

House of Lords Science and Technology Select Committee

Call for Evidence: Nanotechnologies and Food

1.0 Introduction

- 1.1 The British Retail Consortium (BRC) is the main trade association for retailers, and our members are responsible for approximately 80% of all grocery sales in the UK
- 1.2 Retailers take a keen interest in all issues affecting food production and packaging. Whilst retailers sell a large number of own brand products in their stores, they are not manufacturers in their own right. For this reason our submission focuses on issues of retail and consumer acceptance, rather than the detailed science around nanotechnology.
- 1.3 Retailers have strict policies in place to ensure the products they sell are safe and legal. We believe there could be benefits in nanotechnology for consumers; however, as the application of the science is new we support a robust regulatory and safety assessment framework. We want to work with stakeholders to ensure there is a good understanding of the benefits, risks and regulatory gaps around nanotechnology to avoid it being rejected due to lack of understanding.
- 1.4 We have responded to those questions in the request most relevant to our sector

2.0 State of the science and its current use in the food sector

- 2.1 **What are the main potential applications and benefits of nanotechnologies and nanomaterials in the food sector, either in products or in the food production process?**
- 2.2 We believe the benefits could be in improving the composition and packaging of existing foods. In terms of food, the main application we foresee is the ability to improve the efficiency of an ingredient in terms of reducing its usage but retaining its quality. For example, manipulating salt crystals at a nano level could have a huge impact in reducing salt consumption but retaining the taste customers expect. Re-formulation on this basis, to improve the nutritional composition of a product without compromising the taste could play its part in improving the nutritional value of processed foods. In terms of packaging, there could be benefits through lengthening the shelf life of food, reducing the amount of packaging and improving its potential for recycling.

2.3 What is the current state of the market for, and the use of, food products, and food production processes involving nanotechnologies, either abroad or in the UK?

2.4 This depends to a certain extent as to the definition of a nano food process as we understand this could extend to products such as traditional cheeses. In our opinion the definition of nano food should take account of whether it is engineered or naturally occurring, whether it is soluble, its size and change in properties. This raises the issue of whether manipulating existing ingredients such as salt at a nano level is something that would be counted as new technology or simply the better application of a known product. There could be a market for these types of products as consumers may see it as re-formulation but retaining the taste they want. In terms of more innovative, new products developed from scratch, our market is conservative and consumers will weigh up the benefit to them.

2.5 What are the barriers to the development of new nano-products or processes in the food sector?

2.6 All retailers are led by consumer demand, which means consumers need to see tangible benefits, which could cover a number of factors including nutrition, sustainable development or innovation. As consumer knowledge is currently low they would need to recognise such benefits over existing products and for this to be sufficient to overcome concerns they might have. We know, from the GM debate that consumers could not see a benefit in GM food for them and became concerned about the perceived health and environmental risks due to the messages they received at the time. This demonstrates the need for Government to explain to consumers the benefits, give clear direction on risk and also the key role the media have in reporting new and emerging science in a factual and balanced way.

3.0 Health and safety

3.1 Can current risk assessment frameworks within the food sector adequately assess the risks of exposure to nanotechnologies and nanomaterials for consumers? If not, what amendments are necessary?

3.2 We believe there does need to be a distinction in terms of food safety between completely new food ingredients which are produced from scratch and existing ingredients which are engineered at a nano size that retains their properties but enables them to be used more efficiently. We also believe risk assessment needs to account for where nanotechnology is used, drawing a distinction between packaging and food. We responded to the FSA consultation in 2008 on novel foods to suggest more detail was required on the definition of novel foods and if

that covered nanotechnology. We are clear, however, that we support a robust and transparent regulatory framework.

4.0 Regulatory framework

- 4.1 Is the regulatory framework for nanotechnologies and nanomaterials fit for purpose? How well are imported food products containing nanotechnologies and nanomaterials regulated?**
- 4.2 We believe this would be improved by clarifying the definitions in the novel food regulations to make it clearer if it applied to nanotechnology.
- 4.3 How effective is voluntary self-regulation either in the UK or EU or at an international level? What is the take up by companies working in the food sector?**
- 4.4 In general terms self-regulation works well in the UK food sector, for example, the industry has made good progress on nutrition, removing artificial trans fats and colours, reformulating products to reduce the amount of salt and saturated fat, and supporting public health campaigns to encourage customers to eat healthily.

5.0 Public engagement and consumer information

- 5.1 What is the current level of public awareness of nanotechnologies, and the issues surrounding the use of nanotechnologies and nanomaterials in the food sector? What is the public perception of the use of such technologies and materials?**
- 5.2 Our belief is there is a very low awareness of nanotechnology generally amongst consumers. In some non-food products there is an understanding that nanotechnology is used positively, improving quality, for example miniaturising components in electronic equipment. Our members have confirmed from that their customer care lines do not receive queries about nanotechnology and our belief is that customers do not believe it is currently used in food. In terms of the public perception, there is a positive approach to some of the non food applications but we are cautious about their perception of its use in food. Consumer demand for GM has never recovered from the damaging media reaction in the late 1990's and we believe they remain cautious about other products that use new technology.

5.3 How effective have the Government, industry and other stakeholders been in engaging and informing the public on these issues? How can the public best be engaged in future?

5.4 To date engagement with the public has been limited. We would be happy to contribute to a Government led engagement which aims to raise awareness and discuss the issues in a pragmatic fashion. The Government needs to be at the heart of discussions to ensure these are based on science and fact and not dominated by speculation and individual opinions.

5.5 What lessons can be learned from public engagement activities that have taken place during the development of other new technologies?

5.6 We need to bear in mind the lessons that should be learnt when GM food was trialled in the 1990's. We must ensure that an authority, FSA in our opinion, is available to provide the facts from a consumer perspective. FSA action should include proactive engagement with stakeholder groups, including consumers and the media, to ensure current issues are understood and uncertainties answered. Ultimately the introduction of nanotechnology to food products will only succeed if consumers can see a benefit for themselves, something that was never clearly demonstrated with GM food.

5.7 Should consumers be provided with information on the use of nanotechnologies and nanomaterials in food products?

5.8 The key issue is whether consumers understand the use of nanotechnology and the issues around them, which will rely on education. Information is only effective where it helps consumers make an informed choice. Without the knowledge to make informed decisions there is a danger that labelling will mislead consumers.

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