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# Editorial: Much ado about nothing

Ten years ago, on 5th February, 1996, we watched a mother, with a small child, walk down the aisle at our local supermarket store in Berkshire, England. She paused, picked up a can of tomato puree, looked at the label and then placed the tin in her shopping basket. We were witnesses to a small historical event: the purchase of the first food produced from genetically modified (GM) plants to go on sale in Europe.

Over 1.7 million cans of the tomato puree were sold over the next three years by two UK supermarket chains. The product was a success. A decade later it is time to reflect on what has been lost and the lessons learnt from that small beginning.

After that promising start, Europe turned its back on the growing of GM crops and their use in food. In the rest of the world, such crops have been a dramatic success in both the developed and developing world. Last year 81 million hectares of GM crops were planted, and over half of the worldwide crop of soybean and over a quarter of the world's cotton is from GM plants.<sup>1</sup> How did it come to pass that from a position of scientific leadership in crop biotechnology, the UK and Europe have reacted in this fashion?

The tomato puree had been subjected to a rigorous regulatory evaluation for safety in both the USA and the UK. Its launch had been widely covered in the media, not just in the UK, but worldwide. This coverage was almost uniformly favourable. The product was labelled 'produced from genetically modified tomatoes', there were clear benefits to the consumer (cost and taste) as well as to the grower and processor. As the product was sold next to the standard product, the consumer had the choice to buy, or not to buy. There was no marketing or advertising campaign as a deliberate decision; the GM product sold itself, often reaching 70 per cent of the sales in its category. At the same time, throughout Europe, field trials of GM crops were being destroyed, research laboratories picketed and scientists threatened. There were many attempts to understand public, as opposed to activist, reactions to GM crops and food through 'citizens' juries' 'consensus conferences', etc. as well as by commentaries from journalists, politicians and pundits of all persuasions.

The anti-GM movement reached a climax in the UK a couple of years later, following a TV programme in which a scientist claimed that GM food was dangerous. The work upon which Dr Pusztai based these claims had not been published in any journal (let alone peer-reviewed). The media frenzy that followed saw front page headlines such as 'Mutant crops could kill you' as newspapers decided that a 'Whistleblower tells awful truth about big business' story was good for circulation. Three years after the launch of the tomato puree, in 1999 during the week of 12th February, 48.4 column-metres of articles on GM crops appeared in the leading seven UK newspapers according to the *Guardian* newspaper, even pushing the proposed impeachment of President Bill Clinton into second spot. A scientific rebuttal to the claims of Dr Pusztai was produced three months later in a thorough study from the Royal Society, but understandably this was not headline news. The atmosphere at the time was best captured by the Prime Minister who in a newspaper article wrote 'Anyone who has dared to raise even the smallest hand in protest is accused either of being corrupt or a Dr Strangelove.'

There must be multiple reasons for the change in attitude to GM crops and food in the period 1996 to 1999. A major source contributing to the distrust of government and

the regulatory process was undoubtedly the BSE outbreak and its linkage to the human disease nv-CJD. However, some companies and sectors of the food industry exploited, for commercial reasons, the concerns by claiming to be GM-free.

Much of the analysis of the events around GM crops and foods in Europe has been written by the victors, or an army of commentators and quangocrats.

The first product was developed with the support of the food industry; a decade later the food industry in Europe, but not the rest of the world, has backed away from this area of innovation. With the tomato puree the consumer was presented with a choice; a decade later the consumer has no choice. The academic community has volunteered for self-censorship and no longer seeks funding in areas that may be controversial and could be at the leading edge for crop biotechnology. Europe has lost a whole generation of young scientists and research-based businesses. What have we learnt? As scientists we have learnt that certain pressure groups and members of the media pay scant regard to data, evidence or scientific reputation. As consumers we have learnt the absolute power of supermarkets and the food industry in the supply of innovation to consumers.

We see the same problems replaying in other areas relating to the application of the biological sciences, for example, in the acceptance of MMR vaccines, animal testing and nanotechnology. Perhaps this ten year anniversary of the launch of a GM tomato puree should see the scientific and business community rejoin the debate on how innovation in biology can be taken forward for the benefit of our fellow citizens and to maintain our society's place as a leading, knowledge-based economy in the coming century.

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### **Reference**

1. James, C. (2005) 'ISAAA Briefs 32-2004: Preview: Global Status of Commercialized Biotech/GM Crops: 2004' (URL: <http://www.isaaa.org>).