



PPEC Factsheet

The composting alternative

While most paper products are recyclable, sometimes they are just too far away from a recycling mill for recycling to be economically worthwhile.

For example, there are limited or no suitable recycling facilities in the Atlantic or Prairie provinces for the recycling of some used paper packaging. Even rural communities in provinces where there are recycling mills are concerned about the costs of shipping generally low-value used paper long distances for minimal economic benefit.

Recognizing this fact, and that paper (cellulose) materials provide a good carbon source, PPEC began investigating the composting alternative back in 1991.

A world literature search revealed no previous published information on this topic so PPEC hired the Macdonald College campus of McGill University in Montreal to do some trials using waxed corrugated and old boxboard.



The trials were very successful. Waxed corrugated could indeed produce good compost. Three of the seven samples tested met Ontario guidelines for unrestricted use; another three qualified for restricted use. The college suggested these could be a valuable media for ornamental and other non-edible plant species. A subsequent and far bigger trial at a commercial composting facility in Ontario in 1992 revealed no problems at all with waxed corrugated.

An initial concern about boron levels in old boxboard, identified by Macdonald College, was not a factor in later (1995) trials commissioned by PPEC at Scott's Composting Farm in Milton, Ontario.

Both the curbside-collected boxes and the composts produced by blending the boxboard with other paper fibres and food and yard wastes met all the Ontario Ministry of Environment and Energy's guidelines for aerobic composts, regarded as the most stringent in North America.

Barley and radishes were grown in small pots containing various blends of the compost and harvested, oven-dried and weighed after three weeks. There was no adverse impact on either the germination rate or dry matter yield of barley or radish grown under these admittedly non-field conditions.



There was an initial problem with odour. The boxboard compost heaps gave off odours that Scott's Composting Farm, located near a residential area, found unacceptable. The solution was to reduce the amount of boxboard in the initial mix to about 15 per cent. It may be that in a less sensitive location, the amount of boxboard in the initial mix could be increased.



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Another concern was the amount of contamination in the boxboard bales — things like plastic film, can lids, plastic pop bottles, toys, running shoes.

Mixing old boxboard with food wastes to get the right carbon to nitrogen ratios for composting means both are diverted from landfill. The compost itself can be used as plant bedding material in local parks and reserves or as a soil conditioner for horticultural crops. It's a great opportunity for some communities to create local jobs and to provide a valuable soil amendment at the same time.

Two provinces now send more old boxboard cartons for composting than they do for recycling (PEI and Nova Scotia). Here is a [video](#) on PPEC's composting efforts.