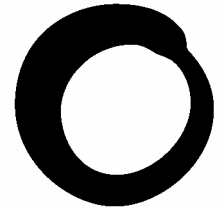


Briefing Note



**Friends of
the Earth**

Economic Impact of GM

The Government and the biotech industry are promoting genetically modified (GM) crops on the economic benefits they will supposedly bring. However, after several years of growing them in the US, the evidence of the economic benefits is far from clear. In fact, growing GM crops is more likely to result in increased costs - for farmers, consumers and the economy generally. Indirect effects such as loss of land or farm value, the environmental cost of contamination, and costs incurred by non-GM farmers need to be taken into account in any cost and benefit analysis of growing GM crops commercially in the UK.

Impact on farmers

With the UK farming industry in crisis, farmers may hope that GM crops will help them to become more competitive in the global market place. The biotech industry is promoting GM crops to farmers on this basis. However, US experience shows that the economic gains are patchy at best. And for those farmers who wish to grow non-GM and organic crops costs will actually increase if commercial growing of GM crops begins in the UK.

Farmers' incomes

Increased incomes for farmers in the US have not materialised after several years of growing GM crops. A recent comprehensive report carried out by the US Department of Agricultureⁱ showed that economic benefits were variable and, in the case of Bt corn, farmers were losing money. In Europe, more comprehensive research is needed to look the impact of growing GM crops on a farming industry already facing financial crisis.

Increased dependency

Farmers growing GM crops in the US and elsewhere do so under contract to the biotechnology company which sells the seeds and the related herbicides. GM seeds are more expensive, and the technology fee can often add up to 40 per cent on to the farmers' costsⁱⁱ. Biotechnology companies are also buying up seed companies, creating monopolies over sales and limiting farmers' choices.

Loss of markets

Consumers, both in the UK and internationally, are increasingly rejecting GM foods. In the US this has resulted in farmers being unable to export their produce as food suppliers went elsewhere to source non-GM crops.

Increased costs to non-GM farmers

Farmers who wish to remain GM-free or farm organically will bear the burden of increased costs if GM crops are commercially grownⁱⁱⁱ. These costs will result largely from measures that will need to be taken to protect farmers from the inevitable contamination resulting from genetic pollution. This could add up to 10 per cent on to production costs, and even more in some cases - for example with organic oilseed rape the cost increase could be as high as 41 per cent. Farmers will not be able to

reclaim these costs because there is no liability regime for GM crops.

Beekeepers

Bees are essential pollinators of crops and fruit trees, and the value of this in the EU is estimated at around £3 billion a year. A recent survey showed that 63 per cent of UK consumers want honey to be free of GM materials^{iv}. If GM crops were to be grown commercially in the UK, maintaining such purity levels would be impossible. This could seriously damage the market for UK honey so that beekeepers could find it hard to continue.

Costs to consumers

Consumers have consistently rejected GM foods. 94 per cent of consumers across Europe want the right to choose whether to eat GM or not^v. If GM crops are grown widely it will be necessary for the food industry to ensure that the right to eat non-GM products is maintained. This is already happening in the UK, with costs being absorbed by food producers and retailers. However, this may become increasingly difficult if GM crops are grown more widely. The Food Standards Agency has already indicated that it wants non-GM food to be left as a niche market^{vi}. Inevitably this would be more expensive - consumers will be expected to pay more for the food they have always eaten.

The biotechnology industry

When Tony Blair talks about the benefits of biotechnology for economic growth^{vii}, it appears to be financial gain for the companies involved rather than for farmers, producers or even consumers. However, it is clear that the GM food bubble has burst even for the multinational companies involved. Research budgets have been reduced in recent years and the crops being promoted as benefiting society as a whole are still many years away from development. This has led a leading Wall Street financial analyst to comment "*the euphoria is gone. Growth has fallen significantly. The industry has overstated the rate of progress and underestimated the resistance of consumers.*"^{viii}

The economic advantage of being 'GM-free'

With the market for GM food collapsing internationally, there is an economic advantage for the UK to remain 'GM-free'. The organic sector is worth £90million, and is set to increase with Government support. Research has shown that the co-existence of GM crops with non-GM and organic will be extremely difficult to achieve, and will offer dubious economic benefits. It will compromise the organic and non-GM sectors. With the demand for non-GM produce remaining high, the UK is ideally placed to take a share of this market.

ⁱ Fernandez-Cornejo, J, McBride, W, May 2002. *Adoption of Bioengineered Crops*. ERS Agricultural Economic Report No. AER810. 67 pp.

ⁱⁱ Soil Association, Sept 2002. *Seeds of Doubt: N. American farmers' experiences of GM crops*.

ⁱⁱⁱ Joint Research Centre, May 2002. *Scenarios for co-existence of GM, conventional and organic crops in UK agriculture*. www.jrc.cec.eu.int/GECrops/

^{iv} Friends of the Earth, 20 Sept 2002. *Consumers reject GM honey*.

^v Eurobarometer, Dec 2001. *Europeans, science and technology*

^{vi} Letter from Sir John Krebs to the Five Year Freeze, 31 October 2001.

^{vii} Tony Blair. 23 May 2002. *Science Matters*.

^{viii} The Guardian, August 28, 2001. *Global GM market starts to wilt*.

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