

# Bio & Compostable Plastics 101

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**First Canadian Summit  
on  
Compostable  
Products & Packaging**

Montreal 20<sup>th</sup> September 2018

# Four major categories with respect to compostability

<b>Conventional not compostable</b>	<b>Bio-based not compostable</b>
<b>Conventional compostable</b>	<b>Bio-based compostable</b>



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# Certified Compostable plastics

- are rapidly consumed by micro-organisms during the composting process
- are certified to have passed stringent tests for performance under industrial/municipal composting conditions
- do not introduce regulated toxic substances to the soil
- have no observable effect on plant growth
- leave no detectable residue except for carbon dioxide, water, and biomass
- are a recognized part of the circular economy



# Certifications for compostability



# Bioplastics

- come in many forms with properties similar to, or sometimes different from, conventional plastics
- global production capacity for bioplastics is projected to reach 2.44 million tonnes by 2022
- with the right support from government and industry, bioplastics, many of which are compostable, are projected to be able to create at least 19,000 jobs in Canada and contribute \$1.8 billion to the economy in the next decade.



# Issues are being addressed by the compostable plastics sector in consultation with composters

- certified compostable plastic products and packaging perform satisfactorily in most but not all composting facilities. Several studies are underway to better understand required composting conditions.
- it is difficult to visually differentiate compostable from non-compostable materials. Work on a fix is underway.
- it is sometimes claimed that allowing compostables in organics collection increases contamination by non-compostables. Studies indicate that this is fully resolvable.



# Examples of major manufacturers and brandowners committing to compostable packaging and products

- Unilever
  - Dell
  - Tom's of Maine (Colgate-Palmolive)
  - PepsiCo
  - L'Oréal
  - Procter & Gamble
  - Loblaw
  - A&W
- and many more



# Some examples already on the market





# Afterword

- **certified compostable packaging is appropriate when reuse or recycling present a significant environmental or economic burden, such as when packaging is very small (e.g. candy) or contaminated with food residue.**
- **some compostable plastics degrade in marine or aquatic environments. More research is needed.**
- **new compostable and bio-based resins are being introduced at a significant rate and can often be developed to required specifications.**
- **many compostable resins are readily interchangeable with conventional resins on packaging equipment.**

