Untitled Essay, Research Paper

COMPOSTING AND THE GROCERY INDUSTRY The following bulletin was prepared from Grocery Industry Committee on Solid Waste October 24, 1991 EXECUTIVE SUMMARY Solid waste composting is an important component of an integrated solution for solid waste management. Composting can divert organic, compostable materials, not otherwise recycled, from the solid waste stream and convert them into a useful product. Composting is environmentally sound, technically and economically feasible and meets local waste management needs. This report, from the Grocery Compost Task Force to the Grocery Industry Committee on Solid Waste (GICSW), is intended to establish composting as a viable and sustainable component of an integrated solution for solid waste management. To do this the industry supports the development of composting systems for grocery manufacturers and retailers, and the development of the supporting infrastructure. Composting can handle from 30 to 60 percent of all municipal solid waste, including food waste, yard waste and paper and paperboard waste. The grocery industry is committed to a high level of product stewardship. This commitment includes the environmentally sound management of wastes generated at the retail levl as well as wastes from grocery products after they have been sold and used by consumers. Much of this waste is organic in nature and landfilled. From a product stewardship perspective the grocery industry believes that composting is a more environmentally sound management practice than disposal for managing these wastes. While single stream and segregated stream composting may be more readily available for many manufacturers’ and retailers’ own waste, MSW composting is an attractive alternative for waste created by consumers. This report focuses on grocery retailer composting programs, but will also address goals and programs for manufacturers. Food waste plus wet and waxed corrugated from retailers alone accounts for 6.6 million tons per year of waste that could be composted rather than discarded, which is nearly 4 percent of all municipal solid waste (MSW). Disposal of those wastes costs the grocery retailers $482 million per year, eating up the pre-tax profits from $34 billion of grocery retail sales. All food waste produced directly by manufacturers and retailers, as well as home food waste produced by grocer shoppers, comprises nearly 20 percent of the entire grocery industry’s wastes. On a store level, over 90 percent of the solid waste is deemed by this task force to be most representative of a “typical” store, produce 43 percent of their waste as food waste. Almost all corrugated is recyclable or compostable. 30 percent of the corrugated produced by a grocery store is either wet or waxed, precluding its recyclabiliy. Composting can achieve important benefits for the grocery industry including: 1. Meeting the demands of grocery customers who are demanding more environmentally sound and responsible ways of managing solid waste; 2. Proactively controlling waste disposal tonnage and expenses; 3. Supporting governmental initiatives for landfill diversion and material recovery; 4. Encouraging recycling of other materials; and 5. Making the best use of natural and man-made resources by converting organic waste into compost instead of landfilling them. Each grocery industry facility should evaluate how best to handle its compostable waste. As detailed in the report, there are several possible approaches to handle mixed organics from the solid waste stream. Regardless of the approach, it is important for the industry to help establish a composting infrastructure. Market development is a key element of this infrastructure and the grocery industry supports market development initiatives. Depending upon the compost program, compost processors may require or prefer source-separated homogeneous food wastes to obtain maximum control over end-product quality. Source-separated materials may have greater value to the end user because of the densification and readiness for processing, and therefore may lead to lowest collection and processing costs for the generator. For grocery retailers, this report focuses on segregated stream composting. Because the industry can generate a source-separated product, free of harmful wastes and relatively free of inert materials, it can easily be integrated into whichever composting program is most likely to be available locally. This report explains the various ways to handle, collect, transport and process grocery store wastes for composting. In general, the GICW recommentds: \* Collection of compostables in dedicated barrels; \* Pickup and transportation of the compostables either by loading barrels into a truck or by emptying the barrels into a dedicated dumpster or compactor for collection by a hauler; \* Composting at the best locally available site; and \* Careful training of store employees to maximize participation and minimize contamination. Several specific recommendations addressing issues such as economic analysis, health issues, facility flexibility and recommended implementation steps are included. This report also discusses Municipal Solid Waste (MSW) composting. MSW composting, as described here, refers to the composting of residential and commercial separated mixed organic waste, with the recyclables and other noncompostable materials removed. Separation may occur at curbside or the waste may not be transported by conventional waste vehicles to a central site for the site separation of compostable materials from noncompostable materials. There are 15 MSW composting facilities currently available in the U. S. Another 150 are in various stages of planning or development (a new MSW facility can take 3-4 years to site, build and become operational). Where they do exist, they should be considered by grocers for composting. The availability of an organic fraction from the grocery industry will be added impetus for development of community based facilities. The mixed organics method of collecting compostables should require little or no change in supermarket operating methods since material separation is accomplished on the other end by the receiver or end user. All composting facilities need to use the best technology available to ensure production of compost that is safe and marketable. Attention must be given to the separation of compostable materials from recyclables and noncompostable waste. Many state and local governments, federal government through EPA and the Solid Waste Composting Council (SWCC) are addressing composting. In addition, composting. The GICSW should work with these entities toward the common goal of developing composting as a viable solid waste management tool. In order to develop end markets, the grocery industry should demonstrate and confirm the beneficial use of compost and aggressively promote the marketing of the product, specifically to known end users. Product standards and end markets for compost are in the early stages of development. Standards for end-product quality do not exist on a federal level but are beginning to be promulgated on a state-by-state basis. Currently market development is planned or in progress in 11 states. The GICSW should become involved in market development, establishing science- based standards, ensuring product quality, establishing pilot programs and supporting compost legislation. Specifically, the GICSW can play a role in opening new outlets for compost in the agricultural community. The industry should move towards setting and measuring attainment of goals to support the development of composting, such as: \* The production of recyclable and/or compostable consumer packaging. \* The recovery, through composting, of an annually escalating proportion of manufacturer and retailer wastes. \* The recovery, through composting, of an annually escalating proportion of consumer wastes The grocery industry should make a serious effort to publicize the GICSW’s environmental philosophy and actions, and to educate consumers, the general public, the grocery industry and the solid waste community. In all cases, the GICSW recommends extreme caution against overstating any facts, expectations or interpretations. The GICSW recommends that grocery manufacturers and retailers implement a list of specific action items as soon as possible in order to promote grocery industry composting. Composting is an important emerging solid waste management method that holds great promise for grocery manufacturers, retailers and communitites. As the cost of disposal spirals upward, and the economics of composting improve, composting is becoming an increasingly cost-effective means of controlling waste expenses. Composting is also a more environmentally responsible option than landfilling and grocery customers are constantly raising their level of expectations in favor of this kind of environmentally responsible behavior. This report should facilitate the successful implementation of new composting programs, and addresses policy issues that will support composting nationwide. 3.0 ROLE OF THE GROCERY INDUSTRY Significant Portion of the Waste System As shown in Exhibit A, RIS estimates that 19.5 percent of the solid waste generated directly or indirectly by the grocery industry by weight is food waste. This analysis includes manufacturers and retailers, as well as home waste from grocery shoppers. Containers and packaging represent a significant portion of the waste stream, some of which is organic and can be composted. While a grocery manufacturer’s compostable wastes are highly dependent upon the products made by that manufacturer at any given site, the compostable wastes from retailers are more consistent from one grocery store to another. Keeping regional differences in mind, grocery store compostable wastes include food waste, waxed and wet corrugated, bakery waste, dairy products, produce, floral seafood. From January through April 1991, FMI conducted a waste composition survey, with 27 food retailers and wholesalers responding. The data represented in these exhibits should serve only as a guide as waste compostion may vary depending on store format and offering. The survey respondents were separated into three groups: \* wholesalers (Exhibit B); \* large supermarket chains, definded as having more than 50 stores (Exhibit C); and \* small supermarket chains having 50 or fewer stores (Exhibit D). According to this survey, over 90 percent of the waste generated by each of these categories is recyclable or compostable. Small chains showed a large proportion of their wastes were comprised of food wastes (43 percent). Wholesalers reported a small fraction of food waste, since the wholesalers surveyed generally did not trim or process perishable, unpackaged food as retailers often must do. The small fraction of food waste (10 percent) among large chains is likely due to the fact that many large chains have de facto wholesale facilities in-house, and so the relative proportion of corrugated is greater. This large corrugated proportion reduces the relative proportion for food waste to only 10 percent. However, if dry, non-waxed corrugated containers (OCC) are recycled, then between 75 percent and 90 percent of the remaining waste is compostable food waste and paper. (This percentage fluctuates depending upon how much wet and waxed OCC is available for composting rather than recycling.) Thus, even for a “large chain” that generates a relatively smaller percentage of food waste, the waste actually being disposed is mostly compostable. This task force believes that the composition shown for small chains (Exhibit D) is most likely to represent the composition of most typical retail grocery stores, excluding distribution and warehousing operations. Accordingly, it is significant that such a large percentage-43 percent- of this waste is compostable food waste. From a waste management perspective, recycling of food waste via composting at the retail level is as important as recycling corrugated boxes. The FMI composition survey did not differentiate between recycled, wet or waxed corrugated. Based on a sampling of three grocery stores in 1991, 70 percent of the corrugated containers are compostable (Exhibit E). These statistics enabled the task force to estimate the volume of compostable food waste, wet and waxed corrugated produced by grocery retailers at 6.6 million tons per year. \* The conclusion is that the grocery industry as a whole is a large producer of wastes that are potentially very compostable. The compostable food waste and corrugated alone from grocery stores comprise nearly 4 percent of all municipal solid waste (MSW): \* Retail grocery food waste, compostable wet and waxed corrugated /all MSW (EPA, 1990) = 6.6 million tons / 179.6 million tons = 3.7 percent. Financial Significance of Compostable Wastes Futhermore, disposal of these wastes is increasingly expensive. The National Solid Waste Management Association (NSWMA) has not completed its recent national landfill tip fee survey. However, extrapolating from the 1988 national average tip fee to 1991 based on the recent FMI disposal expense survey yields an average tip fee of $58 per ton for landfills. Tip fees for incinerators may be significantly higher. After adding a conservative hauling charge of $15 per ton, grocery retailers alone are paying $482 million each year to dispose of their compostable wastes: \* 6.6 million tons per year of compostable wastes X ($58/ton tip fee + $15/ton hauling fee) = $481.8 million/year in grocery retailer disposal expense. To cover the expense needed to pay for their $482 million per year disposal cost of compostable wastes, grocery retailers must, at an FMI-estimated pre-tax net profit rate 14.3 percent of sales, sell $33.7 billion in groceries: \*$481.8 million disposal expense / 1.43 percent pre-tax net profit = $33.7 billion in sales. Because individual grocery manufacturers have such product-specific waste streams, a similar expense for the industry overall is difficult to estimate. However, it is clear that, for retailers and manufacturers, the cost of disposal is spiraling upward. FMI documented a 26.6 percent increase in disposal costs for its members in 1988 and a 29.2 percent increase in 1989. This is undoubtedly one of the fastest growing expense items for manufacturers and retailers. It is interesting to note that by simply recycling corrugated boxes and composting all compostable wastes, a grocery store can reduce the amount of waste being landfilled by approximately by 89 percent (Exhibit D). The Composting Option Composting grocery store waste is an attractive option since this waste is consistent in quality and quantity. These materials compost readily and are especially effective when co-composted into existing programs with yard waste, wood waste, manure, with other clean corrugated. However, they are compostable and can provice necessary bulk to the composting process. By supporting and participationg in local composting operations, the industry can serve to encourage broad-based development of composting as an integral part of local solid waste management. Initially, pilot projects could serve as working examples that composting can be accomplished successfully in order to reduce the landfilling of grocery industry wastes. While grocery manufacturer and retailer wastes may be composted in a segregated stream process, MSW composting is an important option for the wider range of organic materials that are produced by other businesses and by grocery consumers. 4.0 GROCERY INDUSTRY OBJECTIVES The grocery industry can set an example for the community by practicing sound recycling and composting activities. Some significant objectives that the grocery industry can achieve by composting are: 1. Meeting demands of grocery consumers that stores and manufacturers be environmentally responsible; 2. Proactively controlling waste disposal tonnage and disposal expenses, which are increasing rapidly; 3. Supporting EPA, state and local government initiatives for landfill diversion and material recovery; 4. Encouraging and enhancing recycling of other recyclable materials, such as plastic, wood, glass and metal through improved separation; and 5. Making the best use of natural and man-made resources by converting organic waste into compost instead of landfilling them. Downloaded from Recycling: America BBS (818) 902-1477