

Food Packaging in South Africa: Reducing, Re-using and Recycling

by Anton Nahman

Food packaging is essential for maintaining food quality, freshness and integrity. It also allows for convenient transport, storage and sale in discrete quantities. Finally, it can be used as a means of product differentiation, marketing and information dissemination.

However, increased consumption and the lack of a recycling culture in South Africa have resulted in an ever-increasing volume of used packaging reaching landfill sites. Not only does this use up increasingly scarce and valuable landfill airspace; it also constitutes a loss of potentially valuable materials, such as steel, glass, and plastics, which could otherwise have been re-processed into new products, thereby displacing the need to exploit virgin raw materials.

How Have Government and Industry Responded?

There have been two types of responses to these problems. One response has been from government, who have identified plastic, glass and steel cans as 'priority wastes' that need to be kept away from landfill sites through reduction, re-use and recycling (the others being paper and tyres) (Goldblatt, 2009). For example, regulations on plastic shopping bags were imposed in May 2003 (Republic of South Africa, 2003), comprising both design standards (in terms of thickness and printing) to increase recyclability, and a tax on bag sales to encourage reduction and re-use.

However, during the course of implementation, government bowed to political pressure on both fronts, lowering both the proposed standards and the initial tax rate. As such, little progress has been made in terms of recycling (Gosling, 2006), while initial gains in terms of reduction and re-use seem to have been reversed.

A second type of response has been from industry, which has recognised the business case for removing valuable materials (such as plastics, glass and steel) from the waste stream and re-processing them rather than using virgin raw materials. A number of voluntary industry initiatives have therefore been established to coordinate recycling efforts in the respective industries.

The most prominent examples are Collect-a-Can (steel beverage cans), the Glass Recycling Company (GRC), and PETCO (polyethylene terephthalate (PET), a plastic used mainly in soft-drink and mineral water bottles). In all three cases, the materials in question are high in value and 100% recyclable many times over at relatively low cost, for a variety of end-use applications.

Nevertheless, recovery of post-consumer waste for recycling was low prior to the establishment of the respective organisations in all three sectors (see Figure 1). This was largely because of a lack of infrastructure, awareness, and/or financial incentives for consumers to

separate their waste and return used packaging; and because of low and/or unstable prices for these materials, such that potential collectors could not be guaranteed a steady income.

The three recycling initiatives are therefore focused on ensuring a steady supply of recyclable materials by raising awareness, setting up collection infrastructure and providing financial incentives for consumers and/or collectors to return used packaging.

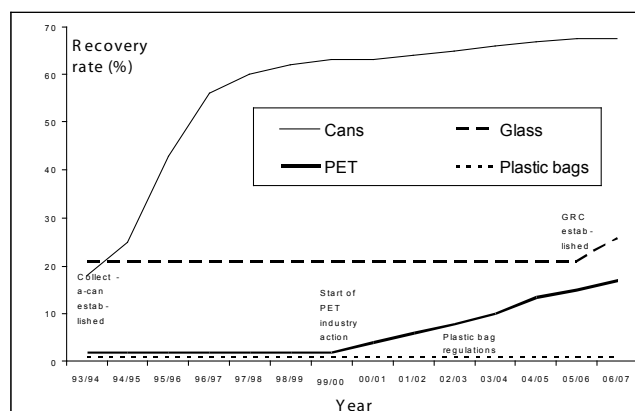


Figure 1: Recovery rates over time in SA for cans, glass, PET and plastic bags packaging.

In particular, collectors are reimbursed for their efforts in such a way that they are protected from market fluctuations, keeping them in the market even in adverse economic conditions, thereby guaranteeing a reliable supply.

As a result, recovery rates have increased in all three cases (Figure 1), although consumer awareness remains low, with the majority of materials still entering the waste stream and being recovered by scavengers at landfill sites, rather than being separated at source. This can be contrasted with the case of plastic bags, where recovery rates have remained low.

The Merits of Regulation vs. Voluntary Initiatives

These results do not imply that voluntary initiatives are necessarily more effective than regulations. Instead, it is likely that the low recovery rate for plastic bags relative to the other packaging sectors can be explained by the differing characteristics of the former that make them less amenable to recycling. In particular, their lower weight and value per unit, and the relative lack of post-recycling applications, implies that they have a low recycling value relative to the other waste streams. Regulation therefore seems to be necessary in cases where the material in question has little inherent recycling value, such that there is little incentive for industry to take the initiative.

In addition, in the case of glass and PET, it could be argued that the initiatives were not entirely 'voluntary.' In both cases, a major incentive behind the initiatives was the desire to avoid punitive regulations like those imposed on the plastic bag industry. Thus, the plastic bag regulations may have provided a *raison d'être* for 'voluntary' initiatives in the glass and PET sectors, thereby indirectly stimulating recovery in those industries.

Furthermore, in contrast to the plastic bag regulations, the industry initiatives only focus on recycling, and do little to foster reduction or re-use. This is simply because, while recycling is in the respective industries' best interests, the business case for encouraging reduction and re-use of their products is less clear-cut. Thus, in the absence of regulation, there may be little incentive for industry to design their products in such a way that packaging is minimised, or to raise prices so as to reduce sales. Indeed, the plastic bag regulations were initially effective in encouraging reduction and re-use, although these initial gains were reversed after government bowed to political pressure to reduce the tax rate. This suggests that there is nothing inherently wrong with the regulations, only with the way they were subsequently implemented.

If increasing recycling was the only goal, this would not be an issue. However, with ever-increasing purchasing power and consumerism in South Africa, there is an increasing demand for packaging. Thus, in the absence of efforts at reduction, the amount of packaging reaching landfill sites will continue to increase, unless recovery rates increase sufficiently to absorb the increasing amount of packaging being produced. This suggests the need for a combination of both regulation (or at least mutually-agreed targets) aimed at reducing packaging quantities, and industry initiatives focused on recycling efforts. This requires both political will in the face of likely opposition to regulations, and improved efforts at raising awareness to encourage separation at source.

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