
Guest editorial

In the five years since our previous special issue of this Journal¹ on the rapidly developing field of agricultural biotechnology, there has been an immense amount of activity. Genetically modified (GM) crops are now being sown extensively in North and South America, in China and in increasing areas elsewhere, with the outstanding exception of Europe, where there has been almost no development. Food made from GM crops or with the aid of enzymes from GM bacteria has become part of the normal diet in North and South America and in China but not in Europe, where contention continues. Even in Europe, however, safety concerns over such foods have been slowly dying away as 300 million US citizens continue to eat GM soya without any ill effects. Of course, many European citizens have eaten GM soya while on a holiday in the USA without any adverse effects.

Concerns over any possible environmental effects of growing GM crops are far from settled in Europe, and these concerns led, three years ago, to the planning and execution of an extensive farm-scale evaluation of three GM crops in the UK, whose results have just been announced.² The Advisory Committee on Releases to the Environment has recently advised the UK Government on the implications of the farm scale evaluations of genetically modified herbicide-tolerant crops.³ There has also been a major review of the science of genetic modification by a specially commissioned GM Science Review body in the UK, chaired by Sir David King, the Chief Scientific Adviser to the UK Government, which has also just been published.⁴ In addition, and also in the UK, the Agricultural, Environmental and Biotechnology Commission has been very active in producing a series of reports on the scientific, social and ethical issues arising from the sowing of GM crops.⁵ So early 2004 is a very appropriate time to review where we have got to, what issues are outstanding and to reflect upon the social and political issues that now dominate the future of GM foods and crops in Europe. The purpose of this special issue is to bring the wider biotechnology community up to date.

There is one area that has been omitted from this volume since it is the subject of a recently issued Discussion Paper from the Nuffield Council on Bioethics called 'The use of genetically modified crops in developing countries'.⁶ The reader is referred to this major review for a detailed appreciation of the current situation. A previous report on the same topic from the Nuffield Council on Bioethics in May 1999⁷ concluded that 'GM crops had considerable potential to improve food security and the effectiveness of the agricultural sector in developing countries'. This new report confirms and extends the findings of the former, and concludes that 'possible costs, benefits and risks associated with particular GM crops can be assessed only on a case by case basis' and recommends that

in dealing with questions as to whether GM crops should be used or not, it is essential to focus on the specific situation in the particular countries, asking the question: 'How does the use of a GM crop compare to other alternatives?' All possible paths of action must be compared, including inaction, in respect of improving in a cost-effective and environmentally sustainable way, human health, nutrition, and the ability to afford an adequate diet.

The Discussion Paper then goes on to show that in particular cases, GM crops can meet these criteria, affirming the conclusion of the 1999 Report that 'there is an ethical obligation to explore these potential benefits responsibly, in order to contribute to the

reduction of poverty and to improve food security and profitable agriculture in developing countries.'

The authors of the papers in this issue have been chosen because of their expertise in the area they write about. I believe that these papers give an expert and fair overview of this new technology at a crucial time in its development, for the next few years will determine whether it can be used for the benefit of all, in both developed and developing countries, in the Americas, in Asia and even in Europe.

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References

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