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# â€œNo scientific evidenceâ€?

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## “No scientific evidence”

*—MK Sharma,  MD, Mahyco Monsanto*

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*In the early 1990s, Mahyco was growing cotton but the management felt that the country faced huge loses because of the attack of insects and wanted  to develop a new solution to be resistant to such attacks, a technology which can overcome such a predicament. That is when Monsanto came into the picture and it licensed its technology to Mahyco and a joint venture was formed in 1994. Monsanto gave Mahyco the gene, but it was the latter which initiated the transformation of that gene. MK Sharma, MD, Mahyco Monsanto, shared his views on the debate on GM Foods.*

Dr Ramadoss has expressed his apprehension on GM Foods. Is he justified?

Dr Ramadoss cannot say such a thing because  Bt Brinjal has been thoroughly tested  as per the guidelines. They are found to be harmless. The farmer will have to spray less pesticides because normally excess pesticides in a way enters the food chain. That is when it can be a health hazard. The environmental damages are also less in the case of a Bt crop and above all farmers also gets additional revenue.

In urban areas we heartily welcome any new form of technology like computers. Why should we then hinder and put obstacles when a technology is made available to farmers?

I can confidently say that the Indian Regulatory system is the best in the world and it is very stringent. It will release aproduct only when a product is thoroughly tested .
When people just oppose for the sake of opposing no matter how much of logic or rational reasons you put forward in front of them they will never be convinced because they have their share of prejudices and preconceived notions.

## Why India needs GM foods?

India needs GM Food crops more than any other country. Brinjal is a tropical plant and grows well in warm areas like India and Bangladesh. It is a poor man's crop and farmers are dependent on it not just for revenue purposes but for daily social requirements. If you go to a field, even if he is growing cereals, he will grow a few brinjal crops.
To kill one insect, a farmer sprays anywhere between 20-50 sprays of pesticides in a crop of 120 days. As a result, there is a damage of 40-60 percent. These sprays are also a health hazard to the farmers who do not even wear a mask while spraying.
Farmers had readily accepted this technology in the case of Bt cotton and am sure that the same will be replicated for Bt brinjal. 80 percent of farmers use transgenic seeds today.

## Why are some countries opposing it?

These countries have less area for agriculture. Agriculture is not their main source for economic growth and moreover it isnot a need because their production of non Bt crops is so high. In places like Africa it is more of ignorance and apprehension towards new technology. India in contrast is ahead of such countries. China is in the process of releasing Bt rice. It had mastered the hybrid seeds for rice and the Chinese Government is proactive.

**Bt Brinjal**
The following environmental biosafety studies and food/feed safety studies which are prescribed by the Government of India regulatory bodies have been completed on Bt brinjal:
Pollen flow studies- 2 Locations (2002)
Acute oral toxicity studies in rats (2003)
Mucous membrane irritation test in rabbit (2004)
Primary skin irritation test in rabbit (2004)
Multi Location Trials and ICAR trials (2004)
Subchronic oral toxicity study (2005)
Allergenicity study in rat (2005)
Multi Location Trials and ICAR trials (2005)
Subchronic feeding studies in goat/rabbit (2006)
Socioeconomic and risk assessment (Various papers published)
Large Scale trials through Ind an Institute of Vegetable Research (2007)

The additional environmental biosafety studies and food/feed safety studies have also been completed on Bt brinjal:
Fish feeding study (2005)
Chemical fingerprinting of Alkaloids (2006)
Chicken feeding studies (2006)
Lactating cow feeding studies (2006)
Germination and weediness studies
Aggressiveness studies
Soil microbiota studies
Substantial equivalence studies
Protein expression studies
Baseline susceptibility studies
Protein detection in cooked fruits
Molecular characterization and event ID
Limit of detection of event at 0.01% level
Crossability with wild relatives
The complete biosafety has been submitted to RCGM and GEAC and we are awaiting a hearing.