

# Five Year Freeze Position Statement

March 2004



## Background

The Five Year Freeze was launched five years ago, in February 1999, in order to give voice to the deep public concern over the rapid introduction of GM crops and food in the UK. The 125 supporting organisations have all signed a pledge calling for a minimum five year freeze on:

- Growing genetically modified plants and the production of genetically modified farm animals for any commercial purpose;
- Imports of genetically modified foods, plants, farm crops and farm animals, and produce from genetically modified plants and animals;
- Patenting genetic resources for food and farm crops.

During the period of the freeze we called for the following to be developed:

- A system where people can exercise their right to choose products free of GM;
- Public involvement in the decisions on the need for and the regulation of GM;
- Prevention of genetic pollution of the environment;
- Strict legal liability for adverse effects on people or the environment from the release and marketing of GMOs;
- Independent assessment of the implications of patenting genetic resources;
- Independent assessment of the social and economic impact of genetic engineering on farmers;
- Prevention of harm to human health;
- Proper assessment of the impact of GM crops on the global food supply;
- Animal welfare to be prioritised when decisions are made about genetic modification of animals for use in food and farming.

The evidence from Government-funded and other research reinforces the continuing need for a moratorium. Given the gaps in our knowledge of the possible impacts, the lack of statutory enforceable regulations, as well as the strength of public opinion, it would be both irresponsible and undemocratic to allow GM crops in to our food chain at the present time.

The purpose of this document is briefly to review the position and demands of the Five Year Freeze in the light of the evidence that has been produced during the last five years. This is set against a background of an apparent push towards commercialisation by both the UK Government and the European Commission, against the clear wishes of the majority of their citizens. The Freeze campaign celebrates its fifth birthday this year and has received an overwhelming mandate from our supporters to continue the campaign for a moratorium.

## Reviewing the evidence

In 2003 the Government received reports from five major pieces of research it commissioned on GM. Other research has highlighted the difficulties in preventing GM contamination and the potential for pollution of wild species.

Far from giving the green light to the commercialisation of GM food, the published data highlight the case for a continued moratorium. Some of the key messages are summarised briefly below:

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### Field Work: Weighing up the costs and benefits of GM crops by the Strategy Unit - July 2003

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- Acknowledged the scale of uncertainty with GM technology;
- The long term risks could outweigh the long term benefits;
- There is a possibility of unforeseen "shocks";
- If consumer and retailer attitudes remain hostile, then the production of GM crops for food could prove inconsistent with the goal that farmers produce food that consumers want to buy;
- Our ability to deal with any risks to the environment, human health and the impact of GM crop cultivation on non-GM and organic farmers depends on the nature of any regulatory system developed;
- Negative consumer attitudes can be expected to limit the demand for products containing GM foods, and therefore the economic value of the current generation of GM crops.

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### GM Science Review - July 2003

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- There has been no epidemiological monitoring of those consuming GM crops in any country;
- It is uncertain how farmers will apply GM technology in the field and therefore it is difficult to quantify the severity of impacts on the environment;
- If GM crops are introduced it may be impossible to grow certain non-crops or use some existing farming practices without contamination occurring;
- Significant uncertainties and gaps in our knowledge exist;
- There is a clear need for more research in a number of areas;

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### Report on the GM Nation? Public Debate - September 2003

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- People are generally uneasy about GM;
- The more people engage in GM issues, the harder their attitudes and more intense their concerns;
- There is little support for early commercialisation;
- There is widespread mistrust of government and multi-national companies;
- There is a broad desire to know more and for further research to be done;
- Developing countries have special interests;
- People want their right to choose to produce or eat non-GM and organic food protected;

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### Results of the Field Scale Evaluations from the Advisory Committee on Releases to the Environment (ACRE) - October 2003

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- Beet and Spring-sown oilseed rape - If GM beet and oilseed rape were to be grown and managed as in the FSEs this would result in adverse effects on arable weed populations compared with conventionally managed beet and oilseed rape. The effects on arable weeds would be likely to result in adverse effects on wildlife such as farmland birds, compared with conventionally managed equivalent crops;
- Maize - If GM maize were to be grown and managed as in the FSEs this would not result in adverse effects, compared with conventionally managed maize. ACRE advised that the crop would have to be grown and managed in exactly the same way as it was in the FSEs and that further work needs to be done on the implications of the new EU ban on the herbicide Atrazine, that was used on the conventional maize crop in the FSEs.

The results of the maize trials have been widely criticised for not reflecting commercial reality, for only studying the crop for one year and only using one application of a single herbicide. There is doubt whether the same weed control systems used in the trials would be acceptable to farmers if GM maize were grown commercially.

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GM Crops? Coexistence and Liability - The Agriculture and Environment Biotechnology Commission (AEBEC) on co-existence and liability - November 2003

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- Government policy on coexistence of GM and other crops must facilitate consumer choice to the greatest possible extent, while allowing UK farmers to respond to present and future national and international market demand;
- If GM crops are grown commercially, there should be legally enforceable crop management protocols designed to achieve at least the 0.9% contamination threshold;
- If GM crops are commercialised, there should be an initial introductory period with intensive monitoring and auditing of coexistence arrangements to determine whether and how far coexistence was being achieved;
- Coexistence protocols should be readily amendable if data gathered in the introductory period showed that coexistence and the delivery of consumer choice was not being achieved and Government should be able to suspend production of a GM crop while it overcomes coexistence problems;
- There should be compensation for farmers suffering financial loss as a result of their produce exceeding statutory thresholds through no fault of their own;
- Legally enforceable, statutory rules are needed to protect non-GM and organic crops.

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Research highlighting the threat of GM contamination

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In addition to the Government-backed research, evidence from experience of growing GM crops around the world continues to emerge.

- Research in the UK has revealed that earlier research underestimated the likelihood of gene escape from GM oilseed rape to its relative, wild turnip; <sup>1</sup>
- The first evidence of a transgene escape to an oilseed rape wild relative during commercial growing of a GM crop has now been recorded in Canada.<sup>2</sup> If GM oilseed rape were grown, genes from the bacteria and virus used to

transfer the genes could be introduced into the gene pool;

- GM oilseed rape volunteers (where seed shed at harvesting germinates in later crops and is a weed) may act as sources of contamination of over 1% in non-GM rape for up to 16 years.<sup>3</sup> If volunteers were vigorously controlled, it would take five years for contamination levels to fall below 1%;
- Cases where non-GM or organic crops are found to contain genes from GM crops continue to be reported. A paper published in *Nature* in 2001 reported GM contamination in native landraces of maize in Mexico even though no GM maize should have been grown there commercially.<sup>4</sup> The findings of the study came under considerable attack (orchestrated, it seems, by the biotechnology industry) and, in 2002, the journal published some critical reviews and indicated that it should not have published the original paper.<sup>5,6</sup> However, it is not the basic finding of contamination that is contested but the claim that transgenes might be unstable in the genome;
- In August 2002 it was revealed that GM oilseed rape grown in the UK's farm-scale evaluations was contaminated with another GM variety which had not been approved for growing;<sup>7</sup>
- In November 2002, the US Department of Agriculture (USDA) announced that it had quarantined over \$2.7 million worth of soybeans (500,000 bushels) destined for human consumption at a Nebraska grain elevator after finding stalks of ProdiGene's GM maize mixed with the soybeans.<sup>8</sup> They later ordered their destruction.

**In the light of this evidence, The Five Year Freeze renews our call on the Government to enforce a moratorium on the commercial use of GM food and crops in the UK.**

**The moratorium should remain in place until the questions that remain about the technology have been adequately answered and the required statutory regulations are in place to ensure consumer choice.**

# Targets for the government

## In particular The Five Year Freeze wants:

- Full protection of consumer choice not to grow or eat GM products, including products from animals fed on GM food, through stricter labelling regulations and lower contamination thresholds;
- Protection of the non-GM food chain from contamination to a level not detectable at 0.1% for all non-GM crops;
- Strict liability laws for environmental and economic harm arising from contamination to a level of 0.1% caused by growing GM crops, including the costs of preventing and detecting contamination, to be borne by the industry that produces and profits from developing them;
- Independent assessment of the implications of patenting genetic resources;
- Independent assessment of the social and economic impact of genetic engineering on farmers;
- Long term, independent research on the safety and impacts of GM food for humans, animals and the environment that is open, transparent and trusted by the public. This should include assessment of the impact of GM crops on soil micro-organisms, farmland ecology and the implications of pollen distribution;
- A ban on the cultivation of herbicide tolerant GM sugar beet and oil seed rape based on the evidence of the farm scale evaluations and a ban on the cultivation of GM maize until further research has evaluated the environmental impact of commercial production;
- A ban on the growing of GM crops which could lead to genetic contamination of native species;
- Thorough consideration of alternatives to genetic engineering in the global food supply;
- A rejection of the use of hunger and malnutrition faced by the developing world as a justification for commercialisation of GM crops in the UK.

## Further information from:

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## References

- 1) Wilkinson MJ, *et al* (2003) *Hybridization between Brassica napa and B. rapa on a national scale in the United Kingdom*. Science. [October 2003]
- 2) Warwick *et al* (2003) *Hybridisation between transgenic Brassica napus L. and its wild relatives : Brassica rapa L., Rahanus raphanistrum L., Sinapsis arvensis L., and Erucastrum gallicum (Willd.) O.E. Schulz*. Theoretical and Applied Genetics 107: 528-539.
- 3) Squire, G.R. & Askew, A. (2003) Final Report - DEFRA project RG0114: *The potential for oilseed rape feral (volunteer) weeds to cause impurities in later oilseed rape crops*.
- 4) Quist, D. & Chapela, I.H. (2001) Transgenic DNA introgressed into traditional maize landraces in Oaxaca, Mexico. Nature 414: 541-543.
- 5) Kaplinsky, N., Braun, D., Lisch, D., Hay, A., Hake, S. & Freeling, M. (2002) Maize transgene results in Mexico are artefacts. Nature 416: 601.
- 6) Quist, D. & Chapella, I.H. (2002) Reply to letters. Nature 416: 602.
- 7) See DEFRA news release <http://www.defra.gov.uk/news/2002/020815a.htm>
- 8) See USDA press release <http://www.aphis.usda.gov/lpa/pres/s/2002/11/prodigene.html>