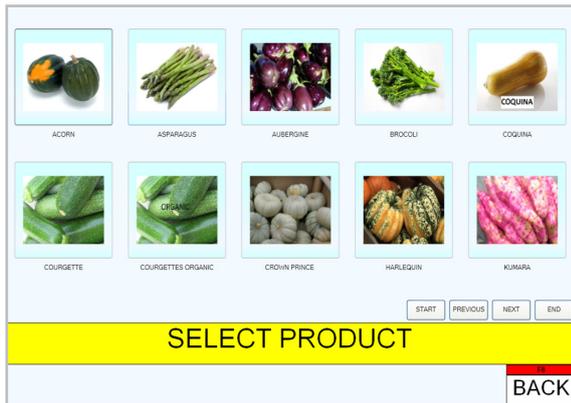




# Waste



## Controlling waste in the food processing chain

Marco's MD Murray Hilborne looks at the problems and costs involved

Whether we all agree or not, the UK is consuming our natural resources at an unsustainable rate and this contributes unnecessarily to climate change. Last year as a nation we generated approximately 290 million tonnes of waste, negatively impacting the world around us and costing businesses and consumers huge sums of money. It doesn't matter where we go or where we look, the encouragement to recycle is everywhere, pricking at our social conscious. Food waste makes up an important part of this waste and environmentally conscious consumers are beginning to judge the major supermarkets over their green credentials. However, despite good intentions, the food supply chain in particular remains a very wasteful place. In the UK up to 18 million tonnes of food waste is sent to landfill each year, with an approximate value of over £20 billion pounds. It is estimated that around a third of this comes from commercial producers and the supply chain. Add in the amount of food waste already composted and incinerated and the total figure for industry is staggering.

Not only is this a huge waste of food, money and resources, but it also causes considerable damage to the environment. When food waste is sent to

landfill it decomposes and releases carbon dioxide and methane. Zero waste to landfill is a popular concept in today's society and it is recognised that it is something that every business should be striving to achieve. The latest EU Landfill Directive sets down targets towards this goal. The UK has to reduce the amount of organic and biodegradable waste sent to landfill (based on the amount land filled in 1995), to 50% by 2013 and to 35% by 2020 or face hefty fines.

Food processors are under pressure, both from consumers and legislation, to reduce the amount of waste they produce and to consume water and energy more efficiently. However it would appear there is disproportionate effort being given to finding alternative ways of disposing of the food waste, rather than looking at the root cause by reducing the amount of waste companies and consumers generate in the first place.

A key problem in all this is that waste generation within the food processing chain is unpredictable and can emanate at any time and at any part of the process, making it even the harder to regulate and manage. In many food manufacturing operations, waste is often simply viewed as inevitable and without a structured system to measure and control waste, it is very difficult to bring the work force on-side to contribute to waste reduction.

Waste generation can occur anywhere in the plant - from goods in to goods out - resulting from a diverse range of operations. The causes fall broadly into two main categories:

- Repetitive waste at known locations in the plant
- Dynamic waste occurring without warning



# Waste

Waste can present itself as tangible product within the plant that needs to be recycled/sent to landfill or as excess product passed on to the consumer which again impacts on profit. The key catalysts for waste are:

- Inadequate stock management/rotation resulting in ingredients going out of date before use
- Incorrect storage conditions/temperatures
- Spoilt batches and sub batches resulting from inaccurate and inconsistent recipe formulation
- Spoilt batches and sub batches resulting from inconsistent cooking/processing
- Unnecessary waste from overpack/overflow
- Waste resulting from under-weight packs needing rework
- Waste from excessive use of one or more ingredients in ready meal/snack assembly
- Excessive waste from trimmings occurring throughout the process
- Waste that cannot be recycled within the process itself
- Wrongly labeled product that cannot be reworked

A key problem is that if certain waste generation sources aren't identified quickly, in real time, processes can rapidly continue to produce excessive waste.

The costs associated with waste within the food manufacturing environment are complex and include:

- Cost of raw material
- Cost of disruption to production
- Cost to dispose of waste
- Hidden costs of increased water, energy and fuel usage associated with the production of waste
- The hidden cost to reputation (possible brand damage) through poor quality product

The potential to improve profits through controlled waste management is significant and every food manufacturer should look seriously at this issue. Possibilities go beyond direct cost savings to encompass potential increases in business and margins. Green credentials are becoming increasingly important and major supermarkets are all jockeying for position in their attempts to prove to their consumers how green they are in areas including waste, sustainability, carbon emissions and energy use. In order to achieve this they are placing increased pressures on their suppliers to prove how green they are.

In parallel, research has shown that an increasing number of consumers are willing to pay more for products with green attributes and the price premium enjoyed by green products could be, for instance, as much as 20% in the future. This could lead to companies considering new methods to attract environmentally conscious consumers whilst differentiating themselves from other businesses, hence creating a significant competitive advantage.

Quite simply, green practices mean a business can become more appealing to consumers, while at the same time reducing its business costs and increasing profits.

High waste levels need not be a fact of life. A high percentage of waste generated in the food processing environment is wholly avoidable, provided a factory floor management system is in place that operates in real time throughout the plant from 'goods in to goods out'. Investments in such systems are very low risk and the rewards are highly profitable in terms of cost savings and possible increased business resulting from improved green credentials.



## United Kingdom

Marco - Enterprise Way - Edenbridge - Kent - TN8 6HF

Telephone - +44 (0) 1732 782380

E-mail: [info@marco.co.uk](mailto:info@marco.co.uk) - Website: [www.marco.co.uk](http://www.marco.co.uk)



## Netherlands

Marco - Sprendlingenpark 23 - 5061 JT Oisterwijk

Telephone: +31 (0) 13 522 0435

E-mail: [info@marco.co.uk](mailto:info@marco.co.uk) - Website: [www.marco.co.uk/nl](http://www.marco.co.uk/nl)



THE QUEEN'S AWARDS  
FOR ENTERPRISE:  
INTERNATIONAL TRADE  
2014

**MARCO**  
Productivity Improvement Experts