

Biotech Mailout

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**Friends of
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Co-existence between GMOs and non-GM agriculture:

The Commission dodges its responsibility

On 5 March EU Agricultural Commissioner Franz Fischler presented a Communication on the co-existence of genetically modified (GM), conventional and organic crops to the European Commission. The paper has been heavily criticised by environmental NGO's, like Greenpeace, Friends of the Earth and the European Environmental Bureau. The green NGO's accuse Fischler of not taking his responsibility. So far the Commission has completely failed to present a consistent and credible draft legislative framework, to safeguard conventional non-GM conventional and organic agriculture from genetic pollution.

Co-existence is the term used to describe the growing of GM and non-GM crops together. If the area under cultivation of GM crops in the EU is expanded there could be major impacts on the way we farm, our freedom to choose what we eat and the environment. Cross-pollination from insects and wind, and mixing during harvesting and processing could easily lead to genetic contamination of the environment, organic and non-GM conventional agriculture and the food supply. A whole range of measures would be needed to avoid such unwanted dissemination of genetically modified organisms (GMOs), like the establishment of isolation distances between GM fields and non-GM fields, separate facilities for the processing of GM and non-GM food and routine cleaning of machinery.

It is obvious that these preventive management measures to ensure co-existence can only be successfully implemented if they are legally binding. However, in his Communication Fischler has taken the view that legislative action at Community level should be avoided. Also he argues that the burden of co-existence measures should "fall on the economic operators (farmers,

seed suppliers, etc.) who intend to gain a benefit from a specific cultivation model they have chosen." Applied to the current situation in the EU, this would mean that conventional non-GM farmers and organic farmers would have to pay to avoid genetic contamination, since they certainly have an economic interest in ensuring that their products remain GM-free.

Responses to Fischler's paper

Fischler's Communication has met several comments from the EU member states and Members of the European Parliament. During a meeting of the Coreper on 3 April eight EU member states who are upholding the moratorium believe that the proposals for Regulations on labelling and traceability (COM (2001) 182) and genetically modified food and feed (COM (2001) 425), who are currently up for second reading, "do not deliver an adequate answer to the specific legal, economic and political problems relating to co-existence".

Commenting on who should pay the cost of co-existence, Germany's Agricultural Minister Renate Künast said to the German newspaper Der Spiegel that: "those who want to produce without GMO's in the future should under no condition be confronted with extra costs."

Also three Socialist Members of the European parliament's environment committee, Karin Scheele, Torben Lund and Guido Sacconi, called on the Commission in a pressrelease to launch a "new, more ambitious proposal". However the Commission so far sticks to the subsidiarity-principle, which means that it wants to leave the

implementing of measures to ensure co-existence and to avoid genetic contamination to the EU's national authorities. However, at the same time the member states are not given the legal competence to draft any meaningful legislation on co-existence. EU Directive 2001/18 on the deliberate release of GMO's, which entered into force in October 2002, only allows for measures to be taken on the basis of environmental and health concerns. It does not make possible the implementation of legislation to protect consumer choice and farmers rights from genetic contamination.

Hot potato

So this brings the ball back to the European Commission, which should stop shifting the co-existence issue back to the member states as a hot potato and draft a legislative framework that addresses the following issues relating to co-existence:

- How to avoid the unwanted and uncontrolled dissemination of genetically modified organisms (both authorised and unauthorised) in the environment? Directive 2001/18 certainly does not cover all the environmental risks

resulting from GMO's, especially not the risks of those GMO's that have been authorised.

- How to ensure the right of farmers and consumers to produce and consume without genetically modified organisms (GMO's)? Labelling and traceability regulations are necessary, but not enough to ensure freedom of choice. Without sufficient supply of GM free food and seeds, these rules would become meaningless.
- How to ensure that GM polluters will be held liable? Crops that are contaminated by GMO's from neighbouring fields may lead to economic loss to non-GM farmers, because their crops cannot be sold anymore at the premium price that is usually given for non-GM products. The current proposals for an EU Liability Directive do not cover such damage.

- Who is going to pay the costs of co-existence? The answer that Fischler has given in his Communication is very unsatisfactory and violates the polluter pays principle. Therefore the Commission should present a proposal that puts the burden of applying measures to avoid genetic contamination of the environment, food and farming on GM producers and GM operators.

Friends of the Earth Europe strongly believes that these issues should be fully addressed before commercialisation of GMO's is expanded. Many problems relating to co-existence have not been resolved yet. It therefore makes sense to keep the de facto EU moratorium in place until legally binding measures are in place that ensure the protection of the environment, organic and conventional farms from genetic contamination.

Friends of the Earth, The Greens/European Free Alliance, EURO COOP and the Heinrich Böll Foundation are organising a one day conference on co-existence between GM, organic and conventional crops. The conference is called "GMO's: co-existence or contamination?". During this conference many stakeholders, like farmers- and consumers organisations, will present their position on co-existence for the first time. The conference will be held on Thursday 28 th May, in the European Parliament in Brussels from 9.00 to 16.30. For more information and registration: www.foeeurope.org

Science as a Smokescreen?

The Farm Scale Evaluations of GM crops

In September the results of the 'Farm Scale Evaluations' (FSEs) will be published - a four year trial in the UK of genetically modified herbicide tolerant crops. The aim of the experiment was to examine the impact on agricultural biodiversity and it used split agricultural fields, with the GM and non GM crops being grown on one half each. Monitoring of the plant and invertebrate life found in the GM and non GM crops was then undertaken. Over four years Monsanto's glyphosate tolerant sugar beet and fodder beet, and Bayer's glufosinate tolerant maize and oilseed rape were each grown on around 60 sites.

The trials were instigated by the UK government in 1999, in the face of growing pressure for a moratorium on GM crops. English Nature (the UK government's statutory nature conservation advisor) had called for a moratorium on growing GM crops because of the potential impact on UK biodiversity. Through the 'Five Year Freeze' campaign, this call was eventually supported by over 120 national organisations, as well as many local government authorities and food companies. As well as biodiversity, this wider group raised concerns about the ethical status of GM crops, their safety as foods and their potential economic impacts on other farming sectors. However the UK Government has been consistently resistant to the idea of a moratorium, and

instead announced its programme of "*managed development*" of GM crops, combined with ecological monitoring - the Farm Scale Evaluations.

Whatever the results of the FSEs, we can predict that they are likely to be used by governments around the world to support their decisions about the commercialisation of GM crops, and by the biotech companies to support applications for commercial approval of these GM crops, both to the EU and elsewhere. The international reputations of the organisations which carried out the research will help to support the view that they provide 'the answer' on the safety of GM crops. In the face of the hype that is likely to accompany the publication of these results, it is useful to look at just what the research will be able to show.

Uncertain results

Friends of the Earth EWNI¹ pulled together a group of ecologists, statisticians, farming researchers and local activists to examine the design and conduct of the FSEs. Using published materials such as the tender documents and annual reports, as well as local witnesses to the conduct of the trials, the group examined the available evidence in order to give some indication of how 'certain' the results are likely to be. None of the actual results of the ecolog-

¹ EWNI: England, Wales, Northern Ireland.

ical monitoring have been published, so the group focussed on the experimental design, in a similar way to how research proposals are peer reviewed. The findings of the group were published in the report *Science as a Smokescreen* in March 2003.

Analysis of the design of the Farm Scale Evaluations indicates that, while the trials are likely to provide a significant contribution to the understanding agricultural ecology, they will not necessarily be able to determine whether the introduction of GM crops will lead to ecologically important reductions in biodiversity. In particular ecologically significant differences between GM and non GM crops could be missed because the experiment does not have sufficient statistical power. Modelling and extrapolation of the results will be hampered by a lack of knowledge about interactions between different species and poor geographical distribution of the trials means that they may be unrepresentative of UK farming, reducing the relevance of the results. These findings are in no way a criticism of the integrity of the researchers involved, but rather reflect the limitations within which they had to work.

Analysis of the conduct of the trials found that advice on the management of the GM crops was provided by Monsanto and Bayer, leading to

concerns that the GM crops may have been managed during the experiment to maximise biodiversity, something that would not be done by farmers, who manage their crops for the best profit and yield. In addition, Bayer neglected to advise researchers that in the United States it sells glufosinate in mixture with other herbicides, and that US agricultural advisors recommend that farmers do not use glufosinate on its own, because it does not achieve commercially required levels of weed control.

When the results of the FSEs are published in the autumn, it is likely that they will be equivocal and may only raise further questions. But whatever the results show, they will not be the final answer on whether or not to grow GM crops because they only address one part of the problem. The public across Europe remain opposed to GM crops to being grown, and this is based on concerns about the ethical, food safety and economic impacts of these crops, as well as biodiversity. Such concerns cannot be answered by the results of the Farm Scale Evaluations.

The full text of the report *Science as a Smokescreen?* can be found at http://www.foe.co.uk/resource/reports/science_smokescreen.pdf

Europeans do not support GM foods

A new Eurobarometer ¹ survey has reconfirmed that the general public is deeply skeptical about GM foods and crops.

The report released in March is the fifth in a series first started in 1991 and is based on a representative sample of 16,500 respondents, approximately 1000 in each EU member state. The survey concludes that:

- *“Europeans are not technophobic. The greater majority think that telecommunications, computers and IT, the internet, solar energy and mobile phones will improve our way of life over the next 20 years.”*
- *“Europeans continue to distinguish between different types of applications, particularly medical in contrast to agri-food applications.”*
- *“A majority of Europeans do not support GM foods. These are judged not to be useful and to be risky for society. . . . Overall support for GM foods is seen in only four countries - Spain, Portugal, Ireland and Finland.”*

For GM crops, support is lukewarm, while they are judged to be moderately useful they are seen as almost as risky as GM foods. While GM crops are supported in Spain, Portugal, Ireland, Belgium, UK, Finland, Germany and the Netherlands, with the exception of Belgium, all the countries that called for the extension of the de facto moratorium on the commercial exploitation of GM crops (France, Italy, Greece, Denmark, Austria and Luxembourg) have publics that are, on average, opposed to GM crops.

For GM crops and GM foods support declined and opposition increased over the period 1996-1999. Between 1999-2002 there is almost no change in levels of support or opposition in Europe considered as a whole.

The report concludes that: *“Future scenarios point to the possibility of more sober discussions of risks related to GM foods and crops, and the growth of risk tolerant support in Europe. But, unless new crops and products are seen to have consumer benefits the controversies of the 1990s may be reactivated.”*

¹ Europeans and Biotechnology in 2002, Eurobarometer 58.0, (2nd Edition: March 21st 2003)
http://europa.eu.int/comm/public_opinion/archives/eb/ebs_177_en.pdf

Pest feeds on genetically engineered Bt crops

New research on *Bacillus thuringiensis* (Bt) has shown that genetically modified Bt crop can be extra-nutritious for some pests.

The *Bacillus thuringiensis* (Bt) is a natural pesticide widely used by organic farmers. In the 1990's the biotech industry recognised the potential of this soil bacterium and built in the toxin-producing gene from the Bt into several genetically modified GM crops. Organic farmers have always felt concern about the use of Bt by genetic engineers and the risk of creating Bt resistant insects. GM crops that use the Bt gene release far more of the toxin into the environment than when Bt is used in a natural way and this can lead to insects becoming resistant, since they are exposed to the toxin constantly rather than occasionally.

Regrettably these farmers concerns have now been confirmed by research findings. Last 30 March, The Independent published an article titled "Insects thrive on GM 'pest-killing' Crops". The article is based on a study that was performed by the College London and the "Universidad Simon Rodrigues" in Caracas. This study established that pests have been using the Bt poison produced by the GM plants as food¹.

Among other things, the scientists have looked at the larval development time and fresh pupal weight of the diamondback moth. One of their key findings was that the protein in the GM plants, which is supposedly toxic to these insects, can actually be used as "supplementary food protein" and "this may account for the observer faster development rate of Bt resistant insects in the presence of Bt toxin". The scientists found a 56% higher growth rate for the resistant larvae fed on Bt crops.

Friends of the Earth believes the following conclusions should be drawn from this investigation:

- These new findings are demonstrating once again that the risk of genetic engineering is unpredictable. Because the GM crops can have effects that we cannot anticipate, it is reckless to allow GM crops to disseminate in the environment.
- The GM crops pose a threat to farmers. The overall presence of the Bt toxin through widespread planting of GM crops has probably accelerated and spread Bt-resistant diamondback moth, which could become a real disaster for farmers of both Bt and organic crops.

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Netherlands a 'soft touch' on GMOs?

FOE calls for legal investigation

Friends of the Earth have called on the European Commission to investigate the actions of the Dutch Government regarding an application for genetically modified (GM) crop approval made by the company Monsanto. In January, the Dutch authorities gave a favourable opinion on Monsanto's application for a new GM oilseed rape, but Friends of the Earth claims that Monsanto's scientific assessment of the GM crop was so poor that "it is *questionable whether it meets basic legal requirements*".

On January 22nd the Dutch Government forwarded Monsanto's application for the GM oilseed rape (called GT73) to the European Commission [1], recommending that it should be approved for import into the EU. However, when Monsanto's application was circulated to other member states for consultation, it received strong criticism from the UK Government [2], which stated that Monsanto:

- supplied low quality, inconsistent data to support their application
- failed to propose an adequate system for the labelling of the GM oilseed rape. Among other things the UK authorities insist that Monsanto accompanies each batch of material containing GT73 oilseed rape with a document stating that this GMO is not approved for cultivation in Europe.
- failed to present an adequate plan for the post market monitoring of GT73 oilseed rape.

- supplied no information on how they would prevent seed being spilled during transport (something that occurs commonly with oilseed rape) and gave no information on what monitoring or action plans they would need to deal with such spillages.

Friends of the Earth have written to the European Commission calling for an investigation into whether the Dutch Government acted in line with the legal requirements of Directive 2001/18 by approving this application. The Directive clearly states that member states need to check that applications meet the legal standards before forwarding them, and in this case, it did not.

In the light of this criticism, Friends of the Earth Europe is concerned that eight out of ten GM food applications since 1998 have been made through the Netherlands, suggesting that biotech companies may be considering the Netherlands as a "soft touch" on GMOs.

1. The notification: C/NL/98/11 is for the import and consumption of Monsanto's GM oilseed rape (GT73) that has been modified to resist the company's own herbicide.
2. Response of the UK Competent Authority, 25 March 2003.

Friends of the Earth Europe is the largest grassroots environmental network in the world, campaigning to protect the environment and create sustainable societies. Friends of the Earth Europe unites more than 30 national member organisations with thousands of local groups.

The Biotech Mailout is printed bi-monthly and is also available online at www.foeeurope.org/biotechnology/about.htm

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