



FOODCYCLER™
MUNICIPAL SOLUTIONS



ABOUT US

- Canadian company based out of Ottawa, ON
- Founded in 2011 – Company is 100% focused on Food Waste Diversion Solutions
- Products available in North America through FoodCycler Municipal / Vitamix and internationally through network of distributors & OEM partners



THE PROBLEM – FOOD WASTE

- **63%** of food waste is avoidable
- Household waste is composed of **25-50%** organic waste
- Food waste weight is up to **90%** liquid mass (which is heavy)
- The average Canadian household spends **\$1,766** on food that is wasted each year
- Each year food waste in Canada is responsible for **56.6 Million tonnes of CO2** equivalent of GHG



MUNICIPAL IMPACT

EXPENSIVE & HARMFUL

LANDFILL

- Typically **25-50%** of household waste is organic material (e.g.: Ottawa = 45%)
- Landfills are filling up fast, creating cost and environmental issues

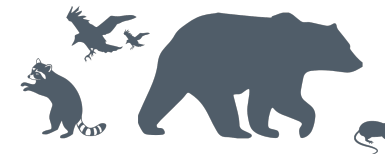
ENVIRONMENT

- Landfilled organic waste produces methane, which is **25X** more harmful than CO₂
- 1 tonne of food waste is equivalent to 1 car on the road for one year



COMMUNITY

- Food in the garbage necessitates more frequent collection
- Removing food waste reduces volume by up to **50%** and reduces the need for frequent collections
- Potential cost savings from reducing collection from weekly to biweekly (or even monthly)



- Food in the garbage attracts animals and produces unpleasant odors
- Removing food waste makes garbage much less "interesting" for animals

HAVEN'T WE SOLVED THIS ALREADY?



GREEN BINS

- Preferred solution for **larger cities** where **dense housing** and large processing facilities generate **economies of scale**
- **Contamination** is an ongoing challenge
- GHG emissions from curbside collection
- **Safety** concerns from additional trucks on the road



BACKYARD COMPOST

- **Cost-effective** but can be **labor-intensive** also
- May attract pests/animals or create unpleasant **odors**
- Most users **do not compost** in winter or inclement weather
- **Adoption rates** are relatively low and stagnant



LANDFILL

- **Easiest solution** and often perceived as the most cost-effective in the short term
- Waste is typically **out of sight and out of mind** for consumers
- High levels of GHG emissions, particularly **methane**
- Long-term **environmental hazard** requires monitoring / maintenance

THE SOLUTION

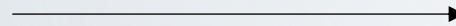
IN THREE SIMPLE STEPS



1. Add waste to removeable bucket

2. Add bucket to unit

3. Press Start. That's it! The resulting by-product can be used in many applications.



90% FOOD WASTE REDUCTION

1 KG (2.5L) of wet,
smelly food waste

100 G of dry, sterile &
odorless soil amendment

4-8 HOURS + 0.8 kWh
<10 cents / cycle



IMPACT

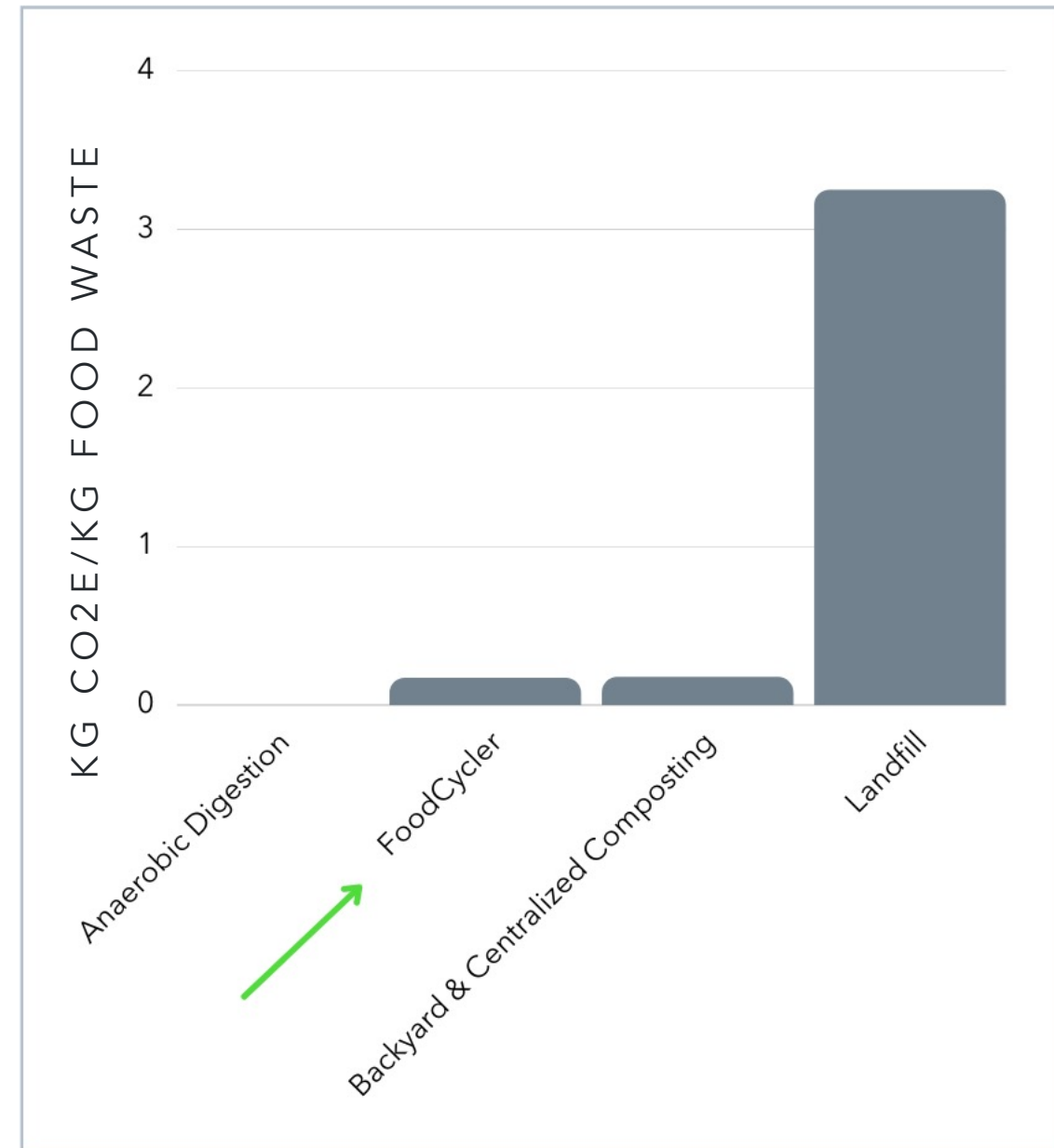
ENVIRONMENT

FOODCYCLER IS COMPARABLE TO:

- Central composting (with no transportation emissions)
- Backyard composting (if done correctly)
- FoodCycler offers >95% reduction in CO₂E vs. sending food waste to landfill

Source: Based on carbon intensity of power grid = 0.08 kg/kWh in Ontario

**Incorrect backyard composting can lead to methane gases and odours



IMPACT ECONOMIC

EXAMPLE OF IMPACT ON WASTE MANAGEMENT OPERATING COSTS



* FoodCycler is a locked-in price not subject to wage increases, fuel surcharges or fee hikes



IMPACT COMMUNITY

ANIMALS

- Food waste in garbage attracts animals
- Removing food waste makes garbage much less “interesting” for animals

PICKUP REGULARITY

- Food waste is estimated to be 25-50% of household waste, this food waste makes garbage smell!
- Removing food waste reduces volume by up to 50% and reduces need for frequent collection
- Potential cost savings from reduction in collection frequency to bi-weekly



IMPACT SOCIAL

THE TIME IS NOW

Residents want solutions, and are willing to pay more for the right one



6/10 consumers are willing to change their shopping habits to reduce environmental impact



8/10 consumers indicate sustainability is important to them when making a purchase decision



Of those who say sustainability is very/extremely important to them, over 70% of them would pay a premium of 35% for sustainable/environmentally responsible brands

INFLUENCE BEHAVIOUR

BRING THE PROBLEM BACK TO THE SOURCE

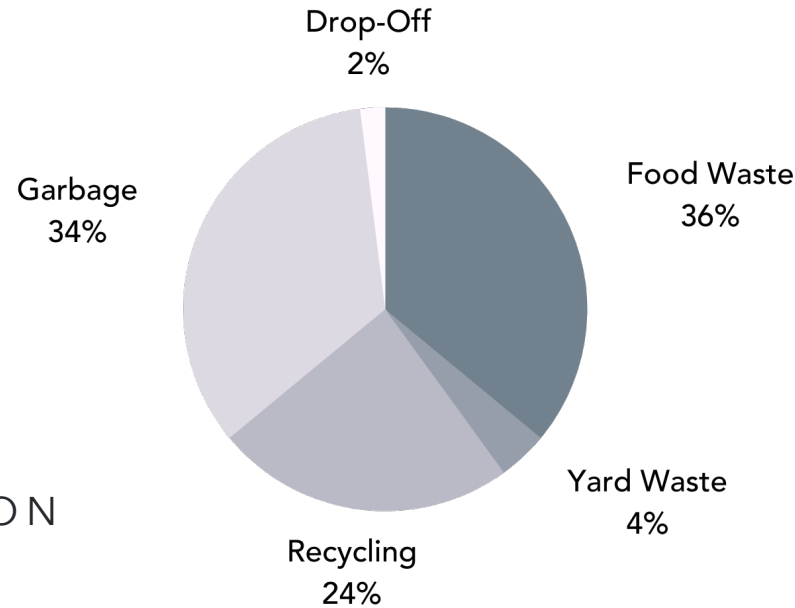
- Waste is overwhelmingly perceived as a “government problem” and there are few incentives to reduce waste
- “Bag tags” and other schemes may reduce garbage volumes, but also encourages dumping

- In-home processing brings problem back to the user and encourages behaviour change
- 63% of food waste is considered avoidable (food that could have been eaten)



IMPACT REGULATORY

ONTARIO WASTE COMPOSITION



- Food waste is estimated to be the largest component of Ontario waste streams according to 2020 data from Statistics Canada
- Based on FoodCycler estimates, total diversion of ~60% is feasible with recycling and food waste diversion programs or ~65% if yard waste collection and drop-off programs are included

Person or entity	Target
a) Municipalities subject to policy 4.1	70% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2023
b) Municipalities in Southern Ontario subject to policy 4.2i	70% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2025
c) Municipalities in Southern Ontario subject to policy 4.2ii	50% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2025
d) Municipalities in Northern Ontario subject to policy 4.3	50% waste reduction and resource recovery of food and organic waste generated by single-family dwellings in urban settlement areas by 2025
e) Multi-unit residential buildings subject to policy 4.10	50% waste reduction and resource recovery of food and organic waste generated at the building by 2025
f) Industrial and commercial facilities subject to policy 4.14	70% waste reduction and resource recovery of food and organic waste generated in the facility by 2025
g) Industrial and commercial facilities subject to policy 4.15	50% waste reduction and resource recovery of food and organic waste generated in the facility by 2025
h) Educational institutions and hospitals subject to policy 4.18	70% waste reduction and resource recovery of food and organic waste generated in the facility by 2025

PILOT PROGRAM

12 WEEKS FROM START TO FINISH

PILOT TIMELINE

START

Residents purchase FoodCycler at a subsidized rate from Municipal Office (or other designated location)

12 WEEKS

Participants use the unit for a period of 12 weeks.

Number of cycles per week are tracked to estimate total diversion achieved.

END

Participants fill out an exit survey, providing their review of the program and any other feedback.

Survey results used to evaluate program success.

NEXT STEPS

Full program design and implementation.

Many grants available!

THE CITY OF NELSON PILOTS

1

★★★★★ 4.40/5 Stars

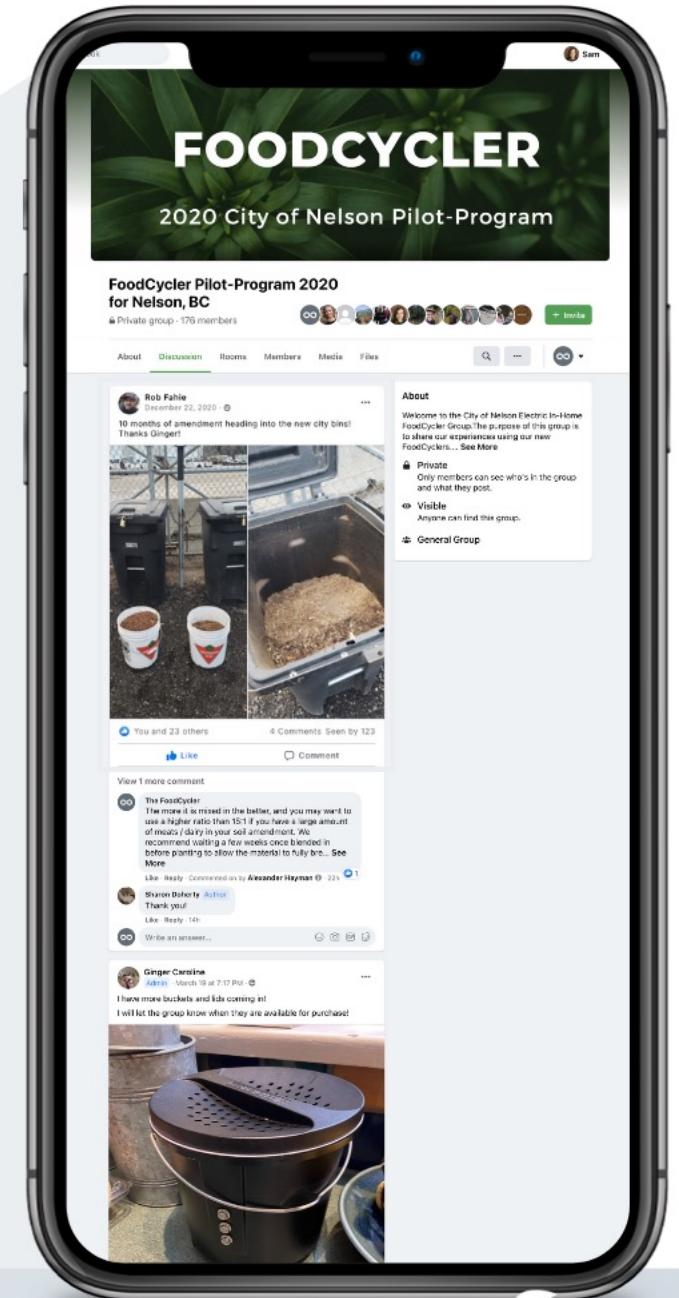
- 151 households opted-in to participate (EcoSave Program)
- 7-8 Cycles/week (**401.50 KG** annually)
- ~40% already composted

2

★★★★★ 4.55/5 Stars

- 31 random households selected by City of Nelson
- 6 cycles/week typical (**36.5 KG** annually)
- ~20% already composted
- More interest in a drop-off option for soil amendment (as a % of users)
- >90% have purchased unit or indicated that they will purchase unit from city

CREATING A ZERO-WASTE
ONLINE COMMUNITY



THE NELSON PILOTS

EXIT SURVEY RESULTS

"WOULD YOU
RECOMMEND?"

83% Yes
<1% No.

5.5% Undecided.

5.5% I need more time to assess

5.5% Other



4.4



Average rating

2L

Each bucket holds approx. 2-2.4 litres
(an average of 1 kilo) of food waste

1.1

Average daily use was 1.1
buckets per household

15

Approx. 15 tonnes of food
waste was processed over the
three month period, by 151
households.

**30,
200**

Approx. 30,200 litres of
food waste were
processed by the 151
participants, over three
months.

FOOD WASTE CHALLENGE

IMPACT CANADA SEMI-FINALIST

Winning the Impact Canada Food Waste Challenge has given us the ability to offer investment opportunity to remote, northern Canadian communities in an effort to support their environmental initiatives.

IN PARTNERSHIP WITH:



THANK YOU

ANY QUESTIONS?

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