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GMO Propaganda Over Facts? BBC Panorama Falsely Portraying Bt Brinjal (Eggplant) Cultivation in Bangladesh as a Success

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The BBC's claim of 90% success for Bt brinjal in Bangladesh has been challenged by a journalist. Claire Robinson reports

BBC Panorama's programme, "GM Food: Cultivating Fear", has come under attack from a Bangladeshi journalist for falsely portraying Bt brinjal (eggplant/aubergine) cultivation in Bangladesh as a success. The programme, which aired on 8 June, featured pro-GMO campaigner Mark Lynas visiting a Bt insecticidal brinjal field and enthusing about the performance of the crop, which was claimed to reduce insecticide sprays and help farmers avoid the effects of pesticide poisoning.

Faisal Rahman, staff correspondent for the United News of Bangladesh (UNB), contacted GMWatch after watching the programme, which he felt "denied the reality of losses the farmers of Bangladesh incurred by cultivating Bt brinjal". Out of concern for the farmers, Rahman wanted to set the record straight. His evidence, together with subsequent investigations by GMWatch, casts serious doubt on the credibility of the BBC Panorama programme.

Faisal Rahman is the author of a report for UNB on the second year of Bt brinjal cultivation in Bangladesh, titled "Bt brinjal turns out to be 'upset case' for famers". The report, published in March this year, was based on field visits and telephone interviews with farmers growing Bt brinjal. The report concluded, "The cultivation of genetically engineered Bt brinjal in the country's several districts has cost the farmers their fortunes again this year as the plants have either died out prematurely or fruited very insignificantly compared to the locally available varieties."

Faisal Rahman's findings

As part of his research for the story, Faisal Rahman interviewed 40 farmers out of a total of 108 growing Bt brinjal this year. He obtained the list of farmers growing Bt brinjal from the Bangladesh Agricultural Research Institute (BARI), which is supervising the Bt brinjal project, and had no prior information about the farmers' experiences with the crop. He visited 12 fields himself and talked to the other farmers over the phone. According to his research, 32 out of the 40 farmers found serious problems with Bt brinjal. For example, farmers Mohammad Haminur Rahman and Mohammad Mobarak Hossain of Sherpur Sadar upazila (sub-district) said they harvested 8-10 maunds (1 maund is around 80 lb) of Bt brinjal three months after the planting, less than half the amount that could be harvested from a local brinjal field of the same size in the same time scale. Ramzan Ali of Jhikargachha upazila in

Jessore said most of the Bt brinjal plants in his field had died.

Faisal Rahman says he did not publish the 32 out of 40 figure because he suspected that the real number of farmers facing loss could have been far higher.

Some of the farmers told Rahman that BARI had strictly forbidden them to talk to journalists. In one case he felt that this influenced the story he was told. “I called a farmer in Jessore. He was in town but one of his brothers was looking after the Bt brinjal field. He said some plants in their field had died but his brother could tell me more. He gave me his brother’s number and I called him instantly. His brother said the Bt brinjal was performing well.”

Call from BBC Panorama

On 16 April, a few weeks after his UNB report was published, Faisal Rahman was called by the BBC Panorama producer and researcher Joseph McAuley. McAuley introduced himself as a BBC journalist interested in investigating the debate on Bt brinjal’s performance at farmer level.

According to Rahman, McAuley asked for his help in visiting some of the Bt brinjal fields mentioned in the UNB report.

Rahman says, “I welcomed him, but with caution.” He hoped that a BBC investigation would cross-check and verify the claims he had made in his own reports, lending them the added credibility of a BBC investigation. Rahman was confident that a truly independent investigation would do just that.

However, Rahman’s note of caution arose from his concerns that McAuley’s independence might already be in jeopardy. “He said he visited some fields in two districts, Tangail and Kushtia. I asked him whether he visited the fields independently or whether there was someone else with him. He said he visited the fields with BARI officials. I asked him whether he thought the presence of BARI officials could produce an independent outlook on the reality.

“I asked this because I had Mark Lynas at the back of my mind, as he posed as independent journalist in 2013. He later produced an absurd piece on Youtube where he was shown interviewing farmers in presence of BARI officials.”

Rahman says the presence of officials during the interviews and filming could influence how the farmers behave: “The colonial legacy here means that officials enjoy a lot of fearful respect from the farmers.”

According to Rahman, McAuley admitted that he had no other contacts to reach the Bt brinjal fields and that was the reason he had visited them with BARI officials. Rahman agreed to send him the phone contacts of some Bt brinjal farmers he had mentioned in his UNB report. He also advised McAuley to visit the farmers on his own, without officials being present.

After Rahman had put the phone down, a thought hit him. “I sent McAuley a text message saying, ‘Can I ask you whether or not your current work on Bt brinjal cultivation is an initiative solely taken by BBC? Is there any other party involved?’

Rahman says, “I felt McAuley’s pride as a BBC journalist was affected by this question as he

called me at once and asked me, 'Do you want me to answer that?'

"I said yes, I wanted to know that. I explained that I was cautious even about helping someone from the BBC, because I had read a shoddy report on Bt brinjal in The Guardian last year. Besides raising false claims, The Guardian report quoted Lynas at length and made allegations against the professionalism of Bangladeshi journalists over their visits to Bt brinjal fields in the first season of cultivation, without giving them a chance to reply."

Rahman asked McAuley whether he knew Lynas: "He remained silent. After some discussion, he said he wanted my help 'as a journalist to a journalist'. I assured him again I would give him the phone numbers of Bt brinjal farmers.

"After some time, he called me again and said something that I could not understand, maybe because he was travelling. After some failed attempts, his assistant, a fluent Bangla speaker, called me and told me what McAuley wanted to say was that I should not mention or publish anything of the conversation between me and him anywhere. I said did not feel bound to abide by that request as farmers in Bangladesh are in great danger, particularly from people from outside the country. Pardon me if I sound a bit xenophobic."

Rahman gave McAuley the addresses of 11 farmers in three districts – Narsingdi, Comilla, and Manikganj – who cultivated Bt brinjal this season, as well as the phone numbers of some of the farmers. In addition, Rahman gave him the phone numbers of two farmers who cultivated the Bt brinjal last season.

When Rahman watched the Panorama episode, he was surprised to find that did not feature any of these farmers. Instead it featured Hafizur Rahman, a farmer from Tangail Sadar upazila, enthusing about the success of Bt brinjal and saying he didn't have to spray insecticides to kill the fruit and shoot borer pest (though he still had to spray for other pests).

Rahman says, "I felt deceived." It was then that he decided to make public the details of his email and telephone conversations with McAuley "for the greater common good – to know whether McAuley visited the farmers or had any conversations over the phone, and what he found. And second, the way Panorama featured Lynas raised doubts in my mind about McAuley's intentions."

GMWatch challenges McAuley

GMWatch emailed McAuley and asked him whether he had contacted any of the farmers whose contact details Rahman had give him. We said we were concerned that the breadth of Bangladeshi farmers' experiences with the crop were not accurately reflected by the programme and that the available testimony about the problems farmers had experienced may have been ignored.

McAuley replied:

"We spoke to a wide range of people to understand more about Bt brinjal; Mr Rahman and the farmers he suggested were a few of the many people we contacted.

"We did meet some of the farmers. They had complaints about the Bt brinjal crops, but those did not concern the effectiveness of the crops in resisting fruit and shoot borers. One farmer said his crops had been affected by bacterial wilt, something which we have been

told has affected a small number of farms. Other farmers we met said that locals around their town had a long-standing preference for brinjal varieties with particular colours and textures, and this meant they were finding it harder to convince local wholesalers to give them a high price. One of those farmers also felt the recent hot weather had impacted on later yields of his crop, which had initially been strong.

"One farmer did not wish to speak to us, and two of the farmers Mr Rahman suggested were not growing Bt brinjal this season… The programme contained interviewees in the UK and Bangladesh who were opposed to Bt brinjal, and other contributors who were opposed to GMOs more generally. We are confident that we reflected facts and a range of opinions about Bt brinjal with due fairness and accuracy, and that we made the programme in accordance with the BBC's Editorial Guidelines."

McAuley clearly received complaints from the farmers about the Bt brinjal's performance but these were not reflected in the BBC Panorama programme.

What's more, McAuley's response is suggestive of the blinkered mindset that has grown up in some parts of the media regarding GM crops. According to this view, as long as the deliberately inserted GM trait (in this case, a Bt toxin that kills the fruit and shoot borer pest) performs as intended, all other aspects of the crop's performance and marketability can be ignored. In the strange parallel universe of GMO hype, a crop can fall victim to bacterial infections and fail in the marketplace but still be hailed as a success.

We showed McAuley's response to Faisal Rahman, who replied:

"Bacterial wilt was endemic to Bt plants in most of the fields. Even according to BARI, bacterial wilt was the reason for the death of 15-100% of the plants in some of the fields I visited. So the problem of bacterial wilt with Bt brinjals should not be taken lightly.

"In most of the fields, Bt brinjal appeared to be more vulnerable to whitefly, another common pest of brinjal. Almost all the farmers used pesticide for whitefly. However, whitefly has not yet appeared as a major threat to non-GM brinjal in Bangladesh.

"Whatever the reason – in almost all cases the official reason is bacterial wilt – Bt brinjal plants started dying from as early as one month to as late as 4 months after planting. In many fields, some plants were alive but the fruits they bore were rotten.

"Even though some farmers – of those I talked to over the phone, it was no more than one-third – claim to have an average or satisfactory yield, most said that the Bt brinjal fruits were not selling well because of the colour and size, and in some cases the fruit being harder than the local varieties.

"The people of Bangladesh are great connoisseurs of brinjals and it sounds a little unnatural to me when someone says a particular brinjal is not sold in a particular area because it is unconventional. People like to pinch the fruit to feel its flesh and they are attracted by the brightness of the brinjal before buying it. I think buyers might have been put off the Bt brinjal fruits by the first touch or sight – the unnaturally hard fruits, the extra weight compared to size, the faded colour compared with the local non-GM varieties. Some of the Bt brinjal farmers agreed with me."

BARI defends GM technology

In judging Bt brinjal solely on the performance of the Bt trait and ignoring other problems with the crop, McAuley seems to have taken his lead directly from BARI. After Rahman's UNB article on the failure of Bt brinjal was published, Dr Rafiqul Islam Mondal, the director general of BARI, sent him a rejoinder in which he attacked the article as "totally partial and worthless". Mondal said BARI had developed the Bt brinjal "only as a resistant [sic.] to shoot and fruit borer" and "the technology was successfully demonstrated among 108 farmers plot. Bt technology is not responsible at all for dieing [sic.] of plants due to bacterial wilt and other insects and pests."

Dr Doug Gurian-Sherman, a plant pathologist trained in molecular biology and director of sustainable agriculture at the Center for Food Safety, commented on Mondal's statement:

"Dr Mondal's assertion that susceptibility to bacterial wilt has nothing to do with the Bt gene or its expression is not supported by any cited research or science. It may or may not be true, but can only be determined by appropriate research or data. His statement does not recognize that genes generally affect the function (expression) of other genes, and most often in unpredictable and unintended ways. When a gene affects the function of other genes, geneticists call this pleiotropy. There are many examples for genes that have been engineered into plants. That does not mean that possible pleiotropic effects of the Bt gene or its expression will necessarily affect the plant's defence against disease. But the possibility can't be ruled out without doing the experiments.

"In fact several GM traits have been associated with possible negative pleiotropy with known plant disease defence genes, or in at least one case, increased susceptibility to a plant disease (none of these engineered genes were Bt genes, but they support the concept).[1] A well-known incidence of unexpected pleiotropy involving conventional breeding occurred in 1970, when a trait for male sterility in corn, which facilitates the making of hybrids, unexpectedly also conferred susceptibility to a previously minor plant disease called Southern Corn Leaf Blight. The result was the loss of a substantial part of the US corn crop. So dismissal of the possibility of pleiotropy in the case of Bt brinjal and disease resistance without providing any data to support it is not scientifically sound.

"Alternatively, the brinjal variety that the Bt gene was inserted into may be more susceptible to bacterial wilt, and may have other problems too. Defenders of GM might say that this is not the fault of GM. But it may be related to the GM process. For example, it is often easier to transform some varieties of crops than others, and these varieties may be more susceptible to some diseases, or have other undesirable properties. It would take considerable time to transfer the Bt gene to the many Bt brinjal varieties grown by local farmers that may already have resistance to the wilt disease, as well as other desirable properties. And farmers may not want these genes placed into those varieties.

"Either way, connections with GM should not be dismissed offhand. Technologies always have a social context. It is as real as any gene. We need to understand how that context is a weakness or strength of GM, not dismiss it. The common refrain that society should consider only narrowly-based risk assessments ignores the reality of the inevitable social contexts of technologies."

BARI rejoinder confirms the UNB report

In spite of Mondal's indignant response to the UNB report and attempt to defend GM technology, the BARI rejoinder does not contradict and in fact confirms the main allegations raised by the UNB report against the performance of Bt brinjal.

For example, the UNB report said, "Harun Mirza, Dilip Kumar Das and Mohammad Ali of Burichong upazila in Comilla planted BARI Bt brinjal 1 (Bt-Uttara) and BARI Bt brinjal 4 (Bt-ISD 006) on about 18-20 decimal plots. All the three claimed that around 150-200 of the 500-700 saplings that were provided to them died earlier within one month's of the planting. The fresh plants that replaced the dead plants also could not survive, while the most of the rest are also dying out, they added."

The BARI rejoinder confirmed, "At Comilla, Bt brinjal plots of [Mohammad] Ali and Dilip Kumar was [sic.] affected and all the seedlings died due to heavy shower during November."

BARI also provides more detailed figures for the failed Bt brinjal crops of some of the farmers quoted in the UNB report. For example, one farmer is quoted in the UNB report as saying, "Most of the saplings (of Bt brinjal) have died. The plants are prone to diseases." BARI confirmed the experience of this farmer and gave a figure of 45% crop failure due to bacterial wilt.

On issues of fact, BARI's rejoinder disagrees with the UNB report in one respect. BARI claimed, "No shoot and fruit borer is seen in the BARI Bt brinjal varieties". In contrast, the UNB report claimed fruit and shoot borer infestation in at least one Bt brinjal field. Faisal Rahman says, "UNB has strong evidence in support of the claim." Photographs of the affected farmer (Mohammad Ali, of Nimsar, Comilla) are shown below.

Missing data for 90% success claim

In the BBC Panorama programme, the narrator and frontman Tom Heap said, “After a false start last year, this season more than 90% of the GM trial plots have been successful.”

This remarkable claim is at odds with the finding of Faisal Rahman that 32 out of 40 farmers interviewed by the end of March this year complained of Bt brinjal crop failure. That’s 80% of the sample interviewed and 30% of the total of 108 farmers growing Bt brinjal. As Rahman points out, the real figure could be much higher, as he did not interview the remaining 68 farmers.

So where did Panorama’s 90% success claim come from? The source was briefly flashed up on the screen as “Cornell University”. Cornell and the Bangladesh Agricultural Research Institute (BARI) are “partner” organisations of the Agricultural Biotechnology Support Project II (ABSPII), which is promoting the Bt brinjal project in Bangladesh and the rest of South Asia.

Cornell University is home to the controversial Cornell Alliance for Science, which is publicizing the Bangladesh Bt brinjal project. The Alliance was launched last year with a $5.6 million grant from the Gates Foundation to “depolarize the charged debate around agricultural biotechnology and genetically modified organisms (GMOs).” Its partners includethe GMO industry group ISAAA, which is funded by Monsanto, CropLife, and Bayer. Cornell gave Mark Lynas a Visiting Fellowship and a platform to voice his pro-GMO views. Lynas now promotes GMOs “to the exclusion of almost everything else”. Cornell paid his travel expenses to the Philippines to write a pro-GMO article.

GMWatch wrote to Cornell’s Alliance for Science, asking them to provide the study or documentation that was the source of the 90% claim. The Alliance’s Sarah Evanega replied

but failed to provide any documentation. Instead she told us, “The original source was BARI – the national Institute leading the project”. We replied: “When we cite data at GMWatch, we ensure we have the study or documentation that is the source of the data. So I am sure you have the document on which this claim is based, even if it comes originally from BARI? Please can you send it to me?” Evanega replied, “Please get in touch with BARI. As I did not produce the [Panorama] piece, nor write it, I do not have the source. Best you get it straight from the source.”

GMWatch put the same question to Cornell’s International Programs of the College of Agriculture and Life Sciences but thus far has not received a response (we will update this article if we do receive one).

GMWatch also put the question to BARI and to Joseph McAuley, the producer and researcher for the BBC Panorama programme. BARI did not initially respond. McAuley did respond, but avoided answering the question and failed to provide any data. He wrote:

“As I mentioned in my email of 28th June, if you have any further comments to make or concerns about the programme, the BBC has an official complaints process. The website is www.bbc.co.uk/complaints. That is the best way to ensure your concerns are dealt with properly and formally. I am happy, however, that the programme was accurate with the information we were given.”

After receiving no reply from BARI for 10 days, we wrote again. This time we received a reply from Dr Rafiqul Islam Mondal, the director general of BARI. He wrote:

“Performance of Bt brinjal during 2015 at 108 farmers fields of 17 districts are quite good and satisfactory. Farmers got a good yield and also a handsome profit by selling their product. Some slides in this regard are attached herewith for your kind information. We have a short video on the performance of Bt brinjal, but it could not be attached due to its large size. We are also planning to arrange a press conference on the performance of Bt brinjal in the last week of this month.”

This statement provided no evidence for the 90% success claim. The powerpoint presentation attached by Dr Mondal also provided no evidence, and mostly consisted of pictures of brinjals in the field.

One possible source for the 90% claim is the BARI rejoinder to UNB. This claimed that only 12 farmers out of 108 were affected by bacterial wilt and insect pests and that the remaining 96 (90%) had “success” with Bt brinjal. But this is just an assertion. No documentation was provided in support.

Doug Gurian-Sherman explained:

“Meaningful data would ideally include side-by-side comparisons of Bt and non-Bt brinjals, grown with the same inputs and managed appropriately by unbiased researchers. Additional comparisons with brinjals typically grown in the areas where the trials were conducted, again with the same inputs and management, would also be valuable. The trials in Bangladesh were apparently farmer trials, not experimental field trials. But that is no excuse for not having some reasonable comparative data.”

The unavoidable conclusion is that BBC Panorama claimed a 90% success rate for Bt brinjal with no sound evidence to back it up. It is especially ironic, then, that the programme

allowed the former EU chief scientific advisor and biotech entrepreneur Anne Glover to claim, without challenge, that anti-GMO campaigners just "make things up".

After Panorama left, farmer's showcase Bt brinjal crop failed

On 20 June Faisal Rahman visited some Bt brinjal fields in Tangail with fellow journalist Delowar Jahan, staff correspondent of the daily newspaper Sokaler Khobor. BBC Panorama's visit to Tangail had made them curious about the performance of Bt brinjal there. They called in on Hafizur Rahman, the farmer who was featured in the Panorama programme to show Bt brinjal was a success.

Tellingly, Hafizur Rahman said he had "stopped taking care of his Bt brinjal field about one and a half to two months ago" because the plants had been slowly dying out, from just three months after planting.

His brother Alhaj had also cultivated Bt brinjal on another plot nearby, and the condition of his crop was worse. The two journalists found a significant number of the plants dead in both the fields. Many plants were bearing fruits that were unnaturally hard and some of the fruits had rotted before being fully ripe.

In two other fields in the neighbouring sub-district of Elenga upazila, the condition of the crop was far worse. Abul Hossain, the farmer the journalists interviewed there, had to sell his Bt brinjals at an extremely low price – Tk 5 a kg (the normal price was Tk 15 and above). His uncle was the owner of another Bt brinjal plot and had the same experience. Both fields were mostly planted with the BARI variety Bt Begun 2 (Nayantara), which rotted prematurely. The other variety, BARI Bt Begun 3 (Kajla), bore excessively hard fruits and the colour was faded.

Hafizur Rahman told the journalists that the BBC team had visited his field along with others from BTV, the national Bangladeshi TV channel which is strictly controlled by the government, Channel i, a private TV channel that supported Bt brinjal from the beginning, and BARI.

The fact that BBC Panorama claimed this new GM crop as a success without following the farmers for at least one complete growing season is an extraordinary lapse of journalistic standards. In effect, they treated an experimental trial as a proven agricultural success – without even waiting to see how the experiment ended.

BBC Panorama following Lynas's lead?

BBC Panorama was not the first to feature the supposed success story of the farmer Hafizur Rahman. Mark Lynas got there first. In April 2015, Lynas had published an article in the New York Times about Bt brinjal in Bangladesh self-interestedly titled, "How I got converted to GMO food", which also featured Hafizur Rahman. Lynas claimed that the Bt brinjal had "nearly doubled" productivity and that Hafizur Rahman had been able to sell the crop labelled "insecticide free". Lynas concluded, "Now, with increased profits, he looked forward to being able to lift his family further out of poverty."

But Farida Akhter, from a Bangladeshi NGO that has been monitoring the Bt brinjal field trials, tracked down Hafizur Rahman and said almost every element of the Lynas narrative was misleading or false.

According to Akhter, far from being a poor farmer that the GM crop is helping to lift out of poverty, as Lynas claimed, Hafizur Rahman is actually "a Polytechnic graduate" and "well off commercial vegetable farmer". And the story about the GM crop enabling him to dispense with agrochemicals was also, it seems, far from the truth – multiple chemicals, including pesticides, were used on the crop. The farmer also complained that the Bt brinjal had a "rough surface and gets soft very quickly", unlike the traditional variety which is "shiny and remains fresh for a longer time".

None of this appeared in Lynas's account, though the BBC did at least admit that some pesticides were used on the crop.

Did McAuley of BBC Panorama merely follow Lynas and the GMO promoters at BARI and Cornell in choosing to put Hafizur Rahman at the centre of its report? It seems likely. This approach is an odd choice for a journalist who was offered the opportunity to take an independent approach by following up the stories of farmers whose experience differed so radically from Lynas's version. It only makes sense if the aim of the programme from the start was to make a GMO promotional.

Who's behind Bt brinjal in Bangladesh?

Faisal Rahman finds it hard to believe that Lynas's version of what happened with Bt brinjal in Bangladesh is preferred by much of the world's media over the version presented in reports from independent journalists based in Bangladesh. He said, "I welcome any other independent journalist or researcher to investigate the debate, but the way the Western world is bending its head to listen to what Lynas has to say about Bt brinjal is surprising to me."

Perhaps the only way to explain it is by looking at the power structures that are promoting Bt brinjal in Bangladesh.

This issue was skated over in the BBC Panorama programme. The presenter Tom Heap paid it lip service by asking Matia Chowdhury, Bangladesh's agriculture minister: "Are you truly free and independent of the big agritech companies or are you in the pocket of Monsanto?" She replied that the Bt brinjal gene was given by Cornell University, "not an agritech company". Monsanto told the programme it does not receive any benefit from the Bt brinjal project in Bangladesh.

Heap took these claims at face value, allowing the impression to stand that the Bt brinjal project is a humanitarian public initiative.

But the reality, as is generally the case with "humanitarian" GMO projects, is more complicated.

Bt brinjal is promoted in Bangladesh and the rest of South Asia by the Agricultural Biotechnology Support Project II (ABSPII), which lists the Bangladesh Agricultural Research Institute (BARI) and Cornell University among its partners.

As we've seen above ("Missing data for 90% success claim"), Cornell has given Mark Lynas a position from which to promote GMOs.

As for ABSPII, it is funded by USAID and counts Monsanto as a partner. USAID has long been known as a tool that the US government uses to actively promote GM seeds and agriculture.

A report by GRAIN stated:

“USAID programmes are part of a multi-pronged strategy to advance US interests with GM crops. Increasingly the US government uses multilateral and bilateral free trade agreements and high-level diplomatic pressure to push countries towards the adoption of many key bits of corporate-friendly regulations related to GM crops. And this external pressure has been effectively complimented by lobbying and funding from national and regional USAID biotech networks.”

Finally, in presenting the Bt brinjal project as a public initiative, agriculture minister Matia Chowdhury failed to mention that the private seed company East West Seed Ltd, now renamed Lal Teer, is a partner in the project. According to an agreement between the company and Monsanto subsidiary Mahyco, Lal Teer (East West Seed) is a sub-licensee for some other Bt brinjal varieties. Environmental campaigners in Bangladesh have accused USAID’s ABSPII project of encouraging Mahyco to provide open-pollinated Bt brinjal seed varieties to BARI free from royalty and the hybrid varieties to Lal Teer against payment of royalties to pursue its “ultimate goal” of the commercialisation of patented GM crops in Bangladesh. Lal Teer chairman Abdul Awal Mintoo admitted that Monsanto and Mahyco owned the GM technology in the Lal Teer Bt brinjals.

Ecology and biodiversity conservation researcher Pavel Partha commented that Bt brinjal cultivation would rob the farmers of their right to produce their own seeds.

Integrated Pest Management a more effective approach than GM

Bangladesh is the home of highly successful Integrated Pest Management (IPM) programmes to manage pests, including the fruit and shoot borer, in brinjal crops. A report by Dr David Andow found that brinjal IPM in India and Bangladesh has been about three times more profitable than Bt brinjal is projected to be, and has directly improved the profitability of small-scale resource-poor farmers.

The estimated economic surplus for brinjal IPM is significantly larger than for hybrid Bt brinjal. Farmers are expected to receive 63% of the surplus from brinjal IPM but only 10% of the surplus from hybrid Bt brinjal. The report concluded, “Increased public investment, greater promotion, and strengthened public policy for brinjal IPM relative to those for hybrid Bt brinjal will result in greater social benefits in India and a major increase in profitability for small-scale resource-poor farmers.”

Conclusion: How BBC Panorama misled the public

BBC Panorama’s claim of a 90% success rate for Bt brinjal this year in Bangladesh is contradicted by the findings of the independent journalist Faisal Rahman, who conducted extensive interviews with farmers and found that 80% of the farmers he interviewed, 30% of the total growing Bt brinjal this year, had problems with the crop.

Joseph McAuley, the producer and researcher of the BBC Panorama programme, failed to provide evidence for the 90% claim when asked and said the source was Cornell University. Cornell also failed to provide evidence and referred GMWatch to the Bangladesh Agricultural Research Institute (BARI), which is supervising the Bt brinjal project. Dr Rafiqul Islam Mondal, the director general of BARI, also failed to provide evidence. We conclude that there is no evidence for the 90% success rate claimed by BBC Panorama.

The main problem affecting the GM Bt brinjal was bacterial wilt. This was admitted by McAuley and Mondal. However, both McAuley and Mondal implied that because the intended trait of the GM Bt brinjal – resistance to the fruit and shoot borer – appeared to work, this justified presenting the crop as a success. Dr Mondol said, "Bt technology is not responsible" for bacterial wilt. But Dr Doug Gurian-Sherman, a plant pathologist and director of sustainable agriculture at the Center for Food Safety, said there is no evidence to support this claim. The wilt problem could be related to the Bt trait, but no one has done the experiments to find out.

BARI issued a "rejoinder", which aimed to rebut Faisal Rahman's report for United News of Bangladesh (UNB) detailing the widespread failure of Bt brinjal in its second year of cultivation. However, the BARI rejoinder confirmed the UNB report in the major points of fact. It differed in one point: BARI claimed 100% success for the Bt brinjal crop in resisting the fruit and shoot borer pest, while the UNB report claimed fruit and shoot borer infestation in at least one Bt brinjal field, a claim for which Faisal Rahman says there is strong evidence.

Even the showcase Bt brinjal crop featured by BBC Panorama failed soon after the cameras left, according to Faisal Rahman and fellow journalist Delowar Jahan, who conducted a followup interview with the farmer concerned.

BBC Panorama also failed to investigate the many commercial links with the Bt brinjal project and the implications for Bangladeshi farmers of losing control over their own brinjal seeds.

Finally, BBC Panorama ignored research showing that existing Integrated Pest Management (IPM) non-GM brinjal programmes are three times more profitable than Bt brinjal is projected to be and have directly improved the profitability of small-scale resource-poor farmers.

In conclusion, for its programme, "GM Food: Cultivating Fear", BBC Panorama appears to have abandoned facts for propaganda.

Notes

1. See Doug Gurian Sherman's reports for the Union of Concerned Scientists, Failure to Yield, High and Dry, and No Sure Fix (available from http://www.ucsusa.org/); also Zeller SL et al (2010) Transgene × Environment Interactions in Genetically Modified Wheat. PLoS ONE 5(7): e11405. doi:10.1371/journal.pone.0011405

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