Survey: Single Use Plastic Packaging in Canada's Produce Industry

Single use plastic (SUP) packaging, or viable alternative packaging materials, are vital to maintaining an effective and efficient global produce industry. To assist CPMA's work with its members in determining a path forward to address the use of problematic and unnecessary plastics within the produce sector and in determining best practices necessary to reduce the environmental impact of SUP on our world, Value Chain Management International (VCMI) is updating the packaging landscape review first completed in 2019 as part of the preliminary work undertaken shortly after the launch of the CPMA's Plastics Packaging Working Group.

The purpose of this study is to determine what changes have occurred in the volumes and types of plastic packaging associated with the Canadian fresh produce market, and what has driven any such changes.

Industry, along with federal and provincial/territorial governments, are asking for CPMA's input in the development of plastics-related regulations. By completing this survey, you will enable CPMA to provide accurate information that informs government policies and ensures the minimized impact of regulatory burden in Canada. You will also support CPMA's goal of harmonizing regulations between trading partners.

The following survey on SUP and alternative packaging materials should take no-longer than ten minutes to complete. If you wish to review the questions before completing the survey, the questions can be previewed here. **Please ensure that you complete this online survey by Friday, June 16.**

All of the information provided will be treated with the strictest confidentiality. We are not seeking the names of people, businesses or organizations.

If you have questions about the study, please contact Martin Gooch at +1 416-997-7779 or martin@vcm-international.com.

We thank you in advance for your cooperation.

Regards,
Martin Gooch, PhD

Q1. Please indicate which of the following best describes your core business.

- ☐ Grower (open field)
- ☐ Greenhouse grower
- ☐ Grading/packing
- ☐ Further process (e.g. bagged salads, pre-cut veg) ***If yes – directed to Q3***
- ☐ Wholesaler/distributor (primarily retail)
- ☐ Wholesaler/distributor (primarily foodservice)
- ☐ Retail ***If yes – directed to Q3***

Q2. Do you further process your products prior to sale (e.g. bagged salads, pre-cut vegetables, etc.)?

- ☐ Yes
- ☐ No

Q3. In which countries are your operations located? Please indicate all that apply.

- ☐ Argentina
- ☐ Belgium
- ☐ Canada
- ☐ China
- ☐ Egypt
- ☐ Spain
- ☐ Greece
- ☐ Honduras
- ☐ Israel
- ☐ Italy
- ☐ Morocco
- ☐ Mexico
- ☐ Netherlands
- ☐ United Kingdom
- ☐ United States
- ☐ South Africa
- ☐ Other (please specify)

Q4. In which state or province are your primary headquarters and/or primary operations located?

Q5. Please indicate which market your business primarily serves. *Please choose one answer.*

- ☐ International
- ☐ Canada (domestic)

Q6. With regards the mandatory inclusion of 50% PCR (recycled) content in plastic packaging by 2030: on a scale of 1-5 *(1 = little effort/investment; 3 = moderate effort/investment; 5 = extensive effort/investment)*, **at the present time**, how much effort and/or financial investment is your business making towards including at least 50% recycled content in your packaging?

Effort / Investment	Scale 1-5
Including 50+% PCR in our overall plastic packaging strategy	
Including 50+% PCR in our primary SUP packaging by 2030	
Inclusion 50+% PCR in our secondary plastic packaging by 2030	
Incorporating “design for recycling” into our plastic packaging by 2030	
Incorporating “golden design rules” in our plastic packaging by 2030	
Other (please specify in the box below)	

Q7. If the mandatory labelling of plastic packaging (<u>in definitive “yes/no” terms regarding its recyclability</u>) differed to align with the recycling systems that exist in each Canadian province or territory in which your products are sold, how challenging would this be for your business to implement? *Please answer on a scale of 1-5 (1 = not problematic; 3 = moderately problematic; 5 = majorly problematic) by clicking on the slider below.*

Q8. If the mandatory labelling of plastic packaging (<u>in definitive “yes/no” terms regarding its recyclability</u>) differed to align with the recycling systems that exist in each Canadian province or territory in which your products are sold, how do you expect that your business would respond? *Please answer on a scale of 1-5 (1 = very unlikely; 3 = likely; 5 = very likely).*

Likelihood of Response	Scale 1-5
Nothing would change, it would be business as usual	
Sell in loose format only (not pre-packed)	
Increase the price charged to customers/consumers, due to the operational inefficiencies and costs that this would create	
Stop selling into the Canadian market	
Other (please specify)	

Q9. For each of the items that you handle, listed in the table below, please indicate your **estimated annual sales in metric tonnes**. Use whole numbers only; do not use commas or spaces. *Please ignore any items that are not relevant to your business.*

Commodity/item	Annual sales (metric tonnes)
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	
Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Other commodities	

Q10. For each of the items that you handle, listed in the table below, please indicate the **approximate percentage of these sales** which are sold pre-packed in SUP (single use plastic). Use whole numbers only without % symbol. *Please ignore any items that are not relevant to your business.*

Commodity/item	Percentage sold in SUP
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	

Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Other commodities	

Q11. Compared to three years ago, has the demand for pre-packed produce changed?

- ☐ Yes, increased.
- ☐ Yes, decreased.
- ☐ No, remains unchanged.

Q12. If demand for pre-packed produce has increased or decreased, by approximately how much as a percentage?

Q13. Within the last four years, have you measurably decreased (e.g. by approximately 20% or more) the volume of total sales **sold pre-packed in plastic SUP**; for example, by replacing plastic with an alternative material such as paper, cardboard or fibre?

- ☐ **Yes** – **If Yes, you will be directed to Q20**
- ☐ **No** – **If No, you will be directed to the next question (Q14)**

Q.14 Within the last four years, have you measurably decreased (e.g. by approximately 20% or more) the volume of total sales **sold pre-packed in any material**; for example, you sell 20+% more products in master cartons, with consumers purchasing them loose.

- ☐ **Yes** – **If Yes, you will be directed to Q21**
- ☐ **No** – **If No, you will be directed to the next question (Q15)**

Q15. For each of the items that you handle, listed in the table below, **please indicate the estimated percentage increase in loss (shrink) above current levels that would be caused by your preferred SUP no longer being available or allowed.** Whole numbers only without "%" symbol. *Please ignore any items that are not relevant to your business.*

Produce item/commodity	Estimated % increase in loss (shrink) due to not being packaged in your preferred material
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	
Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Other commodities	

Q16. For each of the SUP packaging material types listed below, please indicate the percentage that this type of packaging contributes to your overall SUP usage (**total has to equal 100%**). <u>Whole numbers only without “%” symbol</u>. *Please ignore any items that are not relevant to your business.*

	Percentage of overall SUP usage (OMIT % SYMBOL)
PVC & polystyrene	
Oxy degradable materials	
Rigid water soluble plastic	
PLA – polylactic acid	
Industrial compostable	
Polycarbonate	
Acrylic	
Black or dark coloured plastics	
Home compostable (e.g. cellulose, Mater-Bi)	
OPP – oriented polypropylene	
PP – polypropylene	
Complex or multi-layered laminates / films	
PVdC – polyvinylidene chloride	
PET – polyethylene terephthalate	
HDPE – high-density polyethylene	
LDPE – low-density polyethylene	
PE – polyethylene	
Non plastic (e.g. paper, cardboard, fibre)	

Q17. For each of the SUP packaging material types listed below, please identify if you are planning to transition away from their use, transition into their use or maintain current level of use? *Please ignore any items that are not relevant to your business.*

Material	Plan to transition away from use	Plan to transition into use	Maintain current level of use
PVC & polystyrene			
Oxy degradable materials			
Rigid water soluble plastic			
PLA – polylactic acid			
Industrial compostable			
Polycarbonate			
Acrylic			
Black or dark coloured plastics			
Home compostable (e.g. cellulose, Mater-Bi)			
OPP – oriented polypropylene			
PP – polypropylene			
Complex or multi-layered laminates / films			
PVdC – polyvinylidene chloride			
PET – polyethylene terephthalate			
HDPE – high-density polyethylene			
LDPE – low-density polyethylene			
PE – polyethylene			
Non plastic (e.g. paper, cardboard, fibre)			

Q18. For each of the factors listed below, using a scale of 1 to 5 (1 = not effective; 3 = moderately effective; 5 = very effective), please indicate the comparative effectiveness of current packaging versus replacement SUP or alternative materials.

Factor	Effectiveness of current SUP	Effectiveness of replacement SUP or alternative materials
Food safety assurance		
Quality assurance		
Maximizing shelf life		
Cost-effective transportation		
Damage protection		
Food loss and waste (shrink) prevention		
Convenience (e.g. re-sealable)		
Consumer messaging		
Marketing (design / aesthetics)		
Unique product ID (traceability)		
Food preparation (e.g. microwave ready)		
Overall cost effectiveness		

Q19. By approximately how much percentage wise do you expect transitioning to replacement SUP or alternative packaging materials will change your costs of doing business? *(Costs of doing business include research and development, cost of production, waste, energy, purchasing new equipment, cost of materials, marketing, labour, training, credit claims, etc.)*

NOTE: If you had answered "NO" to Questions 10 or 11, you will be directed from here to the end of the survey.

Q20. What packaging material do you use for single use packaging instead of plastic?

- ☐ Cardboard
- ☐ Paper
- ☐ Fibre
- ☐ Other (please describe)

Q21. From the list of drivers below, please identify on a scale of 1-5 (1 = proactive transition in response to market dynamics; 3 = combination of proactive and reactive factors; 5 = reaction to customer or consumer driven change) the impact that each of these drivers had on your decision to transition away from SUP packaging, or single use packaging per se.

Driver	Scale
Impending SUP regulations and bans	
Extended producer responsibility (EPR) programs	
Consumer feedback	
Customer demands	
Corporate social and environmental (ESG) reporting	
Environmental sustainability	
Cost reduction	
Competitive advantage	
Export opportunities/markets	
Other, please specify	

Q22. For each of the factors listed below, using a scale of 1 to 5 (1 = not effective; 3 = moderately effective; 5 = very effective), please indicate the comparative effectiveness of the previously used SUP versus the new alternative packaging material, or selling in master cartons for consumers to purchase loose.

Factor	Effectiveness of Previously used SUP	Comparative Effectiveness of Replacement Materials or Packaging Format
Food safety assurance		
Quality assurance		
Maximizing shelf life		
Cost-effective transportation		
Damage protection		
Food loss and waste (shrink) prevention		
Convenience (e.g. re-sealable)		
Consumer messaging		
Marketing (design / aesthetics)		
Unique product ID (traceability)		
Food preparation (e.g. microwave ready)		
Overall cost effectiveness		

Q23. For each of the items that you handle, listed in the table below, **please indicate whether your transition away from SUP packaging or pre-packaged per se led to a percentage increase [+] or a percentage decrease [-] in sales.** *Please ignore any items that are not relevant to your business.*

Item/Commodity	Increase [+%] or decrease [-%] in sales following change in packaging material or format
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	
Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Other commodities	

Q24. For each of the items that you handle, listed in the table below, **please indicate whether you experienced a percentage increase [+] or a percentage decrease [-] in loss (shrink) following your transition away from SUP packaging, or pre-packaged per se, compared to prior levels of shrink.** *Please ignore any items that are not relevant to your business.*

Item/Commodity	Increase [+%] or decrease [-%] in loss (shrink) following change in packaging material or format
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	
Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Other commodities	

Q25. By approximately how much percentage wise did transitioning to replacement SUP or alternative packaging materials change your costs of doing business? *(Costs of doing business include research and development, cost of production, waste, energy, purchasing new equipment, cost of materials, marketing, labour, training, credit claims, etc.)*

Q26. Do you use PLUs?

- Yes
- No **– If no, you will be directed to Q30**

Q27. For each of the items that you handle, listed in the table below, **approximately what percentage of your total sales carry individual PLUs?** *Please ignore any items that are not relevant to your business.*

Item/Commodity	%
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	
Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Bananas	
Other commodities	

Q28. For each of the items that you handle, listed in the table below, **approximately what percentage of the PLUs that you use are either paper or certified compostable?** *Please ignore any items that are not relevant to your business.*

Item/Commodity	%
Potatoes	
Citrus fruit (incl. oranges, limes, mandarins, grapefruit, lemons)	
Leafy greens (incl. lettuce, kale, spinach, bagged salads)	
Apples	
Onions and shallots	
Tomatoes	
Carrots	
Soft berries (incl. strawberries, blueberries, raspberries, blackberries)	
Grapes	
Peppers	
Cucumbers	
Celery	
Broccoli	
Soft fruit (incl. peaches, plums, apricots, nectarines)	
Mushrooms	
Pears	
Cherries	
Beets	
Beans (green and wax)	
Kiwis	
Bananas	
Other commodities	

Q29. If only certified compostable PLU stickers were allowable in Canada, on a scale of 1-5 *(1 = very unlikely; 3 = likely; 5 = very likely)*, how likely do you believe that your business would respond in any of the ways listed below.

Likelihood of Reponse	Scale 1-5
Nothing would change, it would be business as usual	
Sell in pre-packed format only	
Increase the price charged to customers/consumers, due to the operational inefficiencies and costs that this would create	
Stop selling into the Canadian market	
Other (please specify)	

Q30. How central is the colour green to your businesses' branding and marketing efforts – such as logos, letter heads, merchandizing, etc. Please respond on a scale of 1-5, by clicking on the slider below *(1 = do not use the colour green; 3 = use the colour green, though it is not central to our marketing and brand image; 5 = the colour green is central to our marketing and brand image).*

Q31. Thank you for participating in this important study. Is there anything further that you would like to add about SUP packaging in the context of the Canadian produce industry?