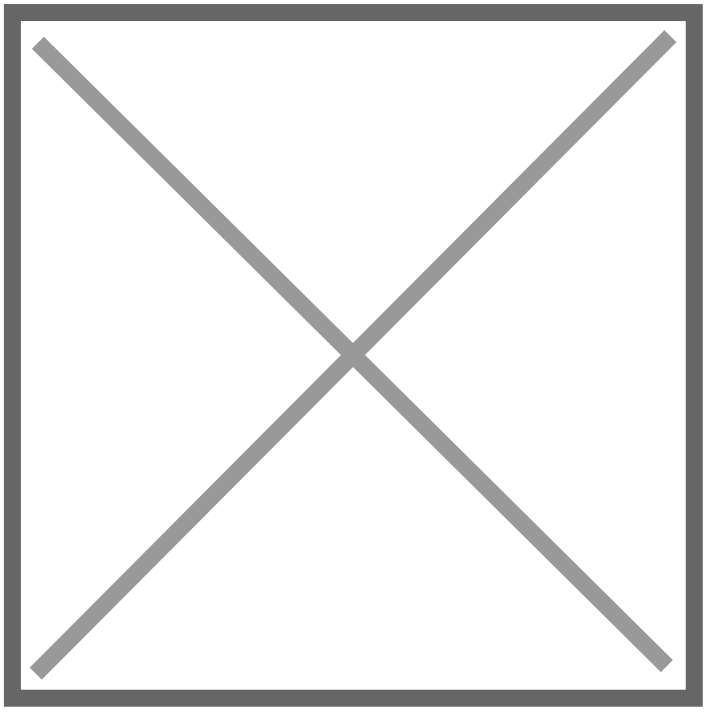
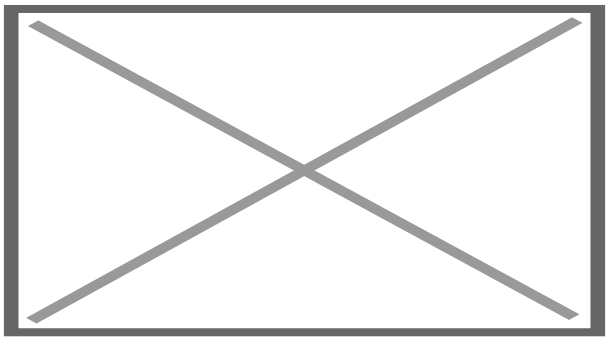
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# Dark clouds gather over Bt brinjal

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*The anti-GM (genetically modified) groups seem to be winning their battle against the introduction of the country's first GM food crop, a Bt brinjal hybrid, developed by Mahyco Seed Company, using Monsanto's transgenic technology. The regulator's (GEAC) approval of October 14, 2009, is most likely to be consigned to the cold storage for a few years at least*

The anti-GM (genetically modified) foods campaign gathered momentum in September 2009, anticipating the regulatory approval of India's first GM food crop, a Bt brinjal variety developed by Mahyco. The regulatory approval came on October 14, 2009. But this setback has not dented the enthusiasm of anti-GM groups. In fact, these groups stepped up their pressure so much the Minister of State for Environment and Forests (MoEF) Jairam Ramesh was forced to announce a nationwide public consultation process before the regulatory approval is implemented.

Ramesh's consultation process, coordinated by Ahmedabad-based Center for Environment and Education (CEE) which started in Kolkata and moved to Bhubaneswar, Ahmedabad and Hyderabad in the last four weeks, has been an eye opener.

Fearing that they will be shouted down, the normally reticent scientific community which primarily works for government-funded research institutions, has kept away from these public consultation process. The few dozen seed companies, including the developer of the Bt brinjal, too have kept away from these meeting leaving the field clearly for the anti-GM brigade.

No wonder, every consultation meeting of Ramesh has been turned into a carnival with drum beats, brinjal garland and folk singers in attendance greeting the minister. At many venues, the minister was told to shut up vocal activist who told him to just listen to them as that was the intent of the consultative meeting. The run up to these meetings had public meetings organized by civil society groups which gave platform to both pro and anti-GM foods lobbies. However, the pro-GM voices have been confined to the sidelines by the relentless campaigners who used a mix of emotional farmers, civil rights activists and retired scientists to drive home the message that Bt brinjal is bad and more safety tests should be done under public watch before its

commercial cultivation is allowed.

Surprisingly, the BioAgri industry has been keeping quiet since October 2009. The members of the regulatory agency, the Genetic Engineering Approval Committee (GEAC) in the MoEF too has been reluctant engage in any discussion. For this special report, BioSpectrum sought the views of every member of GEAC and their cryptic reactions are included in this special feature. Along with it , there is an overview of the tumultuous meetings on Bt brinjal from across the country that happened in the last five weeks.

**Protests greet minister at Bt brinjal meetings**

The first round of public consultations on the genetically modified Bt brinjal was held in Kolkata on January 13, 2010 at the Bose Institute, in which the Union Environment Minister Jairam Ramesh heard opinions of scientists, farmers and research scholars on the issue.

Ramesh said he was holding the first consultation in Kolkata as West Bengal yielded 30-35 percent of brinjals cultivated in the country. The minister clarified he was not judging the future of technology but that he had been given the mandate to get public feedback.

Kolkata University teachers said if government wants to stop the genetically modified crop cultivation, there should be some sense of inquiry. And if it is accepted then India should start slowly in a small-scale and that constant monitoring should be done.

A group of scientists said forcible introduction of Bt brinjal would create economic and political disturbances. Written representations were also submitted to the minister who said he was willing to receive mails on the issue too.

**Bhubaneshwar**

Widespread protests marked the visit of Minister Jairam Ramesh, to the national consultation on commercialization of Bt brinjal in Bhubaneshwar on January 16, 2010.

In a novel method of registering their resentment to attempts to allow commercial production of Bt brinjal in the country, hundreds of women under the banner of Orissa Nari Samaj (ONS) took out a funeral procession of Bt brinjal. They set a model of Bt brinjal on fire. Raising slogans against the scientific community and multinational companies, the ONS members exhibited indigenous varieties of brinjal, which they claimed was produced with the use of organic manure.

Ã¢â?¬Å?The act of trading science for money has proved beyond doubt that it has spoiled the planet and consequently there is global warming. Doomsday may not be far unless the people's movement brings a halt to the act of these destroyers of indigenous seeds,Ã¢â?¬? said G. John, executive director of Thread, an NGO that spearheaded the mass movement against genetically modified food crops.

Women members also held a parallel consultation meeting where they opposed the introduction of Bt brinjal saying the approval by the GEAC was a conspiracy against farmers. Rights activists, scientists and other people from different walks of life addressed the gathering. ONS activists and members of other NGOs marched towards the venue to gift the minister organic brinjals. Various farmers' organizations from far away districts had reached the venue with placards to show their resentment to attempts to allow Bt brinjal in the country.

**Ahmedabad**

Over 1,200 individuals gathered at the JB Auditorium, Ahmedabad Management Association for the third round of the seven consultations on January 19, 2010. People also came from Rajasthan, Madhya Pradesh, Maharashtra and Gujarat to voice their concerns on the much debated genetically modified food crop.

In the first session, out of 28 farmers who got to speak, 18 rejected Bt brinjal. In the second session, where scientists expressed their views and feedback, an overwhelming 13 scientists out of 15 scientists who spoke, took a stand against the entry of Bt brinjal. The minister spoke to an audience of over 500 stakeholders inside the auditorium while another 700 stood outside, waiting to be heard.

The reactions at this round were similar to the ones seen in the earlier consultations. Stakeholders at the Ahmedabad consultations urged the Minister of Environment and Forests to stop Bt brinjal. Consumer representatives, youth, women,

farmers, NGOs, scientists and academicians brandished banners and placards as they waited outside the auditorium. 'Let me choose what I eat', 'We are no lab rats', 'GM food an attack on the environment' were some of the messages given to the minister at the consultation.

The minister suggested that Ahmedabad was important because Bt cotton was successful here. He assured that the ministry was in no hurry to come to a conclusion, and would not take a decision in a closed room.

**Hyderabad**

Jairam Ramesh faced similar but more aggressive protests of farmers in Hyderabad demanding that the government reverse its decision. The protesters from Left-affiliated farmers' outfits and Swadeshi Jagaran Manch (SJM) raised slogans like Ã¢â?¬Å?Bt go backÃ¢â?¬? and mobbed the minister on the dais at an event organised at the Central Research Institute for Dryland Agriculture (CRIDA) in Hyderabad. Those supporting Bt Brinjal also raised slogans in support of their demand, resulting in chaos. Additional police forces were called into the venue to rein the agitators.

As the protesters left the hall, Ramesh regretted the incident as no such scenes were witnessed at other public hearings held earlier. He however asserted that he will not come under the influence of any company or NGO. The minister said he wanted to hold an impartial public consultation over the matter. The final decision on the matter would be taken after holding fair public hearings on the issue in other states.

These four consultations seem to have set the mood for the remaining ones. As the consultation process moves ahead, the country hopes to hear a lot more NOs to Bt brinjal.

## 7 states show Ã¢â?¬Å?red flagÃ¢â?¬? to Bt brinjal

*In a major setback to the BioAgri industry, seven major states which together account for more than 70 percent of brinjal cultivation in the country have said an emphatic Ã¢â?¬Å?NoÃ¢â?¬? to the introduction of Bt brinjal.*

Mararikulam is a popular beach town on the Kerala coast in Alappuzha district, famous for its backwaters. But this year, the New Year revelry was replaced with an unusual event, called the Mararikulam Brinjal Festival, organized by Mararikulam North Panchyat. Thousands of activists and local citizens visited the festival which showcased a few hundred varieties of brinjals grown in the country. Interestingly, brinjal is not a popular vegetable in the coastal state.

Attended by Kerala's state ministers and hundreds of anti-GM (Genetically Modified) food activists, at a big public meeting, it was decided to strongly opposed the introduction of the country's first GM food crop, a transgenic hybrid brinjal variety developed by Maharashtra Hybrid Seed Company (Mahyco) which has been given the regulatory approval on October 14, 2009.

Kerala's finance minister, Thomas Issac, declared the intention of the state to keep it Ã¢â?¬Å?GM freeÃ¢â?¬? and not allow cultivation of Bt brinjal variety. This announcement came on January 2, 2010, just a day before Prime Minister Dr Manmohan Singh arrived in Kerala's capital city of Thiruvananthapuram to inaugurate the annual Indian Science Congress session.

Perhaps, taking a cue from the swelling public opinion against Bt brinjal, Dr Singh called for caution on this front in his speech. Ã¢â?¬Å?The technology of genetic modification is also being extended to food crops though this raises legitimate questions of safety. These must be given full weightage, with appropriate regulatory control based on strictly scientific criteria.Ã¢â?¬?

In the normal circumstances, this would have been an innocuous statement by the PM. But the statements made in these two coastal cities of Kerala have sent ripples through the country. And there is now a clamor among chief ministers in other states to join the anti-Bt brinjal bandwagon. So much so by the end of Janaury, seven states have declared that they will not allow cultivation of Bt brinjal even if the central government gives the final clearance for its commercial cultivation.

Kerala is ruled by a coalition of left parties. West Bengal, another left ruled state, was the next to join the Ã¢â?¬Å?No Bt brinjalÃ¢â?¬? corus with the Chief Minsiter Budhadeb Bhattacharya, showing the Ã¢â?¬Å?red flagÃ¢â?¬? to the transgenic brinjal variety even as Environment Minister Jairam Ramesh kicked off his nationwide public consultation process from the Kolkata in early January.

The ripples then reached the adjoining state of Bihar where the Chief Minister Nitish Kumar, said Ã¢â?¬Å?noÃ¢â?¬? to Bt brinjal for the moment. He said the issue was carefully considered by the Rajya Kisan Ayog (state agriculture commission), which, after deliberations with farmers, agricultural scientists and agricultural officers was of the opinion that there should be

an adequate number of trials to see its performance in different agro-climatic conditions in the state.

Orissa was the next state to say no to Bt brinjal. Within a few days, Karnataka's Horticulture Minister Umesh Katti publicly expressed his preference for traditional varieties brinjal which are grown in the state and cautioned against the introduction of Bt brinjal in the state during a meeting with farmers. Ã¢â?¬Å?I have instructed the officials to encourage and prepare a blueprint to develop our own varieties of brinjal. We have seen the plight of Bt cotton and its consequences. Why introduce Bt brinjal and bear that again?,Ã¢â?¬? Katti said.

Within a few days, Karnataka Chief Minister B S Yeddyurappa approved Katti's stand and told a delegation of anti-GM groups which met him on January 25 that state would not allow the transgenic varieties of brinjal for cultivation. Ã¢â?¬Å?The state is the 5th largest producer of brinjal in the country. We are growing more than 40 varieties of brinjal. We will not allow anything that may put our farmers in a difficult spot,Ã¢â?¬? said the chief minister.

Soon leaders of other brinjal growing states like Chhattisgarh, Madhya Pradesh and Andhra Pradesh also made public announcements against Bt brinjal. Interestingly, of these seven anti-Bt brinjal states, six are ruled by parties opposed to the central government run by the Congress party. The 7th Ã¢â?¬Å?no Bt brinjal stateÃ¢â?¬? Andhra Pradesh is run by the Congress party. Tamil Nadu, a partner in the ruling coalition in Delhi, has called for caution on the issue.

## Voices in the wilderness on Bt brinjal

*As the anti-Bt brinjal juggernaut which has dozens of civil society groups, environment organizations, a range of non-governmental organizations (NGOs) corner the entire media attention in the last five to six weeks, a small group of agricultural experts have been making some attempts to get themselves heard in the din.*

Ã¢â?¬Å?We are scientists. We cannot win a shouting match with the activists at the public consultation caravan that has been going around the country,Ã¢â?¬? said a dejected Prof Kameswara Rao, a retired agricultural scientists and now secretary of Bangalore-based Foundation for Biotechnology Awareness and Education (FBAE), a biotechnology advocacy group.

However, the group which has some of Karnataka's best agricultural scientists as members, rebutted every issue raised by anti-GM activists with scientific facts, at a meeting with the media. Even when the agricultural scientific community in the wide network of publicly funded laboratories keep quiet and the BioAgri industry itself not very vocal about Bt brinjal, FBAE has joined the debate in a healthy way.

**These are some clarifications provided by FBAE on the Bt brinjal issue:**

- Bt brinjal helps in reducing the cultivation expenses on the use of synthetic pesticdes up to 77 percent, benefiting millions of farmers by enhancing marketable yield. The consumer gets health fruit and value for money paid. It also greatly reduces the risk from synthetic chemicals to the farmers, consumers, non-target organisms, soil, water and environment in general.
- Bt brinjal has passed through the prescribed mandatory bio safety tests according to Indian regulations. Two expert committees reviewed the bio safety dossier. The second committee concluded on October 8, 2009, that the Bt brinjal with event EE-1 ( Cry 1 Ac) has been extensively tested for its bio safety and no additional studies/review are necessary. Based on this, on October 14, 2009, the Genetic Engineering Approval Committee (GEAC) approved Bt brinjal for commercialization.
- However, the Minister of State for Environment and Forests (MoEF), had opted for further consultation with different stakeholders, which virtually overrides the decision of the GEAC. All the stakeholders had already involved themselves on the issue of Bt brinjal for about five years.
- The stand taken by the MoEF has created a lot of regulatory uncertainty for no valid scientific or environmental concern. No technology developer can afford to operate in the country to develop any biotech crop with such an uncertainty of an approval process that is not based on science.
- The charge sheet by activist include several issues, such as that a) genetically engineered (GE) crops are toxic and allergenic, b) they harm non-target organisms, c) gene flow from transgenics eliminates related varieties/species, d) they become super weeds and eliminate all vegetation, e) they negatively impact ecology and bio diversity, f) there is a terminator gene in GE crops affecting farmers' interests, etc. They even attribute farmer suicides to failure of GE crops. There is extensive scientific literature that amply demonstrates that there is no truth in any of the above charges and allegations.
- The activist make an emotional argument that India is the country of origin of brinjal, for which there is no scientific evidence.

- The opposition to Bt brinjal means to India nothing but a reduced marketable yield, an increased use of pesticides (with economic as well as health damage to farmers, consumers and environment). The government should decide whether to help Indian farmers or pesticide producing corporations.

*N Suresh & Jahanara Parveen in Bangalore*