CPMA ACDFL
CANADIAN PRODUCE MARKETING ASSOCIATION
ASSOCIATION CANADIENNE DE LA DISTRIBUTION DE FRUITS ET LÉGUMES

A landscape review of plastics in the Canadian fresh produce sector 2019

Technical Report
Executive Summary

Authors:
Martin Gooch, PhD
Delia Bucknell
Dan Laplain
Peter Whitehead, PhD

CPMA
CANADIAN PRODUCE MARKETING ASSOCIATION

A landscape review of plastics in the Canadian fresh produce sector 2019

Report created by Value Chain Management International Inc for CPMA

The global industry we work in is evolving rapidly every year, as is our world's environmental ecosystem. In order for business and ecology to mutually thrive moving forward, we must consider the greater good of our planet in our corporate practices.

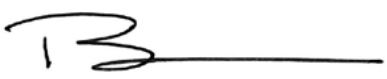
CPMA has identified the issue of plastic waste in the produce industry as being critical to the continuity of our sector. With this in mind, CPMA and our member companies have come together to lead the path forward, aiming to address the global concern of waste and plastics impacting our environment now, and in the future.

This research report is a manifestation of CPMA's efforts and vision for a green economy that identifies concerns around fragmented systems, unnecessary and problematic plastics, the benefits of plastics when used within the appropriate system and the need to ensure food waste and food security in our efforts around sustainable packaging.

We are living in a period of change where social, political and technological disruptions are highly intertwined and occurring simultaneously. In this regard, this study guides us toward change that is based on rational science that recognizes consumer need, environmental impact and societal benefits.

Together with our members and partners across the fresh fruit and vegetable supply chain, and with our colleagues throughout the food system, CPMA hopes to be a catalyst for positive and viable change that enables businesses to thrive, communities to flourish and consumer preferences and demands to be met. Our planet's natural resources are finite, and change is necessary to ensure we are stewards for a sustainable future.

Ron Lemaire



President, CPMA

CPMA
CANADIAN PRODUCE MARKETING ASSOCIATION

A landscape review of plastics in the Canadian fresh produce sector

2019

Report created by Value Chain Management International Inc for CPMA

EXECUTIVE SUMMARY

The purpose of this research was to produce the evidence required to develop and implement a pragmatic roadmap that will assist the Canadian fresh produce industry in navigating the highly complex, multifaceted topic of utilizing plastic packaging in the most economically and environmentally responsible means possible over the short, medium, and long term. Evidence of the need for such a roadmap includes the environmental, economic, and societal effects that have resulted from the existence of uncoordinated plastic packaging value streams. The need for industry, government, and wider industry stakeholders to collaboratively redesign the plastic packaging value chain has never been greater.

The research was completed in four phases:

1. **Literature review, secondary data analysis, consultative interviews**
2. **Primary research and industry consultation**
3. **Data analysis and extrapolation**
4. **Reporting and communication**

The methodology employed to complete the research guided the development of a mass balance model that estimated the volume of plastic packaging used by the Canadian produce industry in relation to overall plastic usage in Canada. The mass balance also estimated the volume and types of plastic packaging associated with specific types of fresh produce (e.g. leafy greens, tomatoes, and potatoes). The research methodology enabled an assessment of the comparative impact that a lack of effective plastic packaging could have on industry and consumers, along with causes and effects impacting the volume of packaging materials recycled, reused, or composted.

The secondary research identified that lack of coordination between federal, provincial, and municipal governments has played a role in post-consumer plastic packaging unnecessarily going to landfill or sent overseas, versus being recycled or composted. This recognition is leading governments to explore means to proactively influence the creation of closed-loop recycling and composting systems. The majority of problematic plastics identified by governments and NGOs have little correlation to plastic packaging used by the fresh produce industry. In fact, UNEP identified that, in the case of fresh foods in particular, an effective alternative to plastic packaging (including bags) does not presently exist. Minimizing the existence of problematic plastics and packaging, not eradicating plastic packaging per se, is therefore viewed as the preferred option. As described, improving the effectiveness of extended producer responsibility (EPR) initiatives has an important role to play in achieving this outcome.

Problematic plastics identified by governments and NGOs have little correlation to plastic packaging used by the fresh produce industry.

More than half (58 percent) of all fresh produce sold in Canadian retailers is not pre-packaged in plastic. The plastic packaging that is used by the Canadian and international fresh produce industry has occurred for good reason. As identified in Section 2.3, the unique benefits offered by plastic packaging has enabled the development of a highly effective and efficient fresh produce industry, which is able to meet consumer demands for year-round access to highly nutritious, value-for-money foods. The research categorized the mechanisms that lead to plastic packaging reducing the loss and waste of fresh produce during distribution, at the point of purchase at retail or foodservice, and in the home as: 1) product protection, 2) extended shelf-life, and 3) promote behavioural change.

More than half (58 percent) of all fresh produce sold in Canadian retailers is not pre-packaged in plastic.

Consumer demands for convenient value-added meal solutions – whether that be in the form of pre-cut fruits and vegetables, ready to cook items, bagged salads, or other formats – have been enabled by the fresh produce industry's use of plastic packaging. The challenge is not plastic packaging per se; it is the lack of integrated systems that encompass the entire plastic packaging value chain. Packaging has not been designed to ensure its ease of recyclability. The lack of commonly accepted and adhered-to global standards for post-consumer recycled (PCR) plastics, combined with worldwide access to high quality low-priced virgin materials, has discouraged packaging manufacturers from choosing recycled content over virgin.

The produce industry represents just one of the seven distinct links that together form the plastic value chain. Unless all links are aligned, it is not possible to establish a circular economy for plastic. This is critical, especially given that during collection and recycling, packaging used by the fresh produce industry is aggregated with polymers and plastics used for other purposes in other industries. The proliferation of packaging materials, driven by packaging manufacturers and converters seeking to add value to commodity-priced polymers through complexity and technology, is among the reasons for why just nine percent of total plastics are recycled annually in Canada.

The challenge is not plastic packaging per se; it is the lack of integrated systems that encompass the entire plastic packaging value chain

The produce industry represents just one of the seven distinct links that together form the plastic value chain.

While the packaging of fresh produce is an easily observable use of plastic, the volume of plastic used by the fresh produce industry represents just 5.1 percent of overall plastic packaging and 2 percent of overall plastic entering the Canadian economy each year. PET (Polyethylene terephthalate) is the most commonly used plastic packaging material used by the fresh produce industry. PET is also the most widely recycled polymer, and PET packaging can be manufactured from 100 percent recycled material. With 129,000 tonnes of recycled PET (rPET) produced annually in Canada, most of which is presently exported, sufficient material exists to begin establishing a robust circular economy.

The volume of plastic used by the fresh produce industry represents just 5.1% of overall plastic packaging and 2% of overall plastic entering the Canadian economy each year.

Means to address problematic plastic packaging that can be extended across industry include 1) light-weighting, reducing the volume of plastic per unit sold; 2) manufacturing packaging from polymers that are more economically viable to recycle; 3) inclusion of post-consumer recycled (PCR) content in produce packaging; 4) design for recycle, such as replacing multi-resin laminates with mono-resin laminated packaging; 5) incorporating packaging design and materials into procurement decisions; and 6) providing customers with the opportunity to buy items loose and take them home in their own reusable containers. The research identified that businesses headquartered and operating in Canada generally feel more motivated to achieve these outcomes than businesses headquartered elsewhere.

Lack of effective packaging could lead to almost a half a million metric tonne increase in food losses and waste (FLW) above current levels. Valued at CA$2.5 billion, based on average Toronto wholesale prices for 2018, this estimate is conservative.

The premature withdrawal of current plastic packaging could have far-reaching unintended consequences. Lack of effective packaging could lead to almost a half a million metric tonne increase in food losses and waste (FLW) above current levels. Valued at CA$2.5 billion, based on average Toronto wholesale prices for 2018, this estimate is conservative. Externalities associated with the premature withdrawal of plastic packaging suggest that the true economic cost would reach $5 billion, perhaps more. This is due to the withdrawal of current plastic packaging creating enormous wider economic consequences for industry and consumers alike.

The range of fresh produce available to consumers would diminish. Business models may no longer be viable, potentially leading to businesses and sectors ceasing to exist. Prices would inevitably rise as a consequence of a less efficient and effective fresh produce industry. Consumers would have less choice. Highly nutritious foods, such as berries, soft fruit, and grapes, would be seasonal. Demand would exceed supply. Consumers' price sensitivity would itself negatively impact the purchasing decisions of many. All of this is counter to the revised Canada's food guide, which promotes the increased consumption of fresh produce.

Establishing more environmentally sustainable packaging solutions rests on a comparatively small number of factors. These factors have been grouped into three themes, which together would form a strategic roadmap for Canada's fresh produce industry. That the Canadian fresh produce industry is already on the road to achieving these outcomes proves the practicality of what is proposed.

Establishing more environmentally sustainable packaging solutions rests on a comparatively small number of factors.

1) STANDARDS AND BEST PRACTICES

An overarching focus of the strategic roadmap is to simplify the types of plastic packaging used by the fresh produce industry. This will help ensure that packaging contains a high percentage of recycled content, and ensure that the maximum possible percentage of the chosen packaging is recyclable (or compostable).

This would be achieved by implementing effective standards and specifications, and having implemented best practice processes and procedures that reflect systems thinking and continually improve over time. Best practices for reducing the overall volume of plastics used in fresh produce, including light-weighting and encouraging consumers to reuse packaging, would also be developed.

Targets against which the produce industry's and municipality's performance is monitored and reported would be established.

2) ECOSYSTEMS AND STAKEHOLDERS

Canadian retailers should establish packaging protocols that their suppliers must attain. Packaging manufacturers and fresh produce suppliers should partner with retailers and foodservice operators to reduce the volume of plastic used to package fresh produce. Easily recyclable materials containing high levels (ideally 100%) of post-consumer recycled (PCR) content will be used wherever possible.

A challenge regarding industrial compostable packaging is that it only makes sense when the necessary collection systems and infrastructures are in place. This is not presently the case in most of Canada. The price of compostable packaging materials can also be so high compared to alternative materials that it creates the potential for food insecurity issues to arise. As with recycling, addressing these challenges will require strategic investments in products, processes, and infrastructure.

3) EDUCATION

Communicating common standards and specifications for PCR materials is a key enabler of the changes described above. Education and awareness efforts will target industry and consumers, and span the entire plastic packaging life cycle. Clear objective messaging regarding the suitability of packaging for recycling or composting, along with the roles and responsibilities that all stakeholders, is required to ensure that the maximum percentage of plastic packaging is recycled and/or composted. Those plastics not suited to recycling should be discouraged. The exceptions would be stop-gap solutions while alternative materials and systems are in development. The research identified that the materials that should be discouraged include PVC, Polystyrene, black and dark coloured plastics, PLA, rigid water soluble plastic, Oxy-degradable, Polycarbonate, and Acrylic.

CPMA

CANADIAN PRODUCE
MARKETING ASSOCIATION

Property of the Canadian Produce Marketing Association

162 Cleopatra Drive | Ottawa, ON K2G 5X2 | Tel: (+1) 613-226-4187

www.cpma.ca