

## THE DEBRIEF

# How compostable bags are helping a retailer cut its plastics use

Co-op is offering compostable carrier bags at 1,000 stores, but barriers may prevent wider take-up. *Connor McClone* visits the Italian facility that supplies the new biodegradable bags to the retailer

Supermarket chain Co-op announced in October that it would offer new compostable carrier bags at more than 1,000 of its stores. Customers can use the bags to carry their shopping home and then reuse them as food-waste caddy liners, according to the firm. The bags will be the same size, strength and price as their traditional single-use plastic counterparts. But unlike standard plastic carrier bags, which can take hundreds of years to decompose, the Co-op's compostable bags will take less than 18 months to break down.

Iain Ferguson, environment manager at Co-op, told ENDS that the firm had arrived at the solution in response to concerns over unintended consequences of removing single-use plastic bags from its stores. He said that while other, larger, retailers such as Tesco had taken the step of removing single-use bags, the fact that Co-op's branches are "convenience stores" means customers often do not bring their own bags because they may not have planned to shop. "If we were to take single-use bags out, we would drive our customers into using bags for life instead. They are made with four to five times the amount of plastic as a single-use bag," Ferguson said.

"The carrier bags are produced by Italy-based bioplastics firm Novamont, which recently boosted the

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Iain Ferguson  
Co-op

production of its Mater-Bi bioplastic by up to 50% to 150,000 tonnes a year with the opening of a second production line at its facility in Pàtrica, around 50 miles south of Rome. The material produced at the plant goes into creating a biodegradable alternative to traditional plastics, including coffee cups and pods, carrier bags, cutlery, straws and food packaging.

Novamont's UK waste specialists, Tony Breton, said that the depletion of organic matter from soils in the UK is a "major issue". Organic recycling – such as via industrial composting or biogasification of food waste – can

## BAGS OF CHANGE

- Co-op has rolled out the biodegradable bags in just over 1,000 of its 2,600 stores
- The bags can only be offered in the 150 English and Scottish councils that will accept them
- A pilot scheme introducing the bags in Oldham, Greater Manchester, helped push use of compostable liners for food waste from 19% to 96%, cutting plastic contamination

alleviate this problem, according to Breton. But he says plastic film is an issue. "Once it arrives at a composting plant and goes through big, heavy shredders, you end up with very small pieces of plastic very quickly, which are very difficult to get out," he said. Novamont maintains that, by creating a carrier bag that is compatible with the food-waste recycling system, it is possible to "take unhelpful plastics out of the system and reduce the contamination in organic waste streams by recycling them in a way which then reinvigorates the soil".

Novamont took over the Pàtrica facility in 2010, converting it from an old PET plastics plant. It started making biopolymers in 2011, opening the second production line with an investment of €100m (£88.5m) in 2018. Various sections of the gleaming plant have been regenerated, modified and, in some cases wholly renewed, to

process the raw materials of Novamont's system. These are dibutandiol and azelaic acid – bio-based monomers that go to making Novamont's final product through a process which is "increasingly sustainable, and always directed towards reducing emissions", according to the firm.

The Pàtrica plant is just one of a network of facilities involved in making Novamont's bioplastics. In Sardinia, the company is working with Eni – the state petrochemical company of Italy – to convert one of its areas into a biorefinery, producing vegetable oils, sunflower oil and thistle oil, which comes from Sardinia itself. Byproducts are put to use, such as polygonic acid, which is used as a biodegradable natural herbicide. Other products, ranging from goat feed to biodegradable lubricants, are also created.

## Pilot scheme

Co-op has already piloted the biodegradable bag scheme in Oldham, Greater Manchester. The borough's food-waste collections had seen high levels of contamination because plastic bags were being used by households instead of compostable liners, according to Ferguson. Before the trial, 19% of participating households in the target area used compostable liners for food-waste recycling, but following an intensive awareness campaign, 96% now use them, he said.

So far, however, Co-op has only rolled out the biodegradable bags in just over 1,000 of its 2,600 stores. This, it says, is because it can only offer the bag in shops within local authority areas in England and Scotland that have food-waste collections. Those local authorities must also be prepared to accept the biodegradable bags in their food-waste collections. Currently, the bags are accepted by only 150 out of the 385 councils in England and Scotland.

Ferguson said he is seeking to engage with the councils that do not accept the bags, as well as the remaining devolved governments. Some authorities, according to Ferguson, are worried that "if you made compostable packaging widely available, you would have people



Co-op's biodegradable bags are made at Novamont's biopolymer factory in Italy

mistakenly putting non-compostable packaging in the food-waste collection, contaminating the stream". He argued that a mandatory UK-wide food-waste collection system would have benefits. It would "help us to divert single-use bags from [circulation] because we would be able to use these bags more widely," he said.

## Reducing contamination

Novamont's other biodegradable products, such as biodegradable food packaging, can be put into food waste collections in a number of EU member states, according to the firm. This drives down contamination rates further, but in the UK currently only the compostable carrier bags are collected. Other types of compostable products and packaging are at present being treated as plastic contamination at the UK's organic recycling facilities, "so making them compliant with the process is the sensible thing to do", said Breton.

For Breton, communication and traceability are essential. A simple, recognisable logo, he suggests, could help by cutting the number of plastic bags mistakenly used to line caddies by households and reducing the amount of compostable products treated as contamination at recycling facilities. "It needs to be strong enough for householders, local authorities and organic recyclers to recognise while being compatible with the demands of the brand owners and retail sector," he said.

Breton said this is something trade body the Bio-based and Biodegradable Industries Association is currently working on. In the meantime, Novamont is in talks and trials with Tesco, Marks & Spencer, Sainsbury's and Waitrose. ■



Co-ops offering the new bags in fewer than half its stores

## 150,000

number of tonnes per year of Mater-Bi bioplastic Novamont can produce at its facility in Pàtrica