

Indian farmers organise to stop Bt brinjal

On 14 October 2009 an Indian governmental agency – the Genetic Engineering Approval Committee (GEAC), part of the Environment Ministry – gave its approval for the environmental release of Bt brinjal.¹ This means that the crop is considered safe for use in an open space, which includes planting on a commercial scale. Its decision followed lobbying by Maharashtra Hybrid Seeds Company Ltd (Mahyco), Monsanto's partner in India, which has been largely responsible for the development of Bt brinjal. Shortly before GEAC announced its decision, Mahyco's managing director, Raju Barware, said on the company's website: "We look forward to a positive decision because it will help millions of our brinjal farmers who have been suffering from the havoc caused by the brinjal fruit and shoot borer (BFSB)". He also claimed that Bt brinjal "has the same nutritional value and is compositionally identical to non-Bt brinjal, except for the additional Bt protein which is specific in its action against the BFSB". This mirrors the US Department of Agriculture's official stand that genetically modified (GM) crops are substantially equivalent to natural non-GM crops.

Bt brinjal would be the first genetically engineered food crop to be approved for commercial cultivation in India, and the government sees it as the first of many. "In the near future we expect many GM crops that have been modified for better availability of vitamins, iron, micronutrients, quality proteins and oils, which would secure nutritional security to the masses", said Minister of State for Agriculture, K.V. Thomas. The importance of this first authorisation was not lost on farmers' and consumers' organisations, along with a wide spectrum of other groups, who immediately organised protests. Faced with this reaction, the Environment Ministry decided just a day after the go-ahead to put the decision on hold for several months. It gave organisations until 31 December 2009 to comment on the report of the expert committee, which formed the basis of the GEAC's decision,² and it has said that it will consult "all stakeholders",³ including scientists, agriculture experts, farmers' organisations, consumer groups and

NGOs, in January and February 2010.

Groups are lobbying strongly to force the Indian government to reverse its decision permanently. According to G. Nammalvar from Vanagam, a non-profit-making organisation in Tamil Nadu that campaigns in favour of ecological farming, "there is no necessity for the introduction of a Bt brinjal in India, which holds the merit of having huge biodiversity. We have 2,500 traditional brinjal varieties in India. Every community is used to consuming a particular variety, i.e. locally produced. Introduction of Bt brinjal with false claims for its advantages will contaminate the local varieties and erode the biodiversity of the vegetable that is consumed by millions." He says that environmental activists, women's collectives, consumers' movements, farmers' associations and traders' associations would join together to resist the introduction of Bt brinjal in Tamil Nadu.

His voice of protest has been echoed across the country. On 7 November 2009 a conference on genetic engineering, farming and food, held in Mysore, called on the state government to declare Karnataka a GM-free region. "We do not want GM crops which can prove apocalyptic for mankind", declared the conference statement. "Let us say never to Bt brinjal." In Trivandrum on 3 December groups organised a Brinjal Festival with, among other activities, a display of local brinjal varieties from the farmers of Tamil Nadu, Kerala and Karnataka. A seven-day festival was held elsewhere in Kerala from 27 December to create awareness of the dangers of Bt brinjal. Over 50 scientists and about 100 delegates from various universities and scientific institutions across the country, besides farmers, policy-makers and representatives of government and non-governmental organisations, participated. Farmers' groups are also threatening to take "direct action" if the government goes ahead with the authorisation.

Meanwhile, at national level, a legal battle is pending before the Supreme Court of India, in which the petitioners are demanding a ban on the release of any GM crops until adequate scientific testing has been carried out and a credible biosafety regulatory system has been put in place. At the same time the government is proposing to set up a National Biotechnology Regulatory

Authority to oversee the testing of biotech crops. Department of Biotechnology Director S.R. Rao said that this will make sure that biotech policies are "based on scientific assessments of risk and not on any sloganeering and campaigning by public interest groups".

Mahyco was the first company to sell genetically engineered Bt cotton – Bollgard – in 2002, and it has faced constant criticism since then. This time it has acted more cautiously and will not itself be selling the GM seeds directly. The promoters of the technology have deftly packaged the release of this Bt crop as an output of a public-private partnership. The partnership – designed by the US government, funded by the USAID and led by Cornell University – comprises Mahyco Hybrid Seed Company Ltd, Tamil Nadu Agriculture University (TNAU) in Coimbatore, the University of Agricultural Sciences (UAS) in Dharwad, and the Indian Institute of Vegetable Research in Varanasi. USAID's Agricultural Biotechnology Support Project II is supporting Mahyco's efforts to gain regulatory approval for the technology.

Many aspects of the development of Bt brinjal are shrouded in mystery, and activists are using Right to Information legislation to try and untangle the complex sequence of events. It is clear that the process started with Mahyco using Monsanto-licensed technology to genetically modify brinjal in its lab in India. The GM brinjal was then crossed with "material" from TNAU. One material transfer agreement (MTA), signed between TNAU and Mahyco, clearly states that "TNAU has supplied to MHSCL [Mahyco] eggplant germplasm developed, owned, controlled and/or in-licensed by TNAU".

Indian farmers have good reason to be particularly concerned about this. They have for years in good faith allowed scientists to gather genetic material from their crops and store it in agricultural universities and research institutes. All this cross-sector, transborder and cross-institute movement of plant material is making many ask some very fundamental questions: to whom do seed and crop materials really belong? Does the public sector National Agricultural Research System (NARS), entrusted with farmers' varieties, have the power to pass on the material to private corporations? And even if there is acknowledgement of the

1 In other parts of the English-speaking world, brinjal is known as aubergine or eggplant.

2 <http://tinyurl.com/ydlhmum>

3 http://ceeindia.org/cee/bt_brinjal.html




years of local farming knowledge behind the folk varieties of brinjal by sharing any “benefits”, can the loss of pure, natural, genetically untampered-with indigenous varieties be reversed or recompensed? Most of all, can large corporations backed by their governments be allowed to take over farming?

There was also a series of “transfers” and “approvals”, which happened with characteristic lack of transparency. In 2007, India’s National Biodiversity Authority (NBA), which became the main decision-making authority under India’s Biological Diversity Act, 2002, gave clearance to Mahyco to import parental

lines from Bangladesh and then to send back the material to East West Seeds Bangladesh Ltd for seed distribution. The company has operations in Thailand, Indonesia, Vietnam and the Philippines. In other words, the NBA actually authorised a multinational company to use Indian germplasm to develop a GM product that would not only be used in India but also exported to India’s neighbours, endangering Asia’s biodiversity.

Some farmers believe that Mahyco’s offer to “provide the technology free of cost” to the NARS is nothing less than a ploy by the GM industry to penetrate the NARS and to leave farmers with little

option but accept Mahyco’s products. For all the talk of the benefits of Bt brinjal, farmers clearly see that the introduction of this first GM food crop would start a process that would seriously jeopardise India’s food and farm systems and the biodiversity that sustains them. They are determined to struggle against it. 

Update: On 9 February 2010, in response to the widespread concern expressed by the public and some scientists, Jairam Ramesh, Minister of Environment and Forests, announced an indefinite moratorium on the release of Bt-brinjal.

Contaminated Canadian flax barred from Europe

In September 2009, farmers in Canada were shocked to learn that their flax (linseed) exports were contaminated with genetically modified (GM) flax. The timing could not have been worse: just as farmers began their harvest, companies in Europe began detecting GM flax contamination, and the European market was closed to Canadian flax. It is not unusual to have crops contaminated by their GM equivalents, but this particular contamination was wholly unexpected because it has been illegal to sell GM flax seed in Canada since 2001.

Flax seeds are used in food products such as baked goods and muesli, and for animal feed. On 8 September, a German cereals company reported contamination through the European Commission’s Rapid Alert System for Food and Feed. Contamination reports multiplied in the following weeks, and by mid-November Japan became the 35th country where contaminated flax was found or where products containing contaminated flax were reported to have been distributed. (Canada and the US are the only countries in the world that have approved GM flax for growing and eating.)

Eight years ago, Canadian farmers themselves fought to have GM flax seed taken off the market, knowing that their European sales – Europe takes 60 per cent of Canada’s flax exports – would be destroyed if GM contamination occurred. The situation is complicated in Canada because GM flax is not actually banned on the domestic market.

As there is no mechanism in Canada by which farmers can get a GM crop taken off the approved list or removed from


the market on economic grounds, the farmers had to find another way to stop GM flax. Flax is one of the crops in Canada that requires variety registration prior to commercial sale of seeds, so in 2001 flax farmers sought – and obtained – the deregistration of GM flax seeds. At the time, 40 seed growers were multiplying 200,000 bushels of GM seed for future demand. As this seed could no longer be sold legally, the authorities ordered the crushing of all the seeds. Despite their efforts, eight years later the farmers’ worst fears have come true. “This is an absolute nightmare for flax growers; it’s why we worked so hard to have GM flax removed”, said Terry Boehm, a flax grower and President of the National Farmers Union in Canada.

The GM flax (tolerant to herbicide residues in soil) was developed in the 1990s by controversial scientist and industry proponent Alan McHughen, when he worked for the Crop Development Centre (CDC) at the University of Saskatchewan. McHughen called GM flax “CDC Triffid”, in reference to John Wyndham’s 1951 horror novel, *The Day of the Triffids*, which features terrifying flesh-eating plants farmed for oil. The flax was developed with public money through provincial government funding to the CDC – obviously without a mandate from farmers. However, the CDC halted its GM research after the flax controversy, which included a public fight with farmers over McHughen’s practice of passing out GM flax seed packets at public presentations.

Canada is the world’s leader in the production and export of flax, which is one of Canada’s five major cash crops, along with wheat, barley, oats and canola. The

price of flax fell 32 per cent before GM contamination had even been confirmed. Farmers don’t yet know how widespread the contamination is or how it happened. It’s likely, however, as in all cases of contamination, that farmers will bear the costs of the clean-up. Canadian farmers are now having to send their flax seed for testing – at C\$105 (US\$100) per test.

Canadian industry continues to see Europe’s zero-tolerance policy as the problem, not the contamination itself. Industry and the government are using the contamination incident to press again for an end to zero-tolerance.

The Canadian government has remained silent about the contamination domestically, not wanting to draw attention to the issue, but in February 2010 a Bill will be debated in Canada’s Parliament that would require an assessment of export-market harm before GM seeds are sold in Canada. 

1 GM flax contamination has reached the following countries: Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Luxembourg, Mauritius, Netherlands, Norway, Poland, Portugal, Republic of Korea, Romania, Singapore, Slovakia, Slovenia, Spain, Sri Lanka, Sweden, Switzerland, Thailand, United Kingdom.

You can see a profile of Alan McHughen at: www.spinprofiles.org/index.php/Alan_McHughen

For updates and more information: www.cban.ca/flax

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