



In high-income countries, post-production stages of food systems — including storage and transport — contribute roughly the same amount of greenhouse gas emissions as is accounted for in the agriculture sector for on-farm production. Carbon dioxide emissions from fossil fuel use and emissions from refrigerant gases are the biggest contributors to greenhouse gas emissions in the post-production portions of the food system.¹

In BC alone, emissions from food distribution, processing, retail, and food services sectors combined are projected to emit nearly a million tonnes of carbon dioxide equivalent (CO₂e) per year.² This includes just four key sources of emissions: refrigeration, energy use (electricity and natural gas), waste, and fleets.

BC food sector businesses carbon footprint and potential reductions

Data source: Climate Smart, 2014²

Sector	Businesses	Employees	Total projected emissions (CO ₂ e)	Reductions within 6 years at 5% yr	Possible cost savings
Food distributors & processors	3,400	50,000	320,000	85,000	\$36 M
Food retail	4,400	75,000	180,000	48,000	\$35 M
Food service	12,500	153,000	450,000	118,000	\$30 M

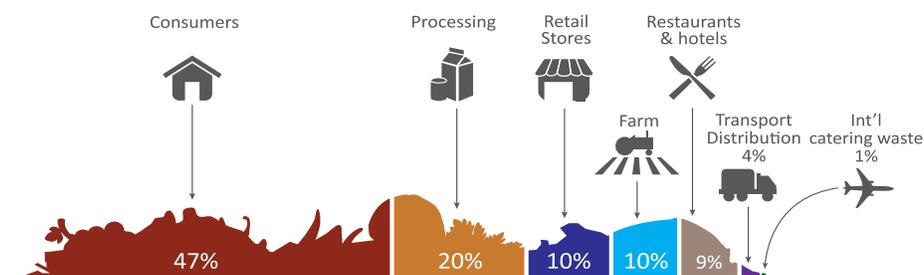
Food Waste

Keeping organic waste out of landfills is a top priority for reducing food system emissions. Once in a landfill, organic waste creates methane emissions during decomposition. In addition, food that is wasted at the consumer level embodies the full footprint of GHG emissions, energy expenditures and other resources required for food production and distribution. Food waste represents an enormous amount of unnecessary emissions.

The GHG footprint of Canadian food loss and waste is estimated at 56.5 Mt CO₂e, that is 75% of total agriculture sector emissions, including on-farm energy and fuel use.³

Where food waste occurs through Canada's Food Value Chain⁴

Based on data from VCMI, 2014⁵





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References:

- ¹ Garnet, T. (2011) *Where are the best opportunities for reducing greenhouse gas emissions in the food system (including the food chain)?* Food Policy 36 (2011) S23–S32.
- ² Climate Smart (2014) *Carbon Emissions in the Food & Beverage Sector: A Climate Smart Industry Brief* climatesmartbusiness.com/wp-content/uploads/2014/06/CS-Food-and-Beverage-Sector-Industry-Brief-digital.pdf
- ³ Value Chain Management International (2019) *The Avoidable Crisis of Food Waste: A Technical Report* Prepared by VCMI for Second Harvest. secondharvest.ca/wp-content/uploads/2019/01/Avoidable-Crisis-of-Food-Waste-Technical-Report-January-17-2019.pdf
- ⁴ National Zero Waste Canada (2018) *A Food Loss and Waste Strategy for Canada* <http://www.nzwc.ca/focus/food/national-food-waste-strategy/Documents/NZWC-FoodLossWasteStrategy.pdf>
- ⁵ Value Chain Management International (2014) *Food Waste in Canada - \$27 Billion Revisited* vcm-international.com/wp-content/uploads/2014/12/Food-Waste-in-Canada-27-Billion-Revisited-Dec-10-2014.pdf