

COMPOSTING MATTERS

by Paul van der Werf

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Decomposition of Pandora's Bag — Part 2

A further overview of degradable plastic bags

In Part One of this article (*June/July 2005 edition, available on the website at www.solidwastemag.com*) I concluded that if degradable plastic bags are going to be part of a composting system, they must be an integral part of the composting process — in other words, they must be "compostable."

The American Society for Testing and Materials (ASTM) D6400 is a Standard Specification for Compostable Plastics. The requirements of this specification include disintegration during composting. There must be inherent biodegradation and no adverse impacts on the ability of compost to support plant growth. Confirmation that a degradable plastic bag is, in fact, compostable requires laboratory testing. This is done on a pass-fail basis. Plastic, whether made from renewable or non-renewable resources, should compost in a manner similar to comparable composting materials.

Plastic bags should not contribute contaminants or pollute the compost. There is evidence emerging that some degradable plastics that are not deemed as "compostable" contain high levels of some metals.

Certification

It is one thing to have a standard; it's another matter to translate that standard into something meaningful for consumers.

In the United States, the Biodegradable Products Institute (BPI) has developed an certification scheme for compostable plastics. It's fully endorsed and co-sponsored by the U.S. Composting Council (USCC) and culminates in the use of a seal.

Steve Mojo is the BPI's executive director. He explains that the development of the ASTM standard has been a long-term process. In an interesting point of context he notes that the standard's benchmark for compostability was at least in part determined by the length of time it took a Kraft paper bag to decompose.

For certification of a product to work it must have integrity. The certifier and the product manufacturer should not have the opportunity to influence or manipulate this process.

The BPI has set up a multi-step program to facilitate certification in an orderly manner.

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First, the manufacturer must send samples of raw material (the material used to make the bags) to one of a list of approved laboratories which then tests the samples according to the ASTM-6400 Standard Specification. Second, the lab must send the results to a third party reviewer. These subject matter experts review lab results for product compostability but also product formulations and metals. These reviews function as a peer review of work done at the lab. Third, the BPI gets a copy of reviewer findings including compostability and metals and performs a final review.

Plastics that pass this certification process are entitled to use the "Compostable" seal (*see figure*) on their products and get the endorsement of the U.S. Composting Council by virtue of their name being on the seal.

The costs of the program are not astronomical. The laboratory testing is the manufacturer's responsibility. The cost of the third party reviewer is US \$1,200 (if the product is certified elsewhere in the world) and \$4,500 if this is a product that has not been certified elsewhere. The manufacturer is also subject to annual licensing fees of \$2,000 to \$2,500 — with the lower fee for USCC members. The USCC is a beneficiary of some of these licensing fees.

The BPI certification program is aligned up with other certification programs including Din Certco, OK Compost, and EN (European Norm) 13432:2000. At this point, there is no Canadian counterpart.

Compostable bags in Canada

"It's either compostable or it's not compostable," says Wayne Riviere, Marketing Manager for W. Ralston (Canada) Inc., the manufacturer of BIOSAK® Compostable Brown Bags™

"Certification takes the mystery out of compostable plastics and gives customers a higher level of comfort beyond the manufacturer's claims."

"The BPI certification process was very positive for us and the certification has been widely accepted in waste management programs both here in Canada and the United States."

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That being said, there is at present no Canadian certification program for compostable plastic bags and so far no one is leading the charge. Some municipalities are looking for some type of compostable bags to use in their composting programs. To date there has been confusion for these municipalities. The subject matter is quite technical and everyone says the same thing: our product is compostable.

The Composting Council of Canada (CCC) has to date not shared the U.S. Composting Council's enthusiasm for getting involved in certification of these products. This has been largely due to the complexity of the issue but certainly also the fractious nature of some of the competing interests (i.e., compostable bags vs other degradable plastic bags).

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“The biodegradable/compostable bag development story has been filled with many chapters over the years,” says Susan Antler, executive director of The Composting Council of Canada. “A number of years ago, we had to make the decision to focus our limited resources on ensuring the solid development of organics recovery and the establishment of composting programs across the country.


“Our uppermost concern with anything to do with inputs into the composting process is to focus on what is best for our composting facilities and end products. Future-forward, our efforts will continue to champion all aspects of importance to our composting programs and facilities to best meet their opera-

tional requirements and deliver excellence in end-product manufacturing.”

To allow the use of compostable plastic bags in composting programs in Canada some jurisdictions, such as Spruce Grove Alberta, Durham Region, Ontario, Lunenburg, Nova Scotia, Prince Edward Island have been relying on the BPI seal and/or European equivalents. It will be important to provide some additional clarity as other jurisdictions develop new composting programs may wish to include compostable plastic products.

It's time for Canada to tackle this issue and assist in bringing some clarity to the market place. It's not clear that Canada needs to develop its own certification program. Certainly it may be possible for a “made in

Canada” solution to adapt the BPI or other certification program to its needs.

The focus of any Canadian certification program should not be distracted by non-degradable plastic bags but focus solely on compostable plastic bags. The key question is, can they be used to produce good quality compost? The answer to that question is simple — are they compostable as defined by ASTM 6400 or not? If not, they should not be treated as compostable nor should they be used in composting systems. 

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