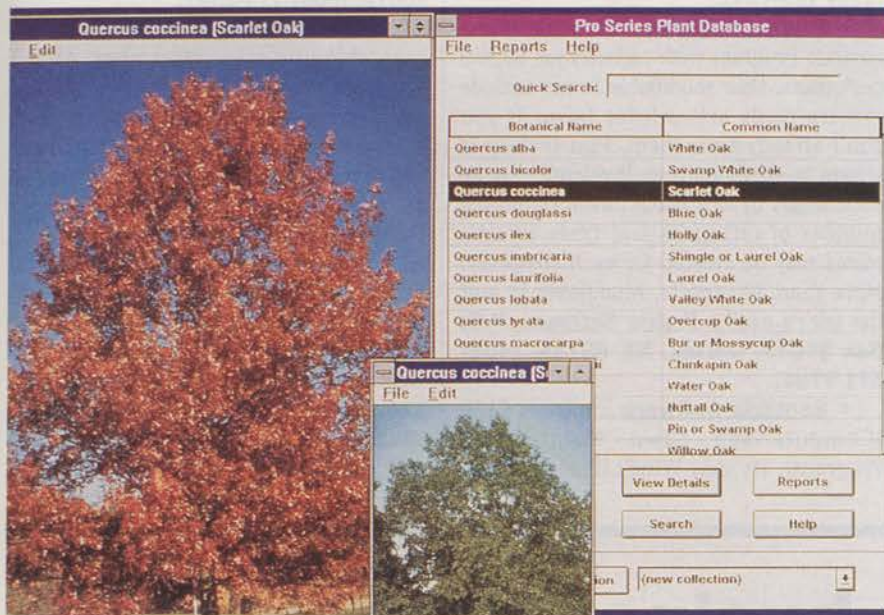
times of hearing something before they remember it. Before they understand it. So don't get discouraged. Just keep on educating.

One of the rules in advertising is that, just about the time you are so sick and tired of hearing your ad, the public is just beginning to take note of it. It will take a while longer before they actually understand it, and still longer before they request what you are offering.

If you've used educational advertising, you have well established yourself as a local authority on the subject, and word-of-mouth takes over as your best source of advertising.

—Judy Good and her husband John are co-owners of J.B. Good Inc. For more information, or to order educational post cards or posters, write them at 5250 N.E. Highway 20, Corvallis, OR 97330. Phone number is (503) 752-6260.

Computer software to help you stay abreast of the times



Green Thumb Software Pro Plant Database has cultural information to help the landscaper and homeowner envision more than 2,000 plants.

by Ron Hall,
Senior Editor

■ The newest computer software products directed at lawn and landscape pros are getting easier-to-use, more helpful, and more colorful. The most eye-catching are the graphics programs for landscape or irrigation design. But there are others that deal strictly with lawn/landscape business management.

Here are some of the newest software offerings, updates or news, coming across our desks:

- **Acacia Software**, a company that produces imaginative landscape design items, is gathering subscribers for its *Landscape Computer News*. The Spring 1995 issue had 12 pages, 10 of them filled with good stuff. You don't have to be a computer whiz to appreciate the information. Gerry Kiffe, the editor, describes the *News* "as a forum for ideas promoting the thoughtful use of computers in the landscape trade." Four issues a year cost \$30 plus s/h. **Acacia Software, 2899 Agoura Road, Suite 652, Westlake Village, CA**

91361. (805) 499-9689.

- **Books That Work's 3D Landscape** is low-cost software aimed at the do-it-yourselfer, but some landscape pros start with something like this, get excited about what design software can do, then move on to more powerful and versatile tools. At just \$49.95, the price is right. Also offered: *Garden Encyclopedia* and *3D Deck*. In fact, Books that Work has a nice section of home project software. **Books That Work, Customer Service Dept., P.O. Box 3201, Salinas, CA 93912-9869. (800) 724-8454 ext. 128.**

- **Creative Custom Software's Lawn Manager** program is made up of eight integrated programs: accounts receivable, maintenance billing, job cost tracking, chemical tracking, vehicle maintenance, accounts payable, payroll system and proposals. Recommended for 386/486 computer, 80+MB hard disk, 1 MB RAM and a VGA graphics monitor. One year free telephone support. Program comes "network ready" and can be modified upon request. **Creative Custom Software, 336-C Rockport Road, Port Murray, NJ 07865.**

(908) 689-5878.

- **Design Imaging Group (DIG)** offers a new CD-ROM disc containing more than 1,800 database items including trees, shrubs, and groundcovers from all zones; pools and spas; and a complete catalog of hardscape items including gazebos, arbors, and brick, stone and marble in several different textures and patterns. **DIG, 32107 West Lindero Canyon Road, Suite 108, Westlake Village, CA 91361. (818) 706-8786 (Calif.) or (201) 770-9212 (N.J.).**

- **Green Thumb Software's Pro Series Database for CD ROM** contains cultural information on more than 2,000 plants. Green Thumb says the program is a visualization tool for garden centers, landscape designers, and others who reference print-

continued on page 10L

THATCH MANAGEMENT!

THATCH BUSTER

*Cellulose Decomposing
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*Non-fulvic humic soil
amendment for improved
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FLORATINE

*Creative Solutions for
Turfgrass Management*



179 So. Main/Collierville, TN 38017
(901) 853-2898

Circle No. 110 on Reader Inquiry Card

COMPUTERS from page 5L

ed plant materials regularly. It is Microsoft Windows compatible. Product shipments began in April. It can be used stand-alone (IBM-compatible, 386SX minimum computer with Windows 3.1, 4 MB of RAM, CD ROM drive, VGA graphics, mouse recommended). Or it can be integrated with GT's LandDesignerPro and IrrigatorJetPro. **Green Thumb, 75 Manhattan Drive, Suite 100, Boulder, CO 80303. (800) 336-3127.**

• **Lafayette Landscape Designs.** Ric and Rhonda Jones updated their LLDesigns imaging/rendering graphics software with a new paint driver, NeoPaint v3.1B. The IBM-compatible software offers 629 cultivars (in 256 colors) depicted to scale. It can be easily manipulated, using NeoPaint, to produce realistic elevation views. The perennials, annuals, bulbs, trees and shrubs are drawn as flowering and non-flowering to allow the designer to show the client a month-by-month progression of bloom in a plan. Faithfully

drawn landscape graphics. Complete packages, including a full legal copy of NeoPaint and the 629 Zone 5 cultivars, retails for \$350. Demo disk available. Smaller, individual packages for perennials, woody plants and annuals also available. **Lafayette Landscape Designs, 6323 Lafayette Road, Medina, OH 44256. (216) 725-7442.**

• **Prairie Software.** Grounds Maintenance Program with capacity for 99,999 customers. User modifiable forms include camera-ready artwork for forms if you don't already have them. Past history is always available on line. Invoicing may be done singly or in a batch mode. Unlimited number of estimates and types of estimates may be created for each customer. More than 30 reports, modifiable to suit the user's needs. **Prairie Software, P.O. Box 34645, Omaha, NE 68134. (402) 571-9786.**

• **Sensible Software** improves CLIP (Computerized Lawn Maintenance Program). Its new WinCLIP release is a

complete Microsoft Windows compatible program that includes job costing, work projections, estimate management, equipment management and other features. Sensible Software's CLIP has been around since 1988 and has garnered a strong following. **Sensible Software, 2 Professional Drive, Suite 246, Gaithersburg, MD 20879. (800) 774-2547.**

• **TKO Software's** RainCAD 3.0 has been shipping since December. All 1.1 users can upgrade for only \$250, and 2.0 users can upgrade for \$20 to cover printing of a new users manual. Also IRRICALC-Pro and EZ, two Windows programs, are now available. A water cost database allows for price estimating by gallons, cubic feet, or acre feet for each month of the year. Xeri-Calc 1.0 for low-volume irrigation is another recently developed Windows program. **TKI Software, 800 West Sam Houston Parkway South, Suite 220, Houston, TX 77042. (800) 348-3248.**

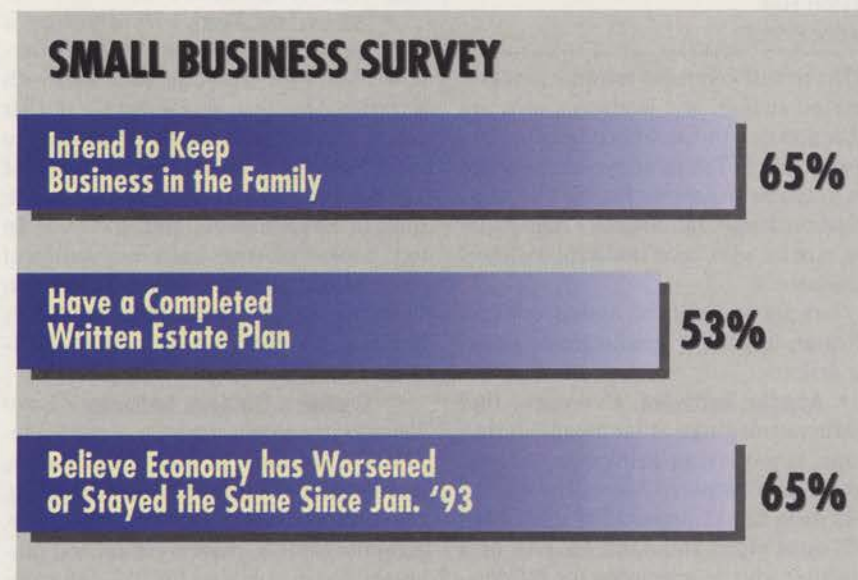
More family business owners are contemplating selling out

Economic conditions and new income tax and estate tax laws may be the reason.

■ Even though it's a time of economic growth, 65 percent of family business owners believe that the national economy has gotten worse or merely state the same since Bill Clinton became President, according to a survey by Massachusetts Mutual Life Insurance. Only 32 percent feel it has improved.

Possibly because of this perception—and others—fewer family business owners are passing their ownership to close relatives, the survey notes. Last year, 65 percent said they intended to keep the business in the family, but this year only 57 percent of the 1,002 respondents said the same.

"It could be that people are taking a look at passing their businesses on at the same time they are starting to deal with



changes in the income tax and estate tax laws," says Dr. Bonnie Brown, director of the Institute of Family Business at Baylor University. "That combination may be giving them reason to think that they may be better off to sell."

Fifty-three percent of the survey participants think business conditions have gotten worse for family businesses, while only 11 percent say they have improved.

"There was clear disapproval of the Clinton Administration," says Dr. Craig

Aronoff of Kennesaw State College in Georgia.

Here are other survey findings:

- 53% said they have completed a written estate plan. (Since estate tax rates can now be as high as 55 percent, businesses can often thrive or fail based on their ability to pay taxes without having to divert funds from the business.)

- 62% claim to have either "a good idea" or "some idea" of what their estate tax liability will be.

- 47% will pay the estate tax bill with life insurance.

- 28% have prepared a written succession plan.

- 93% have never used a consultant or counselor to help resolve family conflicts.

- 57% say they want to work as long as possible before considering retirement. (Only 33% have a target retirement age.)

- 21% of the respondents are women, a much higher percentage than in large, non-family corporations.

The key to fairer succession, notes the Henning Family Business Center, is life planning. There are four reasons to put a will and trusts in place, the center observes:

- 1) To assure your spouse's security.
- 2) To create equity among your children.
- 3) As a means to transfer your business.
- 4) To save estate taxes.

Henning says that successful life planning includes the following:

- Financial security for parents.
- Family values development.
- A family mission statement.

Family business formula for success

■ To be successful in a family business, members must have the following qualities, according to David Bork, a family business counselor based in Aspen, Colo.

- 1) **Shared values**, especially about people, work and money. "If there is a basic agreement about underlying values, then it is possible to create a shared vision for the future," Bork says.
- 2) **Shared power**, as families learn to respect one another's competence and expertise. "We each have different strengths, talents and abilities," Bork notes.
- 3) **Traditions** like travelling together or spending holidays together, Bork

- A business plan.
 - Successor training, including leadership development.
 - Choosing the successor.
 - Preparing for retirement.
 - Career mapping for the entire family.
 - A participation policy for the family.
 - Transfer of ownership and control.
 - Retaining "key" non-family employees.
 - Development of a new management team.
 - An emergency plan for succession crisis.
 - Developing a family council.
 - Activating a board of directors.
- All of this planning serves to magnify

says, bond the family into a unit.

- 4) **A willingness to learn and grow.**
- 5) **Activities** for the maintenance of relationships "put 'relationship currency' into the family bank," he says.
- 6) **Genuine caring** for each other.
- 7) **Mutual respect and trust.** "Some might even call it love," Bork believes.
- 8) **Assistance and support**, "especially at times of grief, loss, pain and shame."
- 9) **Privacy.**
- 10) **Well-defined interpersonal boundaries** that keep individuals from getting caught in the middle.

the benefits of all the years of hard work, according to management consultant Peter Drucker. In effect, he says, it is the "Final Test of Greatness."

—For complete results of Mass Mutual's survey, phone the company at (800) 494-5433 in Springfield, Mass. If you would like more information about the Henning Family Business Center's programs on succession or Mike Henning's consulting arrangements, you can phone (217) 342-3728 in Effingham, Ill. The Henning group also publishes a regular newsletter titled "Mike Henning's Family Firm Advisor."

Trading your services for other commodities

■ Just because you're short on cash doesn't mean that you have to go without. More and more business people are turning to bartering—and finding that it can be good for business.

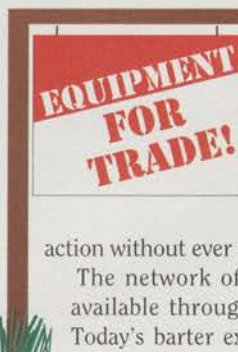
In its simplest form, bartering involves an equal trade. One business swaps goods or services for another. A retail florist or grower might trade merchandise for computer equipment. A landscaping company may trade its service for advertising space in the local newspaper.

Through professional barter exchanges, where members pay a commission for

goods or services traded, more complicated trades are possible. Here's how it works:

A business lists something for trade through the exchange. In return, the business receives a trade credit based on its dollar value. The business can then use its trade credits to "purchase" goods or services offered by other members. The result is that the business is hooked up with a network of actively bartering businesses.

For example, a garden center might offer plants and trade its barter credits in for mowing services. The mowing service might trade its credits in for computer



equipment. And the computer company might trade its credits for office plants. Three separate businesses have taken part in a buy-and-sell trans-

action without ever exchanging a dime.

The network of goods and services available through barter is growing. Today's barter exchange may have as many as a few thousand members nationwide. As bartering becomes more popular, some barter exchanges are starting to trade with each other, further expanding the bartering opportunities available to their members.

Bartering is also another way of advertising
continued on page 10L



John Deere riding lawn mowers are designed for safety and reliability. The F1145 features a roll-over protection structure (ROPS) to help protect the operator in the event of a rollover. Always use proper operating procedures and wear your seat belt for maximum safety.

The F1145 is a powerful and versatile riding lawn mower. It features a 25-horsepower engine and a 42-inch cutting deck. The mower is equipped with a hydrostatic transmission for easy operation and a front-end loader for additional utility. The F1145 is a great choice for homeowners with large lawns or commercial users.

John Deere is committed to providing high-quality equipment and excellent customer service. For more information on the F1145 or other John Deere products, please contact your local John Deere dealer or visit our website at www.johndeere.com.

Turns Mountains Into Mowhills

If you've got the wrong equipment, even mowing the flats can be an uphill battle. That's why more and more cut-

[4-WHEEL DRIVE F1145]

ters are climbing up on the John Deere F1145. With its new 28-hp engine, our high-torque diesel is the undisputed king of the hills. And though it won't turn the slopes of Sun Valley into a stroll through Sunny Brook Farm, this 4-wheel-drive is tough to top. Thanks to rugged componentry it shares in common with our 855 Compact Utility Tractor. Hydrostatic drive, 2-speed axle, differential lock, wet-disk brakes and planetary final drives. Make mowhills out of mountains. See your dealer for an on-site F1145 demo. Or for more information, call 1-800-503-3373.



NOTHING RUNS LIKE A DEERE®

Circle No. 114 on Reader Inquiry Card

TRADING from page 7L

ing your business. By bringing together buyers and sellers who may not have used each other's services before, it can introduce your company to new customers. These may be one-time customers or people who come back to purchase services once they've become acquainted with the business.

Companies that actively barter may do as much as 5 to 10 percent of their business annually through trades. The National Trade Association, one of the largest barter exchanges, recorded a record-breaking \$30 million worth of trades last year. And the ability to barter is not limited to size: corporate giants all the way down to one-person, at-home businesses can use it.

Barter exchanges typically charge a one-time membership fee. Some exchan-

ges also may extend a line of credit to new members. That way, they can start using credits before they've sold anything through a successful trade. Barter exchanges also offer the advantages that they don't require an even trade. You can use credits accumulated for one item to trade for several different items that together add up to your total credits.

Remember, however, if you get involved with bartering that there is no tax advantage. Barter and cash transactions are taxed equally by the Internal Revenue Service. In fact, the barter exchanges themselves must report goods and services sold through barter to the IRS.

Bartering also offers no guarantees. Some trades may happen quickly, others may take some time. An item a lot of businesses want—such as airline tickets—may

be snapped up right away, while carpeting may take a few months to trade.

And you can't always count on getting what you want, when you want it, through barter. The amount of certain goods and services available for trade may fluctuate during the year.

But you have to weigh the advantages against the disadvantages. Bartering turns your downtime or excess inventory into valuable commodities. It increases your sales while enabling you to purchase goods or services you need without any upfront cash. Remember: to make bartering work, you have to be patient, you have to persevere and you have to pick and choose what you want to purchase through barter.

—For more information on bartering, you can telephone the National Trade Association at (708) 390-6000.

Getting back tax refunds from losses you've previously incurred

by Mark Battersby

■ Fact of life: losses happen. And they aren't always the result of bad management or a poor economy.

In fact, one type of loss, a tax loss, can result from too many deductions rather than poor management. The trick is to make the most from these particular inevitable losses.

Many lawn/landscape business owners view losses as a temporary situation, claim the loss, accept a zero tax bill and go on to the next year. However, under our tax rules, you are probably allowed to carry back a net operating loss (NOL) from your business to apply as a deduction against prior income and to deduct from succeeding years' income any unabsorbed loss.

Put another way, a loss can produce a zero tax bill for the loss year but, handled properly, it can also result in a refund of previously-paid taxes or taxes that will be assessed when the company prospers again.

Simply stated, a NOL is the excess of allowable deductions over gross income, computed under the laws in effect for the loss year, along with any adjustments required by our tax law.

One of the prime benefits of a net operating loss is the fact that the losses may be carried back or carried forward to offset income

in those years when profits—not losses—resulted from the operation of the business.

A loss can produce a zero tax bill for the loss year or earn you a refund of previously-paid taxes.

The NOL carryback or carryover is generally that part of the net operating loss that has not previously been applied against income for other carryback or carryover years. In general, the NOL can be carried back three years.

When it carries—A NOL is first carried back to the third year before the NOL year; if not entirely used to offset income in that year, it is carried to the second year

preceding the loss year and any remaining amount is then carried to the tax year immediately preceding the loss year.

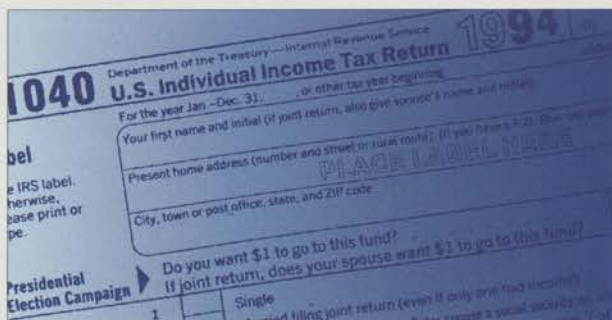
If the taxable income for the three preceding years is not sufficient to absorb the entire loss, any remaining loss is first carried to the year

immediately following, then to the second year following, up to 15 years or until the entire loss is used up.

A special carryback refund procedure allows incorporated landscapers to get refunds from applying the NOL to an earlier year's tax return by filing Form 1139 (Corporation Application for Tentative Refunds). The IRS is required to act on this application within 90 days of either the date it's filed or the due date for the corporate income tax return, whichever is later.

The immediate cash infusion resulting from refunds of previously-paid taxes is not the only nice thing about NOLs. If you are entitled to a carryback period, you may choose, instead, to forgo the entire carryback period to carry the loss forward only.

This election must be made by the return due date (including extensions) for the tax year of the NOL. Unfortunately, the



election is irrevocable for the year in which it's made.

Net operating loss deductions are obviously more valuable in high income years when your tax rate is higher. Thus, carrying back a net operating loss—or increasing it—can be a good choice if you have a high income during those carryback years.

On the other hand, if you paid tax at a low rate in the carryback year but anticipate higher income in future years, you may want to conserve your NOL.

Naturally, if you choose to ignore the carryback provisions of the rules, there is no reason to attempt to increase the current-year NOL since expenses and losses taken will be claimed in later years anyway.

Strategies—Here are some strategies you can use to increase a NOL legitimately:

- You can accelerate deductions into the next tax year by, for instance, purchasing next year's supplies in the tax year when a loss appears inevitable.

- In some cases, income can be deferred from the loss year to the next. Check with your accountant.

- You may want to take down losses on investment or other assets when their book values or bases are greater than fair market value.

- Planned equipment purchases can be accelerated to take advantage of the \$17,500 expensing deduction or to increase the loss-year depreciation deductions.

- You might be able to take steps to nail down bad debt deductions for uncollectable accounts.

Net operating losses are not always bad. All too often, they are the result of depreciation, first-year write-offs (up to \$17,500) of newly-acquired equipment, fixtures or other business assets.

Tax Form 1139 is the key. But if a carryback entitles you, your estate or your trust to a refund of prior-year taxes, file Form 1045 for a quick refund.

—The author is a freelance writer specializing in tax and financial issues. He is based in Ardmore, Pa.

Ornamentals can grow, even in difficult areas

■ Whether your clients' land is too wet, too dry, too shady or too steep, there are beautiful, hardy plants that will thrive.

"The trick to a low-maintenance, long-lived landscape is selecting plants best suited to grow in the climate and soil conditions," says Dr. J. Robert Nuss, professor of ornamental horticulture at Penn State University.

Overly wet soils occur in low-lying areas and are produced by springs, a high groundwater table or nearby ponds or streams. "Consider yourself lucky if you have a wet area on [your client's] land," says Nuss. "It can support a wide range of exotic plants, many of which grow nowhere else."

Annuals that do well in shady, poorly drained areas are shown in the chart above.

Garden centers and catalogs carry

native fern and wildflower stock. "Be patient when introducing wildflowers to an area, though," Nuss suggests. "It may take a few years for them to get established and become showy."

Shrubs and trees that do well in damp, shady places are also shown in the chart. And some fruit-producing shrubs, such as blueberries, also grow in partial shade if they receive a half-day of sun to help flowers and fruit develop.

"Many of these plants do just as well in shady, well-drained areas," says Nuss.

Sunny, dry slopes, though, are another story. "Even during rainy periods, slopes land quickly loses water. These areas require plants that don't mind droughty conditions."

However, even drought-resistant plants

"appreciate organic mulch and periodic watering during the hot summer months," Nuss observes.

Sometimes soil composition also requires careful selection of plants. Heavy clay soil presents problems for plants with delicate root systems, and for most annuals you'll have to work in a "generous amount of organic material."

Nuss recommends a soil test, done by either a private lab or your friendly, local cooperative extension agent.

"You can save time and money by learning about soil, light and water conditions and by selecting well adapted species," Nuss concludes. "With just a little care, you can have a beautiful landscape just about anywhere."

HARDY PLANTS FOR THE LANDSCAPE

ANNUALS FOR SHADY, POORLY DRAINED AREAS:

impatiens, sweet alyssum, scarlet sage, blue sage, verbena, some wildflowers (cardinal lobelia, forget-me-not, wild iris, many violets)

SHRUBS AND TREES FOR DAMP, SHADY AREAS:

alder, dogwood, pussy willow, weeping willow, magnolia, mountain laurel

FLOWERS FOR SHADY BUT DRIER AREAS:

columbine, lily of the valley, bleeding heart, balloon flower, daylily

SHRUBS AND TREES FOR SHADY BUT DRIER AREAS:

boxwood, false cypress, holly, hemlock, pine, yew, barberry, cotoneaster

ANNUALS FOR SUNNY, DRY SLOPES:

marigold, zinnia, four o'clock, geranium, cosmos

PERENNIALS FOR SEMI-ARID AREAS:

yarrow, butterflyweed, daylily, lupine, oriental poppy, prickly pear cactus, many groundcovers like crownvetch and sedum, some ornamental grasses

PLANTS FOR HEAVY CLAY SOILS:

mint, coltsfoot, Siberian iris, perennial sweet pea, red maple, American Hornbeam, pin oak, arborvitae

Need new business?

■ One way to enhance or build a landscape contracting business is to provide services that relate to these future gardening trends, as outlined by Charles Dunn, founder of The Garden Center in Tampa, Fla.

- yards as "outdoor rooms" to live in, rather than just look at
- intensive gardening in small areas
- structural and planted privacy screens
- night lighting of landscape features
- aquatic gardens, garden accessories that feature water
- wildflower plantings
- ornamental grass plantings
- bush fruits, containerized dwarf fruit tree plantings
- herb plantings
- color and fragrance as factors in choosing plants



- heirloom and antique cultivar plantings
- bird feeding
- homegrown flowers for cutting
- no-mow groundcovers instead of grass
- smaller lawn areas
- environmental activism
- water-conserving techniques
- potted plants
- emphasis on perennials rather than annuals
- landscape furnishings
- plants from other countries
- home gardening as an interest of older people

—Courtesy of ALCA Contractor News, May 1994. For more information about the Associated Landscape Contractors of America, phone (703) 620-6363.

PROFESSIONAL LAWN CARE ASSOCIATION OF AMERICA (800) 458-3466

■ **THE ENVIRONMENTAL** Protection Agency praises the PLCAA for its participation in the Pesticide Environmental Stewardship Program, which recognizes organizations that demonstrate a progressive approach to pesticide use.

"I applaud the steps your organization has already taken toward reducing the risks from the use of pesticides," noted Daniel M. Barolo, EPA's director of the Office of Pesticide Programs. "To further advance our common environmental goals, the next steps require collaborative public-private partnerships. Your willingness to join the PESP indicates your dedication to these goals."

Tom Delaney, PLCAA's government affairs director, says that the organization is developing its environmental stewardship strategy now.

THE CERTIFIED Turfgrass Professional program is catching on around the world with lawn applicators from the U.S., Singapore, Israel, Canada and Bermuda expressing interest.

"We have more than 600 people registered and 45 who have successfully completed the course and earned their CTP," reports Dr. Helen Mills, head of the University of Georgia's Community Learning Resources department, which coordinates the program.

For a free brochure on how to become a CTP, call (800) 458-3466 or fax (404)

ASSOCIATION NEWS

578-6071. PLCAA members receive a discount on enrollment fees.

ASSOCIATED LANDSCAPE CONTRACTORS OF AMERICA (800) 395-2522

■ **WHO'S WHO** in Landscape Contracting, ALCA's annual membership directory, has been mailed to all members. Additional copies are only \$5 each for members and \$25 for non-members (plus \$1.50 shipping and handling).

SEVERAL SESSION topics have been confirmed for ALCA's the 1995 Landscape and Grounds Maintenance Conference being held Nov. 12-16 in Fort Worth, Texas in conjunction with the Green Industry Expo.

Confirmed sessions include: "Building a Successful Management Team," "Irrigation Maintenance & Operations," "Selling Residential Design/Build Services," "Snow: Everything You Ever Wanted to Know," "Leadership Principles," "Estimating for Successful Bidding," "Improving Productivity" and "Annuals: Add Spice with a Color Program."

Keynote speaker at the Green Industry Expo will be former prisoner-of-war Charlie Plumb.

MASTERS IN MANAGEMENT seminars will be held in three U.S. cities over the next three months: July 28-29 in Baltimore, Md.; Aug. 18-19 in Chicago, Ill. and Sept. 15-16 in Denver, Colo.

For inquire about space in a particular seminar, phone Connie Whelchel at ALCA headquarters.

ENTRIES FOR the Exterior Environmental Improvement Awards are due in ALCA's office by August 18.

PROFESSIONAL GROUNDS MANAGEMENT SOCIETY (410) 584-9754

■ **COMPANIES MAY** now become members of PGMS, a heretofore professional society for individuals.

"The broadening of our membership offering was the result of two major considerations," says PGMS president Steven W. Chapman. "First, we have been receiving increasing numbers of inquiries from companies—industry suppliers and others—who are interested in working more closely with PGMS and its members, and we just didn't have a mechanism to make that happen as naturally as we would have liked."

"Also, the addition of company members makes us more parallel to our partners in the Green Industry Expo, and will make certain exhibitor-related arrangements for the Expo more easily accomplished."



LANDSCAPE MANAGEMENT

New Products '95

DOWELANCO

Dursban Pro insecticide controls chinchbugs, cutworms and a variety of other insects.

Dursban Pro, an emulsifiable concentrate, was designed to provide turf and ornamental professionals with the same proven performance they've come to expect from Dursban in a new low-odor formulation.

Dursban Pro replaces other Dursban formulations, including Dursban 2E, Dursban 4E and Dursban Turf Insecticide.

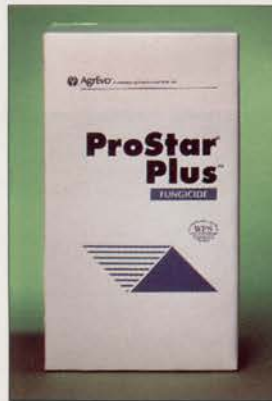
Circle No. 153 on Reader Inquiry Card

AGREVO

AgrEvo's Prostar Plus fungicide is a twin-pack of two independently registered products—Prostar 50WP and Bayleton 50 Turf and Ornamental Fungicide—for control of brown patch, dollar spot and 17 other turf diseases.

The key to the twin-pack's effectiveness is a synergism which dramatically increases the length of brown patch control. Prostar has preventive and curative control of brown patch.

Circle No. 151 on Reader Inquiry Card



CIBA TURF & ORNAMENTAL PRODUCTS

A new application system for Ciba Turf & Ornamental Products' Alamo fungicide has been registered with the Environmental Protection Agency.

Alamo is a systemic, for control of oak wilt and Dutch elm disease.

The new micro-injection system makes the product easier to use and less expensive to apply, and provides a "closed" delivery system.

Circle No. 152 on Reader Inquiry Card



KUBOTA TRACTOR CORPORATION

Kubota Tractor Corporation's L35 tractor-loader-backhoe has more power than most tractors, and offers greater mobility than full-size industrial models.

Powered by a 35 gross-hp engine, the L35 is equipped with a full-scale backhoe and loader specifically designed to handle heavy excavation and fill work, particularly in narrow spaces.

Circle No. 156 on Reader Inquiry Card

FLORATINE PRODUCTS GROUP

Floratine produces specialty products for turf, including auxiliary nutrient biostimulants, soil correction and balancing amendments, and spray adjuvants.

Floratine's specific design growth enhancers (Aston, Per "4" Max, Knife, Renaissance (and Perk Up) promote general health, stress resistance and root growth in intensively managed turf. Soil treatments/amendments improve moisture and nutrient management.

Circle No. 154 on Reader Inquiry Card



LANDSCAPE MANAGEMENT



FOX VALLEY SYSTEMS, INC.

The Easy Marker has been completely updated for better, more effortless marking. A wider comfort ease trigger lets the compatible power paint cartridges stay locked, eliminating hand fatigue.

The Easy Marker is for construction companies, utility companies and contractors. According to the company, the Easy Marker is innovative, new and economical, with state-of-the-art design.

Circle No. 155 on Reader Inquiry Card

LOFTS SEED

Lofts Seed has released, in limited supply, the new bentgrass known in research trials at Texas A&M University as SYN3-88. It will be commercially available as Crenshaw Creeping Bentgrass.

Crenshaw displays excellent heat resistance. It produces a bright green, dense, upright turf with less grain.

Circle No. 157 on Reader Inquiry Card



VALLEY MANUFACTURING

The E-Z Dumper, the original hydraulically operated dump unit for pick-up trucks, is offering a free cab protector with every E-Z Dumper purchased April 10 through July 15.

E-Z Dumper holds up to 4000 lbs., and unloads in seconds, eliminating long hours and hard work associated with manual unloading.

Circle No. 159 on Reader Inquiry Card

MILES SPECIALTY PRODUCTS

Merit 75 WSP insecticide is a new broad-spectrum systemic insecticide that is extremely effective at very low rates.

It offers less risk to applicators, man and the environment.

Imidacloprid, the active ingredient in Merit, delivers superior season-long control of turf and ornamental insects without repeat applications.

Circle No. 158 on Reader Inquiry Card

WOODS EQUIPMENT COMPANY

A new line of high-performance, durable flexwing turf finish mowers from Woods Equipment Company are made for golf course, sod farm and other large-acreage turfgrass sites.

The Turf Batwing Finish Mowers come in three models, with 12- 15- or 17-foot decks.

Heavy tube frame construction features strong pivot points that prevent the wings from assuming a swept-back attitude after normal use.

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Keep a watchful eye to extend equipment life



A list of important things to know before finalizing a preventive maintenance program for your mowers, trimmers, blowers and edgers.

by Eli Luster

■ All of us face ever-rising standards and ever-lower budgets. Personnel and equipment are expected to do more than ever before. To help get the most out of your equipment, a preventive maintenance program can:

- 1) extend the life of your equipment;
- 2) provide you with written records;
- 3) provide maximum uptime; and
- 4) make your machines safer.

If you want to lower the total cost of doing business, you don't lower the equipment maintenance budget. It's been my experience that the condition of a shop is almost always reflected in the condition of the equipment and the condition of the turf.

Some of the new machines—like five-reel mowers—have close to 3,000 parts. One bolt can drop off and you're going to have downtime. And that's not the worst part. The worst part is when another machine comes along and the bolt goes

through a reel.

Excellence begins with your own attitudes: diligence, perseverance and attention to details. So the more effort you put into preventive maintenance, the greater the benefits.



Eli Luster of John Deere doesn't advocate additives to motor oil.

One of the first things to do is meet regularly with operators. Some of the best ideas for preventive maintenance come from your staff. You'll also get to know their concerns.

The manual—Keep equipment manuals handy; consult them regularly. They've

been researched, written by qualified writers, and approved by engineering staffs and technical editors. Usually they're illustrated by trained photographers or artists. Store them in a proper, easy-to-access location. Even experienced operators should review them. You can use them as a guide to develop your own preventive maintenance program.

Fuel and its use—The fuel system has to be clean and fresh, and you cannot tolerate moisture in it. Either use the largest underground storage tanks you can get by with, or build a roof over above-ground storage tanks. It's important that tanks be kept out of direct sunlight because heat and light are the two things that degrade fuel the quickest.

Two-cycle engines should have their own storage area. Write the mix right on the tank of each piece of equipment.

If you are using alcohol-based fuels (ethanol, ether, methanol), don't store them for more than 30 days. Methanol is highly corrosive: it'll melt plastic and eat rubber. To find out if you're using an alcohol-based fuel, see chart on page 18.

The new premium anti-pollution fuels are causing faster carbon build-up in cylinders, so you have to be especially watchful.

The best way to combat fuel problems is to use the fuels in a timely manner. Don't use fuel mixes left over from the previous summer or winter. Summer-blended fuels are less volatile in colder weather and give you carbon build-up on spark plugs. Conversely, you can get vapor lock with winter-blended fuels and a hotter running engine.

Your unused fuel? Don't dump it; call a waste management facility.

Diesel fuel supports the growth of bacteria and algae in warm, humid climates. If this happens, it has to be cleaned out of the entire fuel system. To help alleviate the problem:

□ Keep storage tanks as full as possible.

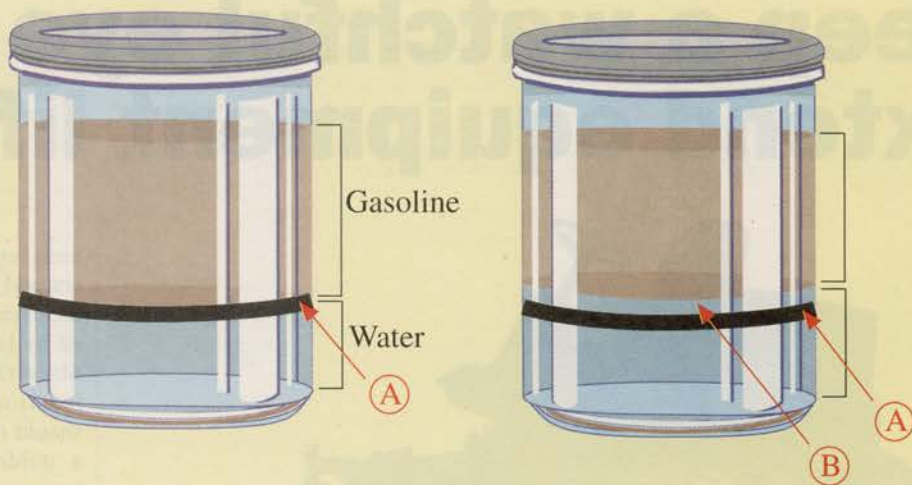
□ Use a bactericide or algicide as an

continued on page 18

TO TEST FOR AN ALCOHOL-BASED FUEL

- 1 - fill a container about 1/4 full with clean water;
- 2 - fill container to 3/4 full with fuel;
- 3 - using a marker, mark line of fuel/water separation (A);
- 4 - cap and shake vigorously for 2 to 3 minutes;
- 5 - let settle 3 to 4 minutes.

If new line of separation (B) is higher than original line (A), the fuel IS alcohol-based.



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additive.

□ Change fuel filters at manufacturer's recommended intervals.

Replacement parts—"Will-fit" parts are different than original equipment manufacturer parts. You really have to be aware of the differences. Will-fit parts are usually required to have some military specifications, but original parts sometimes have things in them that aren't in

Other key points—Numerous other factors play key roles in how well your equipment functions on a day-to-day basis:

- Operators are your best service people because they know the machines. Train your operators to be alert to changes in the machine's performance. Look, feel and listen to the machine. Smell it, too.

- Equipment should be kept looking good. Keep it clean, and take care of paint nicks. It helps give you more trade-in value and forms a good operator's opinion of the equipment.

- Part of the reason we use anti-freeze is because of its corrosion inhibitors, especially in aluminum engines. So change it regularly because old antifreeze will still be cooling the engine but the anti-corrosive elements will be used up.

- The worst thing you can do for an air-cooled machine is to take the shrouding off. It must remain in place. In the spring, if you're having problems, you can

check behind the shrouding for mice nests.

- I don't advocate any additives to oil. Most oils today are far superior to what we were using a few years ago.

- Nothing will determine the quality of cut more than the cutting unit itself. People judge you by how your turf looks, and you can't cut grass with a blunt edge. Angles, reel speeds, and ground speeds have the potential to give you poor turf or shortened machine life. You should also clean the accumulated grass out of rotary decks.

- You have to have documentation. If you can go back and check how much the equipment is costing you to operate, you know whether it's time to trade it in. It can be as simple as a spiral-bound notebook.

- You almost need a checklist for end-of-day service. I suggest you blow-down the equipment with compressed air before you give it a liquid wash.

Checking up—Make these three checks regularly:

CHECK UP...Make sure the operators are performing regular maintenance. Have operators sign and date the checklist. Nobody can remember everything.

CHECK BACK...occasionally to make sure the pre-start checks are being done.

CHECK WITH...supervisors to make sure people are doing the checking.

Preventive maintenance is tough, but it's rewarding. You *can* save money—how much is up to you. Commitment means not what you are, but what you're willing to become.

—Eli Luster is field service coordinator for John Deere's Horicon (Wis.) Works. This article is an excerpt of a presentation he gave at the Sports Turf Managers Association's annual conference earlier this year.



Angles, blade speeds and ground speeds have the potential to give you poor turf and shorten your machine's life, neither of which will help your bottom line.

the military specs. Will-fit parts look the same and fit—but they give you totally different performance. If you're going to use well-fit parts, you're going to have to know the difference.

The *real costs* of your maintenance equipment from a bidding perspective

by J. Paul Lamarche

■ More important than any other criteria you might use to purchase equipment, the machine must match the job for which it is intended.

You can simplify the selection process by talking to your equipment dealer, who should be highly trained, service oriented and backed by the manufacturer.

Many contractors are confused by the wide variety of equipment available. Indeed, many walk into a dealership and ask, "Which is the cheapest machine available?" when they should be asking, "Which machine best suits my needs?"

Let's focus on choosing the right machine from a job bidding perspective. When examining the different types of mowing equipment, the first question you should ask is "Can I afford it?" On the other hand, you should be taking into account any potential increase in productivity that could result from buying a more expensive machine. This is especially important when the machine lowers the per-hour cost to your customers.

So then ask yourself if you can charge for the equipment, get a return on investment, still be competitive, and also actually increase your productivity.

To answer these questions, you will have to obtain the following information from your dealer for each piece of equipment you're considering:

- 1) cost of machine,
- 2) the machine's life expectancy in hours, and
- 3) operating capacity of the machine.

You also need to look at certain figures pertaining to your own company:

- 1) overhead as a percentage of sales,
- 2) hourly rate of pay for the equipment operator, and
- 3) hours you use the machine per year.

From this information, you can figure out how much you need to charge per hour. Is this rate competitive? Can you actually afford the machine?

Brass tacks—Let's compare the operating costs between a 48-inch walk-behind mower that mows and mulches and a 48-inch riding tractor that mows, mulches, vacuums and dethatches. The walk-behind

might cost \$3000 while the tractor might cost \$9000. Which is the better bargain?

Contractors trying to reduce their debt load might be inclined to choose the first machine and save the second for "maybe next time." But there is more to it.

For a company that might use the machine 750 hours per year (25 hours a week for 30 weeks), either machine would have a lifespan of approximately four years.

According to the JPL Equipment Costing Formula, the hourly cost of any machine is obtained by dividing the lifespan (in years) by two, multiplying it by the annual usage (in hours), and dividing the result into the cost of the product in question.

In other words, the \$9000 machine costs \$6 per hour to use and the \$3000 machine costs \$2 to use. With the \$9000 machine, you would earn \$18,000 over its lifespan (4 years multiplied by 750 hours multiplied by \$6 per hour). With the \$3000 machine, you would earn \$6000. So you can see that you're actually earning "return on investment" with both machines.

The cost of the operator must also be considered. For a worker making \$7.50 an hour, the total payroll burden (taxes, insurance, worker's comp) might be \$10.50 per hour. Downtime (travel time, coffee breaks, sharpening blades, etc.) usually amounts to 2.5 hours per 10-hour day, so you'll have to compensate yourself for this time: add 25 percent for a total charge to your business of about \$14 per hour for operator costs.

For the \$9000 machine, to figure out the hourly break-even charge using the JPL Estimating Formula, add the cost of the operator (per hour) to the cost of the equipment (per hour) and divide by 100% minus your overhead. In our example, the break-even price is \$33.34 per hour for the



You can actually earn return on investment with most mowers. How much return, though is variable.

\$9000 machine. To get 10% profit, you have to charge the customer \$40 per hour.

For the \$3000 machine, the break-even charge would be \$26.67, and to get 10% profit, you have to charge the customer \$32 per hour.

However, since the \$9000 machine also picks up cuttings and debris, it eliminates the extra labor you would need for raking up and passing the leaf and grass blower.

If you have a three-acre maintenance job that requires cutting and raking, the \$9000 machine will do the work in two hours maximum. The \$3000 machine would take four hours maximum.

Therefore, you would have to charge the customer \$80 using the large machine, but you'd have to charge \$128 using the smaller machine.

Figuring costs of the machine on the job, and considering the typical jobs they will be required to do, will help you decide which type of machine to buy, and whether—in fact—you should initially buy a more or less expensive machine.

—The author is owner of JP&L in Niagara-on-the-Lake, Ontario, Canada. The company specializes in financial and marketing strategies for horticultural and construction firms across North America.

For more information, phone (905) 935-2648.

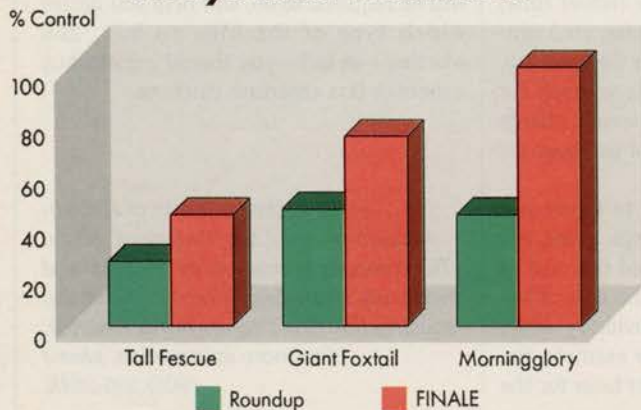


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