

COMPOSTING MATTERS

by Paul van der Werf &
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"Despite increased waste diversion programs in Canada, our waste generation per capita is increasing 1.5 per cent annually."



The State of Composting Across Canada – Part 1

This column represents the first of a two part series that looks at the state of composting in Canada. It represents the culmination of an analysis of existing information and a survey conducted by 2cg Inc. into composting programs across Canada in 2006. We start by looking at worldwide trends and then examine organic waste generation and composting programs in Canada.

Despite increased waste diversion programs across Canada, our waste generation per capita is increasing at a rate of approximately 1.5 per cent a year. Canada's reliance on landfill continues to be high and is similar to that of the US at around 70 per cent of the wastes generated.

In Canada, approximately four per cent of municipal solid wastes are composted. This is similar to the United States where about five per cent are composted. Both of these are relatively low. In Europe, where the grass always appears greener from a waste management perspective, more than 11 per cent of wastes are composted. This doesn't include another seven per cent treated through mechanical biological

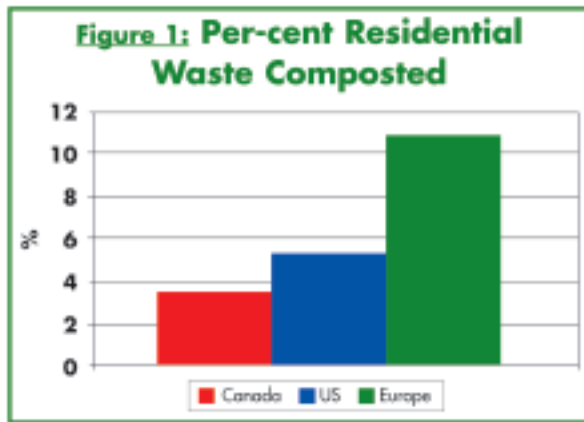
treatment (MBT). (Note that Europeans use a narrower definition of municipal waste than North Americans so there is some overestimation.)

It's a tired mantra organics need to be tackled to achieve the lofty diversion goals we've set in Canada. A preliminary data review suggests the goals have yet to translate into a meaningful impact on overall national waste diversion.

Except for forward-thinking provincial jurisdictions like Nova Scotia and Prince Edward Island, most initiatives have been municipally driven. The key driver to initiating a composting program is often the lack of disposal infrastructure. This is particularly true in Ontario where a significant portion of the Greater Toronto Area (GTA) waste has been shipped to Michigan. It will be interesting to see if the purchase of the Green Lane Landfill by the City of Toronto has any impact on local organics programs. Does the disposal crisis still exist?

The composting (or at least "alternate management") of organics

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continues to be key to effectively and realistically reducing our reliance on landfill. This key seems to be in search of a lock. The solution is clear but how do we actually get there? The solution has the answers but lacks the political voices to make it happen.

Drilling into the data

In very broad terms, about 50 per cent of residential waste is compostable. This includes food waste, yard waste and non-recyclable papers. It's estimated that about 20 per cent of IC&I wastes are compostable (e.g., food

waste, non-recyclable paper), though this can vary widely.

Using the 50 per cent compostable number, approximately six million tonnes of organic wastes are produced in Canada annually in the residential sector. (See Table 1.) About 200 kg/capita are generated on average.

Overall, an estimated 6.3 million tonnes of municipally-generated solid organic waste is generated in Canada (i.e., including IC&I wastes). An estimated 17 per cent of these organic wastes (1.1 million tonnes) were cap-

Table 1. Overview of Residential Organic Wastes Generated Across Canada (2002)

	Population	Organic waste	
		tonnes	kg/capita
British Columbia	3,907,000	677,000	173
Alberta	2,975,000	580,000	195
Saskatchewan	979,000	161,000	164
Manitoba	1,120,000	247,000	221
Ontario	11,410,000	2,194,000	192
Quebec	7,237,000	1,735,500	240
New Brunswick	729,500	128,000	175
Nova Scotia	908,000	126,000	139
Prince Edward Island*	135,000	26,000	193
Newfoundland	513,000	116,000	226
	29,913,500	5,990,500	

tured for composting in a 2002 study.

Although this article is concerned with municipal solid waste, biosolids, forestry wastes and agricultural wastes loom large and, in the correct context, are candidates for composting.

National survey

To supplement this data analysis, a national survey was undertaken to determine the number of composting programs across the coun-

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Table 2. Overview of Composting Programs Across Canada

	Total Population	Population Served	%	Composting Programs	Leaf and Yard	SSO
British Columbia	3,907,000	2,472,000	63.3	28	25	2
Alberta	2,975,000	1,006,000	33.8	9	9	4
Saskatchewan	979,000	18,400	1.9	2	2	1
Manitoba	1,120,000	82,400	7.4	3	3	2
Ontario	11,410,000	10,000,000	87.7	57	57	15
Quebec	7,237,000	2,562,000	35.4	12	12	5
New Brunswick	729,500	338,000	46.3	2	2	2
Nova Scotia	908,000	751,000	82.7	20	20	20
Prince Edward Island	135,000	135,000	100.0	1	1	1
Newfoundland	513,000	0	0.0	0	0	0
	29,913,500	17,367,800	58.1	134	131	52

try. Rather than concentrate on composting facilities, the focus was on municipalities that have composting programs. The survey concentrated on the residential sector.

Table 2 presents an overview of composting programs across Canada

by province. It's estimated that 17 million Canadians have access to some form of curbside organic waste collection. Essentially, all of these Canadians have leaf and yard waste collection. Of those municipalities with leaf and yard waste programs, 40 per cent have source-separated organics (SSO) programs.


If the approximately 1.1 million tonnes of wastes composted in Canada were all diverted by the residential sector, then approximately 63 kg/capita would be diverted. Setting aside

the undetermined amount composted by the IC&I sector, the residential sector that has access to composting is at best currently diverting from disposal just 32 per cent of the organic wastes it generates.

Access to curbside collection of organic wastes varies greatly. Provinces such as Nova Scotia, Prince Edward Island and Ontario have high access; provinces such as Newfoundland, Manitoba and Saskatchewan have little or no access (though some backyard compost-

ing obviously occurs).

Only 52 SSO programs operate across Canada, compared to 131 leaf and yard waste programs. In order to divert more waste from disposal, additional SSO processing facilities will be required across the country.

In the next issue we will provide an overview of the types of SSO facilities currently operating in Canada as well as discuss regional trends. 

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