



## A practical approach to sustainable packaging

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In the past few decades, there has been an increase in environmental awareness. Investors are interested in social responsibility. Companies are incorporating sustainability into their business focus. Consumers are demanding “green” products and packaging. These initiatives also support environmental responsibility and provide economic benefit.

Packaging is a visible and crucial part of the environmental waste issue. Canadians produced 33.5 million tonnes of non-hazardous solid waste with 25.2 per cent diversion in 2012, according to Environment and Climate Change Canada.

The consumer is bombarded with terms such as biodegradable, eco-friendly and “green” packaging. This, along with eco-labelling, causes consumer confusion. In some cases, claims about sustainable packaging mislead the consumer about the environmental benefits of the product.

The definition of sustainable packaging given by the Sustainable Packaging Coalition is broader than package recyclability. The best choice for sustainable packaging depends on a number of factors, including consideration of the needs of the product within the package. Deciding which system has lower impacts is not always straightforward, and a single-criterion approach cannot be used. For example, is a multi-layer, non-recyclable plastic pouch better than a heavier recyclable glass bottle or metal can?

Performing a life cycle assessment (LCA) of the package can provide valuable information on the “cradle-to-grave” environmental impacts. The life cycle

assessment measures the environmental impacts of the package throughout the life cycle from extraction and processing of raw materials through manufacturing, distribution, usage and disposal. The goal is to compare the environmental impact of products and to choose the least burdensome one. The LCA is informative but infrequently performed since this is an expensive and time-consuming exercise that often uses industry average inputs and becomes quickly outdated with changes in process and technology.

So, what are some practical approaches to creating sustainable packaging?

1. **Reuse/repurpose:** As an example, the refillable beer bottles sold in Ontario are reused an average of 15 times before being recycled into new glass bottles (*Beer Store, Stewardship Report 2016*).
2. **Reduce:** Package reduction can be achieved by eliminating unnecessary packaging, light weighting initiatives and minimizing scrap during production.
3. **Recycle:** Selecting packaging materials for recycling and consumer education on recycling will increase recycling rates.
4. **Use renewable source materials:** The use of plant-based materials reduces the carbon footprint of the package.
5. **Use responsibly sourced materials:** Responsible sourcing considers ethical, labour, social and environmental aspects when purchasing packaging materials.
6. **Review the manufacturing process:** Environmental impacts can be reduced by minimizing waste, and by reducing energy and water consumption

in the manufacturing process.

7. **Optimize package design:** Reducing product damage in the distribution system, increasing filling/packing line efficiencies, maximizing packing efficiency in unit and distribution packaging and maximizing shelf life will contribute to reducing environmental impacts of the package.
8. **Examine the distribution system:** Transportation efficiencies can be achieved by minimizing transportation distance or by minimizing transportation impact (for example, ocean instead of air travel and transport by rail instead of truck are more energy efficient per unit package).
9. **Create a corporate sustainability plan:** The plan can include building a business case, reviewing current practices, devising metrics to track progress and savings, identifying current problems, striving to meet the goal, and celebrating success. Industry must balance consumer demands for sustainable products with demands for convenience, performance, appearance and cost. One must also not lose sight of producing a quality package that protects and preserves the product and delivers it safely to the consumer. Consumer and industry education and awareness of the issue combined with practical solutions will go a long way to address packaging sustainability. 🍏

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