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MSW Management

The Journal for Municipal Solid Waste Professionals

ELEMENTS '94



Product Marketing:

The Key To A Successful Composting Program

The hardball realities of the economy have sent the "B-Team" to the showers.

Now the big-leaguers are feeling the bite.

As elsewhere in industry, when things get tough, the tough glue their eyes to the bottom line.

RON ALEXANDER

Composting is an increasingly attractive component in MSW management. During the 1980s, composting sewage sludge was a preferred mode of managing this material, and it's possible that the 1990s will find the same trend in the management of leaf and yard debris, as well as MSW.

Composting and the re-use of agricultural and societal waste byproducts have been practiced somewhat systematically

and scientifically for thousands of years throughout the world. In the United States, residues from the production of agricultural crops and the raising of livestock have been utilized as compost in agriculture, and when refined, by the commercial green industry (i.e., landscapers, nurseries, turf professionals, etc.) as well as the general public. Historically, clean organic residues have been used as feedstocks for soil amendments. Composting farm residue along with food processing and other indus-

trial byproducts is receiving increased attention in recent times.

Many successful composting programs that are both environmentally and financially sound have been developed throughout the US, although such activities have not progressed without challenge. Composting facilities-siting is a complicated process for a variety of reasons, chief among which are: potential for odor generation, poor or unattractive facility design, political opposition, emotional bias, and negative associations with compost ingredients.

In spite of the complexity and vigor of such challenges, composting offers enough attractive MSW management opportunities to encourage continued investigation, ensuring its growth in the near term. Quite apart from its likely ability to overcome institutional objections, however, composting faces a more fundamental and abiding challenge — the ability to move into the mainstream of a market economy. For composting to become a viable MSW tool, it must find, develop, and exploit markets, and success

in these areas is tied to several activities: analysis of the marketplace for potential use, elevation of product uniformity and quality to known and acceptable levels, availability and predictability of its supply, and exposure of the public to its availability and benefits. Complicating matters further is the recognition that these are not independent events that can be addressed linearly, rather they are highly interactive ingredients in a complex brew. As one element changes, others respond, occasioning further change.

An essential first-understanding is that, quite apart from the praiseworthy goals of public officials, MSW managers, and environmentalists, compost is nothing more than a product to the end-user who expects it to satisfy a need. The role its production plays in meeting source-reduction goals and lowering the overall cost of MSW management is of little concern to the consumer. Utility is the key, and this relates to product standards.

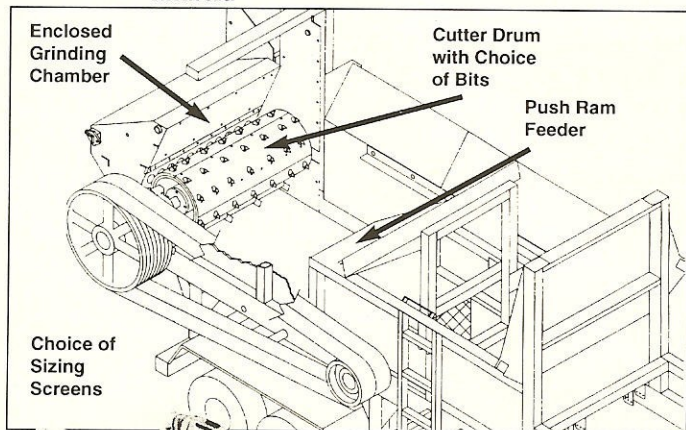


A second understanding is that in a market economy, product quality standards are not dictated by the producer, but the consumer. Facilities that produce inferior products will find themselves facing limited or nonexistent markets, sustained in their costly enterprise by increasingly

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scarce public funds. Without adequate markets, compost stockpiles get larger, site management becomes increasingly difficult and potentially dangerous, odors increase, political pressures intensify, and public relations becomes a rear guard action. If unmarketable product must be hauled from the site at the expense of the producer, not only must the program absorb the direct costs, but it suffers a loss in its credibility which may involve far greater consequences.

How the waste management industry goes about balancing its waste diversion

responsibilities with the practical demands of the marketplace will dictate the option's long-term success. Since at present the increased production of compost is more likely driven by waste management goals than by an increased demand for product, MSW managers and compost producers must strive to better understand the needs of the product users if markets are ever to flourish.

A recent study estimates markets exist for over 100 million cu. yds. of compost annually in the US. However, only a fraction of current productive capacity

actually yields revenue. Until markets in an area develop sufficiently, facilities producing relatively high-quality product may still have to pay to have compost hauled to a landfill or be gratuitously land-applied.

MSW managers should anticipate this possibility as well as a similar circumstance where, as compost production volumes increase, subsidized agricultural or land-reclamation application may be necessary. However, if producers concentrate on developing marketable products by investing necessary resources in the facilities, equipment, and technologies needed to produce high-quality compost, and then



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**Table 1:
Potential Compost
Market Segments**

- Commercial Resale
- Environmental Remediation
- Farm Soil Amendment
- Golf Courses/
Country Clubs
- Grounds Keeping
- Home Uses
- Horticulture
- Land Reclamation
- Landfill Cover
- Landscaping
- Parks & Recreation
- Roadbed Fill
- Roadside Stabilization
- Runoff Control
- Turf Amendment

apply that same vigor to their marketing strategies, they will position themselves to take advantage of increasing consumer demand rather than relying on the sometimes illusory foundation of government mandate to bring about success.

In some cases, the market for compost will be obvious, perhaps even well-established, providing the producer with a known target. Here, success is a matter of making certain all the ingredients of the

process fit together to meet the basic product demands, that plant output consistently meets or exceeds acceptable standards, and that there is an ongoing effort to increase production efficiency and lower costs. However, most MSW managers embarking on a composting program are not likely to encounter such a receptive situation, and will have to approach the issue of quality differently.

While there is no such thing as a universally accepted standard for the "perfect" compost product, most would agree that it should be rich in organic matter; meet state and federal health and safety standards suitable to its intended use; be free of weed seeds, objectionable odor, and foreign matter; be adequately cured/mature; have a consistent pH (near neutral) and bulk density (approximately 1,000 lbs./cu. yd.); be low in soluble salts; and have a moisture content of approximately 50% or less.

While not all uses demand all these characteristics, many do, and the ability to output such a product enables the compost producer to address the broad spectrum of market segments and end-users

So Much Compost with Nowhere to Go

Two facilities in Minnesota producing mixed MSW compost, Daneco and Recomp, are having a difficult time finding users, much less markets, for their product. Both have resorted to using the material as alternative daily cover (ADC) at landfills, but their respective public agencies are not satisfied with the decision.

The Daneco facility in Mora, owned by the five-county East Central Waste Commission, has even looked out-of-state for markets. Originally designed to process over 200 tpd, actual operations during the first two years have reportedly yielded less than half that volume. The facility has also experienced embarrassing cost overruns totaling several million dollars. At higher cost and lower-than-projected operating capacity, compost is overflowing the curing area with nowhere to go other than the landfill. After struggling to find compost buyers, the facility is looking for anyone to take the product off its hands for free. It currently has no takers and the commission is reevaluating its operating contract with Daneco. Better results were expected from the \$13 million

(continued on page 46)

listed in Table 1.

It must be borne in mind that specific market conditions will levy specific product demands, and that these will, in turn, detail not only the desired characteristics of the feedstock, but the production techniques as well. For example, most com-

post products have a pH factor of between 6 and 8, and products outside of these values are in lesser demand. However, when incorporated in soils with an extremely low pH factor, a high-pH compost (e.g. pH=9 or above) may well be of added benefit, particularly where the native soil

PROBLEM:

25% reduction of solid waste mandated by government.

Sludge is banned from landfills.

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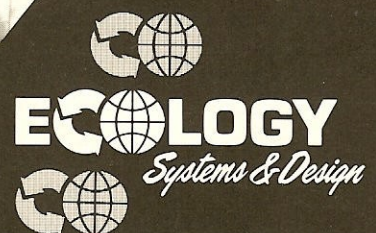
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Product consistency is at the heart of any composting market development program. There can be no long-term market viability for products that are inconsistent in their constitution or produce inconsistent results. Because even minute changes can affect the compost product quality, operators must strive for rigorous control of production conditions and exercise extreme care when making process modifications.

Scotts, which sells more than 3 million tons/yr. of compost through various mass-merchandising chains throughout the nation, develops its marketing plans regionally and procures its materials as close to the outlets as possible. According to Mike Trueman, project leader, compost services, the keys to success lie first in knowing what people want and are willing to pay for, and then meeting that demand with adequate quantities of uniform quality product. "We

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take product from many sources — public as well as private — and package it for sale," he says in explaining how the company is able to make a profit in a business with such low margins. Could a MSW composting operation make it at the retail level? "With enough volume and guaranteed quality, a municipality might be able to reach the end-user through local retail outlets," Trueman believes. Not every MSW activity is equipped to undertake the necessary commitment. A successful program requires expertise in so many areas, it takes a larger investment in physical and human resources than many municipalities are able or willing to make. "Market conditions are continually changing," he adds, pointing out the necessity for flexibility and a broad market base. A less risky approach for municipalities lies in meet-

ing self-generated demands, or in supplying material to those (such as Scotts) already in the business.

Communities that plan to privatize the construction and operation of their compost facility must be assured that their chosen vendor not only can adequately operate the facility and provide a proven technology, but also can produce a marketable product that meets the needs of local markets. In an attempt to guarantee themselves that product will be marketed, many communities simply put the burden of product marketing on the vendor. Although this plan may be logical in principle, it is not by any means a guarantee. If the producer's tipping fees cannot cover the cost of producing a high-quality product, one will not be produced unless the community invests additional revenues in the facility. If a vendor is responsible for marketing and distributing the product, it should pos-

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sess a track record for producing a marketable product and operating a successful marketing program.

It is important to know the vendor and technology that will be used. If it is not certain that the product will meet the needs of paying markets, then funds must be available within the negotiated tipping fee to distribute the product. It is always wise to require a vendor to provide a detailed marketing plan and budget, and to have it reviewed by an individual experienced in marketing waste-derived products. To further illustrate the importance of product markets, several financial institutions that provide funds for the

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construction of facilities, and various regulatory agencies, require that marketing studies be performed, market development programs be outlined, and even that the product be presold before projects are approved or permitted.

Production of high-quality compost requires minute attention to feedstock control, production methodology, product grading, health and safety testing, and product standardization criteria. These areas are receiving increased attention in the US and elsewhere, indicating that not only will debate focus on such substantive issues and their findings, but also on what the findings mean. If composting waits for definitive answers and consensus to develop, large-scale composting will remain a footnote to resource management. While scientists, educators, and politicians stake out and worry their areas of concern, composters would be better-served by turning their attention to the needs of the marketplace. **MSW**

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So Much Compost (continued from page 42)

facility, and if a beneficial use for the compost is not found soon, the future of the facility will be in doubt.

Fifty miles down the road, the Recomp MSW composting facility in Saint Cloud has also resorted to using compost as ADC. It recently had a public giveaway of thousands of bags of compost when it could find no buyers in the garden-center marketplace. Recomp has permits with the state for several tree farms that are willing to take compost, but they cannot afford the high cost of soil improvement. Recomp must haul, spread, and incorporate the material itself. Management decided that it was less expensive to pay reduced dump fees as ADC rather than to meet the standards of the tree farmers.

On August 19, 1993, the Tri-County Solid Waste Commission, which sets the tipping fees at the Recomp facility, passed a resolution stating that ADC does not fulfill the Commission's contract which calls for 68% landfill diversion. Recomp has been given 60 days to demonstrate that it deserves the portion of the tip fee designated for landfill diversion.

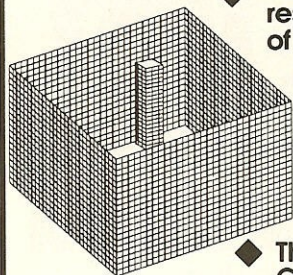
Operators are realizing that compost is difficult to sell in a soil market with well-established peat and forest products. Landscapers, greenhouses, and nurseries are reluctant to try new products, since soil amendments represent a small portion of operating costs, but may mean devastating losses if the product proves unsuitable. It is a rare farm that can afford to haul and incorporate, much less purchase, compost.

Based on the Minnesota experience, if composting is to become a viable tool for MSW managers, producers and system vendors must find, develop, and exploit markets for compost. Once markets are found, quality control and assurance programs need to be implemented to meet the market requirements. It is one thing to get paid to process MSW into compost. It is a wholly different matter to get it back out the door in an acceptable manner.

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