

Peter Melchett - an organic farmer, formerly the UK director of Greenpeace, now Director of the Soil Association

I will give five reasons why we should be against GM crops. I will talk about the uncertainty, health, the impact on developing countries and poorer farmers, the impact on agriculture and then talk about choice, your right to choose what you eat and whether you are forced to eat one thing or another. I also want to introduce you to an alternative. I am not neutral about this. I have a very clear point of view. I think these crops are dangerous, horrible things. Myself and a group of volunteers, when I worked at Greenpeace, tried to remove a GM maize crop at Lyng.

My first point is uncertainty. John Latham has certainly covered this topic pretty comprehensively. If anyone thought that there was anything precise about genetic engineering or that it was carefully regulated, I hope that he has changed your mind. I've ended up a good deal more frightened than I was when I arrived this evening. An American biologist has described GMOs as 'a huge uncontrolled, global experiment' - just how uncontrolled John has explained. He has told you about how the regulators work in America.

A colleague in the Soil Association went to America recently. She had been working on GM for a long time and when there she met the FDA scientists. It was only then that we at the Soil Association realised what John has shown in the letter from the FDA. Regulation in America consists of the company giving the Food and Drugs Administration some information and the FDA writing back, saying, you have given us some information, you are cleared to go. That's what the regulatory process is in America and it's almost identical, certainly not much better, here.

The second thing I want to cover briefly is health. the British Medical Association has said that any conclusion relating to the safety of introducing genetically modified materials into the UK is premature, as there is currently insufficient evidence to inform the decision making process. That's because the evidence is the sort of thing you saw in John's opening. Some company writes in and says we have done these tests, and that's it. So we can't be sure. The British Medical Association is saying we don't have enough evidence to be sure that GM food is safe.

Now we know from all the opinion polls and discussions with the public that the main thing ordinary people worry about is whether GM crops will be harmful to health, quite reasonably. Something you put in your body, you feed to your kids, it's the first concern, quite naturally. It tends to be the concern that's most quickly dismissed by people who are in favour of GM, companies like Monsanto. But the reality is that there have only been 10 feeding trials in the world, where GM food has been given to animals, to assess the possible impact on human beings, as far as we can find out. There have been lots of feeding trials which have looked at how quickly the animals grew. In other words, they have looked at the farmers' benefit, but only 10 trials have been published which have looked at human health impacts.

A recent scientific paper looked at these 10 trials. Five were done by researchers very closely allied with GM companies and none of them found any problems. The others, which were done much more independently, all found evidence of some impact on the lining of the gut in the animals concerned.

John Latham mentioned the 'Flavor Savr' tomato, the very first GM crop that was ever grown. It was on sale in the UK for some time in tomato paste. It's gone now. One of the reasons it's gone is that research, in an unpublished paper, showed that that tomato was having some unclear impact on the gut of animals that ate it. I only know about the paper because of a court case in America. No one has followed up this research.

Some research, which has not been published yet, but which was commissioned by the Food Standard Agency in this country, has looked at what happens to GMOs what you eat them. We are always told by the scientists involved in GM research that you do not have to worry about eating GM crops because it will all be destroyed by the stomach acids. At Newcastle they looked at whether the genetically modified DNA was destroyed when it went through the small intestine of human beings. They did this using people with colostomy bags, where they could take a sample part way through the digestive process. They found that whole pieces of DNA had survived the passage through the human stomach and the small intestine. So there was plenty of opportunity for that DNA to transfer to the other organisms in the human gut.

So the BMA was right and the public was right. The public's gut instinct, if you will excuse the expression, was right in thinking they were not sure it was safe. Might there be some medical problems? We can't be sure but we can be sure that there is a great deal of uncertainty.

My third point is the impact on developing countries. There are two issues here. The first is the idea that you can genetically engineer something, like rice for example, to put things in it which will be good for people. A recent press conference was about Golden Rice. The scientists said they could put vitamin A into rice. Then people in developing countries who have a vitamin A deficiency could eat it. It would stop them going blind. Greenpeace looked at this in some detail to find out how much rice a teenager would have to eat to get a suitable daily intake of vitamin A. Their picture shows the huge pile of rice that a young woman would have to eat every single day. She would rapidly die of overeating. This is typical, a cynical ploy by the GM industry, using the appalling problems of starvation and malnutrition in developing countries to promote a technology which has nothing to offer them.

According to organisations which know about conditions in the Third World, like Christian Aid and Action Aid, GM technology will make things worse for poor farmers in developing countries, not better. One of the reasons is that GM crops don't increase yield. They don't increase output. Even the US Department of Agriculture, one of the world's main advocates for GM crops, which spends millions of dollars trying to promote GM crops all over the world, say that at present GM crops are not likely to increase maximum yields. There are good scientific reasons for this. These crops don't give people more food.

I want to look at the experience of America and Canada. The Canadian National Farmers Union President and two of his colleagues have been to England this year (2003). They were on Farming Today and I think on the Today programme. In America of course they have had 6 or 7 years of growing these crops. Newell Simcral has a large farm in Mississippi. He bought Monsanto's Round-up Ready soya beans because Monsanto told him he would get more soya beans per acre, a better yield. So it annoyed him when he actually got less. He sued Monsanto and Monsanto had to pay him \$165,742 in damages because his yields were down, not up.

The Soil Association has researched this. We looked at the personal experience of many farmers like Newell Simcral to see the overall impact. Spraying costs can go down initially, but start to creep up again after a few years, and bring with them huge problems, some of which I'll go into.

Hundreds of American farmers have found the Pinkerton Detective Agency, employed by Monsanto, coming round their farms looking for unlicensed GM crops. In one case they claimed to have found GM soya beans on a field which actually had sugar beet in it when the inspectors came to look. Some farmers fight back but very few have the guts or the capacity to do that. When settlements are reached they have to be kept secret. Farmers are not allowed even to say what happened.

Second, GM contamination is widespread. The Canadian National Farmers Union has said this is really a huge problem. You can't grow organic oil seed rape in Saskatchewan. Contamination is so bad it has cost millions of dollars in lost exports and lost markets. Organic farmers are really struggling. The Canadian National Farmers Union has said 'enough is enough', we don't want any more GM crops.

Another farmer who had contamination, Tom Wiley in North Dakota, was selling not to Europe but to Japan. The GM contamination in his soya beans for Japan lost him a contract, lost him \$10,000. So it is not just Europe which is rejecting these crops. The Canadian Farmers Union, the American Farmers Union, almost all North American groups are saying, 'Enough is enough, don't let us have any more, no GM wheat.'

I want to talk about alternatives. In my lifetime, and I have lived on farms in Norfolk since I was born, farming has seen the introduction of chemicals and machinery, strong, macho, dominating systems. Farming has got big, overwhelming, chemical, machinery based. The same sort of thing has happened to our food. Obesity is now one of the major health problems of the developed world. Childhood diabetes, which is associated with it, is becoming a serious epidemic in America, a life threatening epidemic. But there is a different way that agriculture could go, the organic way.

The reason I am so passionate about this, the reason we changed the farm over from conventional to organic really was because of the grey partridge, the English partridge. We have data about the numbers of grey partridges on the farm from 1926 to 2002. We can see the effect of the Second World War, a massive drop in numbers. It was a bad time to be an edible bird in the English countryside when the gamekeepers had gone to fight.

In the 1960s, as Rachel Carson said in her book *Silent Spring*, partridge numbers crashed again - far lower this time. This was a huge catastrophe. It wasn't just partridges. It was hares, it was field mice, it was harvest mice, it was butterflies, it was moles, it was skylarks, it was tree sparrows. All sorts of things disappeared which, when I was a kid living at Blakeney, we had seen huge flocks of. What were 'common or garden' birds, became rare and endangered.

On our farm we tried everything we could think of to stop this happening. But it is only since we converted to organic that the numbers have increased. The grey partridges went down as low as 10 pairs on the farm, and they are now, after 3

years, up to above 40. So converting to organic has made a dramatic difference. Not using chemicals has given a fourfold increase. The same has been true of hares. We have monitored the number on part of the farm. With the conversion to organic over the last 10 years or so, there has been an increase from 20 to getting on for 80 hares on that bit of the farm. A huge increase, 400%, not 4% or 40% but 400%.

So organic farming can make a huge difference. It can also add a great deal of pleasure. Organic farming is fun, there are happy pigs wandering round the farm; the quality of meat they produce is wonderful; the animal welfare standards are far, far higher than they are in conventional farming.

We have created jobs. The fall in the number of partridges could have been mirrored by the fall in the number of people working on farms in Norfolk. We have got 890 acres and we probably should have less than one person per thousand acres in this part of Norfolk. That's what the consultants will tell you. We've got three people working full time, partly because of the livestock. It is also wonderful to feel connected to the local community. The local shop sells excellent organic meat.

Organic has all sorts of advantages, all the things that the Government's agricultural policy wants; less pollution, less waste, better for wildlife, more jobs, more connection with the public, benefits for the local economy, and so on. And organic is popular. Monkeys in Copenhagen zoo were given the choice between conventional and organic bananas. They are able to tell the difference, their keeper says... and they always choose the organic, which they eat with the skins on. But they peel the non-organic bananas before eating them.

Finally, choice. You can choose. Three or four years ago the British public decided they did not want GM in their food. They told supermarkets and food manufacturers that and non-GM is now a selling point. The big supermarkets and big manufacturers are promising not to include GM. So don't worry about what the Cabinet Office Strategy Unit says, don't worry about farm scale evaluation results, about what the government says, or the European Union says, or what the World Trade Organisation says. You decide what you eat. As long as you insist on making that choice and tell the people who sell you your food that you do not want GM, if you don't, you will make the final decision, not governments.