



# The Connection between Food Waste, Sustainability and Food Security

Cut Waste, Grow Profit Forum

November 19, 2012

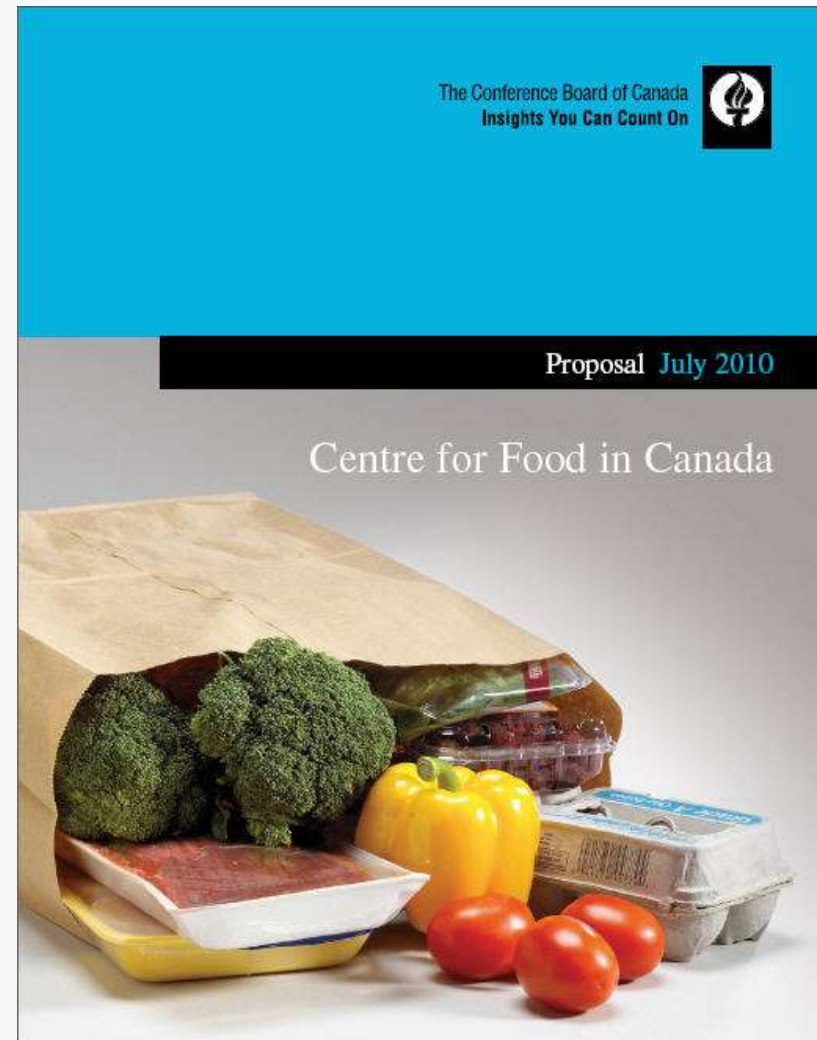
Dr. Michael Bloom

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The Conference Board of Canada

# Centre for Food in Canada

July 1, 2010

The Conference Board of Canada launched the **Centre for Food in Canada (CFIC)**.



# Centre for Food in Canada (CFIC)

## Twin Purposes:

- Raise public awareness of the nature and importance of the food sector to Canada's economy and society; and
- Create a shared vision for the future of food in Canada, expressed in a *Canadian Food Strategy* - to meet our need for a coordinated long-term strategy for change.



# Need for a Canadian Strategy

- Despite being a mega-issue, food suffers from a lack of a truly grand vision—a **Canadian Food Strategy**—that connects all the parts and all of the stakeholders.
- Other countries have already developed their own national food strategies—including U.K., Scotland, Sweden and South Australia.



# 5 Pillars of CFIC and the Canadian Food Strategy (CFS)



Source: The Conference Board of Canada.



# Reducing Food Waste Matters

- Food waste is an important cross-cutting theme.
- Connects to 3 of 5 main pillars of CFIC's Canadian Food Strategy:
  - Environmental Sustainability;
  - Consumer Security; and
  - Industry Viability and Prosperity.

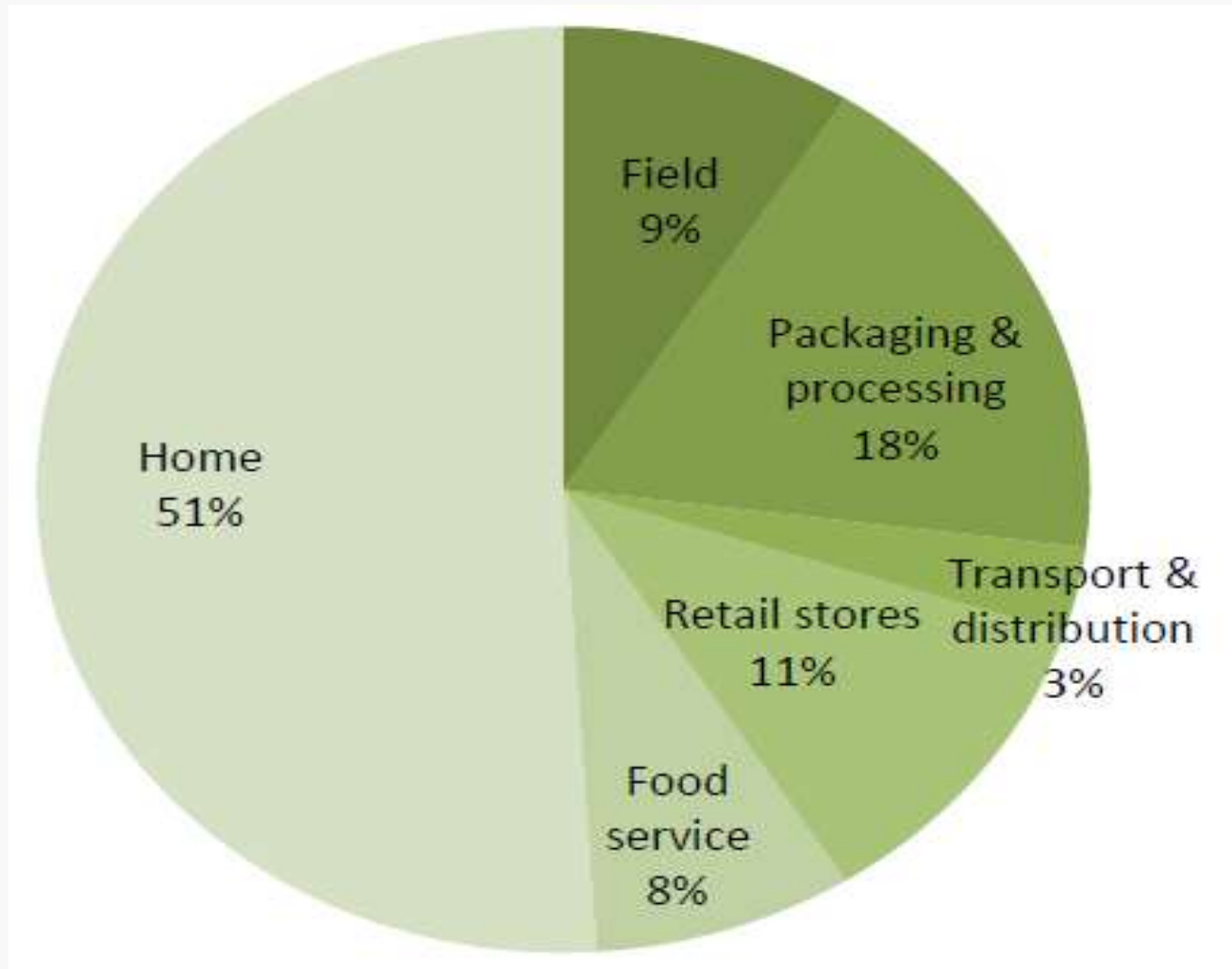


# Food Waste in Canada

- Developed countries waste a high proportion of their food!
- Canada is no exception – est. \$27 billion of food is wasted annually.
- Result: reduced profits all along the value chain, higher prices, negative impacts on the environment, *and* more food insecurity.
- Much waste is *avoidable*.



# Cdn. Food Waste Breakdown



Source: Gooch *et al.*, George Morris Centre.





# HH Expenditure on Food Waste

- 40 per cent of all food produced is wasted.
- Est. annual cost of food waste = \$27 billion.
- 51 per cent of waste comes from households = \$13.77 billion.
- 13.32 million Canadian households in 2011.
- **Each Canadian household spends about:**
  - **\$1,034 on wasted food each year;**
  - **\$86 of food waste per month.**

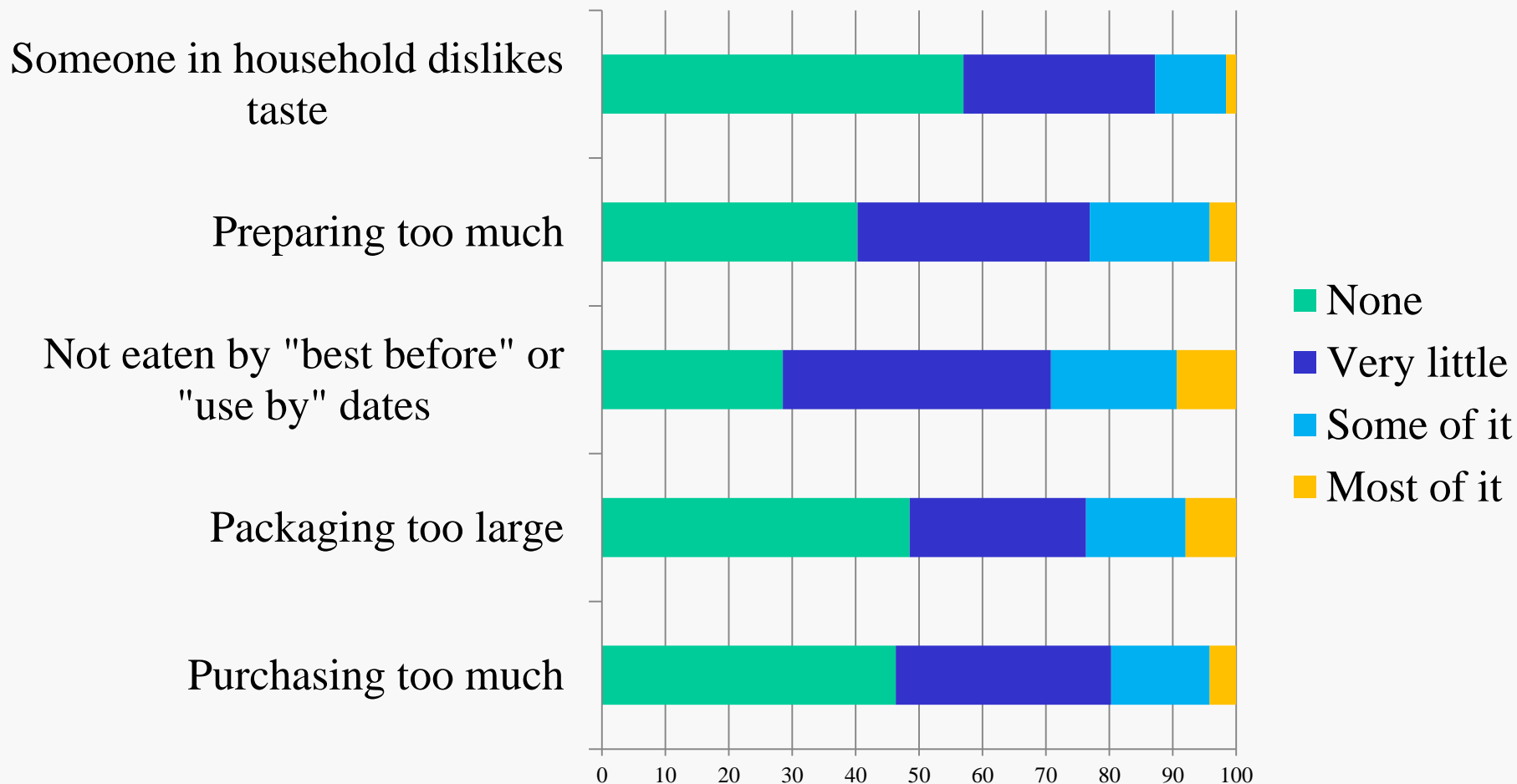


# CFIC Household Survey

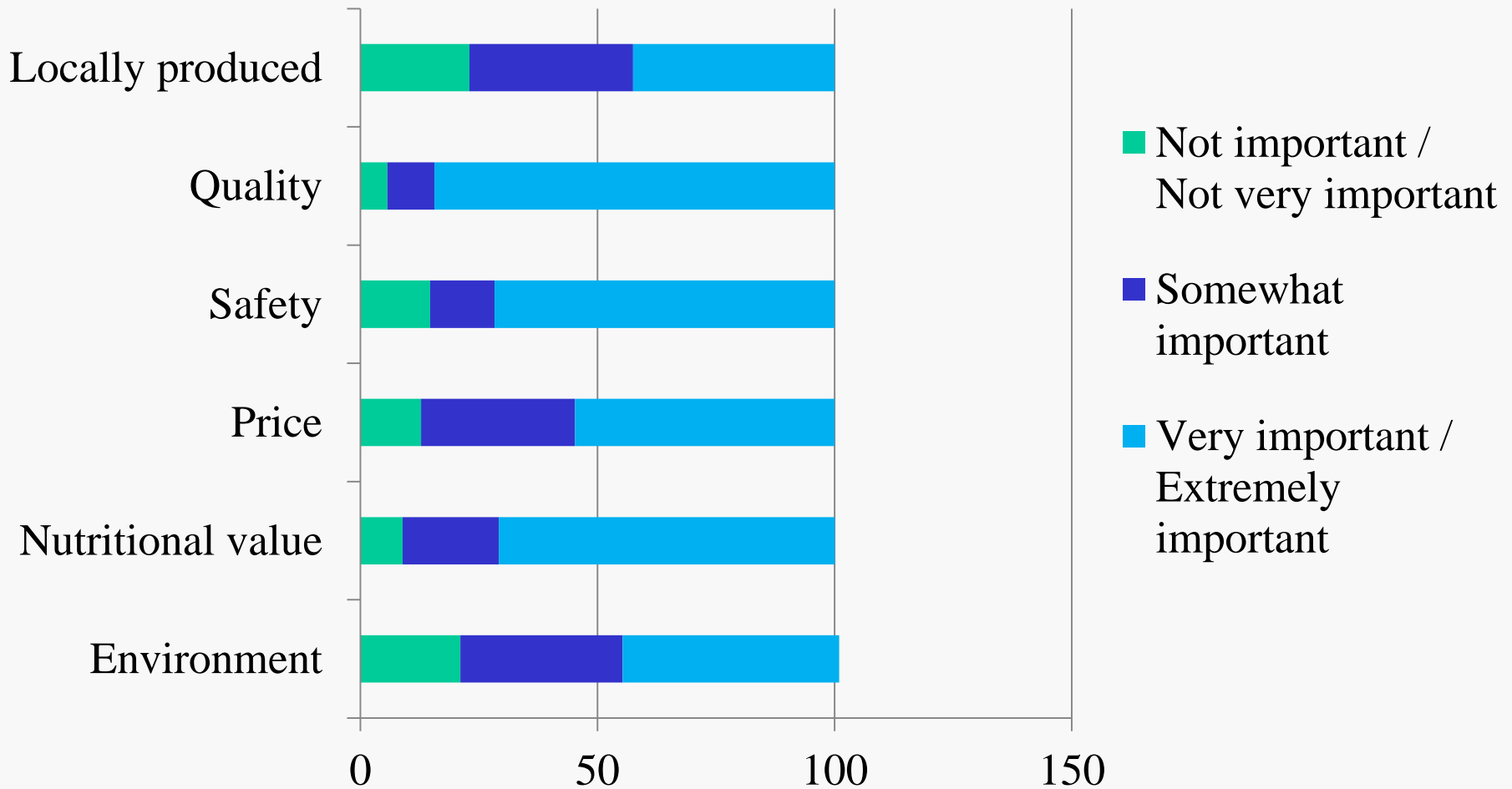
- “On average, how many grocery bags of food that you buy *each week* do you end up throwing out?”:
  - 10.9 per cent – 2 or more bags a week;
  - 22.8 per cent – one bag a week; and
  - 66.3 per cent – zero bags a week.



# CFIC HH Survey – Reasons for Waste



# CFIC HH Survey – Factors in Food-Purchase Decision Making



# **Impacts of Food Waste on Environmental Sustainability and Food Security**



# Food Security Definitions

- Food Security: “when all people, at all times, have *physical and economic access to sufficient, safe and nutritious food* to meet their dietary needs and food preferences for an active and healthy life”.
- Food Insecurity: state where nutritious food is *unavailable, inaccessible, or the supply is unstable*.



# Food Waste & Environmental Sustainability

- Food waste = wasted resources.
- Large negative impact on environment.
- Resources required to produce, process food products are often finite and costly.
- Areas of Concern:
  - Quality of water, air, and soil; and
  - Food waste, energy use, and landfills.



# Water and Energy Use

- “Agriculture is largest human use of water.”
- U.S. uses 70 per cent of its freshwater supply for agricultural production.
- Over 25 per cent of the water is accounted for by wasted food – approx. 40 trillion litres/yr.!
- Average U.S. farm uses 3kcal of fossil fuel energy to produce 1kcal of food.
- Energy consumption to process food in Canada continues to rise each year.





# Energy Use Along Value Chain

- Entire value chain relies on energy and contributes to greenhouse gas emissions:
  - Tilling land and sowing crops.
  - Application of fertilizers and pesticides.
  - Shipping harvested products.
  - Washing and packaging.
  - Processing.



# Energy Use Along Value Chain

- Entire value chain relies on energy and contributes to greenhouse gas emissions:
  - Manufacturing & shipping of packaging.
  - Manufacturing and shipping of processed products to retailers.
  - Retail display and packing.
  - Waste collection, recycling, land-filling.



# Food Waste in Landfills

- In U.S., food waste occupies largest part of landfills – 35 million tons in 2010.
- Decomposition of food waste in landfills generates greenhouse gases such as methane and carbon dioxide.
- Methane gas has global warming potential 20-25 times higher than carbon dioxide.
- About 20 per cent of Canada's methane emissions come from landfills.



# Sustainability and Prosperity

- Action will improve competitiveness and prosperity of Canada's food sector.
- Draw on international and domestic best practices to minimize and reuse food waste, and operate more sustainably, reducing environmental impacts.



# Sustainability and Prosperity

- Good for business (brand building, cost cuts, consumer loyalty)
- Good for the environment (saves resources, reduces impacts).
- Companies are making progress towards more sustainable practices, but *more can be done*.



# Food Insecurity: Impacts

- Hunger due to severe food shortages, resulting from accessibility and cost issues.
- Consumer cannot afford to regularly buy fresh, nutritious foods (e.g. milk, fruits, vegetables, chicken, fish).
- Often reliant on food bank provisions (non-perishable, heavily processed foods).



# Food Security: Impacts

- Negative health impacts on children's development and adult health due to imbalanced diet, low nutrition intake etc.
- People with lower nutrient intake get sick more often, miss more work, develop more chronic diseases and mental health disorders, and incur longer hospital stays.



# Food Security in Canada

- Major problem
- 961,000 or 7.7 per cent of Canadian households are ‘food insecure’ (all/part- of time) according to recent survey.
- Nearly 2 million people.
- Access to food is very threatened by *the cost of food and income levels.*





# Food Security in Canada

- More specifically, food insecurity is influenced by:
  - Income;
  - Costs of food and non-food essentials;
  - Geographic isolation;
  - Lack of transportation; and
  - Food literacy.



*Improving*  
**Food Waste Impacts on  
Consumers & Environment**



# Food Security in Canada

- Reducing food waste along the value chain can help companies cut costs - savings that can be passed along to consumers in *lower prices*.
- Biggest impacts among key product groups that have the highest rates of food waste and prices – e.g. fruits, vegetables, dairy and meat.



# Food Security Programs

- Increase ‘affordable food’ options can help to reduce food insecurity in Canada.
- One answer is to establish targeted ‘affordable food’ programs to use the 30 per cent of fruits and vegetables produced in N.A. that currently aren’t “pretty enough” to be sold.



# Food Redistribution Programs

- Food “waste” redistribution/rescue programs can help the food insecure access more fresh, and nutritious foods.
- Supply food banks and civil society organizations – distribute food in low income communities.



# Reduce Waste & Improve Security

- Update regulations – provide *tax incentives* and introduce *Good Samaritan laws* to encourage and provide legal protection (e.g. from liability) for orgs. that contribute to food redistribution programs.
- Build food waste plans more centrally into government programs, at all levels.



# Reduce Waste & Improve Security

- Expand and scale up operations of food redistribution/rescue programs (e.g. Second Harvest, Quest Food Exchange) across Canada, focus on the most at-risk communities.
- Engage farmers and local businesses to donate.



# What More Can Be Done...

- Apply “Lean” management principles at *all* stages: *maximizing customer value* while *minimizing waste*.
- Innovate and collaborate to identify new creative solutions to reduce and use food waste.
- Use public-private partnerships to engage public and encourage behaviour change.





# What More Can Be Done...

- Promote food waste reduction publicly.
- Provide info and tools on how to cut waste at all stages in supply chain: farmers, shippers, manufacturers, dairies, retailers, hotels, hospitals, restaurants, food services.
- Share best practices and implement successful initiatives from other countries (e.g. U.K., U.S.).



# What More Can Be Done...

- Target food waste in the home.
- Educate Canadians about *the amount* of food wasted and *how to improve*.
- Provide households and individuals with practical ‘use it, don’t lose it’ strategies and techniques, based on real life behaviours, identified in consumer surveys and case studies.



# Observations

- Food waste reduction resonates with Canadians as a concept/idea.
- Big challenge: how to make it work for busy people with modern consumption lifestyles.
- Industry could improve brand, increase sales, by publicly linking waste-cutting efforts with feeding the food insecure and improving health.



# Observations

- A combination of gov't regulations and programs, industry strategies, civil society efforts, and consumer change is needed.
- It is worth the effort - a 'win-win-win' that is vital to industry prosperity, environmental sustainability of the food sector, and the well-being of consumers!

