

Delivering food innovation using the whole supply chain - How to achieve competitive price, enhanced well-being and lower environmental impact for food and beverage products

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Abstract

The food system in Europe serves some 500 million people each day with food and drink. Current food needs of customers in developed nations are becoming more complex with environmental impact, social responsibility, functional foods, nutraceuticals, obesity and food miles, amongst many other issues, driving new products and successful business development.

The choices that determine customer's purchase of food and drink are dominated by price (Defra 2006). Further studies support the need for low-prices and product variety and choice driving consumer demand for improvement (Deloitte 2007). Choice and variety focus on health and wellbeing attributes of food and drink products as being of key importance in purchase choice. Ethical, labelling and environmental concerns, while important, do seem to take a lesser role in the determination of product purchase. Convenience, ability to snack and out-of-home consumption do take a significant part of the drivers for purchase and lie between health and well being properties and those that relate to environment and ethical attributes of products.

The representation of the food system provided by surveys gives a complex continuum of consumer intentions. For example, the consumer intentions to buy ethical products that have low environmental impact with the consumer reality of requiring economical price and wide product choice. The consumer intention to buy products that are healthy with the consumer reality of buying based on price of product and what products are promoted at point of sale.

Resource efficiency and ethical considerations (the 'green' issues) are impacting on New Product Development (NPD) in the food sector and the enabling technologies that deliver across consumer conflicts between choice and reality will be a vibrant area of potential innovations. We have delivered projects that have (1) applied new technologies that have developed non-allergenic products and enabled improved resource efficiency such as reduced water use (2) provided bakeries with a means to develop 'farm to fork' carbon emission inventories for specific products (3) provided computer generated modelling techniques that improve production efficiency for confectionery manufacture and (4) implemented Client Relationship Management programmes for the food and drink sector where the value of interdisciplinary projects in identifying resource efficiency improvement is often realised.

The development of case studies that show how competitive price, enhanced well-being and lower environmental impact can be achieved for food and beverage products is critical. The studies reported here show that these attributes that are part of the 'green' impetus in our food system are not irreconcilable. They can be integrated to provide competitive, profitable and sustainable solutions in the development of food and beverage products.

References

Defra (2006) Food Industry Sustainability Strategy

Deloitte (2007) an appetite for change, food and beverage 2012