Degradables and Other Environmental Issues

by

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Many changes taking place in the environment are causing problems for food distributors and manufacturers. There is not a single or simple solution to any of them. This conference has scratched the surface on international markets, the changing consumer, and technological changes with a focus on packaging. Each subject could occupy several conference agendas. Other topics could have included food safety, residue testing, use of ethanol-based fuels, organic foods, product proliferation, shelf stable foods, transporting inedible chemicals and garbage in food trucks, etc. Several of these topics seem related to packaging, which has been identified as one of the culprits that is contributing to environmental solid waste problems.

A recyclable container means nothing if it is not recycled. Similarly, a degradable container has little value if it is not disposed of in a way that facilitates degradation. Some food products will require recyclable containers and some may be adaptable to degradable containers--for example, plastic bags used to transport groceries home. Why are we concerned?

Solid waste problems are not exclusive to the supermarket industry; but plastic bags, empty cans, bottles, and microwave and other plastic and fiberboard containers are visible reminders of supermarkets' and fast-food restaurants' contributions to the problem. A hamburger may only be in a foam container for a couple of minutes; but the container improperly disposed of and not recycled may last indefinitely. The role of the supermarket is unique because of its role as the purchasing agent from manufacturers for the consumer. Thus, it is not surprising that we are beginning to see retailers taking the lead in encouraging environmentally sound packaging. They do not want legislation requiring container deposits or imposing taxes on packaging.

At the same time that supermarkets and fast-food restaurants are being identified with the solid waste problem, consumers' purchase behavior is changing. Sixty-nine percent of consumers have changed their cooking behavior over the last three to five years with a push toward convenience foods, especially microwaveable items.

The push for convenience extends well beyond the business of marketing food, as supermarkets broaden the concept of one-stop shopping, saving consumers extra trips to other retail outlets. This is also reflected in the growth in carry-out services and in the changes in new products and new product packaging.

New microwave products are proliferating at an unprecedented pace--284 new items in 1987, up 71 percent from 1986. Consumers spent $760 million on microwave foods in 1987. New packaging often doubles as the serving dish, eliminating the need for consumers to clean as many dishes after each meal (Bildner). In Safeway, shelf-stable products, another new convenience category, have grown from $20 million in 1987 to $90 million in 1988. This convenience adds to the waste disposal problem.

Since 1983, the number of consumers who have ordered food for takeout has increased 47 percent; drive-through has increased 45 percent; and home delivery 280 percent. The implications and importance of these trends have not been lost on supermarkets, fast-food and convenience stores (Mayer). All of the convenient products purchased require special packaging to protect the products until they are consumed. The food service industry has been growing at the rate of

3 percent a year since 1980 and is expected to continue.

At the same time, consumers are expressing concerns about the environment. Retailers such as Walmart and Foodland have announced programs to appeal to consumer wishes and encourage manufacturers to exhibit environmental concern in their packaging decisions. Walmart has announced a program to reward manufacturers who switch to "environmentally friendly" packaging with in-store signs promoting the products. Environmentally friendly means either recyclable or environmentally safe. Other retailers are studying ways to improve packaging where possible. A Walmart spokesperson indicated that the retailer is not looking for an overnight improvement, recognizing that it takes time to change packages (Turcsik).

Foodland Supermarkets, a 105-store chain in four states, is promoting environmental awareness with a new program that uses shelf talkers, window signs, and biodegradable shopping bags. The program is aimed at telling shoppers which products are packaged in recycled or recyclable packaging. It also promotes waste-reducing practices and recycling of aluminum cans. Environmentally safe products are identified by special shelf tags; and a free eight-page book of products, divided into paperboard, glass, and aluminum sections is available (Fischman).

William Ruckleshaus, former head of the Environmental Protection Agency, says

> It has been argued that we can recycle waste and reduce waste at the source to such an extent that our need for disposal facilities will disappear. But this is pie in the sky. The EPA estimates that by the year 2000, 55 percent of municipal wastes will still have to be landfilled. That's down from 77.5 percent now; but that still means finding a place for an estimated 107 million tons of waste.
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> More than a third of the nation's landfills will be full within the next decade. New York will exhaust its capacity in nine years, Los Angeles in six, North Carolina in two to five years, and Philadelphia is out of capacity now, and must engage in continuous negotiations to dispose of its 800,000 tons per year. Why? Nobody wants garbage put down anywhere near where he lives, the 'not-in-my-backyard' syndrome--the dreaded NIMBY.

Fifteen years ago landfill disposal commonly cost $5 to $10 a ton. Today, fees of $50 a ton are common and $100-$140 is not unknown. At the Atlanta State Farmers Market, waste disposal costs have gone up 100 percent in three years and are expected to go up another 50 percent this year when the contract is negotiated.

At food distribution centers, 65 percent of the waste is produce. The centers are trying to separate as much as possible. Some centers are looking at grinders for soft pallets. Installation costs are around $100,000. New York is looking at one that will grind everything, costs $285,000, and requires an operating engineer.

Again, Ruckleshaus says,

> The problem of solid-waste disposal in America is not that the industry does not know how to solve it . . . . Our problem has to do with values, public priorities and trade-offs . . . .
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> There are a number of reasons for the absence of a political solution. Most important, it is hard for people to believe in the reality of the problem as long as the garbage is picked up every day and fees are a relatively small fraction of the average person's income.
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> . . . We value, for example, the convenience of products such as disposable diapers and we value attractive packaging. We show this at the checkout counter, which is a powerful incentive for people in political office.
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> . . . The value of an efficient and fair waste disposal system has not been well articulated, and there are few incentives that support such a value. Disposal costs are rarely included in product costs. People who produce lots of trash rarely are charged more than those who produce little--and if they are it's usually not enough to make them change their behavior. (Ruckleshaus)

Environmental pressures along with many local jurisdictions passing or threatening legislation that is well-intentioned but not based on careful analysis of the impact, will result in problems for the food industry. My contention is that there is a combination of potential steps that should be considered to relieve environmental pressures.

For example, I believe in recycling anything that can be effectively and efficiently recycled; however, I think there are also opportunities for the use of bio- or photo-degradable materials. To make efficient use of degradables, we may have to separate them and process them differently to enhance degradation. Yard waste contributes about 20 percent to the solid waste stream and landfills and serves as one example of something that should be treated differently. Yard waste can be broken up by mechanical means and by the environment as the products are turned into compost. Other degradables could be treated similarly; but there are limits to the application of the technology to other food packaging given the current state of the art and the need for variable-length shelf life for many packages. We still do not know much about the residue or dust remaining after degradation, but the volume of plastic is much reduced.

Plastics are projected to make up 10 percent of municipal wastes by the year 2000 as compared to 3 percent in 1970. However, plastics take up 30 percent of the landfill space and are 40-50 percent of all litter.

There is probably a legitimate concern among plastic manufacturers and some environmentalists that the use of degradables hurts plastic recycling efforts. Given the current state of the art, degradables should be restricted to certain uses, and a consumer education program should be launched to help people understand the differences. At the present time, degradable plastics are available in trash and grocery bags, disposable diapers, six-pack rings and as field weed covers.

Kenneth Peskin, formerly with Supermarkets General, adds that the public sees retailers as part of a food production and distribution system that provides great benefits but also creates some issues for concern. Increases in food prices, additives and preservatives, irradiation, pesticides, and now packaging, are issues placed at our doorstep not because we have control but because we are the most accessible. Beyond exhibiting model behavior, the supermarket industry has to use its influence to involve consumer groups, manufacturers, and packaging suppliers with state and local government officials so that solid waste policies and programs are developed in a form that will address the problem rather than simply provide another politically attractive placebo.

A real concern for the food industry is that local communities may enact sweeping regulations concerning the types of materials that could be used in packages sold for use in that community and that would be accepted into the local waste handling systems. Plastic industry officials say that more than 350 individual legislative or regulatory proposals about how to deal with solid waste are currently under consideration on federal, state and local levels (Holusha). The industry will be looking for help and guidance to establish a gradual rather than an overnight move to environmentally friendly packaging. It will require academically based research efforts, common sense, and a good education program. We need to move to clean up and protect the environment in an orderly and logical fashion.

FMI has proposed that the issue be dealt with through

> a combination of four approaches: (1) Reducing the amount of materials entering the waste stream from households, businesses and industry; (2) Increasing the rate of recycling (EPA has set a goal of reducing municipal solid waste 25 percent by 1992 through source reduction and recycling; (3) Incinerating non-recyclable materials in an environmentally safe manner; and (4) Using landfills for noncombustibles and non-recyclable materials. The solutions will require planning and action at the local level and grocers need to play a part as members of their communities. FMI will work with manufacturers and government on the national issues. The programs should be community based and must include source separation, such as curbside or household separation. (Geoghegan)

I am reminded of a recent statement by John Block, former Secretary of Agriculture and now with National American Wholesale Grocers, commenting on the Reagan administration, of which he was a part, and relating to the New Federalism, which focused on turning regulatory powers back to the states. He was referring to the prospect of varied regulations on food safety and pesticide monitoring being proposed by different states. The implication was that the growth in food safety related regulations by states is an "unintended outcome of that program." He also implied that these types of programs should be handled by a central authority. I suspect he would make the same comments about the proliferation of state regulations on food packaging and waste handling. There needs to be a link between a national program and local community or state efforts.

Ruckleshaus discussed how a company he worked with involved a community to develop stringent standards for a hazardous waste handling facility, establish liaison advisory committees, negotiated economic benefits for the community, and secured a favorable community referendum vote to open the facility. The process with community involvement could be a model approach for non-hazardous or municipal waste disposal facilities anywhere.

One of the problems facing recycling today is the glut of old newspapers. The market for old newspapers, the key commodity in any recycling program because it accounts for roughly 60 percent of revenue, has collapsed under tremendous over-supply. There is a need to develop other markets for recycled paper. In this sense the paper industry is behind the plastics industry in not developing other uses for its products.

The result is a loss of revenue for the communities with recycling programs and paper going into landfills. Contrary to popular belief, newspapers take decades to decompose in landfills. Feeling pressured, several paper manufacturers have recently announced plans to increase capacity for processing recycled paper. However, it will take three years to gear up fully. As a result, in cities that had recycling programs, more papers are being collected with the garbage, and the recyclers have negotiated fees such that costs of collection have risen to the point that the costs of recycling now approach that of landfilling (Paul).

Researchers are working on degradable plastics and recyclables at a furious pace in an effort to keep their products from being legislated out. Even manufacturers of degradable plastics are working on recycling, composting, and other ways to help the environment because, as one put it, "degradable bags are not a solution to the waste problem" (DeNitto). It would appear to me that we need research to rethink many of our current waste disposal methods and processes, including how we use landfills and for what purposes. Improved methods for segregating solid wastes will be essential along with much consumer education.

I have not mentioned the fact that it has been fifteen years since we reported in the *Journal of Food Distribution Research* on the savings to be gained in compacting recyclable cardboard in supermarkets (Ricker). However, I think it might be appropriate to point out that within a couple of years after release of the study, most stores had installed compactors. The point is that the food industry would benefit from studies of this type that might forestall bad legislation help make the food distribution environment healthy.

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