

Growing the Composting and Organics Recycling Industry

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ORGANICS RECYCLING is a resource management system with a goal to utilize residuals to their greatest extent. For farmers, gardeners and landscapers, it means creating a compost product that economically and efficiently builds organic matter into soils and grows flourishing crops. For economic developers and company executives, it means new well-paying jobs and innovative market niches. For renewable energy, via such methods as anaerobic digestion and methane recovery, it means cutting power costs and hooking up to utility grids. To fully achieve objectives, researchers and manufacturers provide the expertise and talent to provide the right equipment for collection, processing and preparing residuals for high-value markets.

Those markets have been steadily expanding — albeit not in as smooth or steady way as all of us would hope for, but despite dips and too often challenging plateaus, the progress overall has been dramatic. One year ago, BioCycle editors reported on trends in the industry that were opening up major markets for compost and mulch products as well as biomass in general. The recognition of these trends is widespread. Just yesterday, for example, we received an advance copy of a report, *Recycling Returns*, prepared by ten environmental organizations and coordinated by staff at the Natural Resources Defense Council.

The report is specifically concerned with reforms to make New York City's recycling program more cost-effective, and recommends these steps to restore and expand composting — which it calls the "greatest untapped opportunity for expanding recycling in New York City." After wastepaper, the largest portion of New York's residential waste — approximately 28 percent — is made up of leaves, grass, yard, food and other organic waste. "In the short term, New York City could save in excess of \$12 million per year by restoring and expanding composting programs. Long-term savings in this area promise to be substantially greater." In 2001, 47,000 tons of organic materials were composted, but in 2002, programs were eliminated in budgetary cutbacks. Now, there's an urgent call to strengthen programs — particularly food waste composting.

As noted in our BioCycle trends analysis last April, diversion of food residuals is the next organics recycling frontier as generators and policymakers set up major

diversion methods. Based on presentations at last month's BioCycle West Coast Conference, communities and recycling companies have succeeded in capturing edible food for recovery and the residuals for composting, anaerobic digestion and other recycling methods. Discussion of new food residuals diversion projects at the 34th Annual BioCycle National Conference in Philadelphia, June 21-23, 2004, will provide fresh data on methods, cost savings and markets.

According to the Recycling Returns study, the percentage of New York City's waste stream that is comprised of food scraps is nearly twice the national average — at 15 percent compared to nine percent nationally. Two strategies are recommended to expand recovery: For large-city institutions, it should increase use of its Riker's Island enclosed facility which now handles 20 tons/day of kitchen and cafeteria waste at a cost of roughly \$50/ton — for an annual savings of \$120,000. The city's Economic Development Corporation and Sanitation Department is considering on-site food composting at the Hunts Point Market (wholesale fruits/vegetables) in the Bronx. Another option is a collection program from residences (similar to what was done in the early 1990s in Brooklyn). This method could follow the successful program in San Francisco where residents use a three-bin system.

HOW BIG IS THE ORGANICS RECYCLING/COMPOSTING INDUSTRY?

No one knows for certain the dollar value of the various elements that comprise the organics recycling/composting industry — though calculations are well underway. We thoroughly understand its value and impact, but putting credible figures on equipment purchases, land costs, construction, end product worth in the marketplace, application services and so forth is yet to be done. More accurate statistics are now being acquired on the number of privately and publicly-owned composting sites, the vast numbers of operations on farms, and elsewhere.

This topic — Calculating the Size of the Composting Industry — will be carefully discussed during the 34th Annual BioCycle National Conference in Philadelphia. A first day session will focus on:

How many sites, how much organic feedstocks processed — assembling a national data base; Quantifying tonnages of municipal, commercial, agricultural and industrial feedstocks diverted; Estimating volume of compost produced and marketed;

Dollar value fluctuations for composted products — determining market potential for high quality compost; Case studies on sales impact of variable pricing; Erosion control applications; Storm water management.

Anaerobic digestion industry — calculating the number of operational and planned facilities for various feedstocks; Analyzing estimates by highly-respected authorities that the marketplace for anaerobic digestion/biogas recovery systems is between \$2 to \$3 billion.

According to a veteran observer of the composting industry, "we could estimate the current dollars invested in facilities — always looking at the market as a long-term asset." As we report critical figures in coming up with realistic industry projections, BioCycle editors and the people with whom we'll be working will use a "transparent process" — fully recognizing that this is a group effort of the community that has led the industry to its current status. We welcome the participation of BioCycle readers in the compilation of these significant figures.

LESSONS FROM THE ORGANIC FARMING/FOODS INDUSTRY

Last April in these pages, we documented how composting on farms has become a mainstream practice, and the agricultural connection trend keeps getting stronger. "Fortifying soils with beneficial microorganisms that help combat plant diseases, adding organic matter to improve moisture retention" — these are qualities that are so vital to the role of compost and also lead to the stronger link with organic agriculture.

In a report by Miguel Altieri, professor of Agroecology at the University of California, Berkeley (excerpted in *In Business*, a JG Press publication, Jan.-Feb., 2004), organic farming is described as "a production system whose objective is to sustain agricultural productivity by avoiding or largely excluding synthetic fertilizers and pesticides. The original philosophy that guided organic, farming emphasized use of resources found on or near the farm." Composting and compost have been a method and product compatible with organic farming principles. To gauge the size of the composting industry, it's instructive to examine the figures compiled for the organic farm/food sector. Altieri cites these numbers in his report: In North America, about 1.5 million hectares are certified organic with 45,000 organic farms. In the U.S., organic acreage doubled between 1992 and 1997, and in 1997, the retail

organic produce industry generated \$6 billion in sales. In California, retail sales have been growing at 20 to 25 percent per year for the past six years. Locally owned natural food stores and organic brands are becoming consolidated into national/international chains, explains Altieri.

These are the kinds of figures now being compiled for the organics recycling/composting field — and the statistics will be equally impressive.

MOST IMPRESSIVE DIRECTORY OF EQUIPMENT AND SYSTEMS

The directory on the following pages verifies how far we've come in the translation of a concept into a growing sustainable industry. As pointed out earlier, the current reality is on manufacturing quality products rather than processing feedstocks (the processing being the means to that end). We see more and more expanded processing options featuring grinding, mixing, screening and blending for multiple utilization requirements.

The categories in the directory provide even greater proof of the full range of equipment and systems available. They reflect the scope and diversity of the tools available to maximize organics recovery and minimize disposal. Over the years, people have coined the phrase "BioCycling," defined as any process or method that involves biological decomposition as the means to resource recovery. That includes composting, land application, wood recycling, compost utilization, energy production and bioproducts creation, all practices covered in the following categories: Anaerobic digestion; backyard composting; bagging; biofuels; biosolids management; compost covers; compost tea; composting systems; compost turners; C&D debris processing; dewatering and drying; erosion control and storm water management; food residuals; leasing, maintenance and wear parts; magnetic separation; marketing, site management; materials collection; mixers; monitoring and measuring; mulch colorization; odor control; screens; size reduction — chippers, shredders and grinders; spreaders and applicators; structures; trailers and vermicomposting.

The versatility of this equipment, combined with the knowledge and ingenuity of those who put it to use, has made composting and organics recycling a significant player in residuals management. From the traditional arenas to the new frontiers, we are part of an industry and dynamics whose time has come.

