Case study: Reducing Own Brand grated cheese packaging

Project detail

This case study covers the project work undertaken by Bidfood, in collaboration with our Own Brand supplier of five cheese lines, to reduce size and thickness of bags and reduce case size.

Challenge

Our Packaging Policy explains how we want to lead and inspire change in food service to create a healthier and more sustainable future for everyone. The policy aligns with the Planet section of Bidfood's overall sustainability commitments, one of which is to reduce our impact in the area of plastic packaging, aligned to the UK Plastics Pact 2025 (WRAP). In reviewing our packaging, we want to simplify the materials we use, reducing them to three plastic polymers (i.e., PET, PP and PE).

THE UK PLASTICS PACT TARGETS

1. Eliminate problematic or unnecessary single-use packaging through redesign, innovation or alternative (reuse) delivery model.
2. 100% of plastics packaging to be reusable, recyclable or compostable
3. 70% of plastics packaging effectively recycled or composted
4. 30% average recycled content across all plastic packaging.

We wanted to do a deep dive on own brand cheese packaging, to explore how we could simplify the packaging whilst still protecting the product from damage, preserving it so that quality and shelf life aren't compromised in any way, and maximising recyclability. We chose grated cheese lines, because the packaging, made from an OPA/PE – (2 types) of film, it is 100% non-recyclable. As it protects a food product, it must be from virgin material as the recycled content cannot be guaranteed that it wasn't sourced from a product that previously housed a harmful chemical. This type of PET is in abundance, hence there is a high chance it would be present in the raw material.

Figure 1 - Grated cheese on production line.

The supplier had recently reduced the thickness of their cheese bags from 80 to 59 microns. The impact of lightweighting the PE had no negative impact on the food product, such as shelf life, but the supplier felt they'd taken reductions as far as they could. The main impact was on pallet fill as the cases are now smaller, resulting in more on a pallet, and therefore more product fitting on a delivery. By reducing the size of inner pack by 20mm, the supplier had already achieved a 7% saving in plastic, and subsequently, by lightweighting the pack, there was a further 26% saving. Based on annual sales volume, this represented 6.8 tonnes less plastic per year.

Product Code	Product Description	Pack Size
29713	EVFAV GRATED MILD COLOURED CHEDDAR	1 x 1 x 5 x 1 kg
29714	EVFAV GRATED MILD WHITE CHEDDAR	1 x 1 x 5 x 1 kg
29715	EVFAV GRATED MATURE WHITE CHEDDAR	1 x 1 x 5 x 1 kg
29716	EVFAV GRATED MOZZARELLA / CHEDDAR MIX	1 x 1 x 5 x 1 kg
29718	EVFAV GRATED MOZZARELLA	1 x 1 x 5 x 1 kg

Table 1 - The products chosen for the packaging challenge

In terms of secondary packaging, the cardboard box consists of 130g/Kraft C Flute with a 130g Brown Recycled Liner, weighing approximately 210g with 90% recycled content and 100% recyclable, 4.7mm thick.

The ink used on the box is water soluble but currently, no reference is made to this on the label which could aid how the label is disposed of. A new box is now proposed; the reduced size means less cardboard, which in turns requires less pallet space and associated shrink wrap.

Figure 2 - Secondary packaging

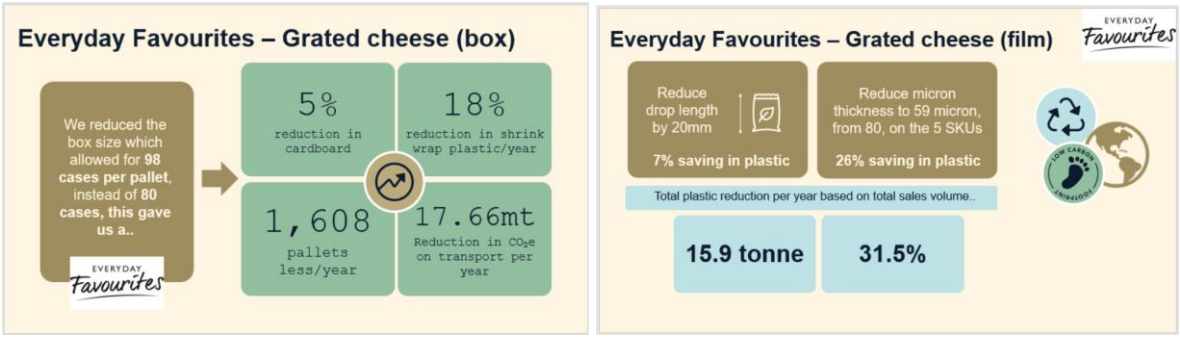

Figure 3 – Savings associated with reductions in cheese box size and plastic film usage

Learning

We're keen to make Bidfood's Own Brand more sustainable, but this project highlighted the confusion that exists amongst suppliers and wholesaler alike, as to how to realistically achieve this, as the ambitions of the Plastics Pact can be challenging to fulfil. We've now created a project team who will develop a document for our Group Commercial team for them to use when challenging suppliers on plastic content, labelling, and generally making the packaging "more sustainable".

Figure 4- OPA/PE film prior to grated cheese being processed and packed. Blue packaging is mandatory in food manufacturing.

When we visited the supplier, we questioned about the readability of the label and lack of instructions of how to dispose of it. It transpired that as this is Own Brand – it was down to Bidfood to dictate what was on the label. On the back of this exercise, we've now kick-started a project to look at our instructions for suppliers and this provided a great insight of a really easy win to improve the recyclability of our products.

In terms of preservation, cheese is a live product, so it's susceptible to mould. The film is washed to prevent spoilage and a gas barrier of a C02 mixed with nitrogen further preserves the cheese. It's essential that the packaging doesn't get punctured in transit, and that the heat generated to seal the inner pack doesn't impact the outer layer. The product is also vacuum sealed at the end of the

process to further preserve. In terms of minimising risks of damage, OPA/PE at 15 microns (tensile strength) means there is good puncture resistance.

Innovation is being considered and worked on by the manufacturers of the film with a number of tests and trials done on some mono polyethylene films – those that don't have different melting points. Currently OPA/PE – the nylon aspect can be heated to 200°C and the PE at 140° ensuring that the inner can be heat sealed without impacting on the outer layer. The melting points detailed above ensure that the packaging does not open in transit.

Other options include a more heat resistant matt lacquer on the outside of the film or BOPE (Biaxilly Oriented PE) that is more heat resistant and can be stretched in two directions.

There are five products in the range, the current label is a temporary fix before they move to the branding required by Bidfood. However, this change would mean five different boxes, so our supplier is proposing one box and five different wraparound labels, such as simplification of packaging.

The impact of the cost of the product was very minimal as a high proportion of the cost is the actual cheese. However by utilising the wraparound label, the supplier would enjoy economies of scale on the box and keep costs lower.

When looking at the labelling of our Own Brand products, it was noted that the labelling is designed to fulfil mandatory requirements in terms of product information, rather than promote the product or provide added value messages. We identified that recyclability guidance could be improved, so this is detailed in the 'next steps' section.

Benefits

The project has helped our Own Brand grated cheese product packaging to be better aligned with the aims of the Plastics Pact, since reducing the size of inner pack by 20mm led to a 7% saving in plastic and by lightweighting the pack, there was a further 26% saving. Based on annual sales volume, this represented 6.8 tonnes less plastic per year.

The environmental savings derived from modifications to the cardboard box are shown in Figure 3.

Next steps

As described above, we've learned a great deal about the complexities of packaging, and the following is a summary of outcomes and next steps:

- Creation of a project team who will create a document for our Group Commercial team to use when challenging suppliers on plastic content, labelling and generally making the packaging "more sustainable".
- Meet with the British Plastic Federation to talk about plastic films in more detail
- Further work is needed on the Bidfood Direct website to demonstrate how versatile the grated cheese range is, where it would save on number of products bought and inspiration for menu items at a more cost effective price, benefitting our customers
- Unlike branded lines, our Own Brand range is still in its infancy in terms of marketing, with colleagues utilising old guidelines to navigate the branding requirements. In the case of grated cheese, our supplier already works with OPRL not only on labelling but also on whether a product can be recycled or not. We're now also reviewing all our inner and outer packaging labelling to make sure that OPRL recycling and disposal guidance is clear.
- Following up with our supplier on their tests and trials on mono polyethylene films, to understand learnings and implications