

# THE GRAYING OF SPRAYING

An aging workforce and an increased focus on turf quality have inspired manufacturers to make application equipment lighter and more nimble.

BY CURT HARLER

AS THE LABOR force changes and fuel costs rise, sprayer and spreader weight becomes important. No longer will a company's full-time workers put up with wrestling heavy, awkward equipment around a customer's lawn.

That is especially true with application equipment. Fifteen years ago, workers were expected to tame a 600- or 700-lb. spreader loaded with 100 lbs. of material — and be happy to push it up and down day after day. When they finished that chore, they had to drag a 1.25-in. hose around to the customer's back yard and finish up with spraying. Is it any wonder that even the kids quit the job?

"This business is out of its teenage years and into senior workers," says Bob Brophy, director of lawn products for Minneapolis-based Turfco. "You can't expect to give workers heavy, cumbersome equipment and have them stick with the job day after day."

He says his company's goal is to produce equipment that is easy on workers' bodies but still provides precise, profitable application of material: "You have to remove the hard labor part of the job."

In addition to older workers, more women are in the lawn care workforce — and they typically are not anxious to wrestle with machines that weigh several times what they do.

"It used to be machinery could be heavy and hard to handle and it didn't matter," Brophy says. "Young guys would work with it all day. Now, you've got to build machinery that full-time workers can handle."

On the other hand, a landscaper can't compromise with either equipment ruggedness or the end results.

"The level of maintenance required of professional turf care at office complexes and high-end apartments keeps ris-



Turfco sees ergonomics as an important factor in machine design.

ing," notes Bill Kenney, vice president of SmithCo, Philadelphia. "The demand for sharper appearance is increasing. To do that, you've got to take the big, heavy stuff off the ground."

## A gentler generation

That means landscapers should be concerned about getting machinery that is light on its feet. A golf course, for example, has the luxury of waiting to make its applications for a couple of days after a heavy rain. By contrast, lawn care professionals (LCPs) have schedules, and it is important a service be performed on schedule so the truck can be in another neighborhood the next day. Yet that sprayer can't leave behind rows of tire tracks in an otherwise nice lawn.

That is the reason why many manufacturers today build machines with large pneumatic tires. "Our edict to our engineers was to design a machine that would be under 20 psi — fully loaded," Brophy says. That is barely tiptoeing, when one considers that a 200-lb. worker will have a heel-imprint impact on a lawn of about 100 psi.

A machine that might have tipped the scales at 600 lbs. two decades ago today weighs under 500 lbs. "But the important thing is not how much a machine weighs; it's what its

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footprint is on the ground," Brophy maintains. "The key is to keep the footprint light and to have enough rubber on the ground.

"With a 20-psi footprint, you can even go out when it's raining and do what you have to do," he adds.

SmithCo has a unit that has a 7-psi footprint — it can roll on a golf green, so it certainly will not hurt the appearance of the typical lawn.

"Bigger is better with tires," Kenney says. He notes that it is imperative to have enough tread on the unit so it is safe and controllable when moving downhill over wet grass. "You can't sacrifice controllability," he emphasizes.

With controllability comes maneuverability. Self-propelled units are more maneuverable than tractor-driven ones. Not only do they weigh substantially less as they move across the turf, but they can scoot around trees and readily follow the contours of flowerbeds and other landscape features. "That is a really big deal," Kenney says.

David Herd, president of Herd Seeders, Logansport, IN, actually likes his units heavy and builds them almost entirely of metal. His spreaders often are used to spread fire ant control and other sand-based materials. Even if they are used for seed-

ing, he says one of the biggest problems with seeding is getting good seed-to-soil contact. A seeder with a bit of heft will press the seed into the ground nicely.

Herd seeders are typically mounted on an all-terrain vehicles (ATV) or similar units, so the backache factor is eliminated.

**Down the road**

Is there a trade-off in quality with the lighter applicators? Manufacturers uniformly say there's not.

"There have been enough advances in plastics, fiberglass and stronger alloys that we can make a lighter-weight machine with the same service life that we had years ago," Brophy says.

But not everyone is entirely sold on plastics. "The only plastic on our units is the fan," says Herd. And the fan only went plastic two years ago when aluminum prices jumped and a local supplier proved he could provide a quality mold.

The base on Herd units is cast iron, and the hoppers are galvanized sheet. "The reason is strength," Herd says. "A landscaper can bolt this onto an ATV or pickup and the hopper will stay attached." He says he does not like plastic hoppers because they can only be attached so tight to a casting: "With galvanized steel, we can put a lot of torque on it."

Kenney sees SmithCo's main savings in weight coming from reducing the size of the unit's primary mover or power plant. He has no doubts about the quality of the construction of today's sprayers.

"It's all industrial-grade materials — the electronics, the hydraulics, the tanks," he says. "There are no exotic materials in our bodies or tanks. It doesn't require that."

However, instead of putting a 30-hp tractor out on a lawn, SmithCo puts a 10-hp spray unit on the lawn. The result is a lighter vehicle — and a lighter footprint on the grass.

There are other cases to be made for toughness, as well. Herd notes that material sloshes around inside the hopper and that causes motion. "Where the screw goes through the plastic, it will get chewed up," Herd says. "A galvanized hopper might look like the wrath — dents and dings — but it will work."

Herd says he "couldn't buy a dinner" with the profits he makes from replacement hoppers. And most of those sales, he says, are to landscapers who rolled a unit or backed into it with a truck.

A tough product will pay off in the long term. Manufacturers agree that the labor issue as a part of applicator design criteria is not going away anytime soon. The result is that lighter weight spray equipment will send equipment to market that is gentler on workers and allows landscapers to be more gentle with the turf, as well. LM



At left, the heft of Herd Seeder units are considered an advantage.

Below, today's SmithCo units feature a lighter footprint.



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