



## **Analysis of Organic Waste Diversion Efforts in Canada Shows Room for Improvement**

**Ontario, Canada (August 5, 2021)** – As Canadian provinces and territories set more aggressive organics diversion and waste reduction related goals, additional organics management infrastructure will be needed to achieve those goals.

That's one of the conclusions reached in a recent analysis conducted by the [Environmental Research and Education Foundation of Canada](https://www.erefdn.org/) (EREF-Canada), a science-based research organization that focuses on solid waste.

The diversion of organic municipal waste materials has been a growing focus throughout Canada, primarily at the province and local levels as policies and collection programs have become widespread. But the collection and access to reliable data has been inconsistent. The results from the EREF-Canada study fill in a number of informational gaps.

Researchers looked at all 10 provinces and 3 territories to analyze each in order to (1) get a clear understanding of the organic waste policies and approval/permitting regimes in each one, (2) the organic waste diversion program availability across the country, and (3) the number of operational organic waste processing facilities, along with their capacities and tonnes processed.

For the purposes of the study, organic waste was defined as food waste that is uneaten and discarded, as well as inedible wastes such as scraps, agricultural waste (e.g. manure), biosolids (organic material recycled from sewage), and leaf and yard waste (including grass clippings, yard and garden debris). The report also focused on residential, industrial, commercial and institutional organic waste diversion. It did not take into consideration organic waste that might be applied directly to land, backyard composting, or waste stabilization methods such as lime stabilization, fermentation, and pasteurization.

The analysis found that most provinces (with the exception of the Territories and more remote areas) have adequate processing capacity to manage more basic degradable materials like leaf and yard waste. For example, collectively there is enough processing capacity for 2.66 million of these basic degradable materials at static pile and windrow facilities (facilities with an open-air process that places material in long piles that are rotated regularly) in Canada.

However, most provinces do not have sufficient processing capacity to address larger volume and more complicated materials like source-separated organics. Based on the 3.08 million tonnes of available processing capacity for in-vessel and anaerobic digestion facilities, they are at capacity or have relatively small amount of buffer capacity.

Compost facilities were predominately responsible for managing the organic waste being generated. Of the 4.83 million tonnes of organic waste processed in 2019, 72% of it was processed by compost facilities. EREF-Canada calculated that on average compost facilities processed 10,611 tonnes of organic waste. However, this reflects a wide range of facility sizes and processing capabilities with facilities processing from 50 tonnes to 150,000 tonnes. The anaerobic digestion facilities (facilities that degrade organic waste without oxygen) were responsible for processing 1.35 million tonnes of organic waste.

Collectively, the 387 facilities can process as much as 5.74 million tonnes (excluding Quebec) of organic waste annually. The total processing capacity reflects processing capacity for both easily degradable

organic waste like leaf and yard waste as well as the capacity to degrade materials that require more intensive infrastructure like source separated organics.

According to EREF-Canada's analysis, there is a shortfall of about 1.1 million tonnes of total capacity when compared to the quantity of food and yard and garden waste generated annually. This shortfall in capacity becomes even more pronounced considering that the majority of this waste is more complex food waste which can require more intensive infrastructure like in-vessel and anaerobic digestion systems. EREF-Canada found that there is 3.08 million tonnes of capacity for in-vessel compost and anaerobic digestion facilities, resulting in a potential 3.72 million tonne shortfall in capacity for processing more complex organic wastes

The 128-page report also highlights how the organic waste sector in Canada has grown since the early 1990s when the first curbside and depot municipal leaf and yard waste programs were implemented. EREF-Canada's research identified that as of 2019 there were a total of 328 compost and 59 anaerobic digestion facilities active in Canada.

Researchers also found that there is widespread implementation of organic waste management programs at the local levels. Ninety-one percent of all Canadians live in an area that has a residential organic waste management program. Furthermore, curbside programs are widely available, with 83 percent of the population living in an area with access to curbside leaf and yard waste programs and 71 percent with access to curbside source-separate organic programs.

As a result of the analysis, researchers say, in general, the country is highly motivated to increase the amount of organic waste diverted from disposal and reduce the amount of organic waste generated. Diversion from disposal was the most common goal used across the country with 10 provinces/territories citing diversion as a goal. Reduction of waste was the second most common goal with 7 provinces/territories citing this as a goal.

The specifics of the goals for each province vary. For example, while the overall Canadian government goal is to reduce organic waste by 30 percent by 2030 (or 490 kg per person), the Ontario government is shooting for a 50-70 percent reduction by 2023 or 2025, depending on the sector where the goal is applied. Similarly, Nova Scotia is targeting a goal of 50 percent waste diversion, as well as a target for waste disposal of no more than 300 kg/person/per year. Quebec and British Columbia have been more aggressive goals. Quebec wants to recycle or recover 70 percent of all organic matter by 2030 and reduce the quantity of waste sent for disposal to 525 kg per capita. Meanwhile, British Columbia has a target of diverting 95% of organic waste for agricultural, industrial, and municipal waste.

EREF-Canada's analysis suggests that as provinces and territories set more aggressive organics diversion and waste reduction related goals, additional organics management infrastructure will be needed. The country has the capacity necessary to collect additional materials, as many residents already have some access to an organic waste collection program. However, researchers say it is also necessary to ensure that these programs are routinely and properly used by residents. Many provinces and territories have already developed policies and programs that are driving progress towards their organic waste goals. Their continued progress will require supporting existing policies and programs, while also supporting improved access and availability of organics management infrastructure.

To download the complete report, click [here](#).

*The Environmental Research and Education Foundation of Canada is a registered charity with a designation of Public Foundation. Its mission is to advance education by conducting and funding research on all aspects of the Canadian solid waste management industry to achieve greater sustainability, higher process efficiency and increased knowledge and making the results publicly available.*

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