



# Left Holding the Bag

**A Survey of Plastic Packaging in Canada's Grocery Stores**

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environmental  
defence

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# Executive Summary

Environmental Defence commissioned a survey of 54 high-traffic grocery stores across Canada in the fall of 2022 to identify the prevalence of single-use plastic packaging in four departments: produce, baby food, pet food and soups. Auditors scanned more than 40,000 products in stores belonging to four major grocery chains and some independent grocery retailers across Canada.

## KEY FINDINGS

Categories	Per cent of items packaged in plastic	Per cent unwrapped
Baby Food	76%	N/A
Produce	71%	27%
Pet Food	66%	N/A
Soups	35%	N/A
Overall Average	64%	N/A

- ➔ Baby food was the most likely to be packaged in plastic, at 76 per cent, a figure that is strikingly consistent across the different chains and store brands.
- ➔ Grocery stores incentivize the purchase of plastic-wrapped produce: the price per weight of whole fruits and vegetables is cheaper when the produce is pre-packaged in multiples than when it is sold unpackaged.
- ➔ Pet food appears to be shifting toward plastic packaging, with an average of 66 per cent across all stores and products but a variation of nearly 20 per cent between the chains, from a low of 58 per cent to a high of 76 per cent.
- ➔ There is otherwise very little variation between the stores. **If you shop at a major local grocery store, you will not be able to avoid single-use plastic packaging.**

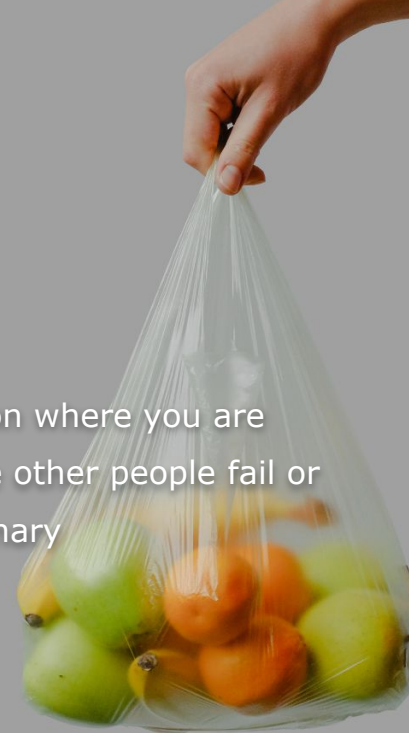
There appears to be a trend toward flexible plastic packaging for the items we scanned. With less than 15 per cent of all plastic packaging recycled in Canada,<sup>1</sup> the vast majority of this type of packaging is destined for landfills, incinerators and nature. The growth in this type of packaging works against the government goal to eliminate plastic waste by 2030. The increase in use of plastic packaging of all types also raises concerns about human – and particularly baby and toddler – exposure to chemical additives commonly found in plastic packaging, including phthalates and bisphenols.

Packaging is a significant source of plastic waste in Canada and everyone comes into contact with packaged food. Yet, neither governments nor grocery chains have effective plans to reduce the plastics in the grocery departments we surveyed. Further, there is little discussion or action on the impacts of chemical additives in plastic food packaging.

# be left holding the bag

**PHRASE** [VERB inflects]

If you **are left holding the bag**, you are put in a situation where you are responsible for something, often in an unfair way because other people fail or refuse to take responsibility for it. – Collins English Dictionary



## RECOMMENDATIONS

**Governments** need to step up regulations of plastic packaging to address a growing source of pollution from food packaging:

1. Ban plastic packaging material that is not recycled at scale and has no prospect of effective and safe recycling.
2. Require refill and reuse of 30 per cent of retail packaging by 2030.
3. Set a legal requirement for labelling of hazardous chemicals in products, including food packaging in the *Canadian Environmental Assessment Act* or other law.
4. Urgently assess chemicals used in packaging, including bisphenols and phthalates, with the aim to eliminate whole classes of hazardous chemicals from food packaging.
5. Improve transparency of formulations of chemicals used in food packaging to facilitate safe recyclability and elimination of hazardous substances in contact with food.
6. Set high targets for the safe and environmentally-sound recycling of plastic packaging.

**Retailers** do not appear to be on track to reach even their own goals to reduce plastic packaging waste. Between now and 2025, we recommend retailers:

1. Eliminate packaging for at least 90 per cent of produce and encourage the use of reusable produce bags.
2. Eliminate the use of plastic packaging for foods marketed to babies and toddlers.
3. Phase out the use of plastic pouches, wrappers and films for all products.
4. Introduce or scale up reuse and refill opportunities, including return-to-retail of containers for food marketed to babies and young children and prepared foods in the produce section.
5. Be transparent about the additives used in the packaging of food products and require this information from suppliers.

# Introduction

A trip to the grocery store quickly becomes an exercise in frustration for people wanting to avoid single-use plastic packaging. Our food is increasingly encased in throwaway plastic at a time when governments in Canada and around the world are committing to address the plastic pollution crisis<sup>2</sup> and related human health risks.

People in Canada generate 2.2 million tonnes of plastic packaging waste each year.<sup>3</sup> It is estimated that some 900,000 tonnes of plastic packaging are collected from Canadian households annually,<sup>4</sup> and it can be assumed that a large proportion of that packaging is sourced from grocery stores.

Environmental Defence set out to identify the sources of the plastic packaging we face when we shop for food and to assess its impacts and possible alternatives.

Over the course of a few weeks in the fall of 2022, we commissioned Merchandising Consultants Associates Limited (MCA) to audit large, high-traffic grocery stores across the country – from high-end store brands like Fortino’s to budget stores such as Food Basics. The audit included the major corporate chains, as well as regional independents.

In each store, MCA auditors scanned the items in four departments: produce, soups, baby food and pet food. These types of products can be – and, until fairly recently, were – largely sold in non-plastic packaging, such as metal, glass and fibre board or paper, or – in the case of produce – in no packaging at all.

## **The auditors scanned more than 40,000 products in 54 stores in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia and Newfoundland.**

Here’s what we found:

- Plastic is taking over: nearly two-thirds – 64 per cent – of all the products were packaged in plastic.
- Only 27 per cent of items in the produce department were available with no added packaging.
- Grocery stores incentivize the purchase of plastic-wrapped produce: the price per weight of whole fruits and vegetables is cheaper when the produce is pre-packaged in multiples than when it is sold unpackaged.
- On average, 71 per cent of all products in the produce section were packaged in plastic.
- Baby food was the most likely to be packaged in plastic, at 76 per cent, a figure that is strikingly consistent across the different chains and banners.
- Soup was the least likely to be in plastic, at 35 per cent.
- Pet food appears to be shifting toward plastic packaging, with an average of 66 per cent across all stores and products but a variation of nearly 20 per cent between the chains, from a low of 58 per cent to a high of 76 per cent.
- There is otherwise very little variation between the stores. If you shop at a major local grocery store, you will not be able to avoid single-use plastic packaging.

Categories	Per cent of items packaged in plastic	Per cent unwrapped
Baby Food	76%	N/A
Produce	71%	27%
Pet Food	66%	N/A
Soups	35%	N/A
Overall Average	64%	N/A



When we examined the types of plastic packaging being used, we noted **“flexible” stand-up pouches, bags and wraps that are almost impossible to reuse and virtually not recycled in Canada.** These plastic packaging formats stand out particularly in the baby food and pet food aisles, where plastic is rapidly replacing recyclable materials, such as metal and paper.<sup>5</sup>

As the federal government and provincial and territorial environment ministers from across Canada set a goal of Zero Plastic Waste by 2030,<sup>6</sup> the companies that feed us continue to introduce plastic packaging that is virtually guaranteed to end up as waste – in landfills or incinerators – if it’s not littered directly into nature or exported to the Global South. Plastic manufacturing and waste have disproportionate impacts on the workers and communities who work and live close to these activities. Black people, Indigenous people, people of colour and low-income communities are the most likely to be affected by plastic pollution in Canada and around the world.<sup>7</sup>

Furthermore, there is increasing concern about the impacts of plastics on human health, including microplastics and the leaching of plastic polymers – the building blocks of plastics – as well as chemical additives from packaging into food.<sup>8</sup> It is stunning, in this context, that the overwhelming majority of the food marketed for babies in our grocery stores is now in direct contact with plastics – from the pouches that are replacing jars for purées to the wrappers for biscuits. The sheer amount of plastic packaging on the baby food aisle requires action by federal health and environment authorities.

At a time when people and governments are seeking to reduce our use of plastics, Canada’s major grocery store chains appear to be doubling down on throwaway plastic packaging that is not suitable for safe reuse or recycling. The plethora of plastics on the shelves also contradicts their own stated environmental goals when it comes to reducing plastic waste.

# PLASTIC IN THE PRODUCE DEPARTMENT

## WHAT WE FOUND

The audit found **71 per cent** of items in the produce department were packaged in plastic, including whole fruits and vegetables. In fact, only 27 per cent of items in the produce department were available with no packaging. From individually wrapped coconuts, squash and cucumbers to bags and pouches for citrus fruits, bananas and peppers, our audit confirms that plastic-wrapped whole fruit and vegetables have become an unnecessary norm.

We also found that whole fruits and vegetables sold pre-packaged in multiples have a lower price per weight compared to unpackaged produce sold in bulk, providing an incentive to shoppers to choose the food in plastic packaging. MCA compared the prices of packaged and unpackaged fruits and vegetables and found that the biggest price differences were for oranges (\$4.41 per pound on average for unpackaged versus \$2.46 for packaged) and onions (\$3.75 versus \$2.07).

The auditors found a significantly lower amount of plastic packaging in the produce departments of two regional independently-owned stores, Freson Brothers (Alberta) and Coleman's (Newfoundland), at 61 per cent as compared to 71 per cent for all stores. Nearly 40 per cent of items in the produce department of those stores were unpackaged, compared to 27 per cent for all stores.

## THE TRUE COST OF PRODUCE PACKAGING

Many of the plastics used to package whole fruits and vegetables are not recycled, including stand-up pouches, film, mesh bags and foam trays. In fact, research conducted in 2021 for the Canada Plastics Pact found that only three per cent of "flexible" plastic packaging collected from households (including bags, films, pouches and wrappers) are recycled in Canada.<sup>9</sup>



**of items in the produce department were packaged in plastic**

Most municipal systems call for this type of packaging to be put in the garbage bin, where it ends up in landfill or an incinerator. When films and pouches do end up in recycling bins, they can get caught up in machinery and damage sorting machines in recycling facilities.

Flexible waste plastics can also get mixed up with – and contaminate – other materials that can be recycled, such as paper. A 2022 investigation by Radio-Canada found plastic pouches and bags from Canada were mixed with bales of paper being shipped to India for recycling. Once in India, the reporters saw these non-recyclable bags and pouches being sent for burning as fuel in local factories, a polluting exercise that is affecting the health of the nearby community.<sup>10</sup>

In addition, unnecessary packaging of multiples can lead to food waste, since shoppers can't control the quantity they are buying and may end up with more than they can use before the food spoils.<sup>11</sup>

There are also potential health impacts of plastic packaging. Phthalates, a group of chemicals used in plastic manufacturing, have been found in bags, pouches and cartons.<sup>12</sup> One type of phthalate, Di-2-ethylhexyl phthalate (DEHP), used as an additive in plastic packaging, has been classified as a presumed human reproductive toxicant by the European Commission.<sup>13</sup> Human reproductive toxicants negatively affect human reproductive function, fertility or fetal development and growth. As a result, medical devices containing DEHP are being phased out.<sup>14</sup> A Canadian federal health assessment of phthalates noted that milk, fruits and vegetables are a source of DEHP exposure, "which could be linked to their packaging."<sup>15</sup>

That assessment found that DEHP does pose a threat to the environment and biodiversity, but the government did not find it sufficiently persistent or bioaccumulative and therefore did not ban the substance under the Canadian Environmental Protection Act.

But given that phthalates such as DEHP do seriously impact brain development and male reproductive health,<sup>16</sup> are present in humans and are found in higher concentrations in young children,<sup>17</sup> a precautionary approach would demand limiting the use of plastic packaging that might contain phthalate additives, especially that which comes directly into contact with food.

A new study from McGill University researchers also reveals that plastic film does not protect foods from contamination by toxic chemicals. The researchers detected concerning amounts of Bisphenol F (BPF), a hormone-disrupting chemical additive, in fruits and vegetables wrapped in film with a thermal label attached to the film. The study found that BPF is migrating through the plastic film from the label.<sup>18</sup>

## ALTERNATIVES TO PLASTIC PACKAGING FOR PRODUCE

- ➔ **No packaging:** fruits and vegetables come in their own casings of peel, husk, rind or shell. Grocery stores should stop pre-packaging multiples and allow customers, at a reasonable price, to choose the quantity they require. The local independents we audited are on the right track, but could do more to eliminate packaging.
- ➔ **Where packaging is needed** (e.g., berries and prepared food), make it reusable. The produce department is increasingly filled with prepared foods, including salads and trays of sliced fruit. Such prepared foods should be provided in returnable containers that can be washed and refilled. In limited cases, containers made of natural fibres that can be composted safely could be used for single-use packaging.



# PLASTIC ON THE BABY FOOD SHELF

## WHAT WE FOUND

The vast majority – **more than three-quarters** – of all items marketed as baby food were packaged in plastic. This includes a significant number of plastic pouches now used for purées that were once almost exclusively packed in glass jars. It also includes portion-sized plastic packets or pouches that are often re-packaged in larger quantities.

There was very little variation between the chains or types of stores in the type of packaging. While glass jars for purées and boxes for dry cereal are still available, it appears these materials are being squeezed out in favour of plastic, and particularly flexible plastics and wraps that are not recycled, including for foods that are labelled “organic.”

## PLASTIC AND BABIES: A TROUBLING COMBINATION

Food consumed directly from plastic packaging is a source of microplastics. Babies and young children fed from single-use plastic-wrapped food and containers are likely ingesting microplastic particles<sup>19</sup> and other additives. We found packaging on the baby food shelves that is even designed to be consumed directly from the single-use plastic packaging by babies and young children. In the process of eating, they are chewing and sucking on the packaging itself, which is not necessarily taken into account when governments approve, and manufacturers and retailers select, packaging.



**of items in the baby food aisle were  
packaged in plastic**

Babies and young children are particularly vulnerable from exposures to toxic chemicals due to their stage of development.<sup>20</sup>

Chemicals, such as phthalates and bisphenols – common plastics additives – can leach from packaging and containers into food.<sup>21</sup> As noted above, phthalates are presumed to cause harm to human reproduction. Recent research has also suggested an association between prenatal exposure and exposure of young children to phthalates with impacts on brain and neurobehavioural development.<sup>22</sup>

Because of its toxicity, the federal government has banned the use of bisphenol A in some baby products, such as plastic bottles and baby formula packaging, but not in packaging for other foods marketed to babies. Further, the government has not assessed or taken action on other bisphenols, including bisphenol S and bisphenol F, which are used as substitutes for bisphenol A and stand to have a similar impact on health and the environment. That means bisphenols can still be found in products – including those marketed for babies and children – the environment and our bodies.<sup>23</sup>

As for phthalates, the government's recent assessment<sup>24</sup> concluded that no action was needed to protect the environment or human health from these chemical additives. The government made this conclusion despite the fact that some phthalates used in plastic packaging have been found toxic to humans, and young children are the most exposed population group to phthalates found in packaging. The data used in the assessment is now up to a decade old and does not reflect the increase in plastic packaging of food marketed for babies.

The overwhelming use of plastic to package food marketed for babies and young children demands closer scrutiny and action to protect this vulnerable group from the health effects of microplastics and plastics additives.

## ALTERNATIVES TO PLASTIC PACKAGING FOR BABY FOOD

- ➔ Glass and paper, ensuring that plastic and chemical additives are not used in closures or lining of the packaging.
- ➔ Safe reusable containers that can be returned to the store for cleaning and refilling.



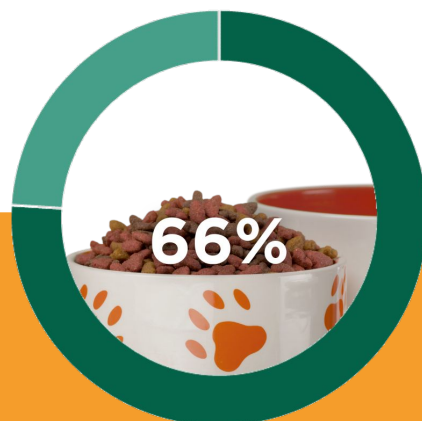
# PLASTIC FOR PETS

## WHAT WE FOUND

**Two-thirds** of products marketed for pets were packaged in plastic. This includes “wet” food found in rigid plastic containers with peel-away foil lids or in pouches, as well as “treats” and dry food in plastic stand-up pouches.

Pet food showed the largest variation across the corporate chains in terms of products packaged in plastic. In the stores owned by Empire, 58 per cent of the pet food audited were packaged in plastic, whereas 76 per cent of the pet food in the Metro stores were in plastic. Some of the same brands and foods were packaged in plastic and non-plastic packaging, depending on the store, suggesting that there is a shift occurring in how pet food is packaged.

It is less likely for the rigid plastic containers for wet pet food to be recycled than the cans they replace. As noted above, it is virtually guaranteed that the flexible pouches replacing cans and paper bags are not recycled. Therefore, pet food packaging contributes to non-recycled plastic waste, a factor that will increase if the packaging of pet foods shifts further to plastic.



**of items in the pet food aisle were  
packaged in plastic**

## IS PLASTIC GOOD FOR PETS?

Domesticated animals studied by the Environmental Working Group in the US were found to have been exposed to a wide range of chemicals, including toxic plastic additives used in plastic packaging.<sup>25</sup> The report points out that...

**“... pets are serving as involuntary sentinels of the widespread chemical contamination that scientists increasingly link to a growing array of health problems across a wide range of animals—wild, domesticated and human.”**

## ALTERNATIVES TO PLASTIC PACKAGING FOR PET FOOD

- Safe metal and paper packaging that does not contain plastic or chemical linings and that can be recycled or composted.
- Returnable containers that can be washed and refilled.



# PLASTIC IN SOUP PACKAGING

## WHAT WE FOUND

Soups were the least likely items to be packaged predominantly in plastic. Overall, 35 per cent of soups and broths were in plastic containers, including aseptic containers known as “tetrapaks,” made of layers of mixed materials, including plastic, that are stuck together and difficult to recycle. That means that the majority of soups were still packaged in metal cans and jars that can be recycled. Produce was twice as likely and baby food more than twice as likely to be packaged in plastic than soups.

If soups were to follow the same trend as the items in the other grocery departments we audited, to double the amount of plastic packaging, they would increasingly contribute to non-recycled plastic waste.



# EXISTING GOVERNMENT POLICY FALLS SHORT ON SINGLE-USE PLASTIC IN THE GROCERY STORE

## ZERO PLASTIC WASTE 2030

Despite a goal of zero plastic waste by 2030, no government in Canada has policies in place to tackle single-use plastic packaging in the grocery store.

### **Single-use plastic bans**

While the federal ban coming into effect on checkout bags and takeout materials (straws, stir sticks, cutlery, containers) will reduce plastic waste generated in grocery stores, it will not address the increasing use of non-recycled single-use plastic packaging in the grocery departments we audited.

### **Recycled content requirements**

As part of its plan to eliminate plastic waste, the federal government has consulted on regulations to require plastic packaging to contain 50 per cent recycled content. The principle behind recycled-content requirements is to incentivize the use of recyclable materials, and the collection and recycling of these materials, to provide the needed feedstock to meet the new standard.



Currently, only two types of plastics are widely recycled around the world: PET, a clear rigid plastic often used for beverage containers, and HDPE, another rigid plastic that is typically opaque and used for jugs that contain liquids, such as milk and laundry detergent. Flexible plastics, such as bags, pouches and wrappers, are not recycled.<sup>26</sup>

If food packaging were included in the recycled-content requirements, these could serve to incentivize a shift away from the non-recycled pouches and wrappers and the elimination of harmful plastics additives that become concentrated in recycled plastics.<sup>27</sup> However, the federal government has signaled that food packaging will not be included in the new regulations.<sup>28</sup> That means there will be no requirement under federal regulations to move away from non-recycled plastic packaging in the grocery store.

### **Extended Producer Responsibility (EPR)**

Provincial EPR policies that require retailers, suppliers and food processors to assume responsibility for the packaging associated with their products have very low targets for the recycling of the flexible packaging materials that are growing in popularity. The highest target – which is in Ontario – will only reach 40 per cent by 2030.<sup>29</sup> This means the majority of the growing mountain of plastic waste will end up in landfills or incinerators. The targets are too low to serve as a deterrent for the use of non-recycled plastics.

### **Chemical transparency and environmental protection**

Only a small fraction of the hundreds of thousands of chemicals in commercial use today have been characterized and assessed by the federal government to determine whether they pose a hazard to human health and the environment. Even when they are assessed, the tools used are not sensitive nor comprehensive enough to identify and account for all of the real-world uses of the products that contain chemicals and the impacts, particularly on vulnerable populations, such as babies, children and pregnant people. The federal government's 2021 assessment of phthalates illustrates the weakness of the current policy to regulate harmful chemicals in Canada. Health Canada lists plastic polymers (e.g., polyethylene, polystyrene and PET) approved for food packaging, but doesn't focus on common plastic packaging additives. Additives pose a risk to our health, including endocrine disrupting phthalates (used as a plasticizer and manufacturing aid), bisphenols and antimony (a likely carcinogen used in the production of PET bottles [juices, water, soft drinks] and clamshells [fruits and vegetables]).

The federal government has committed to mandatory labelling of harmful ingredients in cosmetics, cleaning products and upholstered furniture and on recyclability of plastic packaging, but have yet to consider the need for transparency on what chemical additives are in food packaging.

# GROCERY CHAIN RESPONSES DON'T MEASURE UP

The ownership of the grocery stores that feed us is highly concentrated in Canada. Three major grocery chains – Loblaw, Empire and Metro – do most of the grocery business in Canada, supplemented by smaller regional chains and independent stores, as well as multinationals such as Walmart. Our audit included stores from each of these categories.

Here is what our audit found on the shelves of the four departments in each of the major chains:

	Loblaw	Empire	Metro	Walmart
<b># Items scanned</b>	13,359	6,826	4,617	9,143
<b>% plastic</b>	64%	61%	66%	67%
<b>Produce</b>	4,016	2,092	1,988	1,708
<b>% plastic</b>	67%	82%	71%	77%
<b>% unpackaged</b>	31%	15%	25%	21%
<b>Baby Food</b>	2,694	945	541	1,379
<b>% plastic</b>	76%	72%	72%	80%
<b>Pet Food</b>	4,405	2,265	1,182	5,406
<b>% plastic</b>	69%	57%	76%	66%
<b>Soup</b>	2,244	1,524	906	650
<b>% plastic</b>	34%	33%	41%	32%



The major corporate chains produce “Environmental, Social and Governance” reports that sometimes include commitments to shareholders to address the impacts their businesses have on the environment and people.

The table below provides a summary of the goals or commitments related to plastic packaging made by the companies as part of their environmental reporting (based on 2022 reports):

Company	Consumer packaging commitments
<b>Loblaw<sup>30</sup></b>	<ul style="list-style-type: none"> <li>• Goal of 100 per cent reusable or recyclable packaging for Loblaw branded products by 2025; no actual rate reported for 2021.</li> <li>• Two reuse pilots carried out in 2021 for onsite refillable cleaning supplies in 14 stores in Quebec; and for returnable containers for 15 “Presidents’ Choice” branded products. No reporting on the fate of the pilots.</li> </ul>
<b>Empire<sup>31</sup></b>	<ul style="list-style-type: none"> <li>• “Working on” setting targets for reduction of plastic packaging waste, increasing reused/refilled packaging and improving “value recovery” of packaging materials (i.e., recycling).</li> <li>• Some examples given of shifts from non-recycled plastic to fiber for egg cartons and can holders, as well as refill stations for cleaning products.</li> </ul>
<b>Metro<sup>32</sup></b>	<p>For fresh foods:</p> <ul style="list-style-type: none"> <li>• Reduce the use of single-use packaging, such as film and polystyrene trays (no date or numeric target given).</li> </ul> <p>For Metro-branded products by 2025:</p> <ul style="list-style-type: none"> <li>• Reduce the average weight of packaging by 10 per cent as compared to 2018.</li> <li>• Use 100 per cent recyclable materials in 100 per cent of packaging.</li> <li>• Increase recycled content in packaging to 45 per cent.</li> <li>• Provide sorting instructions on 100 per cent of packaging.</li> <li>• No actual rates reported for 2021.</li> </ul>
<b>Walmart<sup>33</sup></b>	<ul style="list-style-type: none"> <li>• Goal of 20 per cent recycled content in packaging for Walmart-branded products in North America by 2025; rate reported for 2021 was 7 per cent.</li> <li>• Goal of 100 per cent reusable, recyclable or industrially compostable packaging for Walmart branded products in North America by 2025; rate reported for 2021 was 58 per cent.</li> <li>• Goal to reduce virgin plastic in packaging globally by 15 per cent by 2025, compared to 2020 figures; reduction reported for 2021 was 3 per cent.</li> <li>• Eliminate the use of non-recycled resins, polyvinyl chloride and polystyrene. Shift films and sachets to single-material polyethylene for ease of recycling.</li> </ul>

**NOTE:** Auditors were prevented by store staff from completing the department scans at Whole Foods, which is owned by Amazon. Our attempts to contact the company’s head office to explain our purpose in order to resume the audit were not successful. We therefore are not able to assess the Whole Foods data in this report.

# HOW THE GROCERY CHAINS RESPONDED TO OUR ANALYSIS

Prior to releasing this report, Environmental Defence prepared a summary of the audit results for each of the major grocery chains and shared the information with the chains, along with our recommendations and questions related to their environmental, social and governance (ESG) goals and/or commitments on consumer packaging.

Only two of the chains communicated with us ahead of the release of the report: Metro, which also owns Food Basics, and Loblaw, which owns a series of grocery banners, including the Great Canadian Superstore, No Frills and ValuMart.

Metro stated that its goal is for all packaging of its private brand items to be recyclable, compostable or reusable by 2025 and to phase out the use of plastic pouches, wrappers and films for private brand packaging. Further, the chain is “actively looking at return-to-retail solutions for prepared foods and products packed in store” to boost reuse and refill of packaging. For now, it accepts reusable containers from customers for produce and over-the-counter items, such as meat, fish and deli.

Loblaw reiterated its commitment to make all store brand packaging reusable or recyclable by 2025. Their focus is on trying to increase collection and recycling of flexible packaging, which currently sits at about three per cent across Canada.

This response suggests Loblaw will not reduce single-use plastic packaging, including the materials that are most unlikely to be recycled. As Environmental Defence has mentioned before, recycling will not eliminate plastic pollution.<sup>34</sup> Further, while the company has indicated it is trying to phase BPA out of plastic packaging for products for infants,<sup>35</sup> it does not mention other bisphenols. The company also said it would be reporting on the fate of its reuse pilot projects, including refill options for soaps and detergent in reusable containers for at-home meal replacements, later this year.

It is disappointing that Sobey’s and WalMart did not provide any response to our findings or recommendations.

Groceries are a significant source of plastic pollution and waste, and a source of human exposure to microplastics and plastics additives. The big chains’ plans and responses are not commensurate with the scale of the plastic pollution crisis.

**Grocery stores must do more, and more quickly, to eliminate plastic packaging for foods, especially for foods marketed to babies and toddlers.**

Given their strong revenues and influence over supply chains, grocery stores must also do more to mainstream reusable and refillable packaging for the processed and prepared foods they sell. They can also insist on transparency of what is in the packaging they use and sell.

# METHODOLOGY

Environmental Defence contracted with MCA to audit four grocery departments in 54 large grocery stores in eight Canadian provinces in the fall of 2022. The stores audited represent a range of high-end, mid-level and budget banners. At the conclusion of the audit, MCA provided Environmental Defence with a database of 41,521 scanned items from four departments: **produce, baby food, pet food and soups.**

The departments selected continue to have products in alternative packaging materials – mostly glass, metal or paper fibre – or options for no packaging at all, as in the produce section. Scanning these departments is one way to assess the inroads that throwaway plastic is making on our grocery store shelves.

The data provided for each item includes the product brand, description, weight or volume, price, how it was packaged (no packaging, plastic [including Tetra Pak], paper/wood/metal) and the store, city and province in which the item was scanned.

Environmental Defence analyzed the data and made amendments to the packaging material coding related to products with an outer package that was not plastic in which smaller portions were individually wrapped in plastic pouches or wrappers.



# CONCLUSIONS

**Nearly two-thirds** (64 per cent) of the products we audited in four key departments of large grocery stores across Canada were packaged in plastic intended for a single use. The departments included produce, baby food, pet food and soup.

The Canada Plastics Pact has estimated that less than 15 per cent of plastic packaging in Canada is recycled, and that includes beverage containers returned on deposit,<sup>36</sup> which were not among the items scanned in this audit. We can safely assume that the vast majority of plastic packaging of grocery items is not recycled.

It also appears that more and more grocery items are packaged in plastic. Items like soups, pet food and baby food that were once almost exclusively packed in glass, metal or paper/fiber are increasingly found in plastic pouches, wrappers and other containers, with baby food leading among the four departments. However, as the first audit of its kind, the findings can only serve as a baseline.

Overall, only 27 per cent of all items in the produce section were not packaged, while 71 per cent of all produce items were in plastic. This is a striking figure considering that the department's core product is whole fruit and vegetables that mostly come in their own natural "packages" (i.e., peels and skins).

Of significant concern is the amount of baby food in plastic packaging: 76 per cent. There are growing concerns about the negative impacts of plastic packaging additives, including phthalates and bisphenols, on human and animal health. There is also evidence that microplastic particles are in human blood<sup>37</sup> and lung tissue.<sup>38</sup> The amount of plastic packaging with direct contact with food marketed for babies and young children requires further examination and action on the part of environmental and health authorities, retailers and baby food producers.

Existing regulations to address plastic waste and toxic chemicals are not adequate to address the sheer amount and type of plastic packaging used for grocery items. Without urgent interventions, plastic pollution from groceries will only increase, as will the risks to our health and the environment.



# RECOMMENDATIONS

**Governments** need to step up regulations of plastic packaging to address a growing source of pollution from food packaging:

1. Ban plastic packaging material that is not recycled at scale and has no prospect of effective and safe recycling (e.g., flexible pouches made of mixed plastics and mixed materials, flexible plastic wrappers, film and mesh bags for produce, polystyrene and polyvinyl chloride).
2. Require refill and reuse of 30 per cent of retail packaging by 2030.
3. Set a legal requirement for labelling of hazardous chemicals in products, including food packaging in the *Canadian Environmental Assessment Act* or other law.
4. Prioritizing vulnerable populations, such as babies, toddlers and pregnant people, urgently assess classes of chemicals used in food packaging, including bisphenols and phthalates, with the aim to eliminate whole classes of hazardous chemicals from food packaging to avoid substitution of one banned chemical with a similar one.
5. Improve transparency of formulations of any chemicals used in food packaging to facilitate safe recyclability, which better protects workers and communities on the frontline of manufacturing and waste processing, and prompts the elimination of known hazardous substances that come into contact with food.
6. Set high targets for the safe and environmentally-sound recycling<sup>39</sup> of plastic packaging (similar to targets set under EPR programs for glass, paper and metal).

**Retailers** do not appear to be on track to reach even their own goals to reduce plastic packaging waste. Between now and 2025, we recommend retailers:

1. Eliminate packaging for at least 90 per cent of produce and encourage the use of reusable produce bags.
2. Immediately stop the use of plastic packaging for foods marketed to babies and toddlers in both store brands and from all suppliers.
3. Phase out the use of plastic pouches, wrappers and films for all products, including those supplied from consumer goods companies.
4. Introduce or scale up reuse and refill opportunities, including return-to-retail of containers for food marketed to babies and young children and prepared foods in the produce section.
5. Be transparent about the additives used in the packaging of food products and require this information from suppliers.

## ENDNOTES

1. Statistics Canada, Pilot Physical Flow Account for Plastic Material, 2012 to 2019, available at <https://www150.statcan.gc.ca/n1/daily-quotidien/230309/dq230309e-eng.htm>
2. See, for example, the High Ambition Coalition to End Plastic Pollution, available at <https://hactoendplasticpollution.org/>
3. Statistics Canada, "Pilot Physical Flow Account for Plastic Material, 2012 to 2018," 2022, available at <https://www150.statcan.gc.ca/n1/daily-quotidien/220323/dq220323f-eng.htm>
4. Canada Plastics Pact, *Canadian Plastic Packaging Flows*, 2021, available at <https://plasticspact.ca/wp-content/uploads/2021/10/PPP-Foundational-Research-on-Canadian-Plastics-Packaging-Flows-May-2021-final.pdf>
5. Ibid.
6. See <https://www.canada.ca/en/environment-climate-change/services/managing-reducing-waste/reduce-plastic-waste/canada-action.html>
7. Orellana, Marcos, "The stages of the plastics cycle and their impacts on human rights," United Nations Environment Programme, 2021. Available at <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N21/201/78/PDF/N2120178.pdf?OpenElement>
8. See, for example, [https://zerowasteurope.eu/wp-content/uploads/2020/03/Declaration\\_of\\_Concern\\_3March\\_2020.pdf](https://zerowasteurope.eu/wp-content/uploads/2020/03/Declaration_of_Concern_3March_2020.pdf)
9. Canada Plastics Pact, *Canadian Plastic Packaging Flows*, 2021, available at <https://plasticspact.ca/wp-content/uploads/2021/10/PPP-Foundational-Research-on-Canadian-Plastics-Packaging-Flows-May-2021-final.pdf>
10. See <https://ici.radio-canada.ca/recit-numerique/3600/papier-pollution-inde-recyclage>
11. WRAP, "Helping people to reduce fresh-produce waste: modelling the impact of selling products loose or in packaging," 2022, available at <https://wrap.org.uk/sites/default/files/2022-02/Modelling-the-impact-of-selling-products-loose-or-in-packaging.pdf>
12. See <https://www.foodpackagingforum.org/food-packaging-health/phthalates>
13. See <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/screening-assessment-phthalate-substance-grouping.html>
14. Tickner, J. et al, "Health risks posed by use of Di-2-ethylhexyl phthalate (DEHP) in PVC medical devices: A critical review," *American Journal of Industrial Medicine*, Volume 39, Issue 1, pp. 100-111
15. See <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/screening-assessment-phthalate-substance-grouping.html>, page 62.

## ENDNOTES CON'T

16. Engel, Stephanie M. et al, "Neurotoxicity of Ortho-Phthalates: Recommendations for critical policy reforms to protect brain development in children," *AJHP*, April 2021, available at <https://ajph.aphapublications.org/doi/10.2105/AJPH.2020.306014>
17. Government of Canada, *Screening Assessment: phthalate substance grouping*, 2020, available at <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/screening-assessment-phthalate-substance-grouping.html>
18. Mahdavi, D., "New study indicates chemicals from grocery stickers may be leaching into foods," CBC, April 6, 2023, available at <https://www.cbc.ca/news/canada/kitchener-waterloo/bps-food-labels-1.6792373>
19. Shang, J. et al, "Occurrence of Polyethylene Terephthalate and Polycarbonate Microplastics in Infant and Adult Feces," *Environ. Sci. Technol. Lett.* 2021, 8, 11, 989–994.
20. Li, Nan, et al, "Gestational and childhood exposure to phthalates and child behaviour," *Environment International*, November 2020, available at <https://www.sciencedirect.com/science/article/pii/S0160412020319917>
21. See, for example, <https://www.theguardian.com/us-news/2019/may/28/plastics-toxic-america-chemicals-packaging>
22. Engel, Stephanie M. et al, "Neurotoxicity of Ortho-Phthalates: Recommendations for Critical Policy Reforms to Protect Brain Development in Children," *American Journal of Public Health*, March 2021, available at <https://ajph.aphapublications.org/doi/10.2105/AJPH.2020.306014>
23. A recent study of pregnant people in the US detected metabolized BPA in 61 per cent of samples and BPS in 84 per cent; Buckley et al, "Exposure to Contemporary and Emerging Chemicals in Commerce among Pregnant Women in the United States: The Environmental influences on Child Health Outcome (ECHO) Program," *Environmental Science & Technology* 2022 56 (10), 6560-6573, DOI: 10.1021/acs.est.1c08942
24. Government of Canada, *Screening Assessment: phthalate substance grouping*, 2020, available at <https://www.canada.ca/en/environment-climate-change/services/evaluating-existing-substances/screening-assessment-phthalate-substance-grouping.html>
25. See <https://www.ewg.org/research/polluted-pets>
26. Recycle BC has announced it is producing recycled pellets from flexible materials. However, in a public consultation held in November 2022, the organization acknowledged the pellets are of low quality. Pellets of low quality can only be used in very small quantities for new products.
27. IPEN, "Toxic plastics: a threat to the Circular Economy," 2022.

## ENDNOTES CON'T

28. Government of Canada, *Technical Issues Paper: recycling content for certain manufactured plastic items regulations*, 2021, available at <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/technical-issues-paper-recycled-content-plastic-manufactured-regulations.html>
29. Environmental Defence, *Recycling Failure*, 2022, available at <https://environmentaldefence.ca/report/zero-plastic-waste-report-card/>
30. See <https://www.loblaw.ca/en/plastics>
31. See <https://sobeyssbreport.com/wp-content/uploads/2022/08/fiscal-2022-sustainable-business-report-en.pdf>
32. See <https://corpo.metro.ca/en/corporate-social-responsibility.html>
33. See <https://corporate.walmart.com/esgreport/environmental/waste-circular-economy>
34. See <https://environmentaldefence.ca/report/zero-plastic-waste-report-card/>
35. See <https://www.loblaw.ca/en/bisphenol-a-statement>
36. Canada Plastics Pact, *Canadian Plastic Packaging Flows*, 2021, available at <https://plasticspact.ca/wp-content/uploads/2021/10/PPP-Foundational-Research-on-Canadian-Plastics-Packaging-Flows-May-2021-final.pdf>
37. See <https://www.theguardian.com/environment/2022/mar/24/microplastics-found-in-human-blood-for-first-time>
38. See <https://www.webmd.com/lung/news/20220411/scientists-find-microplastics-in-human-lung-tissue>
39. Environmental Defence supports a definition of recycling that includes widespread collection, sorting and cost-effective processing of plastic discards, using a typical recycling method, into post-consumer plastic feedstock suitable for use in identifiable new plastic products. Recycling does not include thermal treatment of plastic waste, including incineration, pyrolysis and gasification, that destroys the plastic polymer.



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# LEFT HOLDING THE BAG: A SURVEY OF PLASTIC PACKAGING IN CANADA'S GROCERY STORES

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