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## PASPALUM from page 40

Applications of nitrogen of at least 1 lb./1000 sq.ft. per month are needed during establishment.

After establishment, seashore paspalum needs 1/2 lb. N/1000 sq.ft. during the growing season to maintain good quality. However, high nitrogen fertilization during summer months produces excess growth and leads to scalping problems. Rooting characteristics of seashore paspalum are similar to those of bermudagrass.

The turf appears to have few disease problems, although it is susceptible to brown patch and leaf spot. However, weed control can be a problem (see sidebar).

### Rooting characteristics of seashore paspalum are similar to those of bermudagrass.

Two weeds of primary concern to turf managers trying to establish seashore paspalum are crabgrass and goosegrass. Both noxious weeds are difficult to control and are prevalent in warm-season turf.

Crabgrass, a bunch grass, is the most common weed in lawns and professional turf areas. Goosegrass, which is often confused with crabgrass, is the single most prevalent weed in the southern U.S. It thrives on putting greens, compacted soil and areas with heavy foot traffic. To help control outbreaks of both types of weeds, deep, infrequent irrigation should be used.



Dr. Joe DeFrank of the University of Hawaii thinks herbicides labeled for seashore paspalum should be applied 12 days after applying stolons.

## Controlling weeds in seashore paspalum

■ Dr. Joe DeFrank of the University of Hawaii has been searching for ways to control problem weeds in newly-established seashore paspalum turf.

"Until recently, there wasn't a pre-emergence herbicide labeled for newly-established seashore paspalum," he says. "So turf managers had to wait until the weeds came up and then try to mow the weeds down, take them out manually, or spot-treat them with a post-emergent. But all of these options are undesirable because of the high cost of labor input."

Through his research, DeFrank now recommends Ronstar (oxadiazon), which can be used soon after sprigging.

One of DeFrank's experiments looked at applying pre-emergents during a seashore paspalum hydro-sprigging operation. One part of the experiment featured a

herbicide application to the soil before putting stolons down, followed by a hydro-mulch cap. Another part featured the stolons being put down first, followed by incorporating the herbicides into a wood-fiber cap.

Since seashore paspalum is extremely sensitive to herbicides, the at-planting applications did not yield acceptable results. However, Ronstar was very effective when applied 12 days after planting with little or no injury to the turf. DeFrank believes that a one-pound rate would be a better choice than a two-pound rate because of seashore paspalum's unique sensitivity to herbicides.

Ronstar also has low water solubility with low likelihood of leaching into groundwater.

## These trees can take what cities dish out

■ City trees have it rough.

Conditions in urban environments are hard on plant life, what with high pH, compacted sidewalk planters, carbon monoxide from vehicle traffic.

Here are some city-tough trees, courtesy of Dr. Nina Bassuk, of Cornell University, writing in "Shade Tree Notes."

**Acer platanoides, Norway maple:** good for Zone 4. Tolerant of salt and a wide range of soil conditions, including mod-

erately high pH. It tends to heave sidewalks so adequate rooting space is recommended.

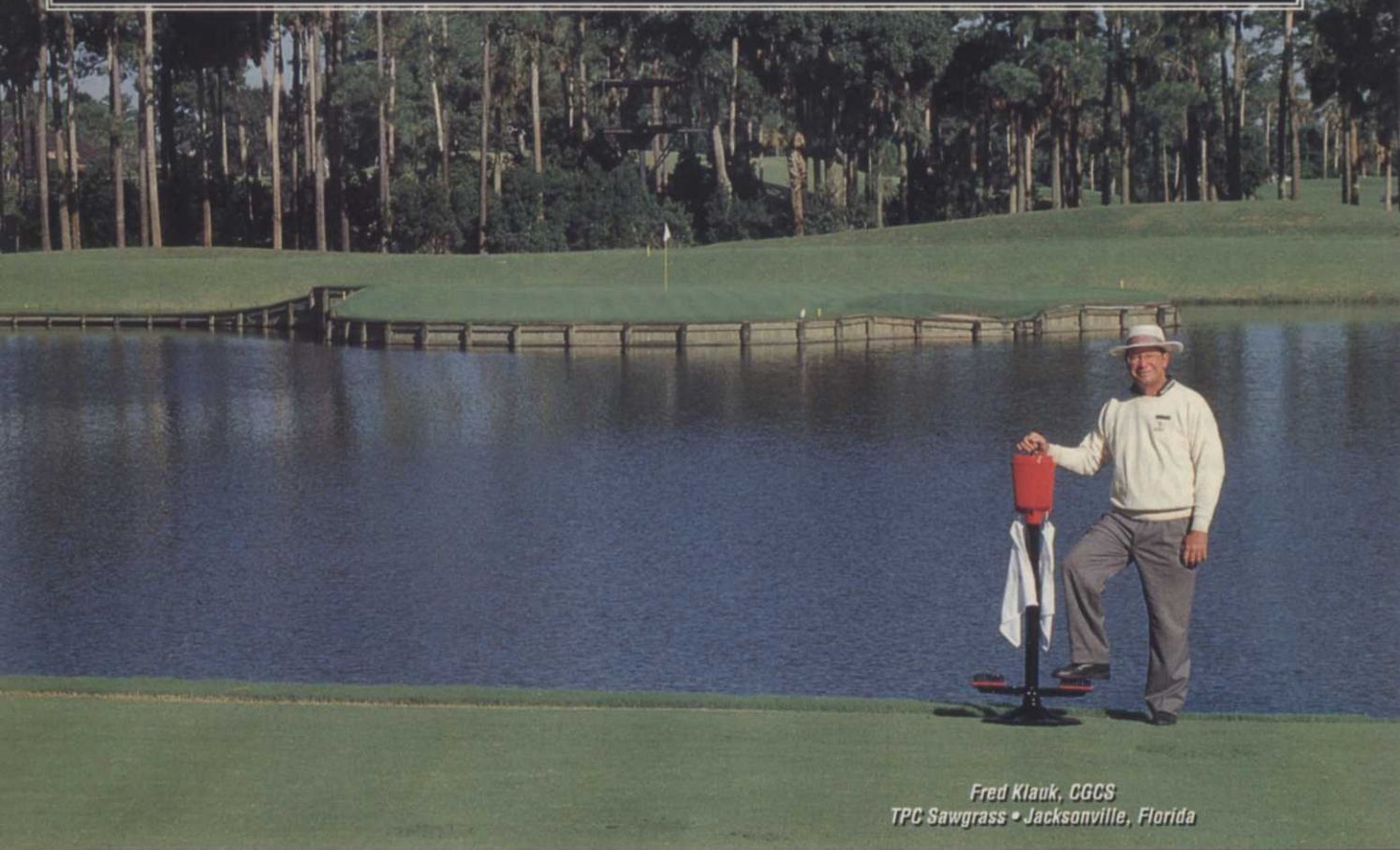
**Acer rubrum, red maple:** use in Zone 3. Acid, moist soils are required. Sensitive to salt and drought. Good fall color. Use with caution only in sites with little environmental stress.

**Betula nigra, heritage river birch:** use in Zone 4. Best on acid, moist soils, but adaptable to city conditions. Resistant to bronze birch borer.

**Acer pseudoplatanus, sycamore maple:** for Zone 5. Tolerant of wide soil pH. Very tolerant of soil or air-borne salt. Take care when planting next to parks or natural areas as the species naturalizes freely.

**Fraxinus americana, white ash:** Zone 4. Full sun, tolerates high pH soils, but needs well-drained soil. Ash decline or some insect problems may be a serious hazard. This tree has good fall color.

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*Fred Klauk, CGCS  
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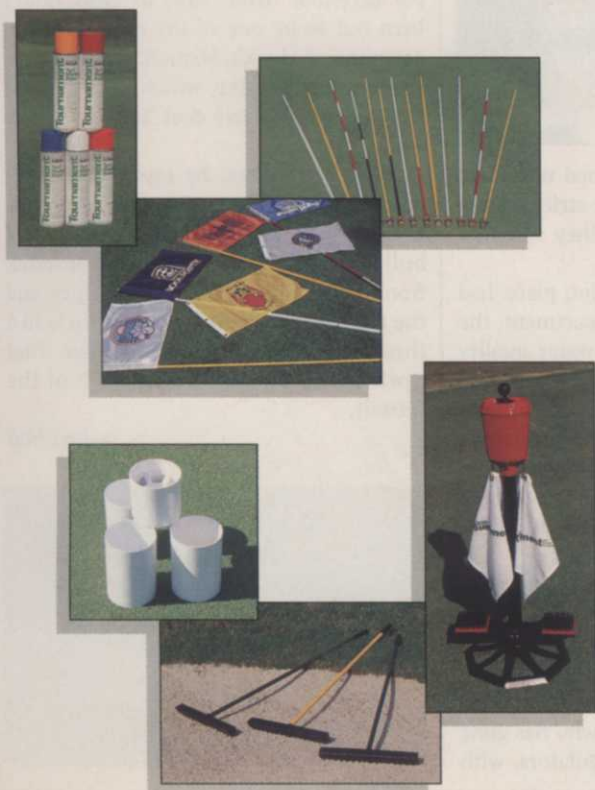
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# GOLF 'SCAPING

## Retrofitting for effluent irrigation

**Though a test of patience, this process has its positive long-term gains in the amount you pay for water and in its environmental compatibility.**

■ Mike Huck didn't fully appreciate how frustrating a golf course superintendent's life can become.

That was until he oversaw the retrofitting of an irrigation system to use reclaimed wastewater at Mission Viejo Country Club just south of Los Angeles. This, he readily admits, turned out to be a major undertaking, in spite of the fact that the course had used treated effluent previously. But when the local water reclamation plant closed down to upgrade its treatment capabilities, Mission Viejo had to switch to potable water for a while.

Huck had been hired as its 13th superintendent about a year before this all began happening.

"You start to wonder if it's all worth it just to grow, green healthy grass," he says half seriously.

Huck says that while his course was waiting for the reclamation plant to reopen and again supply it with treated wastewater, a host of new regulations had blossomed.

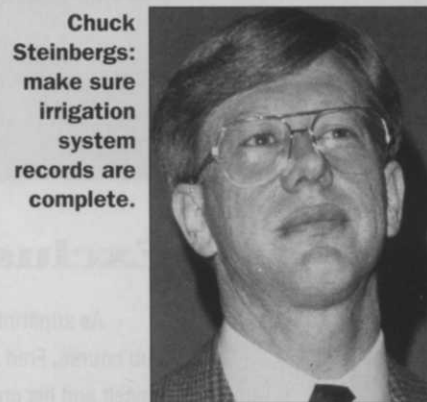
Adding to the frustration, the water reclamation (treatment) plant is located just across the street from the course!

"Our prior permit just wasn't good enough anymore," he says. What followed, in short order, was a seemingly endless scramble to fulfill regulations and inspections.

"When we got ready to ask for the reclaimed water, they wouldn't deliver it to us," says Huck. Not, at least, until the course satisfied every requirement, many of them directed at insuring that the



**Mike Huck:** says don't underestimate complications when retrofitting an irrigation system.



**Chuck Steinbergs:** make sure irrigation system records are complete.

course's potable and reclaimed water are separate. Regulations require strict failsafe measures to guarantee that they stay that way too.

Eventually Huck's irrigation plans had to be filed with the health department, the water district and the state water quality control board.

Chuck Steinbergs, an engineer with the Orange County (Calif.) Water District, in fact, concurs that retrofitting an irrigation system to use reclaimed water can be a lengthy process. It often takes anywhere from six months to a year, he says.

"Don't rush into this project because you'll have to live with it when it's done," he says.

His suggestions:

**1) Confer with a retrofit design consultant.** "You need someone who has gone through the process with regulators, with

the nuts and bolts of design, working with other golf course superintendents," he says.

**2) Keep meticulous records** concerning your irrigation system. "The fewer records we have, the more costly it is to do the retrofit, and the more guesswork there is," he says.

**3) Bring health regulators into the process early.** "It gives you the opportunity to negotiate with the regulators about how things can be mitigated," says Steinbergs.

"People here don't need too much convincing about the value of using recycled water, but nonetheless when you get down to an individual user who has economics and a budget to keep, we realize we have to work out something that both he and we can live with," adds Steinbergs.

As it turned out, the cost of reclaimed water, which jumped from \$200 to \$328 per acre-foot from 1992 to 1993, didn't turn out to be one of the more pressing concerns at Huck's Mission Viejo course. Using potable water, which isn't allowed anyway, would have cost \$500 per acre-foot.

Most headaches, he says, were unexpected. For instance, the course's irrigation storage pond had to be drained for a bulldozer to remove 3 1/2 feet of muck from its bottom. In the process Huck said the pond was deepened to 10 feet to hold a three-day charge of recycled water. That work added \$60,000 to the cost of the retrofit.

—Ron Hall

*More on  
effluent irrigation,  
page 46*



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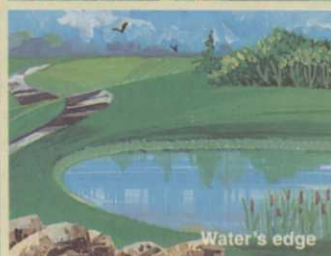
Around beds



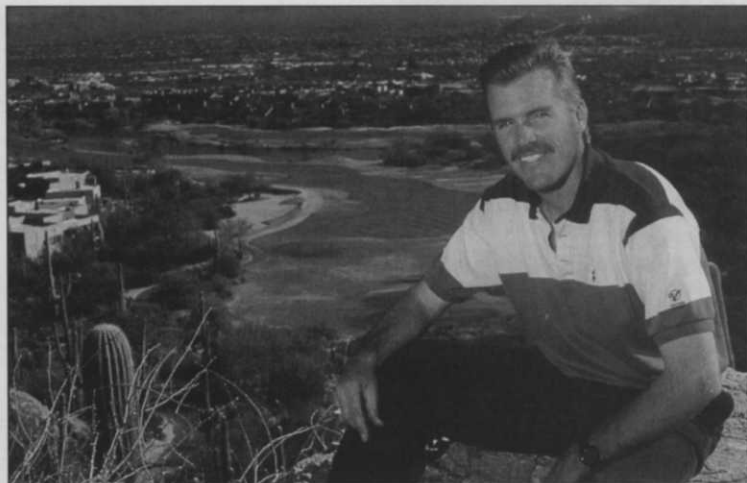
Monuments



Walls



Water's edge



**Scott Miller, CGCS, Ventana Canyon, is satisfied with quality of irrigation water.**

## Reclaimed water makes gem sparkle

■ Scott Miller is one of the caretakers of an emerald in the mountains overlooking Tucson, Ariz.

He's superintendent of the Ventana Canyon Golf and Racquet Club's two golf courses which are irrigated solely with treated wastewater. This is not a requirement in Tucson. Nevertheless, more and more courses across the country are, like Ventana, irrigating with reclaimed water to stretch limited freshwater reserves, particularly finite groundwater supplies.

Actually neither of Ventana's courses are emerald-green year-round. The bermudagrass tees and fairways go dormant each fall: they turn brown. The bentgrass greens, however, remain green in any season in stark contrast to the surrounding desert.

The two 10-year-old, 18-hole courses split about 80,000 rounds annually, with the semi-private "Mountain" course receiving most play from October to May.

Miller, 33, a Chicago-area native and Texas A&M graduate, can't imagine keeping either course playable (never mind rated among the best resort courses in the nation) without an adequate supply of irrigation-quality water.

But recycled water comes with a price tag.

Miller says his water costs \$400 an acre-foot. By comparison, the costs for potable water in the Tucson area vary widely depending on whether you pump your own or receive it from a water plant at a premium price of \$900 per acre-foot.

(An acre-foot of water is about 325,000 gallons. This is enough to fill 19 average-

sized swimming pools. Flush 63,600 toilets. Supply the needs of a family of five for about one year.)

"In Tucson we have a very high quality wastewater," says Dr. Charles Mancino, of the University of Arizona, pointing to a relative lack of industrial contamination in the area. Also, in Tucson, the reclaimed water is small but significant amounts of nutrients like nitrogen and phosphorus are in it.

This is not the case everywhere. In fact, reclaimed water, which is often also known as recycled water, varies greatly in quality, cost and availability across the country.

—Ron Hall

## Golf courses are water 'recyclers'

■ Tom Benefield, CGCS, says the 600-acre, 54-hole golf course complex he supervises provides a remarkable but virtually unrecognized service for his small corner of southeast Florida.

It helps recycle the area's public water supply.

"We're putting the community's wastewater back into the ground, recharging the local aquifer so everyone can use it," claims Benefield.

That's because turfgrass at the Ballen Island Country Club in Palm Beach County is irrigated with effluent water. Benefield's courses often receive and use four to five million gallons of effluent daily. It would otherwise be whisked out into the ocean or deposited in deep wells.

Even so, water utilities sometimes see waste water as a commodity, says Benefield.

Rather than risk political fallout by boosting rates to those who produce the

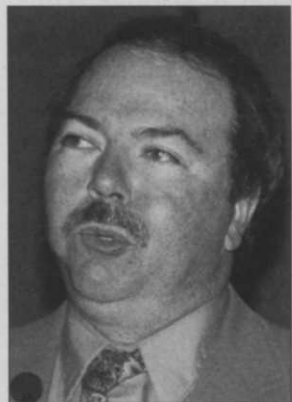
waste water, utilities charge those who reuse it. Prices vary greatly, even within Florida. By Southern California standards, however, effluent at Florida's high end price of even 60 cents per 1,000 gallons would seem to be a bargain.

This is, in part, a function of climate.

South Florida receiving its 50-plus inches of rain annually—more than three times the amount received in Southern California—seems an unlikely area for water shortages. But they occur. That's because most of this rain never reaches public water supplies. It cascades off tile roofs of homes. It gurgles over acres of concrete parking lots and pavement. Finally, it rushes into storm canals to be delivered to the ocean.

"We've lost large amounts of retention, detention and recharge areas to the urban environment. What once used to be large collection basins are now large concrete jungles," claims Benefield.

So, in August 1990 when the South Florida Water Management District (SFWMD) considered a rule requiring golf courses to irrigate with wastewater effluent or face 80 percent water reductions,



**Benefield: Golf courses help recharge water supplies.**

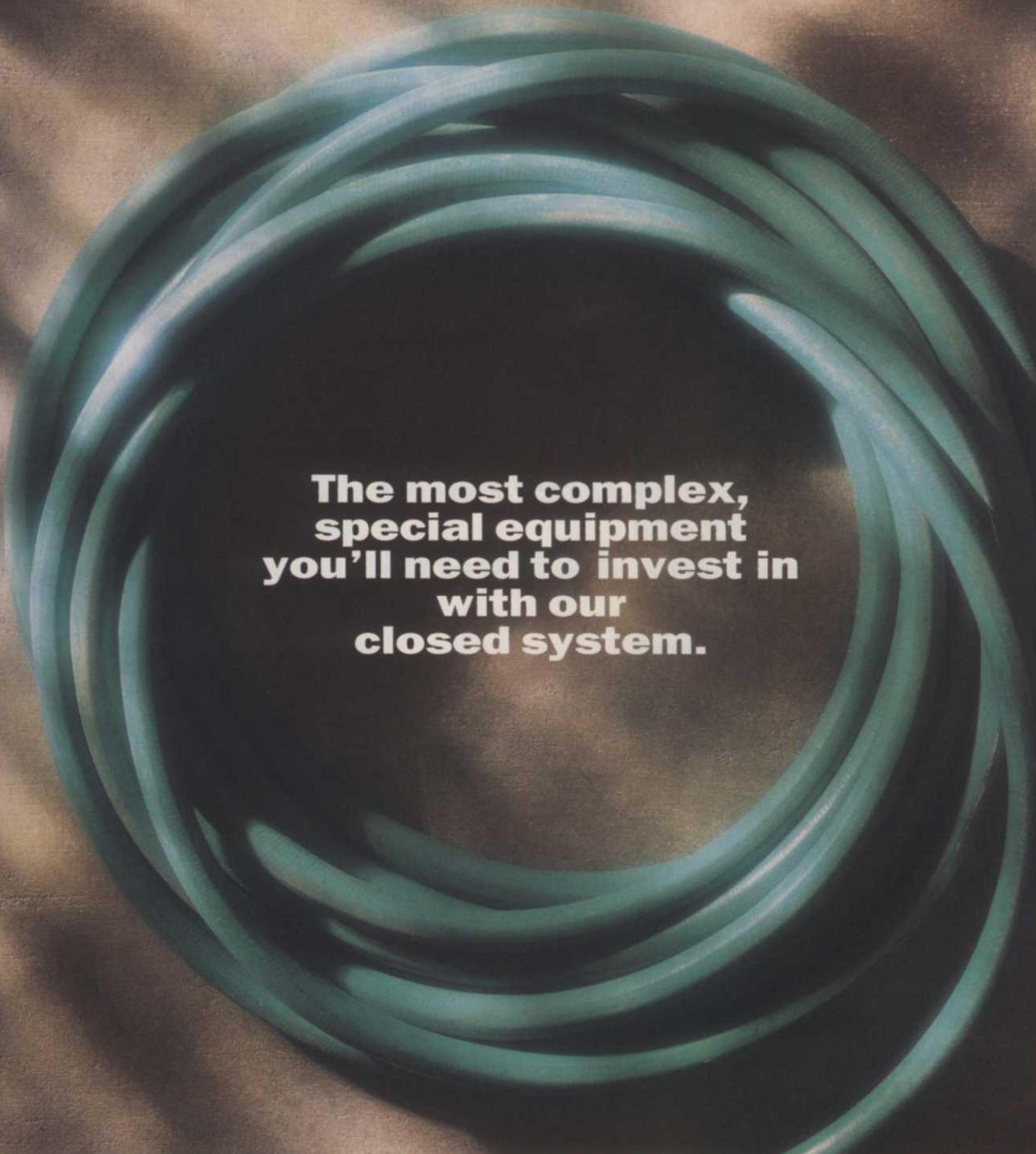
the Florida Golf Course Superintendent's Association (FGCSA) responded.

The result: Benefield ended up on the SFWMD Peer Review Committee, along with representatives from agriculture and industry.

On that committee, he's maintained that golf courses shouldn't shoulder all the responsibility and costs associated with the delivery and reuse of effluent.

"I think our price has already been paid," argues Benefield. "We offer, in south Florida alone, over a billion dollars worth of land to dispose of this material on our golf courses. We offer hundreds of millions of dollars of infrastructure, piping, irrigation heads, pumping facilities to dispose of this water."

—Ron Hall



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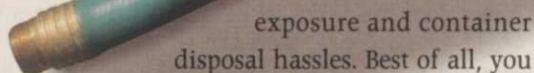
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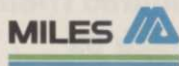
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# LAWN CARE INDUSTRY

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**'The industry needs  
to...start telling our  
clients about their  
outdoor living  
spaces just like  
building architects  
tell them about in-  
door living spaces.'**

—Gary Kinman

■ Last summer, on a whim, Gary Kinman bought a pony. It was a real miniature—tiny enough, he reckoned, to coax and shove into the family minivan and take home to the kids. Strawberry (the name Gary's two children later gave it) rode to the Kinman household with its wet muzzle poking over Gary's right shoulder.

The arrival of the pint-sized gray, with blond mane and tail, elicited the hoped-for response, delighted yelps from the kids and Gary's two, huge yellow dogs. Never mind that the minivan no longer has that new-car odor.

Sometimes impulsive. Usually outspoken. Never boring. Kinman, 36, with his

stocky, powerful build and square jaw, looks like a boxer. Or maybe a middle linebacker.

He's really a pushover, though. A bonafide softie.

When he claims that his Kinman & Associates regularly designs and builds residential landscapes costing \$250,000 and more, he can almost convince a listener that customers always get the better of him in the process. Shame on them.

"We have a reputation—which, I guess, isn't necessarily good—for being expensive," pleads Kinman. "We're not expensive. For the product we deliver, we're inexpensive—which I can prove by our

financial statement."

**A handy market**—Kinman's K&A is located in quaint Dublin, Ohio. It's a good town to be doing what Gary likes to do best, top-of-the-market residential landscape design and build.

Just outside of Dublin, which is itself just northwest of Columbus, is golfer Jack Nicklaus-built Muirfield Golf Course. It's a gem, and site of his annual Memorial Tournament. In fact, Nicklaus's new home will be going up nearby soon.

Kinman may or may not get the Nicklaus landscape. But it's the type of residential project that K&A has earned an enviable national reputation for designing and building: the big residential job.

"A small project for us is in the \$25,000 to \$30,000 range. But I think even that's a lot of money and we can do some really beautiful stuff with it," says Kinman. "Certainly we'd like to do more of that, but our problem as a company is that people in our market think, 'Oh, my gosh, Kinman & Associates, they're too expensive and they work on bigger projects.'"

Plant selection and installation. Patios. Walkways. Retaining walls. Decks. Swimming pools. K&A does it all, says Kinman. Or it'll find a top-notch sub-contractor that can.

"Actually, planting is one of the last things we usually do. There is so much more to the business than jamming a bunch of bushes next to a house. I think our industry pushes that too hard," says Kinman. He calls the process "super shrubbing."

"I think we (the industry) need to be putting in more beautiful, front sidewalks, designing home entries that work, installing stone walls that enhance properties. We've got to start telling our clients about their outdoor living spaces just like building architects tell them about indoor living spaces."

**One job at a time**—Kinman figures K&A has put in over \$30 million worth of

### ELSEWHERE

**The benefits  
of service,  
page 50**

**LCO help their  
injured friend,  
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**Is 2,4-D next  
Alar scenario?,  
page 53**



# Woods family tree

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Project managers Sharon Halldren, foreground, and Julie Taggart see big projects to completion, from initial design to planting.

landscape projects. That's a lot for his small operation that stays so close to home. "I think I almost have enough callouses to prove it," he says opening his rough, workman's hands.

Gary insists size doesn't preoccupy him though. It never did, not even when he decided to start a landscape business almost 14 years ago. He was studying business and finance at Ohio State University then. "By the time I was a senior, I already knew that I wanted a company to put in

the best residential landscapes in the area," he says.

K&A, he insists, is doing just that, in large part, because K&A is a team effort, involving five project managers and supporting office and field crews—even Gary's wife Lori, who works the phones.

As soon as K&A gets a recommendation, Kinman builds a team to work with the client and building architect. Gary's always on the team, along with a project manager. He says he deals with the bigger

client picture, the concept, while the project managers do the actual designs and track construction details.

"I'm kind of associated with every job. I wish I wasn't as much," Kinman admits.

**Everyone's busy**—Actually, each of the five project managers (three men and two women) may have a dozen landscape projects bubbling at once. They guide each through a 22-step process. They can tell at a glance where each project stands because all are recorded on a huge, white board on the wall in front of their drawing boards.

"We're trying to develop a system where each job will have an on-site project manager as well as an in-house project manager," says Kinman. "Then, everything that we're doing on a project—from the beginning design to the end of the job—is being looked at by two people."

When operational, Kinman thinks this system will meet his clients needs even more precisely.

Then, he insists, his clients will get an even bigger bargain.

"The money they spend with us is like money they invest and get high interest on," he claims.

—Ron Hall

## Sell the benefits of service

**To win commercial accounts where there are in-house crews, stress cost, efficiency and expertise.**

■ Laflamme Services of Bridgeport, Conn. has found a way to convince commercial prospects to switch from in-house crews to an outside landscape contractor. Judith Guido, director of business development and marketing for the 24-year-old company, says persistence has paid off—in the form of new commercial accounts eager to sub out the work. And that's because Laflamme knows how to sell the benefits of what Guido calls "outsourcing." And it's

not a very hard sell when it's done right. Just let the numbers do the talking.

Laflamme's message to mid- and large-sized commercial prospects is simple: it's more cost effective and easier to contract out than to subsidize an in-house crew.

Recent new clients include headquarters for Clairol, Champion Sporting Goods and Aetna Insurance.

Guido says area competitors try to sell the idea, but lose something in the translation.

**SHADES of GREEN**  
AN INFORMATION BULLETIN BY LAFLAMME SERVICES, INC.  
AUGUST 1993  
VOLUME 3 / NUMBER 6  
**Eyes On The Landscape**

New England, if you don't care for the weather, wait five minutes and it'll change. Well, Mr. Twain, we could sure use a bit of that change right about now. The July stats are in and we received less than two inches of rain for the month, leaving the 1993 season a full six inches short of the norm. This puts us in a bit of a pickle, horticulturally speaking, for the already tough growing month of August. The water company serving the Westchester area has placed a ban on all non-essential water use and

At this time, reducing the use of fertilizers and pesticides needs consideration. The intent is to slow the growth of the plant reducing its need for water and reducing the stress caused by constant mowing or pruning. Furthermore, the application of certain pesticides during dry spells can cause serious damage to the plants they were meant to save. Adjust mowing heights to provide some needed shade to the crown of the plant and the soil surface itself.

overseeds, that allow new seed to be introduced into the soil without radically reworking it. (Many of these are available through rental centers.) If the season takes its toll on your lawn, now is the time to reseed with drought tolerant, disease resistant varieties. Some of the new rye grasses are ideal for this application and require less fertilizer per season to keep them looking green and healthy, an added bonus.

"There are people who have contacted these companies, but nobody told them *why* it would be better (to contract out)," she says.

Laflamme gives the prospect a list of 26 reasons why it makes sense to contract out (see sidebar). Closing a sale was never so easy!

Most of Laflamme's newly-contracted accounts buy all the important landscape services: landscaping, lawn care, flower planting, waste management and snow removal.

**Reminders help**—As an extra way of staying in touch, the company's single