

Food Loss & Waste: Answering the Packaging Question

VANCOUVER, June 2, 2020 - Paper or plastic? Glass or tin? Or no packaging at all? A new research report from the **National Zero Waste Council** reveals the relationships between food waste, packaging and GHG emissions.

It provides insight into how and when packaging can be applied to prevent food spoilage and waste to significantly reduce greenhouse gas (GHG) emissions from Canada's agri-food sectors.

The research report, *Less Food Waste, Less Packaging Waste*, was commissioned by the **National Zero Waste Council** in partnership with **RECYC-QUÉBEC**, **Éco Entreprises Québec** and **PAC Packaging Consortium** – with funding provided by **Vancity**, **RECYC-QUÉBEC** and **Éco Entreprises Québec**. It was prepared by **Value Chain Management International**, a global consulting firm specializing in the agriculture and food industries.

"Reducing food waste and advancing the circular economy must be a top priority in our collective fight against climate change because preventing one tonne of food waste prevents four tonnes of CO₂-equivalent emissions," said Malcolm Brodie, Chair of the National Zero Waste Council. "Rather than eliminating packaging, the industry must choose packaging materials and designs that keep food from spoiling and support the circular economy in Canada."

The study considered the effectiveness of four common types of packaging (plastic, glass, metal and paper) for extending the shelf-life of twelve product types representing the range of goods found in a typical grocery store.

While some types of foods, such as lettuce, apples, granulated sugar and dry pasta, benefit from bulk or unpackaged sales, the vast majority of foods last longer when packaged properly. Items like fresh chicken and fish filets, berries, milk products and frozen burgers are not suited to loose sales and each benefits from a tailored packaging solution.

"Discarded packaging has become an emblem of the linear economy – it's something we all deal with every day so it's easy to overestimate its environmental impact compared to food waste," said Jim Downham, Vice Chair of the National Zero Waste Council and CEO of PAC Packaging Consortium. "It's crucial that we get packaging right to keep food fresh and safe and to convey important information to customers."

In most cases, any GHG reductions achieved by not pre-packaging food are quickly outweighed by even a minor increase in food waste. While the exact scenario varies by food type, the data suggests that virgin packaging materials only account for five percent of total GHG emissions from the food sector.

"Developing short, local food supply chains as well as reducing, eco-designing, reusing and better recycling are complementary strategies for developing a more circular economy," said Sonia Gagné, CEO of RECYC-QUÉBEC. "The report highlights the need for RECYC-QUÉBEC to continue to take concrete action in these areas and especially its fight against food waste."

The report also urges caution about misleading marketing claims around 'biodegradable,' 'compostable' and 'bio-based' plastics. While these materials may appear beneficial, their use can result in unintended environmental and economic impacts. While some alternative plastics can be recycled, these require specialized infrastructure and routinely contaminate or disrupt established recycling systems for conventional plastics. Biodegradable plastic packaging may also lead consumers to be less careful with their waste, and since there are no established standards for those plastics, there is no guarantee the materials will break down without releasing toxins or microplastics into the environment.

"By introducing environmental criteria into their packaging design, companies commit to a circular business model and ensure they reduce food waste," affirmed Geneviève Dionne, Director of Eco-design and Circular Economy at Éco Entreprises Québec.

"Cutting food spoilage through sustainable packaging, and consequently reducing waste, goes a long way towards tackling interconnected sustainability challenges, such as climate change, food security and resource shortages," said Christine Bergeron, Chief Member Services Officer at Vancity Credit Union. "Research such as this is vital in supporting our understanding of how we can innovate to reduce food waste and greenhouse gas emissions, and Vancity is proud to support this important work."

Recommendations for Industry and Government

The report proposes a suite of actions for food producers, packaging manufacturers, industry groups, recyclers and governments. The recommendations are aimed at a system-wide approach to preventing food waste, addressing problematic or unnecessary packaging, improving recycling and composting infrastructure and supporting innovative packaging solutions.

Key actions for manufacturers align broadly with circular economy principles and include increasing use of post-consumer materials and designing packaging for re-use, recycling and composting.

Governments are encouraged to establish minimum recycled content requirements, to advance certification programs for recyclable and compostable packaging, improve collection programs and to assist with implementing extended producer responsibility programs, which transfer the cost and management of recycling packaging and paper products to producers.

Consumers play a critical role as well – their awareness and participation are key factors for maximizing product shelf life at home, as well as for ensuring the success of residential recycling and composting programs. Education initiatives are important for bringing clarity to issues like 'best before' dates, food storage best practices and effective shopping habits.

About Food Waste

In Canada alone, approximately one-third of the food produced and distributed never gets eaten, due to loss and waste along the supply chain or at home. Every year, 11.2 million metric tonnes of avoidable food loss and waste occurs in Canada, at a cost of over \$49 billion.

If the global food industry's current level of inefficiency continues on its present trajectory, by 2030 food loss and waste is predicted to reach 2.1 billion tonnes worldwide and by 2050, the associated GHG emissions will add up to 6.2 gigatonnes – the equivalent emissions of the country of Brazil.

About the National Zero Waste Council

The National Zero Waste Council is a leadership initiative founded and supported by Metro Vancouver bringing together governments, businesses and non-government organizations to advance waste prevention in Canada. Our mission is to act collaboratively at the national and international level as an agent of change for waste prevention and reduction in the design, production and use of goods.

More Information

Full Report (EN): <http://www.nzwc.ca/Documents/FLWpackagingReport.pdf>

Full Report (FR): <http://www.nzwc.ca/Documents/FLWpackagingReport-FR.pdf>

Summary (EN): <http://www.nzwc.ca/Documents/FLWpackagingSUMMARY.PDF>

The National Zero Waste Council is hosting two webinars about the *Less Food Waste, Less Packaging Waste* report on June 2 and June 3. Visit www.nzwc.ca to register.

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