

Industry learns the limits of lightweighting

By Guy Montague-Jones, 29-Apr-2010

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Lightweighting can be a win-win strategy, reducing the impact of packaging on both the environment and profit margins but food and drink companies are learning that it is not always the best way forward.

Reducing packaging weight is an especially seductive option right now as sustainability concerns grow and the economic downturn intensifies industry efforts to reduce costs.

An initial glance at the results of lightweighting work indicates that its seductive promise can translate into great results.

The International Bottled Water Association (IBWA) recently published research estimating that over the past eight years the gram weight of the 16.9 ounce "single serve" bottled water container has dropped by 32.6 per cent. This represents a significant raw material saving but could also have resulted in major knock-on savings related to manufacturing energy requirements and transportation.

Everyone seems to be a winner so it is no surprise that big manufacturers and packaging specialists continue to push the weight reduction button and offer the market ever lighter packaging options.

Over the past six months the industry has seen a new lighter version of the Eco-Shape PET bottle from Nestle Waters and a new lightweight hot-fill PET bottle from Sidel.

But despite what these launches would suggest lightweighting appears to be falling out of favour.

Lightweighting limits

One of the most obvious problems is that there is simply a limit to how far lightweighting can go. This is becoming increasingly apparent in the PET industry.

PET manufacturer Eastman told FoodProductionDaily.com: *"We believe that the impact of down-gauging will slow, as many beverage producers already use packages which are at, or near, the practical limit."*

Admittedly this is not the case for all packaging materials. In the UK, the Waste & Resources Action Programme (WRAP) published a report earlier this year highlighting the big potential for lightweighting in the market for sparkling wine.

Comparing the typical weights of sparkling wine bottles coming into the UK from 9 countries and potential lightweight alternatives, WRAP estimated that a glass saving of 9,270 tonnes a year in the UK could be achieved without sacrificing quality.

Potential pitfalls

Big savings may still be achievable in the wine sector but more generally the food and beverage industry appears to be exhausting lightweighting opportunities. Focusing on weight reduction now may invite in more problems than it solves.

Philip Richardson, head of food manufacturing technologies at Campden BRI told FoodProductionDaily.com: *"Lightweighting is quickly approaching a point where if it continues you could end up with products that are unable to survive the rigours of the distribution chain. In that sense packaging can be minimised too much. The packaging industry has a duty to provide materials that are able to protect products."*

This is a point that the industry is now taking on board. Tesco set a target in 2007 to reduce packaging weight by 25 per cent by 2010 but then reduced the target to 15 per cent last year, conceding that its focus on packaging weight may have been misplaced.

Tesco said: *"Since we started working with our suppliers and the wider industry to reduce packaging it has become clear that this is a complex issue and that weight alone may not be the most beneficial and environmentally comprehensive measure."*

New approach

Jane Bickerstaffe, director of the Industry Council for Packaging and the Environment (ICPE), told FoodProductionDaily.com that companies are now adopting a more holistic "lifecycle approach" realising that cutting the weight of the packaging on the shelf is not always desirable.

If pushed too far, lightweighting can reduce the sturdiness of packaging, posing problems for transportation and even jeopardising food quality and shelf life.

Greater understanding of the pitfalls of lightweighting is leading to a shift in focus from government and industry when it comes to sustainable packaging.

In the second phase of the voluntary Courtauld Commitment in the UK, 28 leading food companies agreed in March to move beyond solely weight-based targets to embrace goals that demand more sustainable use of resources over the entire product lifecycle.

In place of the weight targets in the first Courtauld Commitment in 2005, the new pact between industry and government includes waste reduction targets and a broad goal of reducing the carbon impact of grocery packaging by 10 per cent over the next two years.

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