


Bangladesh
does NOT
need
Bt. Brinjal
STOP
it!



Bt brinjal in Bangladesh
Failures &
Corporate Lies

Farida Akhter
UBINIG & Nayakrishi Andolon

Presented at the Webinar
GMOs are a failed technology
The future is GMO free
Organised by Navdanya International
10 March, 2021

BANGLADESH

Known for very rich Diversity of Brinjals

- Bangladesh is among the few known countries as the country of origin for *S.melongena* (Indo-Burma region). [AEGROPEDIA, 2012]
- Bangladesh has 248 different varieties and cultivars of brinjals (aubergine) in different agro-ecological zones (GOB, 2007).

BRINJAL (Eggplant) DIVERSITY

248 varieties



Jhopla



Dim



Nayantara



Chikon Begun



Tarapuri Kajla



BARI study showed
24 brinjal varieties
resistant to FSB,
infestation rate
between 9% to 30%.
[Source: Mannan et al;
PJBS, 2003]



Tabla

Some Facts on brinjals in Bangladesh

- Brinjal is the second important vegetable after potato grown in two seasons Rabi and Kharif and vary by different agro-ecological zones.
- Kharif brinjal cultivated in 47213 acres, production: 170189 MT (2018-19) – mostly by small scale farmers (Source: Yearbook of Agricultural Statistics, 2019, GOB)
- Rabi brinjal, including HYV and Hybrids: 27,540 acres and 224040 MT in production (2011-12) [source: BBS , 2014]
- Bangladesh Agricultural Research Institute (BARI): 6 HYV, hybrid, mostly for Rabi season
- Private seed companies: 19 Hybrid varieties for Rabi season
- Commercial brinjal cultivation uses HYV and hybrid in Rabi season, which requires application of pesticides.

Bt brinjal imposition

- Bangladesh became a target country for the Bt brinjal under the Agricultural Biotechnology Support Project II (ABSP II) particularly after the moratorium in India in 2010 and court order in the Philippines against Bt brinjal in 2013.
- The introgressions of Bt cry1Ac gene into 9 Bangladeshi local variety brinjals were done at MAHYCO, (Maharashtra Hybrid Seed Company) the Indian company. The ABSP II is funded by USAID and led by Cornell University, USA.
- Knowing about the moratorium in India and the Philippines court order, Bangladesh environmentalists protested against approval process, concerns were expressed by International scientists.
- During 2013, Bangladesh was going through political disturbance for the upcoming election in January, 2014. The last session of the National Parliament was held on 30 October, 2013.
- Since the media report about application for approval, there have been protests, memorandums, writ petitions in the court.

Flawed approval process

- Bangladesh government took an unusually quick process to approve Bt brinjal for field cultivation.
- Application for approval by National Technical Committee for crop Biotechnology (NTCCB) in mid July 2013.
- Writ petition in August, 2013 against approval.
- Expert committee declared all scientific findings sound (meeting on 19th Sept. 2013)
- Writ petitions rejected by court on 22nd September, 2013.
- Second writ petition on health risks got direction not to release without assessing possible health risks on 29th September, 2013.
- Expert Committee meeting sent the report to National Committee on Biosafety at the ministry of Environment.
- Application for approval was sent to the Biosafety Core Committee (BCC) on October 21, 2013.
- Meeting between the Ministry of Agriculture & Ministry of Environment held on October 27 & 28.
- On 30th October, 2013 the approval was given because of political decision.
- No media press briefing was done.



In August 2013, 10 international independent scientists wrote letters to the Prime Minister, Sheikh Hasina, GOB not to allow the introduction of Bt. Brinjal

- Professor David Schubert, Salk Institute for Biological Studies, USA:
unprecedented health hazard to the population of Bangladesh because there has not been adequate safety testing of Bt Brinjal for human consumption.
- Scientists warned: *If the introduction of Bt Brinjal is allowed, an enormous number of individuals are going to consume amounts of Bt toxin that are thousands times higher than anytime previously in the short history of this GM technology.*
- This population is extremely heterogeneous in genetic makeup, age, and also with respect to underlying health

But yet,

The Daily Star

Published: Thursday, July 11, 2013

Brinjal modified

Bangladesh set to join elusive club of 28 GM crop growing countries

Reaz Ahmad



- **Traditional brinjal** is very vulnerable to pests. Excessive use of pesticides by farmers poses health hazards

- **Anti-GM activists** say govt is not sharing test results; farmers will have to buy seeds from multinationals

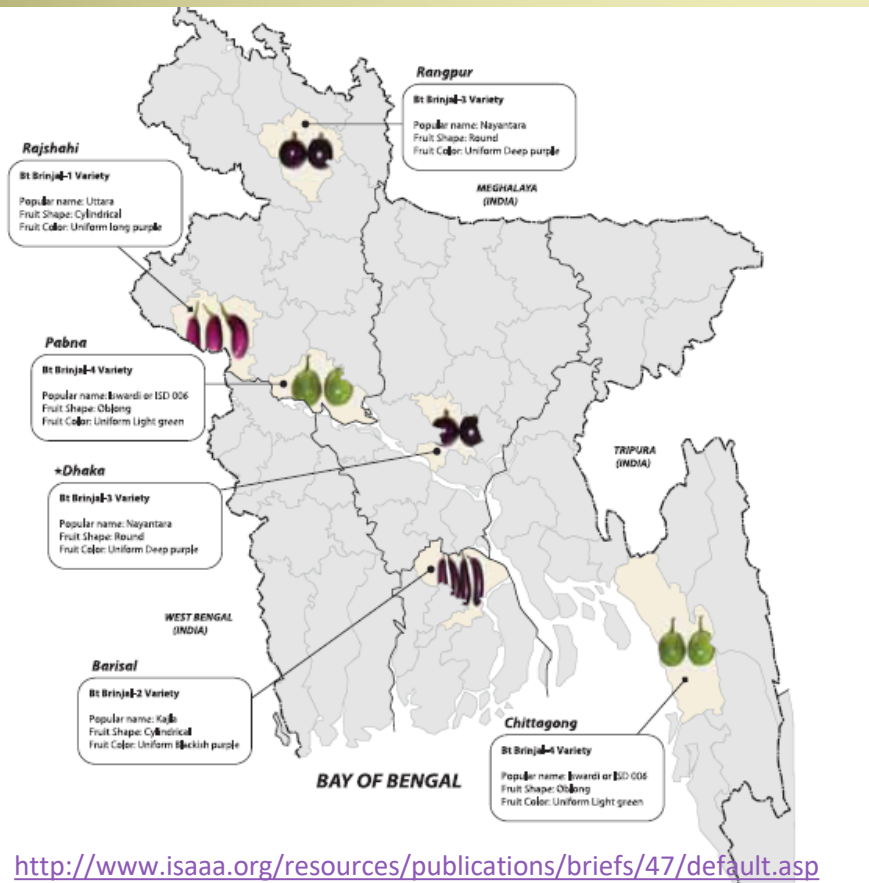
- **Genetically modified brinjal** is infused with a bacterial gene that destroys pests. No pesticide is needed.

- **Scientists/regulators** say there will be public consultation before its release; farmers will be able to use its seeds

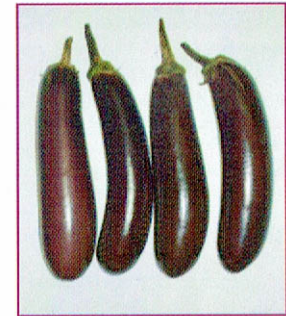
Bangladeshi scientists have readied the country's first genetically modified (GM) crop — brinjal infused with pest-resistant genes — that will see a drastic fall in the use of harmful pesticides in the crop.

Bangladesh Agricultural Research Institute (Bari) will apply to the National Technical Committee for Crop Biotechnology on Sunday for its release next month, said officials concerned

Out of nine Bt brinjals, 4 are given to farmers as Bt brinjal 1, 2, 3 & 4



বারি বিটি বেগুন-১ (উত্তরা)
BARI Bt Begun 1



বারি বিটি বেগুন-২ (কাজলা)
BARI Bt Begun 2



বারি বিটি বেগুন-৩ (নয়নতারা)
BARI Bt Begun 3



বারি বিটি বেগুন-৪
(ISD006)BARI Bt Begun 4

Map by ISAAA on sources of 9 brinjals

[International Service for the Acquisition of Agri-biotech Applications]

Bt brinjal seed distribution

Modified brinjal goes to farmers

Matia distributes saplings of country's first genetically modified crop



Agriculture Minister Matia Chowdhury providing saplings of the country's first genetically modified crop, Bt Brinjal, to one of 20 farmers at a programme at Bangladesh Agricultural Research Council in the capital yesterday.

The Bangladesh Agricultural Research Institute (Bari) has formally started distributing saplings of the country's first genetically modified (GM) crop Bt Brinjal among the farmers. Agriculture Minister Matia Chowdhury yesterday distributed the saplings among 20 farmers from four regions at a programme at the Bangladesh Agricultural Research Council (Barc) in the capital. Bangladesh has now joined a group of 29 countries that grows GM crops. (The Daily Star January 23, 2014)

- There was a hurry in seed distribution b/c of loss of rabi season.
- Election was held on 5 January, 2014, government was formed and by 22 January seeds were distributed by the Agricultural Minister.
- Seeds are given only for Rabi season, where as the pest infestations are higher in the Kharif season.
- First round Jan 2014: 20 farmers in 5 districts – 17 farmers discontinued
- Second round seeds given in September (2014-15): 108 farmers in 19 districts, only one was from earlier round. 58 farmers discontinued, 16 farmers agreed if DAE give them support.
- Six round of seeds have been distributed till 2018-19.

UBINIG Field Studies

- First & second Round (2014 – 2015-16): Farmers were given saplings, fertilizer, pesticides, the net for fencing of the plot and cash money for cost. DAE officials regularly monitored the fields and if there was pest attack they recommended pesticide.
- The plants grew too small to have fruit.
- 16 of the 20 farmers (2014) incurred huge loss, 9 had saplings died at an early stage.
- Second round farmers were mostly new, and agreed to give only 16 deci. Land for Bt brinjal at the persuasion of DAE for 33 deci. It was imposed on the farmers with persuasion.
- 35 types of pesticides including acaricide, insecticide and fungicide were sprayed several times in the Btbrinjal fields as per direction of the supervising officials.
- Farmers were given ‘unfamiliar varieties’ to their areas. In Jessore for example, Btbrinjal 2 (Kajla) and Btbrinjal 3 (Nayantara) are of blackish colour which is unfamiliar to the farmers of Jessore.
- 68% farmers with bad experience were not willing to go adoption for next season.
- Only 13% continued for 2015-16, 10% continued for 2016-17 and only 6% continued for 2016-17.

▪[see the reports in UBINIG website
www.ubinig.org]



General Complaints of farmers

- Farmers are not told what kind of brinjal it is. The names given are Bt brinjal 1, 2, 3 or 4 – **numbered names vs real names**
- Farmers are given false hopes of “no pest attack, no pesticide use”, higher yield/income
- Longer time & weak plant growth, no or male flowers, no or less fruit,
- Reported loss ranged between BDT 15,000 – 30,000
- Local varieties earned BDT 70,000 – BDT 100000.

Atghoria – a local variety



'This is the future of agriculture' Md Rafiqul Islam Mondal, director general of Bangladesh Agricultural Research Institute (BARI), explains to AKM Atikuzzaman about the experiment and controversy surrounding the country's first genetically modified brinjal variety.



"It is totally impossible to label the brinjals before going to market here in Bangladesh. We wrote this observation to the government that it would be difficult to distinguish the varieties with labels in markets".

NEWAGE, March 14, 2014

No labels, violations of approval conditions

- According to a condition imposed by the National Committee on Biosafety, no GM crop can be sold without labels. The Bt brinjals produced by the farmers were sold at local markets allegedly without any label.

[Dhaka Tribune, 14 September, 2014]



Cornell University & Bt brinjal

“success” lies

- The Cornell Alliance for Science was launched in 2014 with a \$5.6 million grant from the Bill and Melinda Gates Foundation to “add a stronger voice for science and depolarize the charged debate around agricultural biotechnology and genetically modified organisms (GMOs)” [CCR, 2015]
- Cornell University is home to the controversial Cornell Alliance for Science, which is publicizing the Bangladesh Bt brinjal project.
- Its partners include the GMO industry group ISAAA, which is funded by Monsanto, CropLife, and Bayer.
- The role of Bangladesh Agricultural Research Institute (BARI) from the beginning was guided by the ABSP II project guidelines, and it had to provide its Regional research stations for Field Testing and later on to get formal government approval for commercial cultivation in the farmer’s field.
- Started back in 2005 it took seven years to complete greenhouse trials. The national bio-safety committee approved the contained field trial of Bt. Brinjal in 2007-08.
- Ministry of Environment passed Biosafety Rules 2012.
- No Biosafety Act yet

Cornell University from the beginning

Weak field trials were conducted in early 2013 in 6 regional field centers of BARI for local adaptability of the crop.



Despite Danger signs, hardly the protection measures were followed



False claims started after repeated failures

- Claims by the promoters that smallholder farmers have rapidly adopted the crop, from just 20 in 2014 to more than 27,000 in 2019 across all districts of Bangladesh [Conrow, 2019]
- The markets in several districts and in Dhaka showed no presence of any Bt brinjal in late April–early May 2020. None of the sellers in the market could identify any Bt brinjal in their stock. None of the buyers interviewed in the Dhaka market could identify any aubergine which would be a GMO.
- In Bangladesh, a program called Farming Future Bangladesh is continuously filling in the media with false information on Bt Brinjal farmers and their so-called success stories.
- But UBINIG investigations of the farmers show different results.
- Bt brinjal farmers are not allowed to talk to journalists or researchers except those with the permission of the DAE officials.
- Farmers are not told what kind of brinjal it is. The names given are Bt brinjal 1, 2, 3 or 4 – numbered names vs real names
- Farmers are given false hopes of “no pest attack, no pesticide use”, higher yield/income

Aggressive propaganda & incentives to government for Bt brinjal

Prime Minister Sheikh Hasina was honored by Cornell University of the United States with a citation in recognition to her overwhelming contribution to the development of agriculture sector and ensuring food security in Bangladesh (May 21, 2015). In response, Sheikh Hasina thanked the Cornell University for innovation of the BT Brinjal.



Engagement of BBC panorama

- BBC Panorama's programme, 'GM Food: Cultivating Fear', aired on 8 June, 2015 featured the pro-GMO campaigner Mark Lynas visiting an insecticidal Bt brinjal field in Bangladesh and enthusing about the performance of the crop, claiming 90% success for this controversial GM crop.
- The presenter Tom Heap, and his friend, GMO promoter Mark Lynas, had grossly misrepresented the so-called success of the brinjal crop.



Gross lies about “Successful” farmer: UBINIG findings

BBC feature

- BBC Panorama featured success story of farmer Hafizur Rahman. Lynas claimed that the Bt brinjal had “nearly doubled” productivity and that Rahman had been able to sell the crop labeled “insecticide free”.



Why rotten Bt brinjals could
not be seen by BBC Drone camera!

UBINIG found

- Hafizur Rahman, far from being a poor farmer that the GM crop is helping to lift out of poverty, is actually "a Polytechnic Graduate" and "well off commercial vegetable farmer".
- The story about the GM crop enabling him to dispense with agrochemicals was 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
- BBC failed to provide sources for the 90% success rate and only referred to Dr Frank Shotkoski, director of the Agricultural Biotechnology Support Project II (ABSPII) programme at Cornell University

Photos from the field of Hafizur Rahman



Protests
 continued



Intimidations against critics

- UBINIG and local farmers were attacked by ruling party workers visiting Bt brinjal field with journalists on 9 March 2014 showing non-performance of the plants.
- Bt brinjal farmers were told not to talk to any journalists or researchers without permission of DAE.
- Media was controlled. Anti-bt brinjal writings and reports about events were not published in major newspapers, except few.
- Bangladeshi scientists with good intention wanted to develop their capacity in biotechnology, but they are not allowed to critic against Bt brinjal or any GMOs.



Bangladesh must be GMO free

