

Michael Stephen | ‘Compostables’ have no place in the circular economy

Michael Stephen, chairman of the OPA, says the Government should not cave to ‘plastiphobia’ and should not support the use of “compostable” plastics.



In the run-up to last week’s first reading of the Environment Bill, 13 MPs were persuaded to sign a [letter](#) to the press backing ‘compostable’ plastic as an alternative to recycling.

According to the signatories, the UK’s recycling strategy does not adequately address film and flexible packaging, of which only a meagre 4% ends up being recycled. The MPs acknowledge that these materials “are extremely difficult to collect and process” and in fact for the most part mechanical recycling does not make sense in either economic or environmental terms.

The MPs are instead advocating “compostable” plastic, but this would only worsen the problem, because it does not convert into compost. This is because the relevant international standards (EN13432 and ASTM D6400) require it to convert into CO₂ gas within six months, and it should not be called “compostable” at all. Label aside, I would hope that the well-meaning group of MPs will agree that the last thing the planet needs right now is more CO₂.

The point does not appear to be lost on operators of industrial composting either. More and more of them, on both sides of the Atlantic, are expressing serious concerns about so-called “compostable” plastics, and asking that their use be halted immediately. Take the industrial composters in Oregon, USA, who recently published 9 reasons why they do not want the material, and at about the same time the City of Exeter, UK also rejected “compostable” and paper packaging. It is difficult therefore to see how “compostable” plastic supports a circular economy.

The EU Single Use Plastics Directive does indeed outlaw the use of powders to convert plastics into fragments, but oxo-biodegradable technology does NOT just create fragments, and nobody would ever have used the technology in the last 20 years in 92 countries if that was all it did.

The problem with plastic is not that there is insufficient plastic going into industrial composting but that too much of it is getting into the open environment, where it may lie or float around for decades. “Compostable” plastic does nothing to help in that regard, because it must first be collected and taken for industrial composting (if a composter can be found to take it). It is tested to biodegrade in the special conditions found in an industrial compost – not in the open environment. By design, therefore, it is not a solution to plastic waste in the environment.

Contrast that with biodegradable plastics like d2w, which are tested according to ASTM D6954 to biodegrade if they get into the open environment. These are designed to make the molecular structure of the plastic dismantle automatically by oxidation much more quickly than ordinary plastic when it has served its purpose. This type of plastic has now been scientifically tested and used all over the world for more than fifteen years, and in some countries it is compulsory.

Oxo-biodegradable plastics do not cause any significant depletion of fossil resources, but bio-based plastics do, when you consider the fossil fuels consumed in the agricultural production and polymerisation process.

A fundamental point that policymakers should be aware of is that plastic is not only the best material for protecting our food from contamination and preventing

food-waste and disease, but it also has a much lower global-warming potential than other materials used for packaging. This is according to research conducted by Intertek for the UK Government, and according to a recent report by the Green Alliance.

Plastic does not place significant demands on fossil resources, as it is made from a by-product of oil which would be extracted for fuels even if plastic did not exist. The only challenge plastic faces is that it can persist in the open environment and degrade into microplastics which get into the food-chain and into the air we breathe. There is no reason, however, to abandon plastic in favour of suboptimal alternatives when a low-cost solution exists to enable people to continue to enjoy its benefits. The UK Government should not cave to 'plastiphobia' and should not support the use of "compostable" plastics.

**Michael Stephen was a member of the Environment Select Committee in the 1992-97 UK Parliament.*



Study finds strong support for paper packaging from European



BOBST launches drive to fully digitise packaging print