

Arborist Association.

"It was never a problem with the machine itself. It was a problem with the operators getting their hands in there," he says.

A disc-knife chipper is different from the older roller drum chipper model in that the faster roller drum relies on the knives to pull in the branches.

Because the disc-knife chipper is designed for larger limbs, it has infeed rollers close to the chute opening to pull in the heavier load.

"That means the operator can get his or her hands closer to the infeed rollers," Gerstenberger explains. "Once you're in there, the power of the thing will break your arm and drag you into it."

Some manufacturers have countered by offering chute extensions, but certain operators still aren't respecting the machine's design. "Now some people are leaning farther into the infeed chute," Gerstenberger laments.

A push stick will not work with the slower feed rate found on the disc-knife chipper: it is simply not designed for smaller twigs.

"It's clearly marked, yet people do it day after day," Gerstenberger says. "The temptation to get that last load of brush in there is always around."

If a disc-knife machine is on the job, policy should be that "all the fine-rakings are put in a garbage can and placed in back of the truck," he suggests. "Sure, disposal is a problem, but it's a much smaller problem than if you have an employee get caught in a disc chipper."

Exact casualty figures are not available, but Gerstenberger says the liability factor stemming from accidents has driven some disc-knife chipper manufacturers from the market.

Gerstenberger expresses hope in a newer design that's been on the marketplace for about a year. The pocket-knife chipper has smaller knives on a larger drum. "They operate much like a drum chipper, and the hazard associated with disc-knife chippers is not there."

He says this device will grind just about "everything up to the primary branches and the trunk."

—Jim Guyette

—The author is former editor of "Lawn Care Industry" magazine. He is a freelance writer based in Cleveland, Ohio.

Estimating: Quantify your own job needs

If you don't have the time to prepare a comprehensive bid by bid date, then don't start it.

by Kent Miller

■ Preparing a comprehensive job estimate is a tedious and often ungratifying experience.

One shortcut that should never be taken is to use the vendor's or supplier's quantities and bid amount without thoroughly quantifying the work yourself. Without quantifying the work yourself, you'll be unable to identify their omissions.

If you receive a quote from a supplier, vendor, or subcontractor, thank them for it. Then compare the quantities to your own. If they've picked up something you've omitted, they've just done you a big favor while there is still time to correct it.

Many of our industry suppliers go to a great deal of expense to provide quotations based on their own quantity take-offs.

This is indeed a great service that would allow us, their customer, the opportunity of checking our take-offs for possible errors. They do not intend for the estimator to rely heavily on their quantities and clearly state a disclaimer on every quote.

We receive quotations from the take-off list we submit to suppliers and vendors prior to the bid date. Some vendors choose to submit their own quantities and unit prices based on their own take-off. Since no two take-offs are alike, you can imagine some of the errors and omissions you'll discover in making the comparisons.

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MAJOR ELEMENTS OF LANDSCAPE & IRRIGATION PLANS

QTY.	DESCRIPTION
	Hydroseed
	Hydro stolons
	Sodded lawns
	Rototill
	Mulch 1"
	Mulch 2"
	Decomposed granite
	Raked earth
	River run stone
	Boulders
	Bark chips 1"
	Steel edge
	Cast concrete curb
	Extruded curb
	Redwood edge
	Tee stakes set
	Lodge pole set
	Redwood set
	Mounds topsoil
	Mounds dirt fill
	Clean up
	Removals
	Haul debris
	Misc. rental
	Misc. subcontract
	Groundcovers
	Shrubs installed
	Trees installed
	Spray pop-ups
	Lawn sprayers
	Filters
	Pressure regulators
	End flushes
	Emitters
	Controller walls
	Wires
	Gate valves
	Quick couplers
	Misc. rentals
	Misc. supplies



Kent Miller: Do it yourself.

A supplier's quote may differ greatly from your own for several reasons. Let's state a hypothetical case in which the vendor was an irrigation supply house and their quote did not include the copper pipe, copper fittings, or booster pump station because they weren't a supplier of it. Maybe the quotation originated from the

nursery and one species wasn't supplied because it wasn't in stock or available.

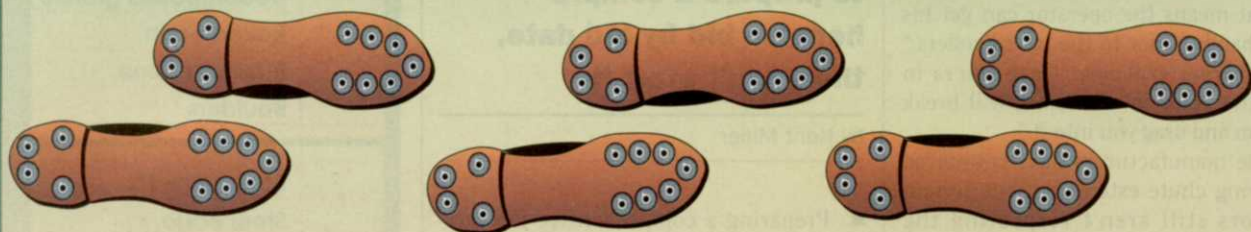
Margins today do not allow for errors or omissions. If you don't have the time to prepare a comprehensive bid by bid date, then don't start it. It is much easier to walk away from a bid date than it is to finish a bad job.

We jokingly say that a bad job only gets worse.

All joking aside, bad jobs cost money and typically originate from poor estimates.

—The author is vice president of *The Groundskeeper, Inc.* in Tucson, Ariz.

GOLF TURF MAINTENANCE IN HEAVY TRAFFIC AREAS



■ Here's some advice for curbing the ravages of heavy traffic on greens, tees and fairways from Randolph P. Russell, groundskeeper for the city of Austin, Texas.

Defining "heavy traffic" is elusive in itself, says Russell. Amount of wear-and-tear depends on the region, predominant weather patterns, and—perhaps most importantly—the varieties of grasses being used.

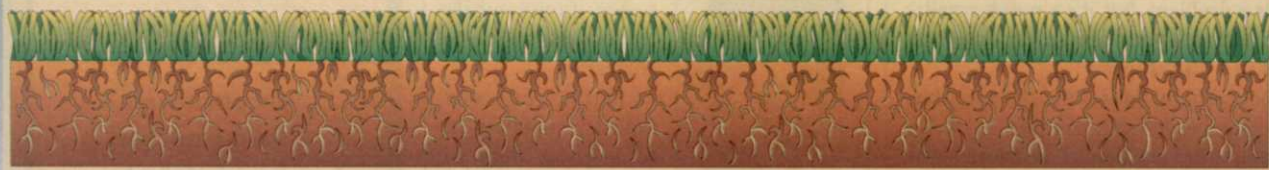
Generally, Russell says he notices that at least 45,000 rounds per year qualify a course for the "heavy traffic" category.

Avoiding the pitfalls of stressed out playing surfaces can be accomplished from tips learned at the "University of Experience:"

- Experiment with nitrogen levels, and don't be afraid to go beyond the norms. Greens recover better from

injury, and thatch build-up is not a problem.

- Consider a one-to-one nitrogen/potassium ratio.
- Resist the temptation to use extremely low cutting heights, especially on putting greens, during periods of heat stress.
- Raise fairway cutting heights as winter approaches. This will improve root depth and not adversely effect playability if done thoughtfully.
- Consistent aeration is a must.
- Minimize verticutting done to thin ryegrass, especially in spring. Close mowing and occasional double-cutting can be more effective.
- Look at all chemical applications from a new perspective, testing where possible under present traffic conditions.



Marketing for small businesses: do-able concepts

'Marketing' is not a jungle of theory and insatiable devourer of time. It's a way to increase profitability.

by Adrienne Zoble

■ You don't have to be a marketing wizard with endless unscheduled hours in order to improve your marketing efforts.

An objective look at your business will almost always reveal already existing marketing opportunities. Here's how to diagnose and perform successful marketing tactics:

1) An analysis of current customers and your relationships with them will likely reveal several opportunities.

Do you discuss the job with the customer after its completion? Doing so will reveal strengths on which you can capitalize and weaknesses on which you can improve. In addition, it may well lead to



Adrienne Zoble: Marketing is 'do-able.'

additional business.

Do you make regular sales calls to existing customers? Don't presume a customer will call you. Sales calls to existing customers cost about 10 to 20 percent of what a sales call to a prospect costs.

Do you schedule strategic lunches or dinners with key customers? Such meetings can strengthen relationships, lead to new business and generate referrals. The