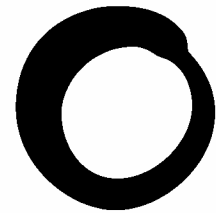


# Media Briefing



**Friends of  
the Earth**

## GM crops - contamination and liability

### 1. Introduction

At the moment, no GM crops are being grown in the UK - either commercially or in outdoor trials. However, ten applications to grow GM crops are queuing up for approval in the EU. If they get through, GM crops could be grown in the UK within the next three or four years. If they are grown, the EU has ruled that 'adventitious' (accidental or unavoidable) contamination of non GM crops and food will not have to be labelled, up to a threshold of 0.9 per cent GM material.

But what would the impact be on non-GM crops if GM crops are grown in the UK?

On 16 July the Government announced a consultation on 'coexistence and liability' for GM crops. This is meant to tackle the fact that there aren't any legal rules to prevent non-GM crops being contaminated with GM traits, but Friends of the Earth is concerned that the Government's proposals will allow some GM contamination of non-GM crops, rather than aiming for zero. A new NOP World poll conducted for Friends of the Earth has shown that 64 per cent of UK public support laws to prevent GM contamination of food and crops [1]. Therefore any moves by the Government to allow GM contamination would constitute a failure to protect farmers and consumers who want to choose GM free crops and food.

### 2. What is the Government consulting on?

The Government will hold a series of stakeholder meetings with a few stakeholders to inform its 'coexistence' consultation document. Later in the autumn, it is expected to launch a twelve week public consultation. Earlier this month a Committee of MPs, who looked at GM 'coexistence' and liability, highlighted Government confusion around its position, and said that "*the Government cannot allow the commercial cultivation of GM crops in the United Kingdom until there is clarification of these critical issues.*" [2]

The Government consultation is expected to include:

- **Options for practical measures (such as separation distances) to allow contamination of non GM crops to reach the 0.9 per cent labelling threshold, as set by the EU.**

Friends of the Earth considers that, as the law states that only adventitious contamination of non GM crops can go unlabelled up to 0.9 per cent, any 'coexistence' regime should be aiming to ensure that all contamination is avoided. The Government's proposals must be designed to eliminate GM contamination down to the lowest detectable level, which is currently 0.1 per cent. There is overwhelming consumer demand for GM free food, and most supermarkets already operate to a 0.1 per cent threshold to meet this demand. The Government regime should not be designed to allow contamination to become the norm, rather than an exceptional circumstance. If any level of contamination is accepted, it will start a process that could eventually lead to bigger increases in contamination over time.

- **Options for an economic liability regime, to compensate farmers if their crops are contaminated.**

Friends of the Earth also believes that liability for any damage caused by GM crops should rest with the biotechnology companies holding the GM crop consents. Companies should be strictly liable for both economic damage, such as a farmer's crops becoming contaminated so that they can't be sold, and any environmental harm.

- **Advice to farmers on setting up voluntary GM free zones**

There are many complex legal and practical problems around the concept of voluntary GM-free zones. For example, what happens if one farmer disagrees with 9 other farmers who want a GM free zone? What happens if a farm within a GM free zone is sold and the new owner refuses to join? It is clear that the Government has not thought through the practical implications of this suggestion. Friends of the Earth believes that measures to prevent contamination and ensure liability, including GM free zones, should come under a tough legal framework and not be left to voluntary schemes that are likely to fail.

### **3. Sources of contamination**

Crops can be contaminated at any stage of the production chain. The possible sources of contamination include: cross-pollination with nearby GM crops, by wind or insects; spillages of GM seeds during transport; movement of GM seeds by humans, machinery and animals; re-growth of GM plants in following crops; accidental mixing of seed or crops.

- For example, pollen can move very long distances while still being viable [3]. In recent studies it was suggested that pollen beetles (a pest of oilseed rape) could have been responsible for cross pollination between oilseed rape plants that were 26 km apart [4].
- For example, a study by scientists at the Université de Lille in France, published in June 2003, warned that GM material could be spread over many miles by farm vehicles or by getting stuck to people's shoes. Weedy hybrids of sugar beet had somehow migrated 1500 metres from the fields. The hybrids must have come from seed because they had maternal genes, rather than the paternal ones carried by pollen.

Friends of the Earth is campaigning for the UK to stay GM free, but if the Government makes the mistake of allowing GM crops to be grown, there must at least be laws in place to ensure that non-GM crops are not contaminated and that biotechnology companies are held strictly liable for any damage their products may cause.

### **4. Current practice**

During the Farm Scale Evaluations (FSE), which ran from 1999 to 2003, a voluntary code that had been developed by the biotech industry and endorsed by Government operated to control cross pollination of GM and non GM crops [5]. However, Friends of the Earth believes that this code was completely inadequate:

- it only set out to ensure contamination did not exceed one per cent
- it did not protect beekeepers
- it did not aim to prevent gene flow into wild species.

The separation distances used in the industry's voluntary code were based on methods developed for producing non GM seeds and industrial crops. However, both of these sectors allow contamination of their products to exceed one per cent. The maximum separation distance for any crop was 200 metres. Despite all these failings, it seems likely that the Government will base its 'coexistence' measures upon the industry's voluntary code.

### **5. Bees and Honey**

Oilseed rape pollen is extremely attractive to bees, and honey bees will travel several miles to collect it. During the Farm Scale Evaluations (FSE), the British Beekeepers Association recommended that beehives should be sited at least six miles from the nearest GM trial field. Honey contaminated with

GM pollen from a farm scale evaluation was discovered by Friends of the Earth in England, and by the Sunday Times in Scotland. Bees can transport pollen large distances - bees near a FSE pilot trial in Oxfordshire were found to have travelled 4.5 km to the plot to collect pollen. The beehives near to GM oilseed rape fields are likely to become contaminated with GM pollen and bees from these could then spread GM pollen to non-GM crops several miles away.

## 6. Evidence of Contamination

There is mounting evidence to show that GM contamination is likely to cause serious problems for farming:

- A report by the Union of Concerned Scientists released in February revealed that seeds of traditional varieties of maize, soybeans, and oilseed rape in the USA are pervasively contaminated with low levels of DNA sequences derived from transgenic varieties.
- In March a study by the Biotechnology Unit at the University of Glamorgan detected GM soya in products labelled organic or GM-free. Most GM soya is grown in the USA, Canada and Argentina, without adequate measures to prevent contamination of non-GM varieties for export.
- In Spring 2000 conventional oilseed rape seed, which had been imported into Europe from America and planted in the UK and other countries, was found to be contaminated with a Monsanto transgene. Advanta seeds revealed that the seed crop had been grown with a separation distance of 4000m from GM oilseed rape.
- In 2000 it was found that a GM maize, called StarLink, which was not approved for human consumption, had contaminated foods across the US. Suspected allergic reactions were reported and more than 300 brands of taco shells, crisps and other maize products had to be withdrawn from shops. The US Government was forced to buy up stocks and Kelloggs closed production lines for two weeks. The cost to the US economy has been estimated at billions of dollars.
- In Canada, oilseed rape weeds have cross pollinated with GM crops resulting in GM oilseed rape weeds that are resistant to three herbicides. This 'gene stacking' can lead to farmers having to use more damaging weedkillers to get rid of the GM weeds.

## 7. Conclusions

The food industry in the UK and the rest of the EU is seeking ingredients that do not contain detectable GM traits. The widely accepted reliable limit of detection for GM traits is 0.1 per cent. The precautionary principle underpins existing laws on GM crops. Therefore taking into account public health, environmental protection and consumer preference, the Government's measures should aim to prevent contamination down to the lowest possible level, rather than allowing GM contamination to become widespread. In addition, the laws should apply to all stages of the supply and food chain to prevent contamination occurring.

### Notes:

- [1] NOP World Consumer Survey, 2-11 July 2004. Further details available from Friends of the Earth.
- [2] 9 July 2004, see: <http://www.publications.parliament.uk/pa/cm/cmenvfru.htm>
- [3] Treu R and Emberlin J 2000, Pollen Dispersal in crop Maize (*Zea mays*), Oilseed rape (*Brassica napus ssp oleifera*), Potatoes (*Solanum tuberosum*), Sugar beet (*Beta vulgaris ssp. vulgaris*) and Wheat (*Triticum aestivum*) Evidence from Publications. Soil Association Bristol.
- [4] [www.defra.gov.uk/environment/gm/research/epg-rq0216.htm](http://www.defra.gov.uk/environment/gm/research/epg-rq0216.htm)
- [5] [www.ukasta.org.uk/scimac/guidelines.pdf](http://www.ukasta.org.uk/scimac/guidelines.pdf)