



APPENDIX 11

Memorandum from the Munloch GM Vigil

INTRODUCTION

The Munloch GM Vigil represents the views of 6,500 consumers on the subject of GM crops and food.

To facilitate this, a petition was taken to the Scottish Parliament, which was forwarded to the Transport and Environment Committee(T+E), and the Health and Community Care Committee (HCCC). These Committees undertook investigations into both the GM FSEs and wider issues of GM crops and food. (Minutes of the T+E deliberations (March-May 2002), and the report of the HCCC (1st report 2003, Report on Inquiry into GM Crops) are available from the Scottish Parliament).

1. The GM Farm Scale Evaluations had obvious and well documented limitations, and their aims and objectives were also questionable. It could be argued that they were an attempt to allay certain fears that, (or to counter claims that) the growing of GM Herbicide Tolerant (HT) crops and their associated herbicide regimes would decrease (increase) biodiversity. To this end many aspects of relevance and importance were not included in these trials, and in the end it became a widespread belief that the trials were purely a political hurdle of the lowest possible kind, designed to buy time for a policy that was struggling in the face of overwhelming opposition.

2. In the event the results showed (to the surprise of some), the inability of two crops (Oilseed Rape and Sugar Beet) to even overcome this hurdle.

3. The results for the third crop (Maize) were thrown into absolute confusion, due to the use of Atrazine. This is because it was used as a comparator herbicide in the majority of the FSEs, and yet is now banned in the EU, and the fact that it is widely used in commercial applications in the US (as a mixture with Glufosinate Ammonium).

4. These problems are compounded by the lack of testing of gene-flow (both to surrounding crops and wild relatives), horizontal gene transfer, effects on the soil and organisms within the soil, and the implications for the wider food chain. Neither were yields measured!

5. Even beyond this the trials were premature. Many other issues still have to be resolved. In terms of environmental safety, this was recognised by the T+E Committee which voted to end the trial at Munloch.

6. Health effects, both of the crops and food produced from them are not adequately tested. The underlying concept on which safety is assessed, substantial equivalence is totally inadequate, and yet all consents for crops and food already issued, are based on this.

7. The effects on a local population of the pollen from GM crops is untested and unknown and was a concern of the HCCC:

"The Committee believes more research should be commissioned into the effect, allergic or otherwise, of GM OSR pollen."

8. The risk assessments were based on insufficient evidence, and possibly biased advice from ACRE, who were prepared in 1999 to declare that the growing of GM OSR and Sugar Beet would produce no negative effects on the environment! The HCCC said of the risk assessments:

- At present risk assessment procedures would appear to be flawed in the following ways:
- They do not appear to follow a standard format.
- They seek to prove the safety of the GMO rather than test and genuinely assess potential hazards.
- They do not identify areas of uncertainty.
- They are overly reliant on modelling and "model assumptions" rather than hard scientific assessment.
- There is no set period of time for which risks must be assessed, and subsequently reassessed.

9. Three examples of the inadequacy of the present method of risk assessment, are the fact that trials were granted on a "generic" basis. The trial in Munloch was given the go ahead based on a risk assessment carried out in Aberdeenshire (over 100 miles away!), and

yet it was continually stated that the risk assessment for Munloch was site specific. (The trial at Munloch was surrounded by four SSSIs, and an ESA; no monitoring of the effects on any of these has been undertaken.)

10. The second example involves GMHT T25 maize (as grown in the FSEs). When this was fed to chickens, twice as many died as those fed on conventional maize, and yet T25 was "passed" as safe by ACRE.

11. Thirdly, the fact that in actual commercial farming in the US, the herbicide Glufosinate is inadequate in helping to produce a viable yield for GM maize, and yet the trials and the crop were given consents on this basis, brings the competency of ACRE into question once again.

12. Surely we need a complete overhaul of the relevant regulatory committees (ACNFP and ACRE) and the instigation of an effective and trustworthy risk assessment procedure. Especially bearing in mind that in spite of these past errors, ACRE are still the body that will advise the Government post the FSEs, and ACNFP are still advising on the safety of GM foodstuffs, as they try to gain consents within the EU.

13. The Science Review showed up conclusively the overwhelming lack of evidence of the effects of GMOs on the environment and human health:

"It is important to acknowledge that we still may not be asking all of the right questions, let alone have the science to provide answers to them" (GM Science Review p 186)

14. There has still not been any testing of the effects of GM foods on human health. Attempted platitudes from GM food proponents that there have been no ill-effects in the US are risible in the face of the fact that the US Centre for Disease Studies has found that food related illnesses have doubled since the introduction of GM foods, mainly due to new allergies! Furthermore 37 people died from GM Tryptophan (no-one has died from non-GM Tryptophan) and numerous allergic reactions to "Starlink" GM maize were reported across the US.

15. These "knowledge gaps" have to be filled, and their continuing existence are inherent in the widespread public concern of and opposition to GM crops and foods, as evidenced by Eurobarometer 55.2, Consumers Association GM Dilemmas, and GM Nation. (All of which also found that the more the public found out about GM foods, the more concerned they were).

16. These gaps in the science surrounding GM crops and foods are also fundamental to the commercial positions taken by the Supermarkets, who have removed GM produce from their own brands, and continue to source non-GM feed for their animal products.

17. They were also instrumental in the findings of the Economics Review, which found no economic benefits in the present generation of GM crops. This was before considering the cost implications of co-existence, identity preservation and liability, all of which (although necessary if GM crops were ever to be introduced) would have inflationary effects across the food chain.

18. GM foods need to be proved, to the satisfaction of consumers, (and independent scientists) to be safe to eat. As a minimum this is likely to require a trusted and independent repetition of the Pustzai experiments, and pharmaceutical standards of testing. Again from the HCCC:

"The Committee is convinced of the need for additional toxicological tests."

"The Committee, after considering the evidence, would wish to see pharmaceutical-style testing being applied to GM crops"

Until then there will be no demand, and no further foods should be allowed into the food chain. While for the sake of real confidence, those GM foods that already are should have their licences revoked.

19. Similarly, and as well as the above, until GM crops are proved to the satisfaction of environmental organisations, to have no negative effects on the environment, they should not be released into the environment.

20. Questions must now also be raised into the amount of time and money going into researching GM crops. None of the issues above are new, and yet none have been addressed. Budgets for scientific research are limited, and issues of opportunity cost and effective allocation of resources have to be considered. A substantial amount of funding (including public funding) has already been spent on GM crops and foods, for negligible return. It may be wiser to re-direct future investments towards researching other, more palatable, agricultural techniques, and/or other areas of science that have certainly not had the financial support of GM foods, and yet have produced results.

CONCLUSION

21. The results of the GM FSEs for Oilseed Rape and Sugar Beet, mean that under EU Directive 2001/18 (articles 4 or 16), they should no longer be allowed to be released into the environment.

22. The results of the maize trials are insufficient to provide satisfactory results that there is no significant or lasting damage to the environment by growing GM maize. As such it should not be grown commercially on these grounds alone, notwithstanding the other concerns that we have raised.

23. Further evidence of environmental problems are emerging all the time. The latest reports commissioned by DEFRA (October 2003) on gene-flow and volunteer survival, show OSR pollen moving 16 miles, and the presence of OSR volunteers for 16 years. This makes co-existence impossible. OSR has also recently been found to cross breed with wild relatives to a greater extent than initially predicted (Wilkinson *et al* 2003, "Science" October 2003), pointing to further environmental damage that would be caused by GM OSR, and a lack of prior evidence of safety.

24. Latest research has also found the presence of GM DNA in the guts of pigs fed on GM feed (Chowdhury *et al*, The National Institute of Animal Health, Tsukuba, Ibraki, Japan 2003). This further undermines any pretensions of safety for GM animal feed.

25. Concerns are not exclusive to the UK or the EU. Opposition occurs wherever GM crops may be grown or eaten. Whether Zambia, or New Zealand, across Central America, and even in the US, where polls show that 92% of US consumers want mandatory labelling, and only 25% believe GM foods are actually safe to eat. Concerns in Canada include the farming community campaigning against the introduction of GM wheat, and leaked cabinet reports, bemoaning the economic disaster of the introduction of GM oilseed rape.

26. The former claims of the lobbyists that GM crops would "feed the world", and now being retracted in the face of numerous reports that argue otherwise, including; Action Aid: "GM crops- going against the grain", May 2003; The Third World Network: "GM crops and sustainable poverty alleviation in Sub-Saharan Africa", June 2003; and The Food Ethics Council: "Engineering Nutrition—GM crops for Global Justice" 2003.

27. It may now also be an opportune time to re-examine some of the claims of the "Central Dogma" theory of DNA and inheritance. This has been questioned by, amongst others, the US Geneticist Barry Commoner (Unravelling the DNA myth):

"There is a crucial problem in molecular genetics and in its applications to agriculture. This science is based on a 50 year old theory that says DNA alone governs inheritance. Molecular genetics is now confronted with a growing disjunction between this widely accepted premise and an array of discordant experimental results that contradict it. But this disparity remains largely unacknowledged and experiments with transgenic plants and animals (many of which are not even recognised to be experiments) continue on a massive scale."

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