

Bangladesh: Farmers say No to Genetically Modified Vegetables

GM eggplant promoted by Mahyco-Monsanto. Intellectual Property owned by Monsanto

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Plans to introduce a controversial GM variety of brinjal (aubergine / eggplant) in Bangladesh are opposed by 100 civil society organisations around the world. As Mae Wan Ho reports, the issue is arousing powerful passions ...

Bt-Brinjal will have negligible benefit but would present an enormous hazard to human health. It would be profound disservice to Bangladesh if Bt-Brinjal were allowed to enter her food supply.

100 civil society organisations have [written to Bangladesh Prime Minister Sheikh Hasina](#) to oppose the commercialisation of a genetically modified (GM) eggplant.

Known locally as **Bt-Brinjal**, the GM eggplant contains a synthetic insect-killing toxin similar to Cry1Ac from the soil bacterium *Bacillus thuringiensis* (hence the acronym Bt) targeted at the fruit and shoot borer.

Bt toxins are already known to have [many off-target effects](#), including [toxicity to beneficial](#) pest predators, animals and human cells.

The Bt-Brinjal [approved for commercial growing in Bangladesh](#) last November originated from **Mahyco-Monsanto**, but the varieties approved were developed by scientists in Bangladesh. The company tried to commercialize Bt Brinjal in India several years ago and failed.

[“Mahyco licensed and used the *cry1Ac* gene obtained from Monsanto and two supporting genes (*nptII* and *aad*)”]

No bio-safety studies

The risk-assessment dossier submitted by the company essentially contained no studies on bio-safety, and that only came to light when [the Indian Supreme Court ordered](#) the company to release the raw data.

The letter sent to the Bangladesh PM – from groups representing farmers, indigenous communities, consumers, women, scientists, and / or promoting sustainable development and biosafety – points out that Bangladesh has a vast native diversity of Brinjal that would be put at risk by the release of the Bt-Brinjal.

As Brinjal is largely open-pollinated, transgene contamination poses a great threat, the letter says. And it raises important issues over safety.

On 29 September 2013, the High Court of Bangladesh ruled that the government should not release Bt-Brinjal without assessing the health risks.

It also ordered the Bangladesh Agricultural Research Institute, the agriculture secretary and the health secretary to submit a report within 3 months, after conducting independent research on health safety in line with standards set down by the Codex Alimentarius.

Negligible benefit, enormous hazards

An independent analysis carried out by eminent international scientists and submitted to the Prime Minister, concluded:

“Bt-Brinjal will have negligible benefit but would present an enormous hazard to human health. It would be profound disservice to Bangladesh if Bt-Brinjal were allowed to enter her food supply ...

“There are at least four mechanisms by which the introduction of the Bt toxin gene into the Brinjal genome can cause harm. These include (1) the random insertion of the Bt gene into the plant DNA and the resulting unintended consequences, (2) alterations in crop metabolism by the Bt protein that results in new, equally unintended and potentially toxic products, (3) the direct toxicity of the Bt protein, and (4) an immune response elicited by the Bt protein.”

Demands for information refused

However the Bangladesh authorities approved the commercialisation of the Bt-Brinjal in November despite this advice and without releasing the information on health safety that had demanded by the High Court in September.

Civil society organizations in Bangladesh have asked to see toxicological test results as well as nutritional composition analysis of Bt Brinjal submitted to the Biosafety Core Committee, but in vain.

Nor has there been any public consultation on the issue before the decision was taken to commercialize the GM crop.

India, Philippines - trials and release halted

Bt-Brinjal is already notorious in the region. In India, [a moratorium was imposed](#) after a series of public hearings and consultations (see [Bt Brinjal Halted](#)). The then environment minister Honorable Jairam Ramesh said:

“It is my duty to adopt a cautious, precautionary principle-based approach and impose a moratorium on the release of Bt Brinjal, till such time independent scientific studies establish, to the satisfaction of both the public and professionals, the safety of the product from the point of view of its long-term impact on human health and environment, including the rich genetic wealth existing in Brinjal in our country.”

Known as Bt-Talong in the Philippines, the Court of Appeals on 20 September 2013

upheld its decision (17 May 2013) to stop field trials in the country based on the constitutional right to a balanced and healthful ecology.

Release in Bangladesh ‘a threat to India’

More than [20 Indian organizations in Kolkata protested](#) against the commercial release of Bt Brinjal in Bangladesh. Tushar Chakraborty, a molecular biologist, was one of the 250 scientists from across India who endorsed a letter addressed to Indian Prime Minister Manmohan Singh, urging him to stop open air release of GMOs.

Chakraborty said the release in Bangladesh was a “*threat to India*” because it would contaminate Indian brinjal crops. It is vital to keep Bt Brinjal out of the region altogether, he said, as it is the centre of origin and biodiversity for Brinjal, which is an major component of local diets.

There have also been protests in New Delhi, including one at Dilli Haat attended by photographer Joe Athialy, who reports: “*One of the concerns is the threat to all future seeds and therefore Indian agriculture coming under the control of global multinational companies and the charging of exorbitant prices from Indian farmers.*”

“The monopoly of MNCs like Monsanto over the seeds is another major concern, as seeds are no longer in the public domain since they are now the ‘intellectual property’ of these multinationals.”

Dr Mae Wan Ho is the director of the [Institute of Science in Society \(ISIS\)](#), which campaigns against unethical uses of biotechnology. This article was first published on the ISIS website under the title [Don't Grow Bt Brinjal](#). Original references have been excluded in this version and replaced with in-text weblinks.

She says: “Please circulate widely and repost, giving the URL of the original and preserve all the links back to articles on the ISIS website.”

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