

How the F&B sector can address the issue of plastic pollution

🕒 March 5, 2020 📰 News

The global food system, according to a recent IPCC report into climate change, is responsible for between 21 and 37 per cent of the world's human-generated greenhouse gas emissions – not a small burden – and the F&B sector is under huge pressure to allay concerns.

Some of this pressure comes from customers, and often focuses on the use of plastic. That comes as no surprise with 78 million metric tons of plastic packaging is produced globally every year and not a small proportion of that ends up in the open environment, where it will fragment into microplastics and lie or float around for decades before it biodegrades, according to Michael Stephen who chairs the OPA (Oxobiodegradable Plastics Association).

“While these concerns are understandable, they do not always lead to responsible decisions,” said Stephen. “Pandering to ‘plastiphobia’ may be one of them. Indeed, a recent UK survey by the Green Alliance found that major brands in the FMCG sector are switching away from plastic regardless of the environmental impact of substitute materials.”

The survey also showed that customers often harbour a deep-seated emotional bias against plastic – one going as far as to describe it as “evil and has no place, regardless of any positives it might have in addressing food waste and what not...”

“This demonisation of plastic appears to be motivating supermarkets to take decisions knowing they could increase rather than reduce environmental burdens,” claimed Stephen. “FMCG retailers should remember that plastic is not only the best material for protecting our food from contamination and preventing food-waste and disease, but it has a much lower global-warming potential than other materials used for packaging, according to LCA's cited in the report.”

Plastic does not cause any depletion of fossil-resources; it is made from a by-product of refining oil, which is extracted to make fuels, and would be extracted whether plastic existed or not. When the plastic becomes waste and if unsuitable for mechanical recycling, its calorific value can be used to generate electricity if it is sent to modern, non-polluting, thermal-recycling units instead of to landfill

“The only problem with plastic is that it can lie or float around for decades if it gets into the open environment, but this is a problem which can be solved without depriving people of the benefits of the material,” said Stephen. “The scientists who invented plastic designed it to be durable, but they soon realised that this very durability causes a problem if the plastic gets into the open environment as litter. They therefore found a way to make the molecular structure of plastic dismantle automatically by oxidation much more quickly than ordinary plastic, when it had served its purpose. The plastic would be biodegradable, and they called it oxo-biodegradable plastic. This has now been used and tested all over the world for many years.



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“Contrast that with the alternatives. Some supermarkets are shifting to paper, but the report cautions that paper bags have much higher carbon impacts. Also, refillable containers can dramatically reduce the useful life of some products.

“Also problematic is the use of ‘compostable’ plastics. By 2025, Australia aims to ensure that 100 per cent of its packaging is reusable, recyclable or compostable, but “compostable” plastic, will only worsen the problem as, by definition (standards: EN13432 and Australian 4736), it has to convert to CO₂ not compost. The last thing the planet needs is more CO₂

“It now seems that the industrial composters of Oregon, USA, don’t want it, and they have recently published nine reasons why. Also the City of Exeter, UK, has in the same month rejected compostable plastic and paper.”

The problem, according to Stephen, is not that there is insufficient plastic going into industrial composting but that too much plastic getting into the open environment. “Compostable” plastic does nothing to help in that regard, because it is tested according to EN13432 and Australian 4736 to biodegrade in the special conditions found in industrial composting, not in the open environment. By design, therefore, it is not a solution to plastic waste in the environment.