The single-use plastics dilemma: Perceptions and possible solutions

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Study conducted by the

Agri-food Analytics Lab
at Dalhousie University

High-Level Findings

- **Regions**, **age groups** are significant socio-economic determinants, highly divided on SUP issue;
- **Atlantic Region** and **Quebec** seen as most mindful region; the **Prairies**, the least;
- **Millennials** and **Gen Z** generally more mindful than older generations;
- Most Canadians not willing to pay a **premium** above **2.5%** for SUP solution at retail, but open to a **tax**;
- Majority of Canadians believe all **sectors** and levels of **government** are responsible;
- Mixed results on incentives provided to industry;
- **Knowledge** on solutions is mixed;
- **Bans** not as popular as use of **new technologies**;
- **Environmental concerns** more significant than **food safety**;
- **Biodegradable/compostable** solutions most popular with Canadians.

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Charlebois, Walker, McGuinty and Music (2019)

Recommendations (1)

- **Plastics** remaining in the packaging system need to be simplified and standardized across Canada;
- Better alignment between **food safety regulations** and the agri-food sector's **environmental obligations** at all levels of government is key;
- Use of **compostable packaging** (plant-based polymers) should be encouraged and incentivized;
- Support for **research** and **commercialization** of compostable packaging should be enhanced, with active involvement of **municipalities**;
- Encourage industry to adopt a **circular economy model**, in line with the federal government's zero plastic waste strategy;

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Charlebois, Walker, McGuinty and Music (2019)

Recommendations (2)

- The **"naked food"** model should be seen as a compelling option;
- Encourage the use of **recyclable materials** like cardboard, paper, foil wrapping;
- **Consumer-centred solutions** should be considered, but not prioritized;
- **Taxation** and **bans** should be considered as populist measures with limited and potentially compromising outcomes;
    - However, a **voluntary phase-out of plastic bags** should be implemented;
- <u>Education</u>: Industry should consider **community events**, **campaigns** for public awareness.

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Charlebois, Walker, McGuinty and Music (2019)

Research Design

- **Aims:** To better understand Canadian consumers' perspectives on single-use plastics in the food industry in Canada, and to explore possible solutions.
- **Methodology and sample design**: Exploratory study sample included 1,014 Canadians surveyed May 13 to 18, 2019. Results combine “Strongly agree” and “Agree”.
- **Margin of error**: 3.2%, 19 times out of 20 (margin of error not applicable to categorized data).

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Charlebois, Walker, McGuinty and Music (2019)

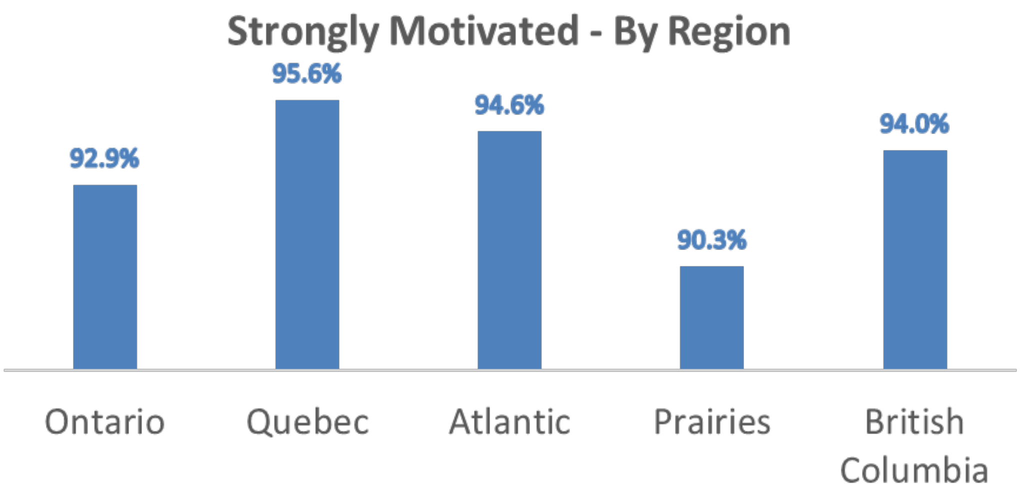
Consumer Behaviour and Opinions

Charlebois, Walker, McGuinty and Music (2019)

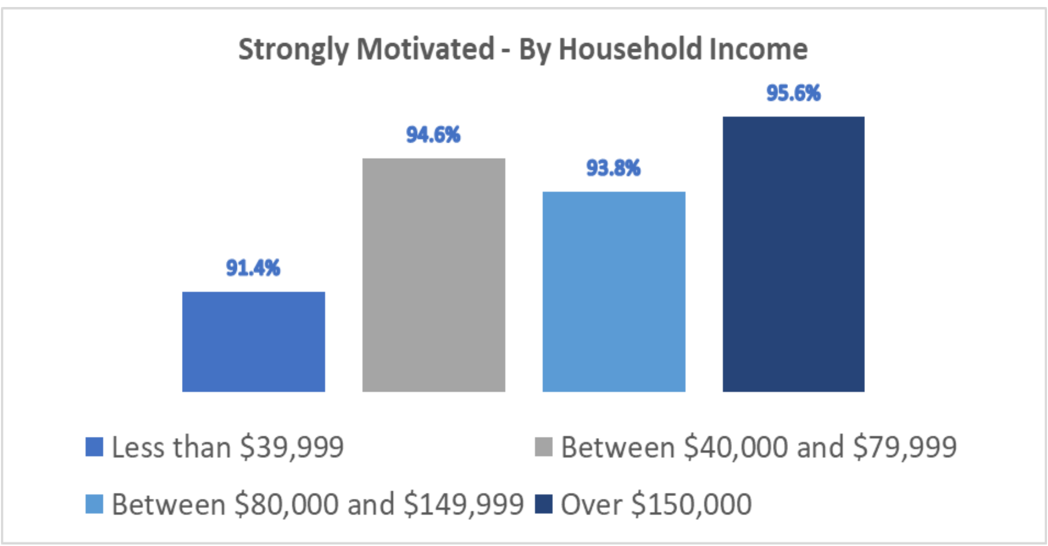
87.2% of respondents consider environmental impacts caused by single-use plastic food packaging to be important

Charlebois, Walker, McGuinty and Music (2019)

93.7% of respondents are personally motivated to reduce single-use plastic (SUP) food packaging because of its environmental impacts.



*High motivation, **Quebec** and **Atlantic** respondents slightly more motivated to reduce SUP.*



*People earning more than **$150k** are slightly more motivated.*

Charlebois, Walker, McGuinty and Music (2019)

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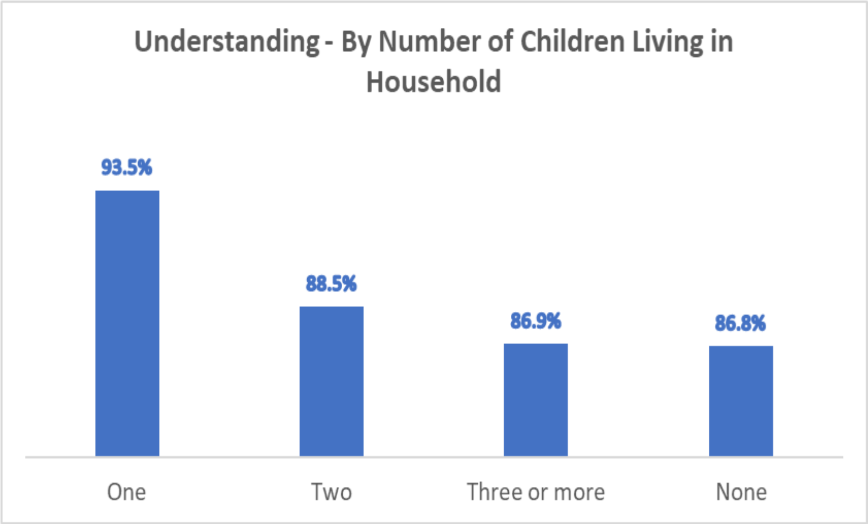
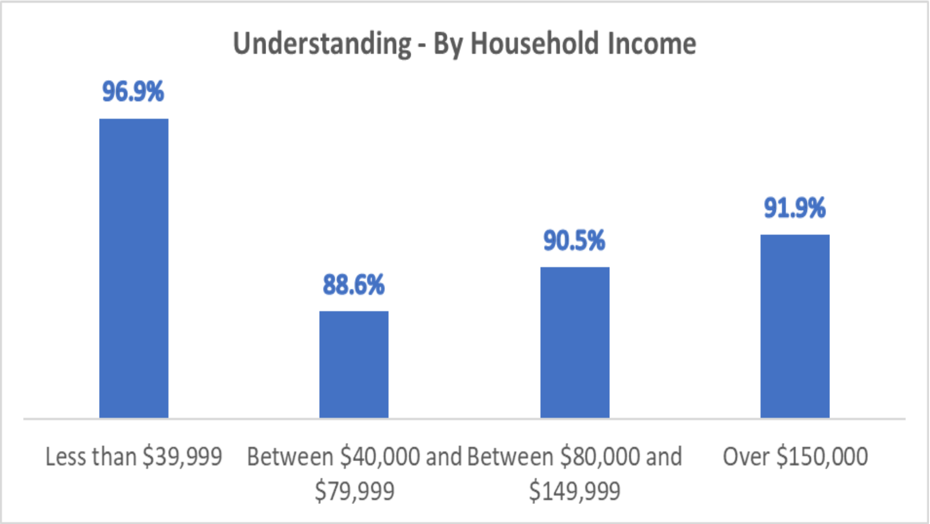
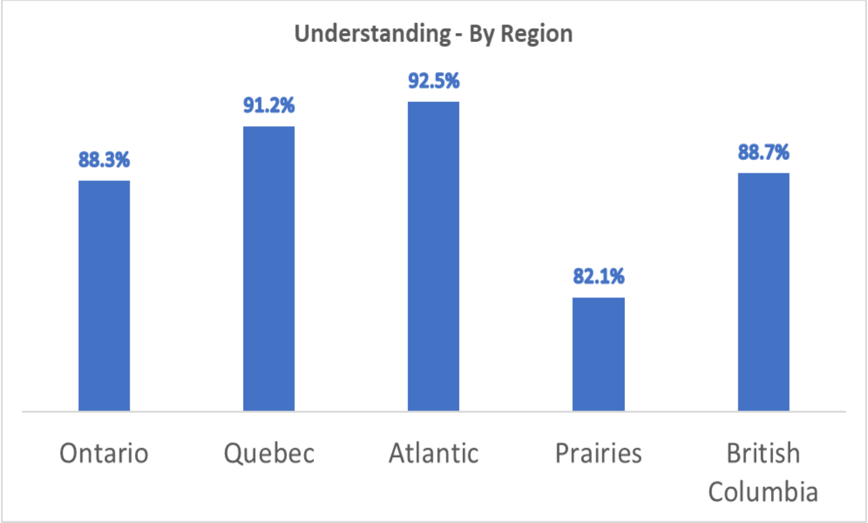
88.6% understand which alternative solutions are available for SUP food packaging.







*Respondents in **Atlantic** and **Quebec** understand alternative solutions slightly more, along with respondents earning less than **$39,999** and people living in a household with **one child**.*

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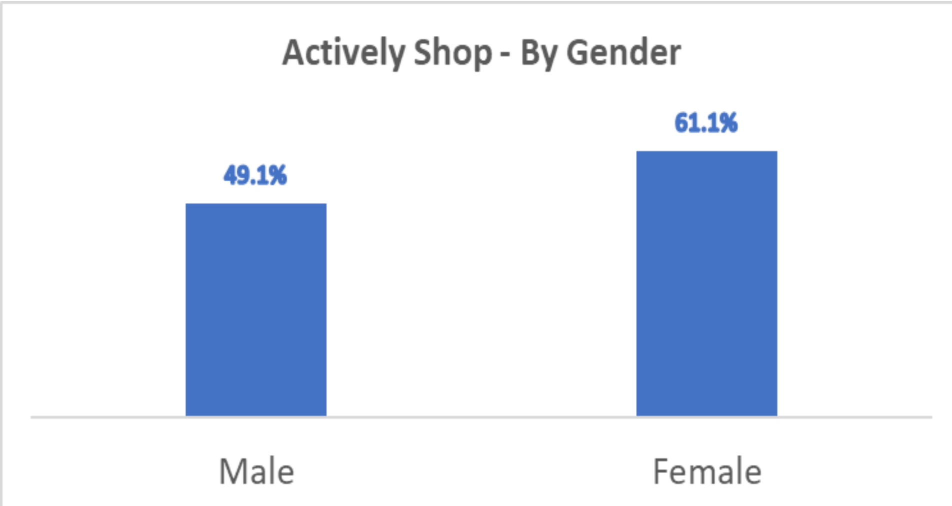
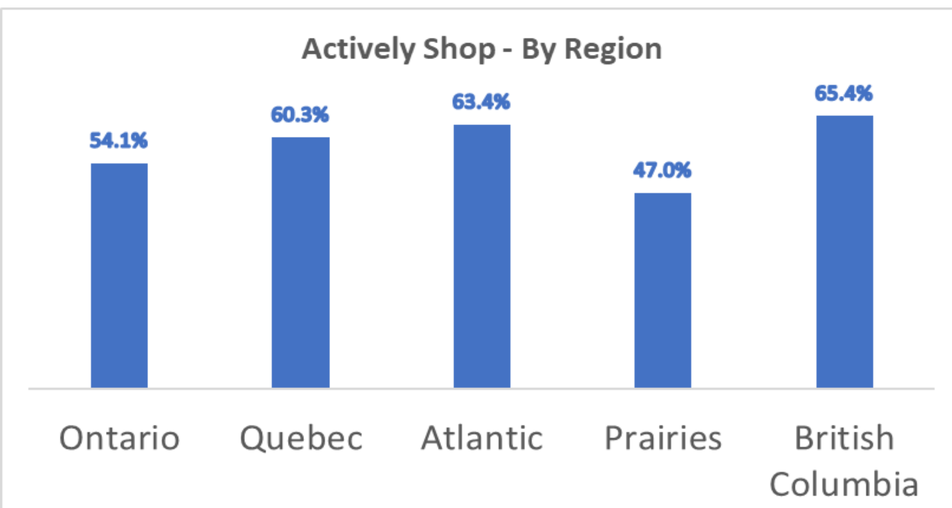
Charlebois, Walker, McGuinty and Music (2019)

56.4% actively shop for food with non-plastic packaging.





One in two Canadians *actively look for non-plastic packaging.*

Women *are more likely to actively seek non-plastic packaging than* ***men****.*

British Columbians *are more likely to actively look for NP packaging than respondents in the* ***Prairies****.*

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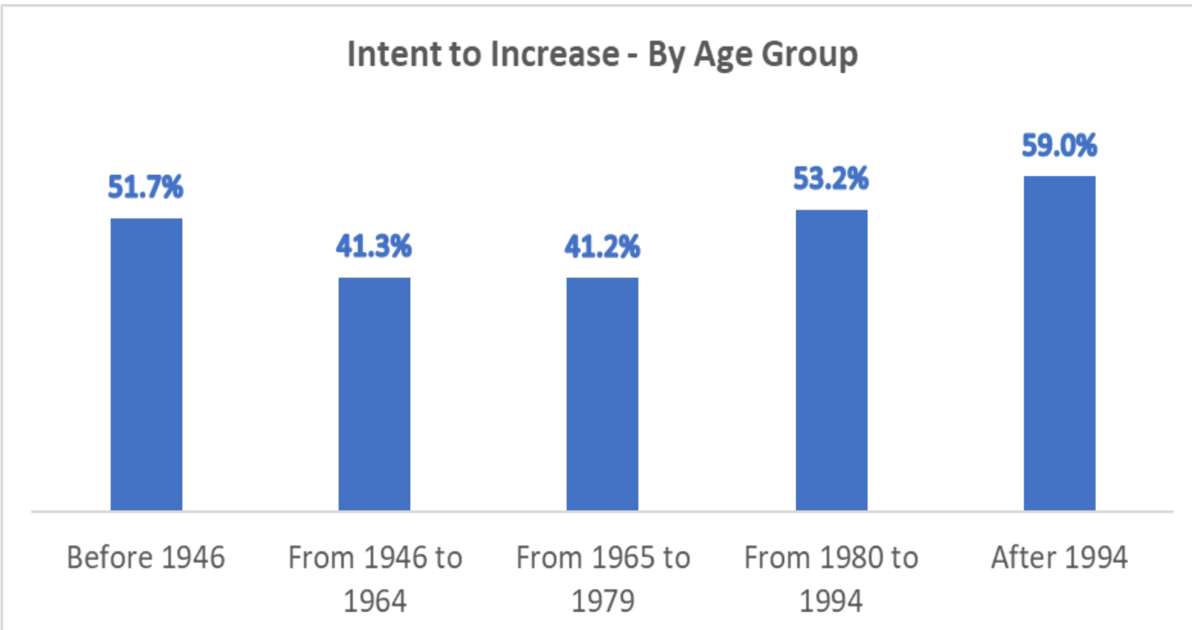
Charlebois, Walker, McGuinty and Music (2019)

In the next six months, **56.6% of respondents** intend to increase food purchases that use green packaging.



One in two Canadians *intends to increase food purchases with green packaging.*

The ***younger*** *the respondent, the more likely s/he intends to increase purchases of green packaging (corr.=.002).*

Charlebois, Walker, McGuinty and Music (2019)

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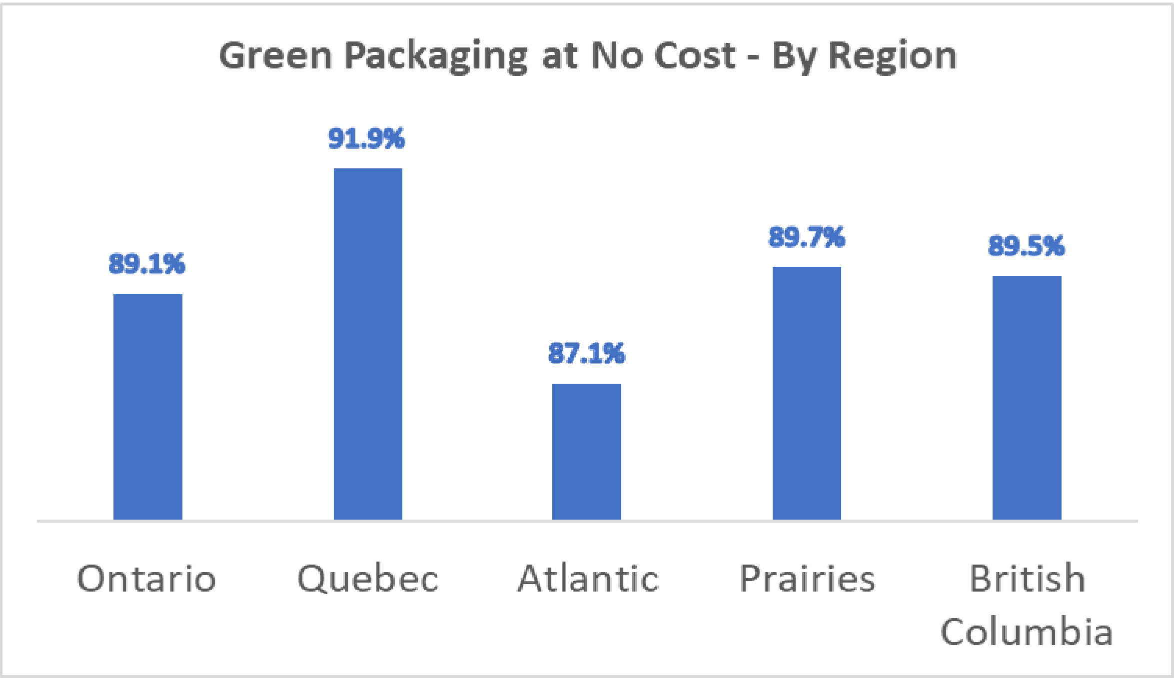
89.8% of respondents believe plastic packaging should be changed to green alternatives but not at additional cost.



***Quebecers** support green packaging but not at additional cost.*

Charlebois, Walker, McGuinty and Music (2019)

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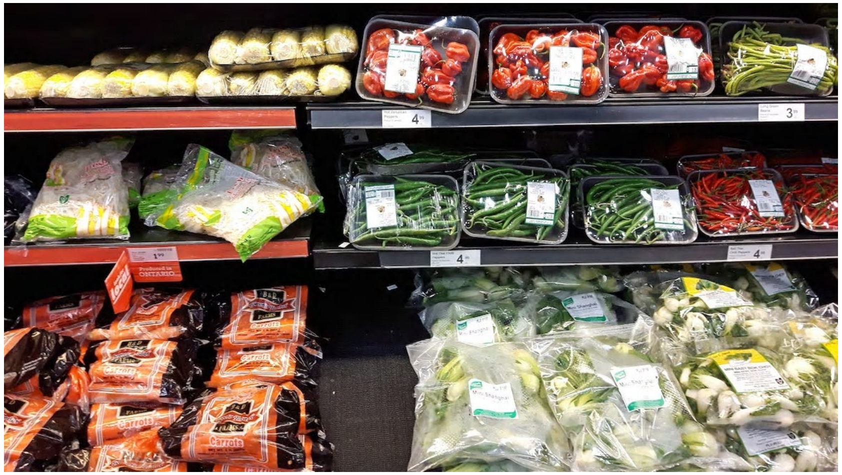

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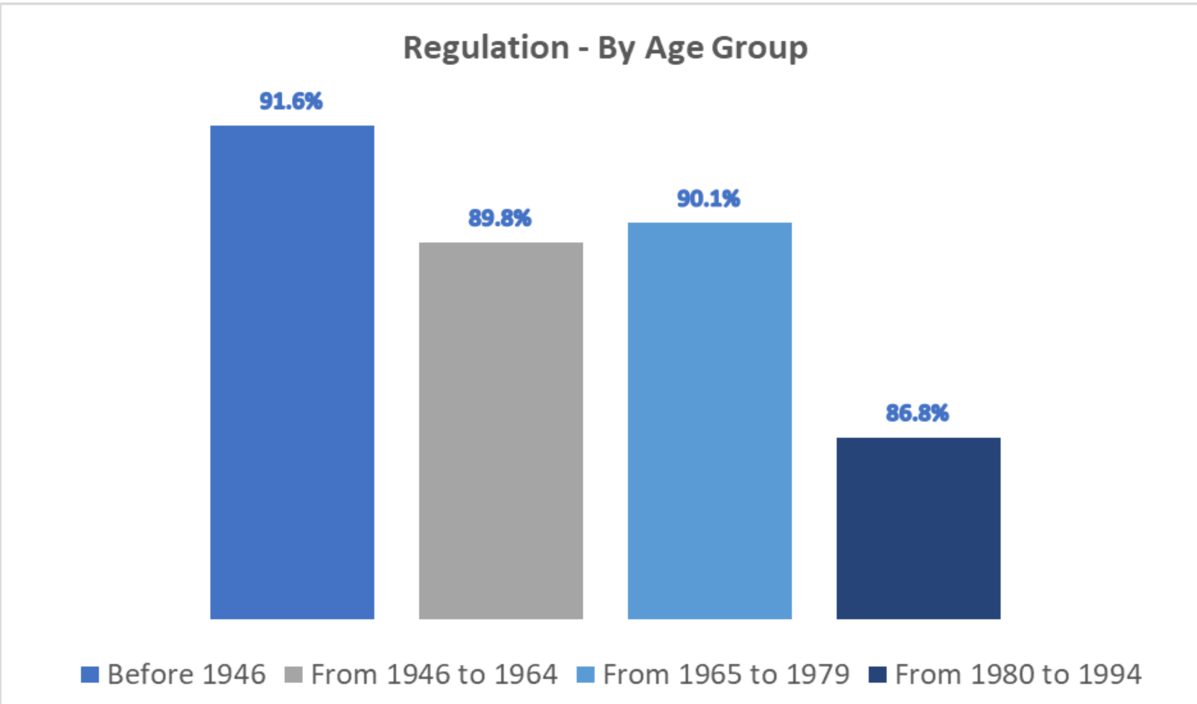
Influence on Change and Adaptation

Charlebois, Walker, McGuinty and Music (2019)

89.8% of respondents believe that regulations to reduce consumption of single-use plastic packaging for food should be strengthened in Canada.



*The **older** the respondent, the more likely s/he is to believe that regulations need to be strengthened (corr.=.001).*

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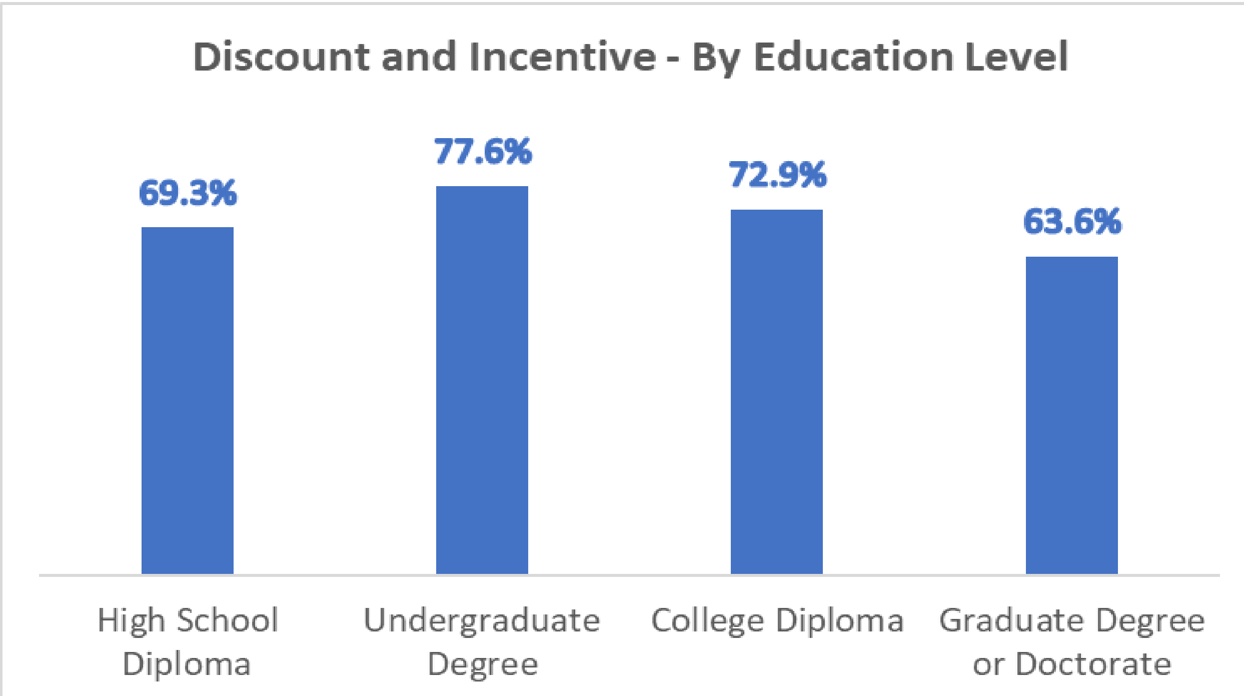
Charlebois, Walker, McGuinty and Music (2019)

If more bans are enacted, **71.8% of respondents** think they should receive a discount, incentive or rebate for supporting alternative solutions.



*The more **educated** a respondent, the less likely s/he would want a discount or incentive (corr.=.004).*

Charlebois, Walker, McGuinty and Music (2019)

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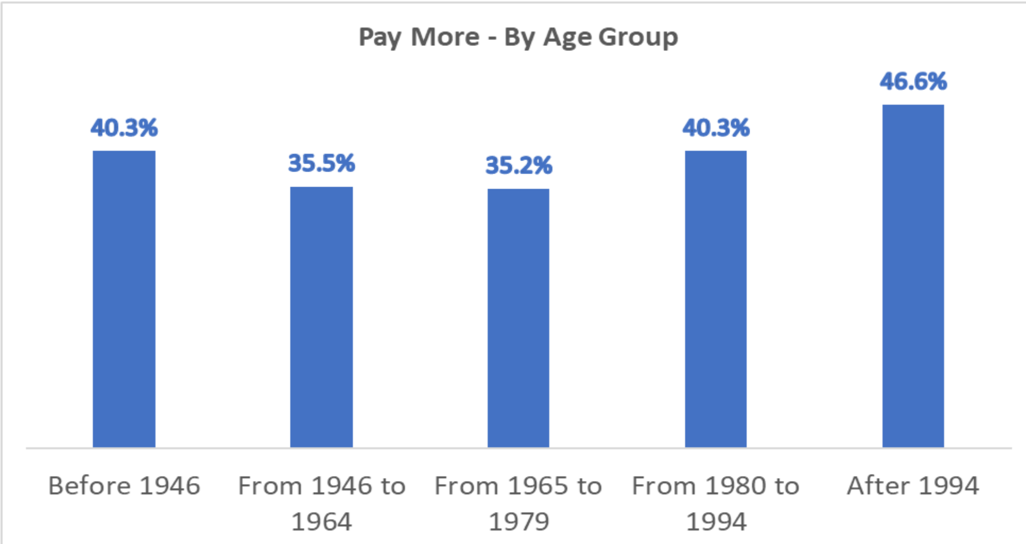
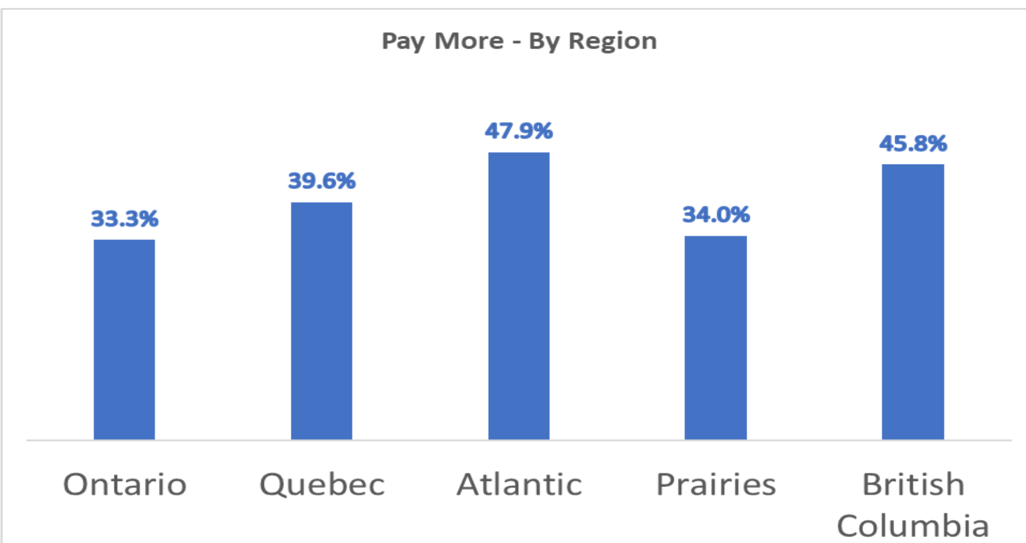
Possible Solutions

Charlebois, Walker, McGuinty and Music (2019)

37.7% of respondents are willing to pay more for an item with bio-degradable packaging.



*The **younger** the respondent, the more like s/he is willing to pay more (corr.=.009).*



Regions are divided on issue of paying more.

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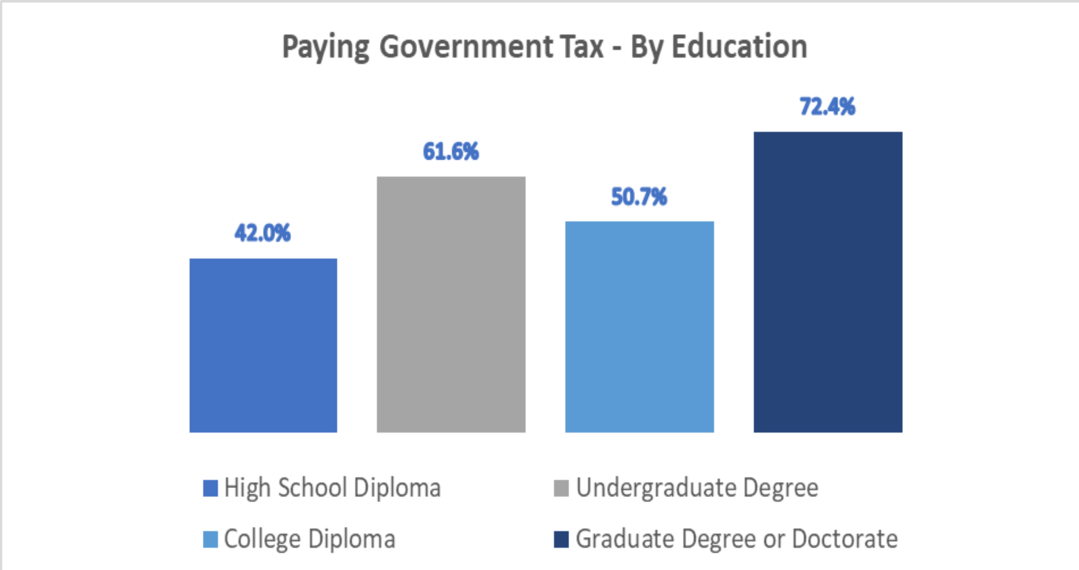
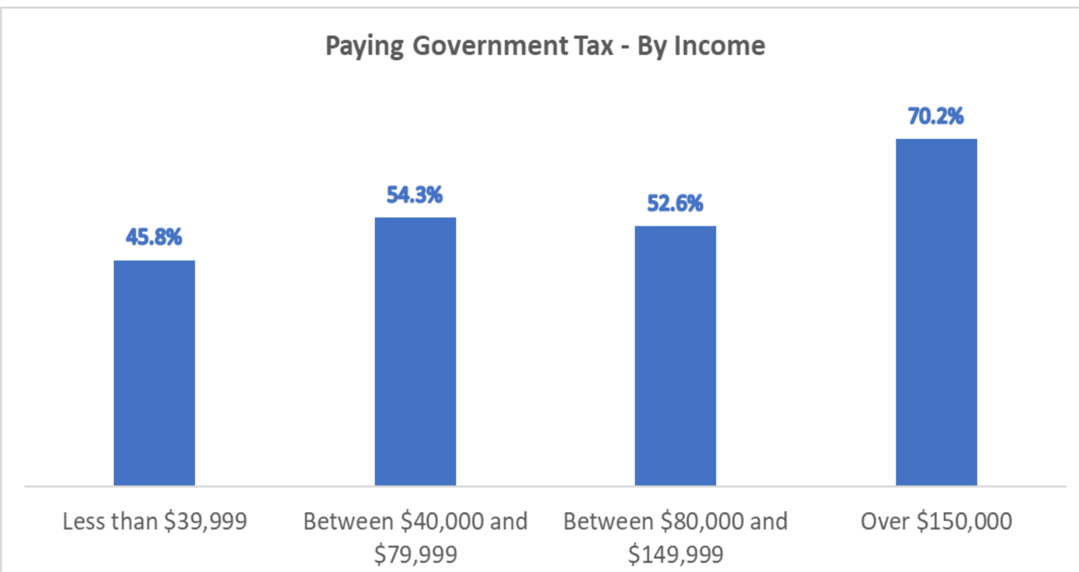
52.9% of respondents would accept paying a government tax to disincentivize consumption of single-use plastic food packaging.



*The more **educated** the respondent, the more likely s/he would accept paying a tax (corr.=.004).*



*The more a respondent **earns**, the more likely s/he would accept paying a tax (corr.=.000).*

Charlebois, Walker, McGuinty and Music (2019)

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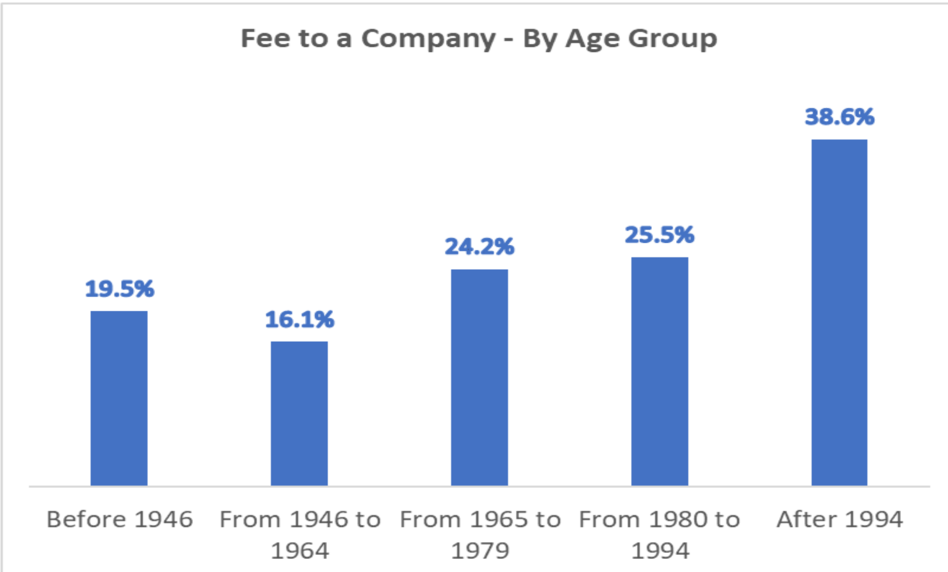
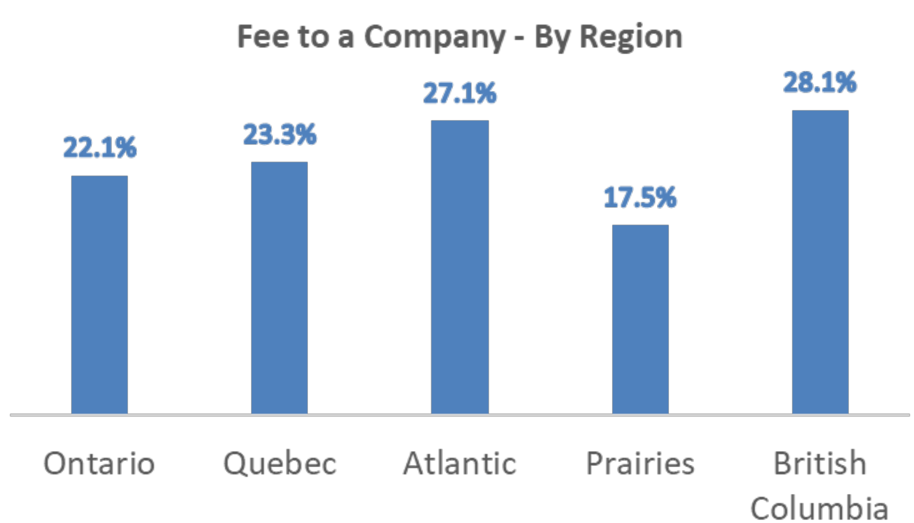
23.2% of respondents would accept paying a fee to a food company for single-use plastic food packaging.



Little support for a fee to a food company.



*The **younger** the respondent, the more likely s/he would accept paying a fee to a food company (corr.=.002).*

Charlebois, Walker, McGuinty and Music (2019)

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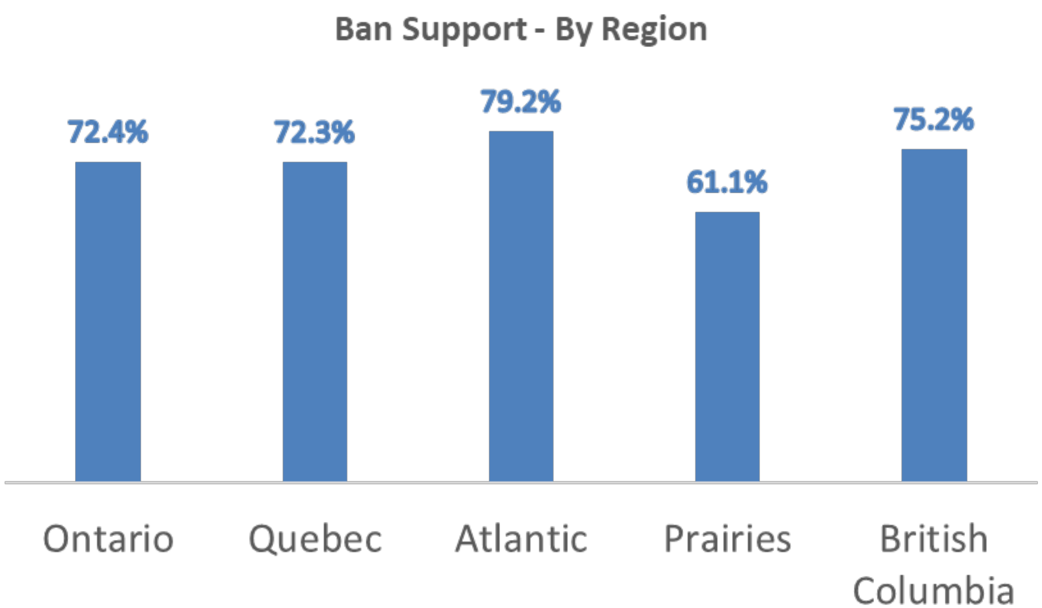
71.2% of respondents support a ban of all single-use plastics used for food packaging.



Highest support for SUP ban in the ***Atlantic Region****.* *Lowest support in the* ***Prairies****.*

Charlebois, Walker, McGuinty and Music (2019)

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Corporate Social Responsibility (CSR) is considered the private sector's strategy to operate with the goal of boosting the triple-bottom line: people, planet, profit.

*As part of CSR strategies in the food industry, **78.5% of respondents** believe it should include minimum bio-degradable product standards and performance measurements for single-use plastic food packaging.*

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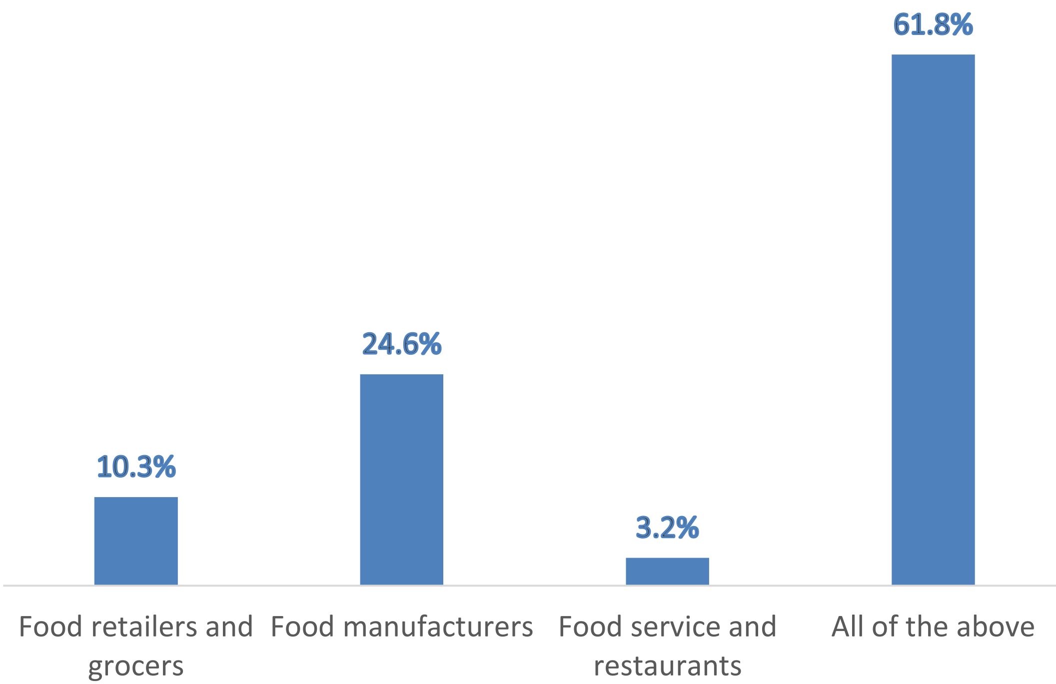
Charlebois, Walker, McGuinty and Music (2019)

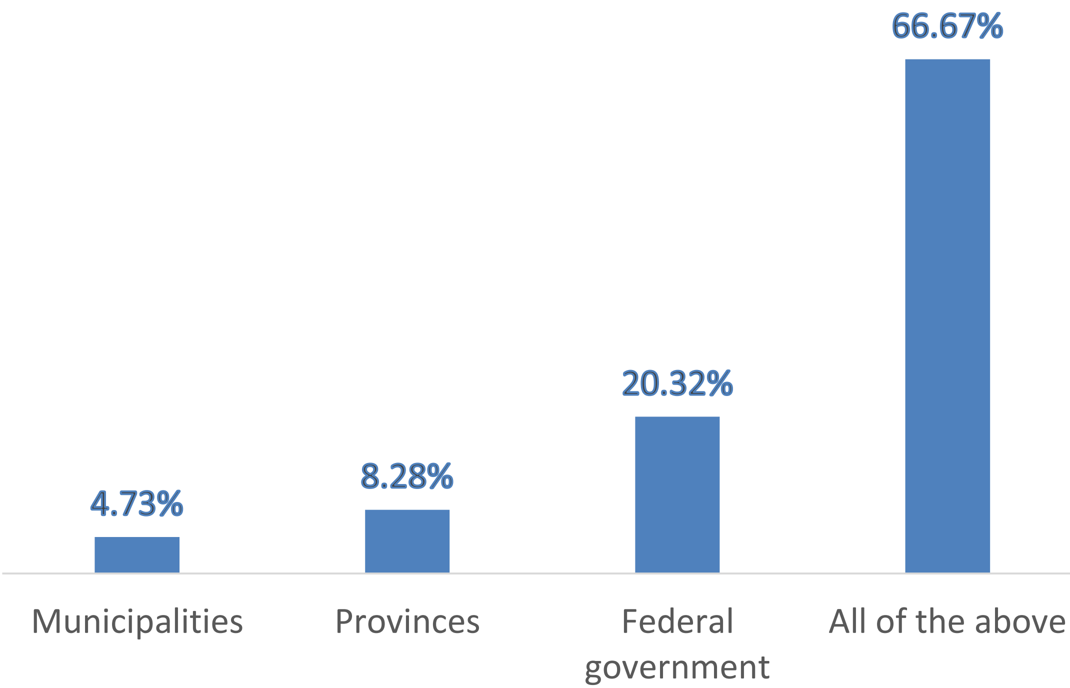
Respondents considered industry sectors to be mostly responsible for acting on and addressing the issue of plastics in Canada.



Majority of respondents consider ***all sectors*** *to be responsible.*

Charlebois, Walker, McGuinty and Music (2019)

Respondents were asked to consider which level of government should be mostly responsible to act and address the issue of plastics in Canada.



Majority feels ***all levels of government*** *are responsible.*

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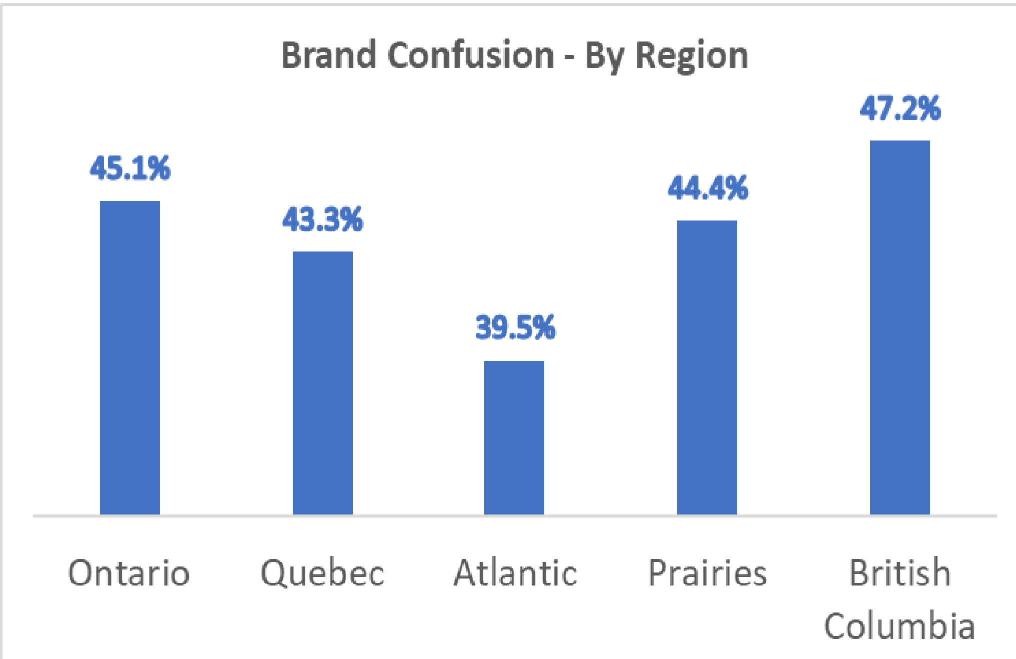
Charlebois, Walker, McGuinty and Music (2019)

45.2% of respondents are confused by branding and marketing of eco-friendly, single-use plastic food packaging.



*A **significant number of respondents** are confused by branding and marketing of eco-friendly SUP food packaging.*

Charlebois, Walker, McGuinty and Music (2019)

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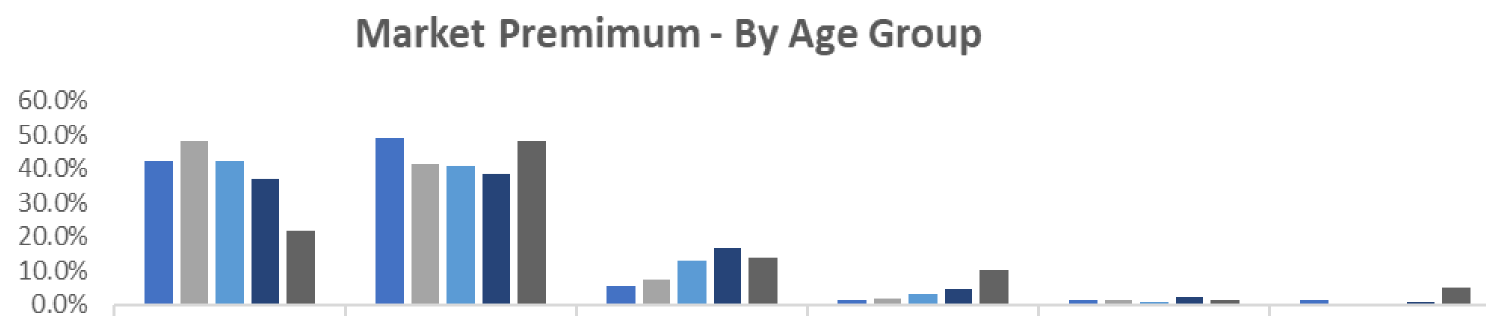
83.3% of respondents are unwilling **to pay more than 2.5% extra** for a food product with green packaging.



	0%	0%-2.5%	2.5%-5%	5%-7.5%	7.5%-10%	More than 10%
Before 1946	42.5%	49.3%	5.5%	1.1%	1.4%	1.4%
From 1946 to 1964	48.3%	41.2%	7.3%	1.7%	1.1%	0.3%
From 1965 to 1979	42.1%	40.7%	12.7%	3.2%	0.9%	0.5%
From 1980 to 1994	37.2%	38.7%	16.8%	4.7%	2.1%	0.5%
After 1994	21.8%	48.5%	13.9%	9.9%	1.0%	5.0%

Before 1946 From 1946 to 1964 From 1965 to 1979 From 1980 to 1994 After 1994

*The **younger** the respondent, the more likely s/he is willing to pay a premium for green packaging (corr.=.000).*

***Boomers** are twice as likely as Gen Z's to be unwilling to pay a premium.*

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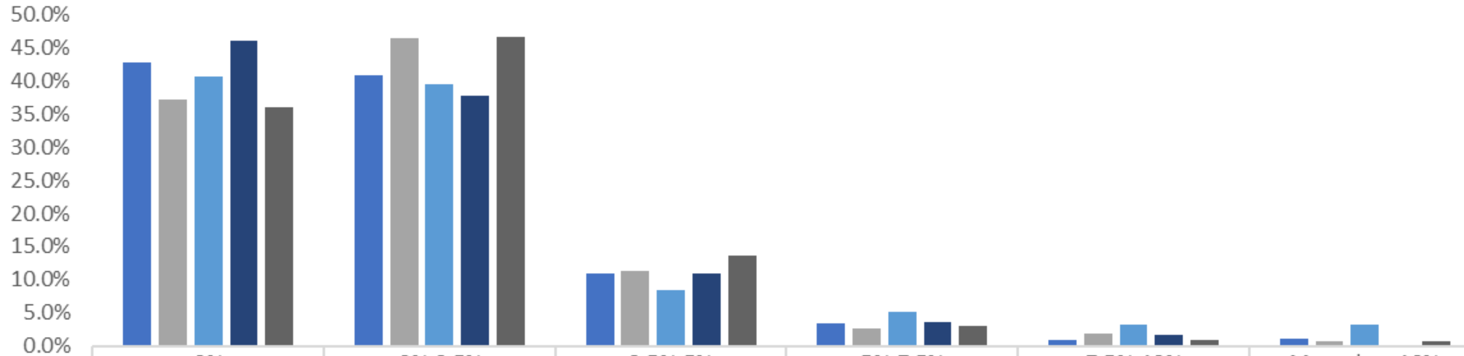
Charlebois, Walker, McGuinty and Music (2019)

83.3% of respondents would be unwilling **to pay more than 2.5% extra** for a food product with green packaging.

Market Premium - By Region



	0%	0%-2.5%	2.5%-5%	5%-7.5%	7.5%-10%	More than 10%
Ontario	42.9%	40.9%	10.9%	3.4%	0.8%	1.1%
Quebec	37.1%	46.5%	11.3%	2.5%	1.9%	0.6%
Atlantic	40.6%	39.6%	8.3%	5.2%	3.1%	3.1%
Prairies	46.1%	37.7%	11.0%	3.7%	1.6%	0.0%
British Columbia	36.1%	46.6%	13.5%	3.0%	0.8%	0.8%

Ontario Quebec Atlantic Prairies British Columbia

*Respondents in the **Prairies** and **Ontario** slightly more reluctant to pay a premium for green packaging.*

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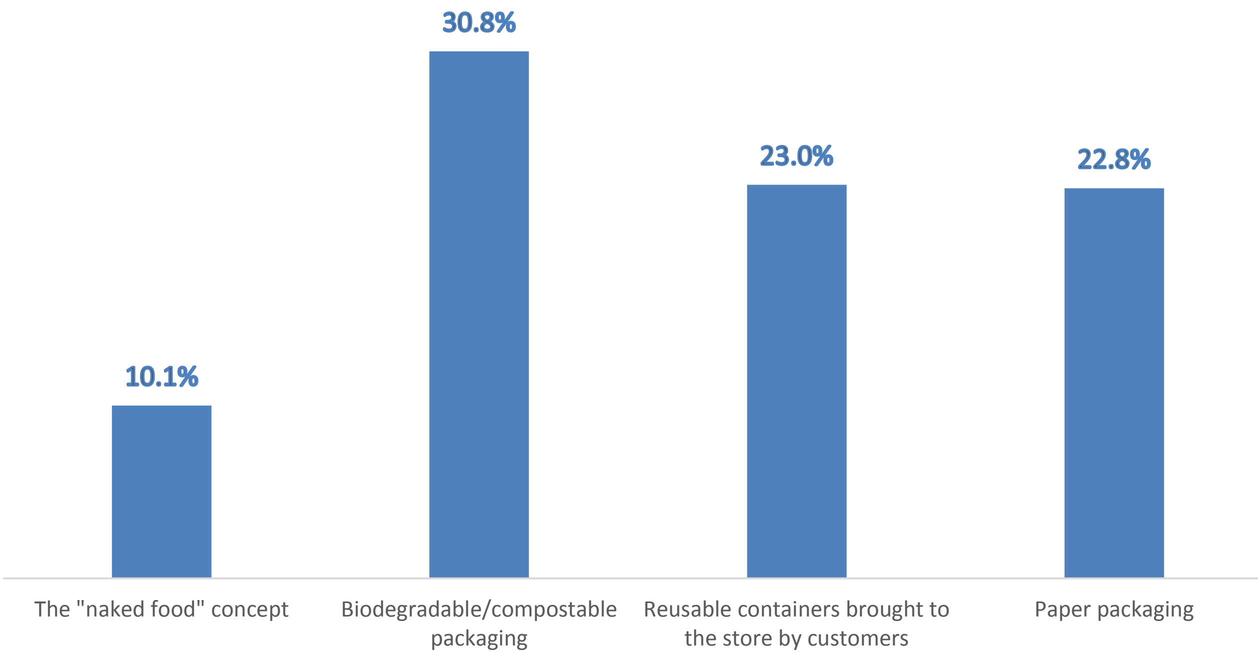
Charlebois, Walker, McGuinty and Music (2019)

30.8% of respondents would purchase food packaged in bio-degradable material.



Not a clear preferred solution perceived by respondents.

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Charlebois, Walker, McGuinty and Music (2019)

Other Findings

Charlebois, Walker, McGuinty and Music (2019)

To reduce single-use plastic consumption, **89.1% of respondents** believe they should be **further educated** on recycling, plastic use and the overall environmental impacts.

75.2% of respondents believe **media coverage** and pressure on the food industry is an efficient single-use plastic food packaging reduction strategy.

73.7% of respondents believe a **corporate incentives** program is an efficient method of changing consumer behaviour towards single-use plastic food packaging.

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Charlebois, Walker, McGuinty and Music (2019)

How important is each of the **following factors** and **measures** on decisions to reduce the number of food items packaged in single-use plastics?

Main factors (on 5-point Likert-type scale)	
Environmental harm concerns	3.9
Food safety concerns	3.7
Overall knowledge and personal motivation	3.6

Preferred Measures (on 5-point Likert-type scale)	
Alternative green packaging	3.3
Incentives, taxes and fees	3.2
Deposits and cash returns	3.1
Mandatory bans	3.0

*While **environmental concerns** are more critical than **food safety**, **green packaging** is seen as more desirable than **bans**.*

Charlebois, Walker, McGuinty and Music (2019)

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