Recycling Online

Is it compostable? – Part 1

by Roger Guttentag

Composting as a method for managing municipal organic wastes was once a fairly straightforward matter as long as the organic waste mix consisted of yard and food residuals. However, the use of composting as a disposal alternative started to experience significant complications due to the introduction of a new class of materials, called bioplastics, for the manufacture of various products such as eating utensils, drinking cups, plastic bags and water bottles. Bioplastics are essentially materials whose source of carbon is from active biological sources, such plants, instead of petrochemicals. The development and marketing of products made partially or entirely with bioplastics is a consequence of several significant social and business trends coming together. These include, in particular, social policies that seek sustainable alternatives to fossil fuels and the desire by companies to appear green or create merchandise that would meet the demands of environmentally-conscious consumers.

Not surprisingly, bioplastic products are often labeled as either biodegradable or compostable, leading consumers to often assume that these claims are equivalent and true. However, as Justin Gast's article on page 18 points out, just because a product claims to be compostable, doesn't automatically make it an acceptable material to a municipal organics collection program or a commercial composting facility.

This situation therefore prompts the asking the following questions:

What are the sources and uses of bioplastics?

What is the difference between being biodegradable and compostable and when is it legitimate for a bioplastic product manufacturer to make either claim?

Why would a product that can be labeled as compostable still not be acceptable for collection by a municipal organics recycling program?

Bioplastics – no dinosaurs were harmed to make them

If you are unfamiliar with what bioplastics are and how they are utilized, then there are two recommended sources to consult. The first, Sustainable Plastics? (SP), was developed by the Institute for Local Self Reliance. The other is the BioPlastics Council (BPC), a special interest group that is part of the Society of Plastics Industries. The fundamental argument made by the former is that plastics that are made from petrochemical alternatives do not make them automatically environmentally preferable or sustainable. SP's goal is, for this reason, to serve as an advocate for bioplastics that are sustainable during their entire life cycle from manufacture to product end-of-life.

The BPC, on the other hand, serves more as a portal on the emerging bioplastics industry for various audiences such as the general public, public officials and the business community. Both sites provide ample information references on bioplastic products, producers, industry news and examples of bioplastic applications.

Labels matter

The next question, what claims can be made by bioplastics manufacturers regarding biodegradability or compostability, is unfortunately not a simple one to answer. A reasonable starting point would be the recently revised Green Guides, the Federal Trade Commission's guidance to marketers regarding what claims can be made about the environmental attributes of specific products. Sections 260.7 and 260.8 both make clear that claims regarding product compostability or degradability "should have competent and reliable scientific evidence" that they are true. This sounds reasonable. However, this does not tell the reader what the differences between these claims are and further, what kind of scientific evidence should be presented.

Web Address Directory

Biodegradable Products Institute	http://www.bpiworld.org/
Bioplastics Council	http://www.plasticsindustry.org/BPC/
Californians Against Waste – Bioplastic Enforcement Campaign	http://tinyurl.com/CAWBioPlas
City of Los Angeles – Guide to Compostable Food Service Products	http://tinyurl.com/LACompost
FTC issues revised Green Guides	http://tinyurl.com/FTCGG1
Sustainable Plastics?	http://www.sustainableplastics.org/
USCC – Compostable Logo Project	http://tinyurl.com/USCCLogo
USCC – Compostable Plastics Task Force	http://tinyurl.com/USCCTask

For this reason you should head to the Bioplastic Enforcement Campaign page on the Californians Against Waste (CAW) site and watch a three-minute video that provides a very clear explanation of what compostable and biodegradable mean and why the difference between the two is extremely significant. In addition, the video provides the key points underlying ASTM-D6400 (ASTM stands for American Society for Testing and Materials) which is the scientific standard that is used for determining if a bioplastic is compostable in a centralized large scale composting facility.

The CAW video refers to the Biodegradable Products Institute (BPI) as the principal source of information on what bioplastic products have verified compostability claims. BPI, along with the U.S. Composting Council (USCC), has created the Compostable Logo which can be used by products that have been verified by BPI to meet the standards established by ASTM-D6400 or ASTM-D6868 (for products that use biodegradable coatings). A full explanation of the Compostable Logo program can be found by selecting the link to "Information About Certified Compostable Products." This page also has links to the relevant ASTM standards as well as to a searchable directory of certified products such as bags or food service items. Readers who are interested in more detail on the various ASTM standards that are relevant to the evaluation of bioplastics should download "Compostable Plastics 101" from the USCC's Compostable Plastics Task Force page.

Compostable certification versus the real world

So it's clear that there are products that can be labeled as compostable based on data showing they are meeting specific scientific standards. Yet, does this mean we can certain that they will actual compost in composting facilities being used by companies and municipalities? That is a different matter and there is evidence, as Gast points out, that there are still real world problems even with certified bioplastics. For example, the City of Los Angeles has a fact sheet on compostable food service products explaining that even though they have been certified by BPI, the facilities used by the city do not operate on the same time scale as the ASTM standards and for this reason these products cannot be composted by them. The result is that the City asks their green bin program participants to put their bioplastic food service items in the black (trash) bins. The Compostable Plastics 101 paper mentioned earlier frankly acknowledges that there are many challenges with regard to labeling, regulatory policies and the ASTM D-6400 standard that need to be addressed by the bioplastic and composting industries.

Next month

Part 2 of this column topic will look at the various issues that have emerged regarding the compostability of bioplastics and what has been learned so far.

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