

WHAT TO DO WITH THE CLIPPINGS?

Regulations regarding lawn clipping disposal are popping up all over. So are alternatives to dumping them in overcrowded landfills.

by Will Perry, managing editor

What more can be said about the proliferation of landscape regulations? Today even the most innocuous byproduct of a hard day's work—grass clippings—falls under the legislative thumb.

Is that it now, Mr. Senator? Have all bases finally been covered?

Probably not. But this recent tide of legislation, enacted to preserve rapidly diminishing landfill space, may actually work to the landscaper's benefit. In today's increasingly environment-conscious market, using alternative disposal methods reinforces the industry's ecological concerns. Also, it may make mowing less time-consuming and burdensome.

Too much waste

Garbologists claim that organic lawn and ornamental matter, or grass clippings and tree limbs, is hogging as much as 20 percent by weight of this country's landfill space. Only paper and paperboard products account for more space. The Environmental Protection Agency projects that half of this country's 6,000 landfills will be closed within five years. The solution: banish all yard wastes.

Consequently, many states have done exactly that. The first bans on landfill disposal of grass and tree trimmings appeared in late 1989. Today, 11 states have enacted legislation to keep yard waste out of their landfills by 1993. In the District of Columbia, Illinois, and a seven-county metro area of Minnesota, it is already illegal to dispose of yard wastes in landfills.

Responding to the issue

The landscaping industry is responding to the landfill crisis in a variety of ways:

- lawn care professionals have gotten in front of the issue by spearheading the "Grasscycling: Today's Turf, Tomorrow's Earth" campaign;

- turfgrass breeders have begun measuring the total volume of clippings accumulated when evaluating new tall fescues;

- mulching or recycling mowers are gaining wider attention;

- a wealth of research is emerging that shows the value of returning organic material to the landscape; and

- composting is becoming a more viable service for landscapers to offer (see related story, "Meeting Tomorrow's Recycling Challenges.")

The "Grasscycling" campaign is being spearheaded by the Professional Lawn Care Association of America (PLCAA). It's an offshoot of a "Don't Bag It" program begun by Dr. Bill Knoop, a turfgrass specialist at Texas A&M University, and county extension agent Bob Whitney in 1989.

"None of the textbooks or any of the research papers ever written suggest that the bagging of grass clippings is a necessary part of lawn care," says Knoop. "The return of grass clippings to the lawn and eventually to the soil has always been considered to be a naturally accepted part of maintaining a lawn by the true turf experts."

One man's trash...

Knoop calls grass clippings "a valuable resource," noting they contain over four percent nitrogen, about two percent potassium and around a half-percent of phosphorus, as well as lesser amounts of other essential nu-

Kurtz Brothers of Valley View, Ohio, uses this Scat windrow machine to recycle organic yard waste into saleable fill material.





trients. Clippings are between 20 and 30 percent protein and are rapidly attacked by bacteria and fungi, which cause their fast decomposition. Therefore, they don't lead to thatch accumulation.

Knoop's study involved 184 Fort Worth residents who followed his guidelines for mowing, watering and fertilizing. Each was given a Toro mulching mower for the summer. In a follow-up survey, homeowners said they achieved healthier, better looking lawns with 30 percent less effort than they did bagging grass during the course of a typical summer.

The PLCAA's "Grasscycling" program is designed to educate homeowners to leave grass clippings on the lawn. The campaign includes developing a community action program, technical guidelines for mowing, watering and fertilization, and a public relations strategy to promote public participation and support.

More study

News concerning the expansion of studies on clippings volume and the effect of returning organic matter to the landscape is becoming more frequent. Researchers at the Rodale Re-

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search Center in Kutztown, Pa., and Garden Way, Inc. have expanded a three-year test program to determine the benefits of returning grass clippings to the soil with a mulching mower versus the bagging of clippings with a conventional walk-behind mower.

"We are expanding the program because the disposal of grass clippings has become a major environmental concern," says Terry M. Schettini, horticultural coordinator. Initial research showed that mulch mowing returns nitrogen and other nutrients to the soil.

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Dr. Bill Knoop

practice. So says Tom Richard, a Cornell University senior research specialist in the Department of Agricultural and Biological Engineering.

"We think we can show that composting municipal yard waste works, that it doesn't have to be offensive, and that it can save taxpayers money," says Richard. "We are seeing pesticide levels of just a few parts per billion, well below the FDA tolerance level for food. As far as pesticides are concerned, you could eat this compost."

Cornell researchers have estimated the average annual cost of composting to be \$15 to \$20 per ton, considered to be far below the escalating cost of other waste disposal methods.

Attention on mulching

Mulching mowers enjoyed a brief heyday in the mid-1970s. But a combination of early bad experiences, limited commercial application, and ignorance about their use and benefits kept them from gaining widespread acceptance among industry professionals. However, as the public and regulatory agencies continue to demand alternatives to traditional chemical controls and more is learned about the benefits of returning organic matter to the soil, mulch-



MEETING TOMORROW'S RECYCLING CHALLENGES

Kurtz Brothers Recycling Systems Inc. has a solution for people who don't know what to do with all the grass clippings and debris manufactured by a typical landscaping job.

The Ohio-based company—and other such commercial enterprises across the country—offers an efficient and cost-effective composting service to municipalities, landscapers and golf course superintendents.

In Ohio, H.B. 592 (which goes into effect in December, 1993) will prohibit organic waste from being taken to solid waste landfills. Such legislation has either passed or is pending in 11 states, most of them in the country's northeast corridor.

"We're going to be an option for that waste diversion," notes company vice president Tom Kurtz. "Some municipalities have started up their own composting operations or have gotten someone like our company to do it for them."

Waste shrubs, grass clippings and wood are either picked up by Kurtz or delivered to its composting facility. It charges the customer a tipping

fee for processing, then composts the material. The compost is then returned to the environment by incorporating it into topsoil blends that the company sells to landscapers, excavators and golf courses.

The debris must be processed, windrowed and cured for three to six months before it is ready to be used as organic material. This is not an inexpensive process.

"We've spent upwards of \$400,000 on equipment; plus site development is typically \$15,000 to \$25,000 an acre," Kurtz notes. "If we weren't in the soil business, we wouldn't have the built-in advantage of being able to use the compost, either."

"If we were to go into business just to compost, I don't know if the market for the compost would be there."

In order to open its organic composting site, the company had to buy property on Cleveland's south side, removed from residential areas because of odor considerations; develop the site to conform to EPA standards; buy what Kurtz calls

"major league" recycling equipment; and invest in manpower, research and technology.

Composting is not an old science and industry, Kurtz notes. The technology is new, so his company is staying on the cutting edge by working closely with researchers at the Ohio Agricultural Research & Development Center in nearby Wooster. Drs. Harry Joitink and Ed McCoy continue to research the composting process; the expertise of Kurtz staffer and Penn State University graduate Sam Stimmel and company founder Melvin Kurtz is also drawn upon.

Kurtz composts lawn wastes for the cities of Brookpark, Maple Heights and Brecksville, Ohio, and markets 40,000 cubic yards of compost per year for the city of Akron. Soil mixed with composted matter has been used at Cleveland Municipal Stadium, Firestone Country Club, the Cleveland Metroparks, the National Park Service and the Galleria shopping mall in downtown Cleveland.

"The golf course and landscape markets are both exploding," Kurtz relates. "We look at this as being a hell of an opportunity. And there's more to it than just making money; we are prepared to meet the environmental challenges set forth by our law-makers."

The company's slogan? "The time to act is now."

Tom Kurtz:
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ing mowers are again being looked at.

Commercial mulching riding mowers with at least 18 horsepower are available from Jacobsen Division of Textron and Excel Industries. Manufacturers of smaller units include Ariens Company, Lawn Boy and Garden Way.

The clippings generated from side discharge mowers are too long and too clumped together to break down

quickly. Mulching mowers, on the other hand, are built to re-cut grass blades several times before returning them to the soil/turf interface.

Mulching mowers accomplish this by incorporating a deeper mowing deck and using specially engineered multi-pitch or staggered blades. The blade and deck combine to both circulate the clippings and create a suction effect that holds grass upright. Once cut, clippings are suspended in the

blade chamber and are repeatedly chopped into finer particles. These small particles are then returned into the turf near the soil level where they decompose quickly.

Landscapers not ready to invest in a full-fledged mulching unit should inquire about mulching plates that can be used on their present units. Mulching plates cover discharge chutes, forcing the clippings into the blades for a finer cut. **LM**