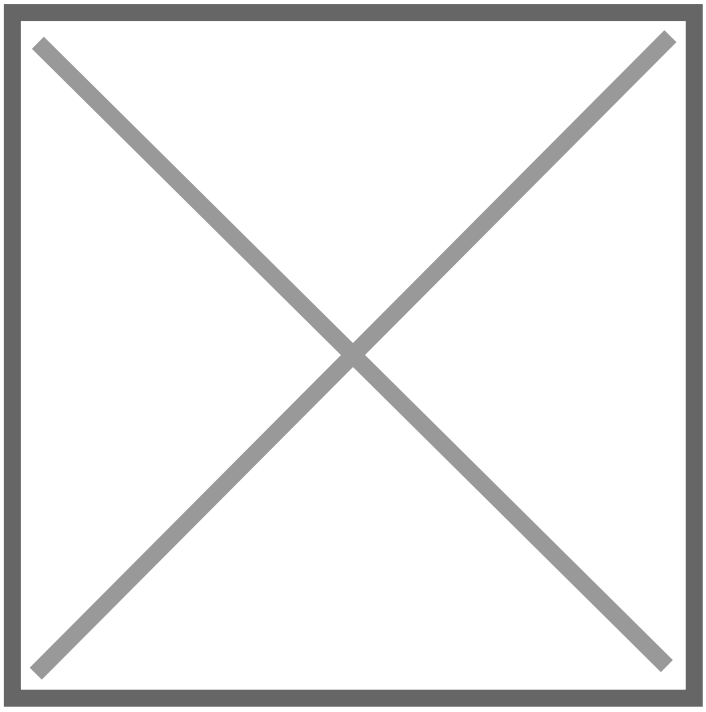
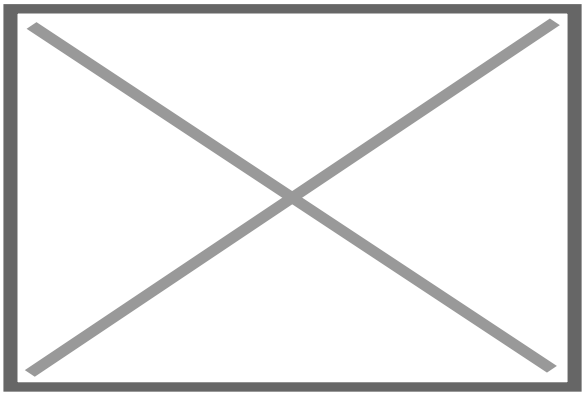
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Double blow to GM crops

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August 9, 2012 proved to be a day of setback for the GM crops in India with two potentially game changing developments concerning GM technology being announced. The first and the one with a larger impact, affecting transgenic crop research immensely, was the recommendation of a parliamentary standing committee to ban all GM crop trials in the country. The other was the radical move taken by the Maharashtra government to ban the sale of Mahyco's brand of Bt cotton seeds for its alleged involvement in black marketeering of seeds. BioSpectrum takes a look at both of these events and the potential impact it will have on the burgeoning agribiotech industry of India

Ban GM crop trials... Is that the solution?

It's the season for incriminating parliamentary standing committee reports it would seem, with the standing committee on agriculture releasing its report Ã¢â?¬Å?Cultivation of Genetically Modified Food Crops- Prospects and EffectsÃ¢â?¬? on August 09, 2012, closely on the heels of another report from the Central Drugs Standard Control Organization (CDSCO). The report, a 506 page opus, has among other things recommended an immediate ban on any field trials for transgenic crops.

The committee consisted of 31 members of both the houses of the parliament. A number of scientists, leading industrialists, farmers association heads, NGOs, and ministers deposed before the committee over a course of 27 sittings. After more than two years of preparation, the document presents a largely anti-GM stand. The report has recommended that, Ã¢â?¬Å?Further research and development on transgenics in agricultural crops should only be done in strict containment and field trials under any garb should be discontinued forthwith.Ã¢â?¬?

Basudeb Acharia, chairman of the committee has gone on record stating that, Ã¢â?¬Å?The committee has come to the conclusion that since concerns on the potential and actual impacts of GM crops to our food, farming, health and environment are valid, GM crops are just not the right solution for our country. The government should stop parroting the promotional lines of the biotechnology and seed industry and their cronies within the technocracy and stand by scientific reasoning and greater public good.Ã¢â?¬? Since almost all political parties were represented in the committee, it questions the future of policy regarding GM research and hence plant biotechnology in India.

Dr Seetharama Nadoor, executive director, ABLE-AG has described the report as Ã¢â?¬Å?disappointingÃ¢â?¬? and Ã¢â?¬Å?unfortunateÃ¢â?¬?. He added, Ã¢â?¬Å?I am not discounting the whole report, but they have to understand that there needs to be a stability in the regulatory process, a kind of predictability especially when the research and development of such products takes 10-15 years. Of course there are things that need to be improved, but there is no need to reject the regulatory policy currently in place, outright.Ã¢â?¬?

A ban on such field trials would be unlike the moratorium placed on Bt brinjal a few years back, since it would stifle the development of the product at the research stage itself, rather than at the time of commercialization. Dr Nadoor adds, Ã¢â?¬Å?Not allowing field trials for new varieties would be akin to developing a drug but never testing it on humans. Crops are meant to grow in the field. Stopping field trials, would mean all companies are as good as finished and government institutes can only publish papers on their research.Ã¢â?¬?

The only transgenic crop that has been successfully introduced in India, Bt cotton, is widely studied in the report. The document mentions the positive effect Bt cotton has had on improving cotton productivity in India, but at the same time presents the claims of changes in organ physiology in animals fed Bt cotton seed. Also, the committee has recommended for an Ã¢â?¬Å?all encompassing umbrella legislation on bio-safetyÃ¢â?¬? instead of a biotech regulatory bill. It remains to be seen if this might serve as an additional roadblock in getting the already delayed BRAI bill from getting passed in the parliament.

The report has gathered support from all quarters of the anti-GM lobby. Neha Saigal, sustainable agriculture campaigner, Greenpeace India has said, Ã¢â?¬Å?The standing committee report exposes the serious gaps in our country's GM regulatory system and the lopsided GM technology promotion policies of the government.Ã¢â?¬? She added that since only Ã¢â?¬Å?profit-motivated seed companiesÃ¢â?¬? were to benefit from GM crops, the government needed to rethink its decisions.

Dr PM Bharagava, noted scientist, founder and director of Centre for Cellular and Molecular Biology (CCMB) was one of the people who had deposed to the committee and was mentioned in the report as well. The committee pointed out that his recommendations for additional testing of Bt brinjal were not carried out by the GEAC, for whom Dr Bhargava is also a supreme court nominee. As a result, the committee also hints at a Ã¢â?¬Å?collusion of the worst kindÃ¢â?¬? for the approval of Bt brinjal without the necessary tests. With regards to the report, Dr Bharagava stated, Ã¢â?¬Å?The standing committee has gone by the evidence which was presented and by what is beneficial for the country. The report was signed by all members of the committee without a single dissent. I think we have a perfect case for stopping all field trials, because we do not have adequate system for assessing biosafety. The only data we have is that which is provided by the company itself, which cannot be relied on.Ã¢â?¬?

Dr C Kameswara Rao, executive secretary, Foundation for Biotechnology Awareness and Education (FBAE) feels that this is a very biased report where the conclusions were predetermined. Ã¢â?¬Å?The members have disregarded the people who have given their opinions. Things like cotton seed oil entering the food chain are hyped up without even understanding that oil would contain negligible, if any amounts of protein in it, especially not Bt protein. If the protein does enter our system, Bt proteins are digested just like any other protein in our body,Ã¢â?¬? added Dr Rao.

Since last year, the regulatory process for GM crops was already in a state of limbo due to the additional requirement of obtaining NOCs from the state governments for conducting field trials. Different governments at the state and national level have differing policies on Bt crops. Manish Tiwari, spokesperson, Congress has however said, Ã¢â?¬Å?What I believe in as a lawyer is the integrity of scientific and regulatory processes. There is a tendency in our system to substitute the opinions of genralists for specialists. Complex scientific issues should be best left to scientists who understand their implications and regulatory bodies who have that remit.Ã¢â?¬?

Previously too, the importance of GM crops for providing food security has been highlighted by the nation's top bureaucrats. Dr Anup Karwa, director life sciences, Krishidhan Seeds Group India echoes this sentiment, Ã¢â?¬Å?In our opinion, GM technology is the logical advancement of science in the service of society. By stopping introduction in a country like India which is a densely populated country and faces continuous challenges for meeting the food, economic and social need of teaming millions, great harm is being done. It is worth taking a pause and thinking that could we have sustained and progressed without self-reliance in food we developed through introduction of green revolution technologies. India was organic in a sense that we were not using pesticides or fertilizers. Yet we were totally dependent on the US and other developed countries for food that were using both. One must clearly see through the hypocrisy and question why we would want to go back to dark days of hunger and poverty again?Ã¢â?¬?

What's next?

The supreme court, in response to a separate public-interest litigation (PIL), has also appointed a separate five-member committee, comprised of members of the scientific community. This committee, is independently looking into the same matter and preparing a report as well, which is slated for release soon. The findings of this committee will also be important, since its conclusions could strengthen or further weaken the case of genetically modified crops.

GM crops have been in the past, and continue to be a highly debated topic, sometimes with more regional and political undertones than scientific ones. They have even been hailed as anti-nationalistic by certain critics who have been quick to point out the role of MNCs such as Monsanto in GM research, but fail to see the 60 plus small and medium sized Indian companies that currently sell genetically modified cotton. A blanket ban on all field trials of GM crops would question the efforts of not only the private enterprises engaged in developing newer varieties, but also the large number of esteemed government institutes such as Tamil Nadu Agricultural University (TNAU), Coimbatore and Univeristy of Agricultural Sciences (UAS), Dharwad and many more who have been actively researching GM crop technology.

Dr K K Narayanan, managing director, Metahelix, one of the first companies to successfully release a GM product based completely on Indian research, says that such delays will only hurt the farmers. He adds, Ã¢â?¬Å?There are thousands of farmers who have taken to this technology much faster than anywhere else in the world. They would not have, if it was indeed such a bad thing. The claim that farmers are forced to buy it, as there is no alternative is misleading, if the farmers wanted non Bt cotton, there would definitely be more companies ready to supply them.Ã¢â?¬?

For the parliamentary committee recommendation to become a reality, the ban has to be reviewed in the concerned departments and then in both houses of the parliament before it can be passed as a law in our country. With a number of legislations including the Biotech Regulatory Authority of India (BRAI) bill still pending, it remains to be seen if this recommendation will get passed as a piece of legislature any time soon. However the ever changing stance of the government on GM technology along with no clear picture on state and national polices, does paint an uncertain and delayed future for GM crops in India. Dr Naraynan however remains optimistic, Ã¢â?¬Å?This will however not be the death knell for biotechnology in India. There will be further delays but the farmers cannot be denied the benefits of this technology.Ã¢â?¬?

Considering the large number of experts consulted in making this report, it would be foolhardy to reject it outright. The need of the hour is for the government to separate political, regional and other such issues and take a strong stand on transgenic crops based on scientific evidence and adopt those measures that are relevant in the Indian context, keeping in mind its socio-economic status.

Ã¢â?¬Å?The standing committee report exposes the serious gaps in our country's GM regulatory system and the lopsided GM technology promotion policies of the governmentÃ¢â?¬?

Neha Saigal

campaigner, Greenpeace India

Manasi Vaidya (with inputs from Rahul Koul)

Maharashtra bans Mahyco's Bt cotton

On August 9, 2012 the Maharashtra government passed an order to ban the sale of Mahyco's Bt cotton seeds in the state. The ban came close on the heels of reports about the artificial shortage of Bt cotton seeds being created, allegedly by the company, in the market

leading to seeds being sold in the black market at more than twice the government stipulated rates.

The director of Inputs and Quality Control (DIQC), Sudam Adsule issued an order stating that, Ã¢â?¬Å?Under the provisions of the Maharashtra Cotton Act, 2009, Maharashtra Hybrid Seeds Company (Mahyco), a joint venture of Monsanto Biotech, is forbidden to carry out its trading activities here. Any violation would attract strict criminal action.Ã¢â?¬?

Following that, Mahyco issued a statement to the press, stating that it had received the cancellation notice on its license being revoked for the sales of Bt cotton seeds from the government on August 13. Additionally it said that, Ã¢â?¬Å?We will work with the authorities to reinstate our license in the state. The state government's decision to withdraw the license of the company for selling Bt cotton seeds in Maharashtra is unfortunate.Ã¢â?¬?

This is apparently not the first time that large seed companies have been found gulity of not adhering to transparent marketing practices. A few years ago, riots had ensued in certain areas in Maharashtra over artificial shortages created by certain companies, leading to the distribution of seeds under police protection. This issue was raised in the legislative assembly by the state agriculture minister, a month back which led to action being taken against the above said company. Mahyco's Bt cotton seeds were reportedly being sold at 2,500 instead of the state appointed price of 930 in the black market.

Many sections of the anti-GM lobby such as the Vidarbha Jan Andolan Samiti while hailing the decision, also called for the ban of Bt cotton seeds from other companies to whom Mahyco had outlicensed their technology to. There has been widespread criticism against Bt cotton in the last few years with reports linking it to decreased yields and farmers suicides, and the ban of Mahyco's Bt cotton seeds was being viewed by many, as the state's opinion against cultivating Bt cotton.

However, an effort has been made by a number of authorities both political and those belonging to farmers associations that this is not a move against Bt cotton or its technology. When contacted by BioSpectrum, the Maharashtra State Agriculture commissioner, Umakant Dangat clearly mentioned that the decision did not reflect the government's stand on Bt cotton. He added, Ã¢â?¬Å?The ban on the sale of the Bt cotton seeds by Mahyco is a result of the company creating an artificial shortage of seeds in the market. This does not mean we are against Bt cotton. This is a criminal matter which is an outcome of the malpractices by the company and its dealers who after creating a shortage in the market indulged in black marketeering.Ã¢â?¬? Dangat also added that this decision would not affect the seed companies that have out licensed Mahyco's Bt cotton technology, since reports of black marketeering were found only against Mahyco. He also stated that they would initiate such stringent action in case any other seeds companies were also found to indulge in such alleged malpractices.

N P Hirani, chairman, Maharshtra State Cotton Growers Marketing Federation too echoed a similar sentiment when he said, Ã¢â?¬Å?There are a number of reasons why the profits from Bt cotton have gone down in some cases, such as poor rainfall and such. However no one can deny the product enhancement in cotton that has been possible today only because of Bt cotton.Ã¢â?¬?

Maharashtra grows more than a third of the country's total cotton. Mahyco sold an estimated 35 lakh seed packets in India last year. On the issue of whether this ban might affect the available seeds in the market, Dangat said, Ã¢â?¬Å?There is no shortage of Bt cotton seeds in the market today. There are many companies who are fully equipped to provide the necessary amount of packets. Land under Bt cotton cultivation of Bt cotton is approximately 40 lakh hectares in Maharashtra. Last year, even though more than 2 crore packets were available, farmers brought approximately 1.25 crore packets only. Hence we had a surplus amount of seed packets with us.Ã¢â?¬?

Industry insiders however have pointed out the undeniable fact that the timing of this ruling is slightly questionable. The allegations against Mahyco have been reported in different media since almost the start of the kharif season this year, but action was only taken in August, towards the end of kharif season. Though this action can be termed as better late than never if the allegations are proven true, it remains to be seen if this action will have any impact on Mahyco's revenues for the next kharif season.

Manasi Vaidya