

Shackled in India, Bt Brinjal gets free run in Bangladesh

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The top regulatory authority in Bangladesh, the National Committee on Biosafety (NCB), has given its approval in November, 2013, to the commercial cultivation of the Bt brinjal, making it the country first in South Asia to allow the entry of any edible genetically modified (GM) crop in its market. The four Bt brinjal approved varieties (Bt begun-1, 2, 3 and 4) have been developed by the Bangladesh Agricultural Research Institute (BARI), with the help of technology actually transferred by the India based Maharashtra Hybrid Seeds Company (Mahyco) way back in 2005-06, through a US Agency for International Development (USAID)-funded and Cornell University-managed 'Agricultural Biotechnology Support Project'. At the moment, the cultivation has been allowed at a limited scale with some conditions.

Battle rages on in India

The Indian agri-biotech industry, which of late has been disappointed by the continuous hush hush attitude on the field trials of Bt crops, is looking at the development very curiously. The majority of Indian agriculture scientific community too feels that their voice has been often ignored in the din of political voices crying hoarse. Currently the case is being heard in the Supreme Court of India where both the sides are putting up strong arguments, justifying their respective stands. The court had earlier appointed Technical Expertise Committee (TEC) which in its report had asked for ban on the GM crops till the regulatory process achieved clarity. There are contradicting views between the five independent members of the TEC and a separate report by a sixth member, Dr R S Paroda who doesn't see any issues with open trials of GM crops. He chose to later submit an independent report to the court.

According to Dr Virander Chauhan, director, International Centre for Genetic Engineering and Biotechnology (ICGEB), "India must realize that after Bangladesh, the other South Asian countries such as Burma, Thailand too can follow the suit, leaving India bereft of any benefit despite the years of research. "Bangladesh took technology from India, developed biosafety guideline with our help and now has taken lead too, while we keep sitting on this important issue."

Mr Ajay Vir Jakhar, chairman, Bharat Krishak Samaj who vouches for the successful cultivation of Bt cotton, is of the firm belief that Indian must not wait more on the crucial technologies. Speaking at a event recently, he said, "We Indian are always more concerned about the hue and cry raised by all sections who don't even understand science. The science must be left to those concerned and not confused with the politics."

Dr N Seetharama, executive director, Association of Biotechnology Led Enterprises (ABLE-AG) emphasized that the technology dissemination is very important. "GEAC issue requires to be sorted out as soon as possible as its defunct status is a major concern for whole agri-biotech sector," he says. ABLE-AG has been at the forefront of the pro GM activities and galvanizing support for GM crop trials.

At the same time, the anti-GM food groups based in Delhi have sought government's intervention under international convention and protocol to halt Bangladesh from doing so. The organizations believe that the move may endanger rich biodiversity of entire South Asia. The activists have asked the government of India that it must take adequate measures under the Article 25 of the Cartagena Protocol on Biosafety to stop any such transboundary movement of the GM crop in the eventual case of Bt Brinjal cultivation in Bangladesh. The Convention on Biological Diversity (CBD) to which both India and Bangladesh are parties to, recommends that all measures should be put in place to protect centres of origin and diversity of crops. Raising their concerns, the civil society groups and NGOs like Greenpeace and Coalition for GM Free India have said that it was the same genetically modified Brinjal which was rejected in India and Philippines. "After the failure of getting this risky Bt Brinjal released in India and Philippines, the GM industry has now turned to Bangladesh. Once the transgenic variety of this vegetable gets clearance in Dhaka, it will automatically enter India illegally through porous border", said Rajesh Krishnan, co-convenor of the Coalition for GM Free India.

Dr Vandana Siva, noted environmentalist and a known critic of GMOs in agriculture feels that biodiversity in no way must get hurt. "GM technologies are like half baked product that is being unnecessarily pushed by the industry. Once at one of the meetings of biotech industry, I was told that we cannot wait for more tests because then we will loose revenues and competition. I feel that there lies the problem," she told BioSpectrum.

Meanwhile, a group of scientists have signed a petition to Prime Minister of India demanding ban on all the GM crop field trials outside greenhouse. The five scientists who have drafted the letter are prominent molecular biologist and founder director of Centre for Cellular and Molecular Biology, Mr PM Bhargava; former vice chancellor, Calcutta University, Mr RN Basu; Dinesh Abrol of Institute of Studies in Industrial Development and Jawaharlal Nehru University in Delhi; Mr VS Vijayan, former chairman, Kerala State Biodiversity Board. It has been endorsed by hundreds of other scientists including eleven former and present vice chancellors of universities across the country.

Will there be repeat of Bt cotton experience

Many prominent agri-experts on both the sides agree that once Bangladesh allows cultivation of GM food crops on full scale, the existing moratorium on Bt Brinjal in India may not remain relevant as the transgenic variety of the vegetable, can easily seep into Indian side through porous border. Therefore, it gives rise to a possibility that the government might have to by default agree to the industry demands in the long run as in case of Bt cotton, which now is counted among the big success stories in agricultural space. This might also as well, become a good case of argument in Supreme Court, where there is an ongoing case being battled out between pro and anti GM stakeholders.

Dr Deepak Pental, former vice chancellor, Delhi University is rather very straightforward in asking few hard hitting questions to those who oppose GM. "It will be downright foolish to ignore this development. We keep on typing knots and untying them will take a lot of time. So far we have not released anything in proper fashion. Even those who demand ban on all GM crops for the future, are not talking about Bt cotton. It will be unfortunate that if Bt brinjal comes in under clandestine circumstances and finally illegal cultivation without proper segregation happens, making the government to accept the facts later."

Mr Tariq Anwar, minister of state for agriculture and food processing, recently at an event expressed hope that soon the technologies beneficial for the country will get acceptance from all the sections of the society. "We are unable to derive full benefits of the technologies so far. Biotech is expected to play a great role in the crop improvement. This issue needs to be debated as the issue has been contentious across globe. Technical committee requires to be constituted in a proper way. Robust system required for scientific," said the minister. Anwar further admitted that there certainly are loopholes in the

governance. "Something is seriously wrong with how the system operates," he said.

Evolving common ground is a must

While advanced technologies can provide much of the solutions for improved production and sustainability, the debate about use of such technologies to meet our future food requirements has reached a deadlock for long.

Prof. R B Singh, president, National Academy of Agricultural Sciences (NAAS) feels that though the genetically modified (GM) technologies have been a point of different perspectives and debates, there must be efforts to keep the discussion on. "Different ministries hold divergent opinions on the issue. But the Prime Minister's opinion on the issue has been clear that liberation of science is important for the human society as the hunger of a child can't wait," said Dr Singh on the GM debate.

Dr Vandana Siva puts onus on scientists and feels that they must accept that there is need to have longer biosafety tests. "Rather than just harping on one fact that we are done on biosafety for once and all, they must also take civil society's concerns into account, she says.

Many like Dr Virender Chauhan believe that the ongoing debate has to end somewhere and if it doesn't very soon, then we may end up as losers. "Both the sides have to find a common ground on various aspects and adjust to each others concerns. It is important to agree on certain issues but unfortunately that hasn't happened so far."

One positive thing that emerges out of the scenario, is that there is a common intent on both the sides, to ensure food security for future generations. However, the questions that still hang fire are that whether India in longer run, would be able to produce enough food without any help from genetic engineering? And would activists forever ignore technology intervention in agriculture? Hope we find some satisfactory replies in due course.