

Lies, Damn Lies and Corporate Spin: Why Don't We Trust the Biotechs?

By P J Chandler

As the Government launches its 'public debate' on GM, survey after survey shows that people don't want to eat it and don't want farmers to grow it. Yet the industry is still pushing hard for commercial planting and using its financial muscle to intimidate those who object. They want us to trust them, but are they trustworthy?

This year has seen a hardening of attitudes on both sides of the GM battlefield. While UK field trials continued to be targeted by protestors, the biotechs have been busy attacking environmentalists and organic farming. The EU Parliament voted for clear labelling and tighter controls, while the USA, backed by Monsanto, threatens legal action under WTO trade restriction rules.

In February, an official inquiry⁰ set up after large tracts of the British countryside were inadvertently sown with GM-contaminated oil seed rape, completely failed to discover the source of the contamination.

Two years previously, it was discovered that hundreds of British farmers had sown thousands of acres with GM-contaminated seed imported from Canada. The GM seed - which was also planted in a number of other European countries - was not approved by the Europe Union for release into the environment. The crops were eventually destroyed, and Advanta (later Aventis, now Bayer), the firm that sold the seed, agreed to compensate farmers.

The Canadian Food Inspection Agency held an inquiry into how the GM seed came to be contaminated. It concluded that "there is no evidence of any impropriety on the part of Advanta Canada, its third party processor or the Canadian Seed Growers' Association" and it "was unable to determine the source of the adventitious trait present in the seed lots in question."

The Canadian oil seed rape (canola) was specifically grown to produce non-GM seed. Under Canadian regulations an 800 metre separation distance must exist between GM and conventional oil seed rape. According to the Canadian Government, this regulation was observed. Under SCIMAC guidelines, the separation distance in the UK for GM oil seed rape grown in the GM farm scale evaluations is only 50 metres.

Pete Riley, GM campaigner at Friends of the Earth, said. "What steps are the biotech industry and the governments of Canadian and the UK taking

to ensure it doesn't happen again? This report is a complete whitewash. The whole fiasco demonstrates once again the risk these crops pose to conventional and organic farmers, and provides yet more evidence for banning GM crops from being commercially grown in the UK."

Rural Conflict

In April, the Government was warned¹ by Professor Malcolm Grant, chair of the Agriculture and Environment Biotechnology Commission (AEBC - the Government GM technology watchdog) that conflict could erupt in rural communities if it mishandles the decision on whether to allow GM crops to be commercially grown in the UK. Professor Grant told the Financial Times: "The potential is there for rural conflict, which is why this is about more than food safety. The Government has to listen and be seen to be listening," he said.

In May, Britain's ethically-minded Co-Operative Bank² said it would not do business with biotech companies involved in GM or cloning. Simon Williams, director of corporate affairs, said, "Our stance in genetic modification, which received widespread support amongst those polled, reflects our customers' genuine concerns." The Government could learn from this attitude.

There have been other signs that investors are pulling out of biotechnology. Bionova Holding Corporation of Oakland, California is closing down its research and development operations³, carried out primarily through its subsidiary DNA Plant Technology Corporation (DNAP). Concerns about public acceptance of transgenic products in these markets have made producers reluctant to invest in the development of transgenic fruits and vegetables.

Meanwhile, in the Essex village of Weeley⁴, over 95% of villagers who voted in a referendum registered their opposition to the GM maize trial at a local farm. 1,373 Weeley residents received ballot papers asking, "Are you in favour of GM crops being tested in Weeley?" Villagers returned a total of 547 ballot papers, with 520 people voting "No" and 16 voting "Yes".

In Dorset, inhabitants of a 'pink castle', supported by locals, made a brave stand against a farmer determined to sow GM oilseed rape. A 100-strong crowd demonstrated at a farm in the small Easter Ross village of Munlochy, the site of one of the UK's biggest GM crop trials. Police arrested three men, who were caught using a 4x4 vehicle to destroy the crop. Several other trial sites around the country were also harvested early.

Trials and Tribulations

The controversial three-year farm trial programme is coming to an end, and the Government will soon have to decide whether to allow commercial planting. Contrary to widespread belief, the trials are not – and have never

been – about food safety or even environmental safety, but are designed to monitor GM herbicide management regimes. There has been no testing for cross-pollination with wild species or gene flow to soil bacteria. DEFRA announced on 15th August that Aventis Crop Science (now Bayer Crop Science) had admitted that oilseed rape seed used in more than twenty of the Farm Scale Trials and two other GM test sites in the UK was contaminated with other GM varieties containing antibiotic resistance genes to the level of 2.8%.

Despite the lack of any credible food or environmental safety testing, Tony Blair still appears to be keen to allow the first full-scale crops to be planted as soon as possible. Environment Minister Michael Meacher, on the other hand, has, the story says, admitted his scepticism about commercialisation and has been quoted as saying "We are not going to be bounced into this by the Americans."

The Government's "public debate" on GM crops should be well under way by the end of 2002, together with a scientific review and a cost/benefit study. It would be comforting to think that this will be a real consultation on which Government policy will be based. Unfortunately, the signs are that it will in fact be just another exercise in public relations. The Government has advised AEBC chairman Professor Malcolm Grant that they would "...find it particularly helpful if the debate could identify the issues which cause public concern, the strength of the concerns and could suggest how they might be addressed by government when considering applications for commercialisation of GM crops."⁵ It will be interesting to see what weight is given to public opinion, compared with the scientific review and cost/ benefit study, but this sounds a lot like "Tell us what issues people raise about GM so we know how to pitch our PR." One unnamed Minister has already been quoted as saying "the decision has already been taken."

Back in the real world, the debate about GM has been going on for several years. Poll after poll has revealed the high level of public disquiet about GM and it is clear that a sizeable majority do not want to eat GM food, nor do they want it grown in Britain.

Global Resistance

Belgium's new environment minister Magda Aelvoet invoked the precautionary principle to block five field trials of GM oilseed rape. She ruled that it was "impossible" to stop them leaking genetically modified material into the environment, despite strict measures designed to protect surrounding wildlife. Aelvoet warned GM developers that she will introduce a change in her government's policy on the issue, with future trials subject to much tougher rules.

Elsewhere, the story is similar. Even in famine-stricken southern Africa, Zambia, Zimbabwe and Mozambique have rejected shipments of GM maize sent from the US as "food aid". The African governments say that if the West really wants to help, they should send the money to buy the food they want to eat, instead of using them as a dumping ground for otherwise unsaleable GM crops.

In the same part of the world, it was claimed that GM foods contribute to the inflationary trend in the cost of food to South Africans⁶. Glenn Ashton, a prominent anti-GM product campaigner, raised the issue at the May food and beverage safety compliance conference in Rosebank, Johannesburg. Concerns were also raised about the lack of consultation over the introduction of GM foods and crops in South Africa. Due to market demands, many producers and suppliers now insist on GM-free products and ingredients. Ashton said that the estimated cost of segregating GM and non-GM crops of between 0.5% and 5% introduced an unnecessary and uninvited inflationary trend. He said that neither farmers nor food producers would willingly accept the cost of segregating GM products, instead passing it on to consumers.

NGOs have welcomed a consensus among Swiss retailers not to import a new GM coffee. Swissaid and the Bern Declaration, presenting the results of a seven-month campaign, said some of Switzerland's biggest coffee importers - Coop, Migros, Mövenpick, Merkur and Starbucks - shared their concerns about the GM coffee and would not stock it. The two Swiss NGOs say the livelihoods of millions of poor farmers in the developing world are at stake. "Genetically modified crops don't only have environmental implications. They can also have an impact on the daily lives of thousands of coffee farmers", says François Meienberg of the Bern Declaration. "This GM coffee represents a big threat to poor coffee-producing countries like Colombia and Ethiopia."⁷

Pigs in Peril

Pig farmers are concerned about a report⁸ from Iowa, which suggests that GM corn could have a serious effect on sow fertility.

Farmer Jerry Rosman was alarmed when farrowing rates in his sow herd plummeted nearly 80 percent. Rosman, who has nearly 30 years of farrowing experience, checked and double-checked all of the usual suspect causes. He tested for diseases, verified his artificial insemination methods were being properly implemented, and checked his nutritional program. But he found nothing out of the ordinary. Eventually, Rosman became aware of four other producers within a 15-mile radius of his farm whose herds had nearly identical pseudo-pregnancies. The herds had different management styles, different breeding methods and different swine genetics. The common denominator was that all of the operations fed their herds the same Bt corn hybrids.

Counting the Cost in the USA

According to a Soil Association report⁹, published in September, GM soybeans, corn and canola are estimated to have cost the US economy at least \$12 billion (£8 billion) since 1999 in farm subsidies, lower crop prices, loss of major export orders and product recalls. Farmers are not achieving the higher profits promised by the biotechnology companies as markets for GM food collapse. Widespread GM contamination at all levels of the food and farming industry is the major cause of these difficulties.

"GMOs have been a legal, environmental and financial disaster for American farmers," said Jane Doe, an Iowa soybean farmer and a member of Iowa farmers, one of several US farm groups that co-released the Soil Association report. "This report is overwhelming proof that farmers have everything to lose and little to gain by growing GMO crops."

The severity of problems with GM crops has led to more than 200 groups representing farmers and the organic sector in the USA and Canada to call for a ban or moratorium on the introduction of the next major proposed GM food crop, GM wheat.

Peter Melchett, the Soil Association's Policy Director said, "GM was introduced to the USA when farmers were financially vulnerable. The biotechnology industry's claims that their products would bring benefits were widely accepted, but GM crops have now proved to be a financial liability. Growing GM crops in the UK will undermine the competitiveness of British agriculture."

The US Department of Agriculture seems to agree, "...the 'success' of the introduction of GM crops in the US owes more to marketing hyperbole than it does to objective science and agronomic delivery"¹⁰

Bees Under Threat

In September, the biotech industry launched a charm offensive on beekeepers. They are uncomfortably aware that, without pollination by honey bees, GM oilseed rape yields could be as much as 30% lower than conventional, fully-pollinated equivalents. A conference organised by the British Beekeepers Association (BBKA)¹¹ mainly comprised speakers from industry and government, eager to reassure beekeepers that GM is 'perfectly safe for both bees and honey'.

Despite the lack of formal counter arguments - representatives of the wholefood trade, consumers' groups and environmental NGOs not having been invited - most of the audience appeared unconvinced and voted overwhelmingly to maintain the 6-mile exclusion zone around GM crops for the purposes of selling 'GM-free' honey. BBKA have not yet taken a stand on

GM, simply advising beekeepers 'to move their colonies away from trial sites'.¹²

Perhaps they should be telling the GM industry to keep their crops away from bee colonies. One of the conference speakers, Professor Ingrid Williams, made the following statement in one of her research papers:

*"Consequences [of growing GM crops] may be identifiable and potentially deleterious, for example, the spread of herbicide tolerance, with resulting progeny becoming weeds of agriculture or invading non-agricultural habitats, or less predictable, resulting in loss of identity or even extinction of wild plant species."*¹³

The value of bees as pollinators of agricultural crops has been estimated at more than £200M per annum¹⁴, with honey production valued at about £15M. Yet in the Government's scooping document for the GM 'public debate', there is no mention of either bees or honey.

Stacking Genes

We now know that - contrary to the industry's earlier claims - GM plants do indeed cross-pollinate readily, both with wild plants, standard farmed varieties and other GM strains. This has led to the phenomenon of 'gene stacking', where genes from different GM varieties appear together in 'volunteer' plants that grow from seed left behind during harvesting.

It is quite conceivable that a herbicide tolerant variety of oilseed rape could be contaminated with insect and fungal resistant genes and other herbicide tolerant genes over only a few growing seasons. Some volunteer oilseed rape (canola) plants in Canada have three herbicide tolerance genes within them, making them resistant to some of the most commonly used agricultural herbicides. English Nature¹⁵ are concerned that attempts to eliminate GM volunteers with multiple herbicide tolerance in 'weedy' crops like oilseed rape could lead to more intensive herbicide use in field margins and un-cropped habitats, which can be important refuges for wildlife.

GM contamination by cross-pollination in the field will result in an unpredictable assortment of mutant genes turning up in seed kept by farmers for the next year's planting. Seed saving is practiced by many farmers in Britain and may account for up to 40%¹⁶ of all seed sown in the UK. So a farmer who innocently sows what he believes to be GM-free seed may find himself harvesting a contaminated crop. Not only will this prevent him selling his produce as GM-Free, but, like Percy Schmeiser in Canada, he may find himself being sued for patent infringements by a giant multi-national.

Dr Brian Johnson of English Nature said: "We do not yet know how 'stacked gene' plants would behave either in farmers' fields or in the wild. The European regulatory system has not yet approved GM herbicide tolerant oilseeds for general release. English Nature will be working with DEFRA and

ACRE to ensure that risks from possible gene stacking are properly addressed, and that we avoid the mistakes that have been made in Canada".

English Nature has been pressing the GM industry to explain how to deal with these issues before GM crops are released widely, rather than wait for stacking to emerge and then try to control the rogue crop plants.

Attacking Organics

The growing demand for organic and additive-free food is inconvenient for the proponents of genetic engineering. It indicates a deepening public distrust in corporate science and corporate spin, first exposed to the acute embarrassment of Monsanto when they tried to flood Europe with GM products in the late '90s. So it comes as no surprise to see the biotechs and their allies taking every opportunity to undermine the organic movement, directly and by proxy, while simultaneously claiming that their technology 'reduces the use of chemicals in agriculture'.

What is surprising - considering the huge resources at their disposal - is how thinly they disguise their real motives and how inadequately they cover their tracks.

As George Monbiot revealed in May¹⁷, any hopes that Monsanto may have mended its ways were revealed as wishful thinking when they were caught out in a dirty tricks deal with PR firm Bivings. The Bivings Group specialises in 'Internet lobbying', which in this case involved inventing fictitious people to label environmentalists as 'eco-terrorists', lobby for embarrassing research papers to be withdrawn and promote industry-sponsored websites. Bivings seem unrepentant. "Sometimes," they boast, "we win awards. Sometimes only the client knows the precise role we played." Sometimes, in other words, real people have no idea that they are being managed by fake ones."

The European Commission's Joint Research Centre concluded that if only 10 per cent of a country or region was planted with GM crops, the resulting contamination would be likely to mean that "organic farms will lose their organic status and face severe problems to grow their crops according to the regulations given by the EU."¹⁸

As if that wasn't enough, the upcoming generation of GM crops is likely to incorporate insect-killing technology, using the organic farmers' own, hitherto effective weapon, *Bacillus thuringiensis* (Bt), which produces a natural pesticide with no unpleasant side-effects. Instead of Bt being applied occasionally as a 'last resort', it will be engineered into the GM plants, causing them to express a low-level but continuous dose of insecticide. The perfect conditions to cause insects to become resistant to its effects and render it useless to organic growers.

The combination of GM pollution and the demise of Bt would leave the organic movement in an impossible position: include GM in the definition of 'organic' – an unthinkable U-turn – or delete from their list all crops capable of crossing with GM varieties – almost equally untenable. It is extraordinary that long-standing proponents of sustainable agriculture should be put in such a position by the vested interests of chemical companies such as Monsanto and Bayer.

Once their goal of eliminating organic farming is achieved, the biotechs plan to be ready with the next technological fix. Whatever this turns out to be, it's purpose will be to establish them as the saviours of our food industry and cement their position as *de facto* owners of the human food chain.

Cynical? Paranoid? That is the problem when discussing the *eminences grise* behind the biotech industry: conspiracy theories spring so readily to mind for the simple reason that they have so often been caught out in lies, mis-directions and subterfuge.

And the more caring, altruistic and public-spirited they try to appear, the less we seem to trust them.

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Footnotes

⁰ Canadian Government report published on 15 February 2002.

Tests on the contaminated canola showed that 77% were contaminated with Monsanto's GT73. 23% had contamination levels greater than 1%.

¹ FoE Press release 30 April 2002

² Co-Operative Bank, 2 May 2002

³ Bionova R&D Operations to Be Shut Down Oakland, Calif., May 13, PRNewswire

⁴ The East Anglian Daily Times May 2, 2002

⁵ Western Morning News, October 21, 2002

⁶ <http://allafrica.com/stories/200205020699.html> GM Products Raise Food Costs Mail & Guardian (Johannesburg, South Africa) May 3, 2002

⁷ FoE web site

⁸ April 29, 2002, Iowa Farm Bureau

⁹ Seeds of doubt: experiences of North American farmers of genetically modified crops, Soil Association

¹⁰ United States Department of Agriculture report, July 2002

¹¹ BBKA GM Conference, 20 September 2002. Phil Chandler attended as representative of the Devon Beekeepers Association. [I asked BBKA Technical Committee member Norman Carreck, research scientist at IACR, to back up his claims for GM safety with published research. He sent me a selection of papers,

several of which contained alarming warnings of potential toxic effects; none unequivocally supported his position; none were studies on whole colonies conducted over periods of more than a few weeks.]

¹² BBKA web site <http://www.bbka.org.uk/>

¹³ Prof. Ingrid Williams, GM Crops, Bee Foraging Behaviour and Gene Flow, Apimondia 2001"

¹⁴ The Economic Value of Bees in the UK, N L Carreck & I H Williams

¹⁵ English Nature EN/02/06 05 February 2002 GM crops may become weedier

¹⁶ Consultation on the EC proposals on the thresholds for Adventitious Presence of Approved GMOs in Seeds, Response from Friends of the Earth August 2002

¹⁷ 'The fake persuaders - Corporations are inventing people to rubbish their opponents on the internet' George Monbiot, Tuesday May 14, 2002, The Guardian

¹⁸ 22 May 2002, SCENARIOS FOR CO-EXISTENCE OF GENETICALLY MODIFIED, CONVENTIONAL AND ORGANIC CROPS IN EUROPEAN AGRICULTURE