Symphony environmental technologies

Press Release

7th June 2011

CONFUSION BETWEEN 'OXO' AND 'HYDRO' IN STUDY OF BIODEGRADABLE PLASTICS IN LANDFILL - BUT FINDINGS ARE GOOD FOR OXO

In May this year, researchers at North Carolina University, USA published a report on the performance of biodegradable plastics in landfill. It concluded that some of them might be doing more harm than good. The findings were published online in "Environmental Science & Technology".

Today, Symphony issued the following statement:

"It is really important not to confuse the two fundamentally different types of biodegradable plastic. The NC State report is about hydro-biodegradable or “compostable” plastic, which is usually made from vegetable matter. This type of plastic is intended for industrial composting, and that is why a rapid rate of degradation is required by ASTM D6400; EN13432; and Australian 4736. It is not designed to degrade in the open environment, and it will emit methane (a more powerful greenhouse gas than CO2) deep in landfill."

We agree with the NC State University report, but they have not distinguished between "compostable" and Oxo-biodegradable plastic. Oxo-biodegradable plastic will not cause the problem they have identified, because it has a deliberately slower rate of degradation and it is inert in landfill in the absence of oxygen.

The fundamental point about Oxo-biodegradable technology is that the additive, included at low cost at manufacture, turns ordinary plastic at the end of its useful life in the presence of oxygen into a material with a different molecular structure. At that stage it is no longer a plastic and has become a material which is inherently biodegradable in the open environment in the same way as a leaf. Approximate timescale for degradation can be set at manufacture as required. For a video of plastic film degrading, go to http://degradable.net/play-videos/4

A press report follows,

Biodegradable products in landfills may be harmful
By Shawn Wright | WASTE & RECYCLING NEWS
June 1, 2011

RALEIGH, N.C. (June 1, 12:15 p.m. ET) -- Biodegradable products, such as disposable cups and utensils, may be doing more harm than good in landfills, according to researchers from North Carolina State University.

The study, which was published online in Environmental Science & Technology, found that so-called eco-friendly products release a powerful greenhouse gas as they break down.
The problem is attributable to the rate at which biodegradable materials break down, the study found. According to Federal Trade Commission guidelines, products marked as biodegradable should decompose within “a reasonably short period of time” after disposal. But that rapid deterioration may be environmentally harmful, the researchers found.

Federal regulations do not require landfills that collect methane to install gas collection systems for at least two years after the waste is buried. If materials break down and release methane too quickly, the study said, much of the methane will likely be emitted before the collection technology is installed. This means less potential fuel for energy use and more greenhouse gas emissions.

The researchers found that a slower rate of biodegradation is more environmentally friendly because the majority of the methane production will occur after the methane collection system is in place.

“Methane can be a valuable energy source when captured, but is a potent greenhouse gas when released into the atmosphere,” said Morton Barlaz, co-author of the study and a professor and head of N.C.State’s Department of Civil, Construction and Environmental Engineering, in a statement. “In other words, biodegradable products are not necessarily more environmentally friendly when disposed of in landfills.”

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