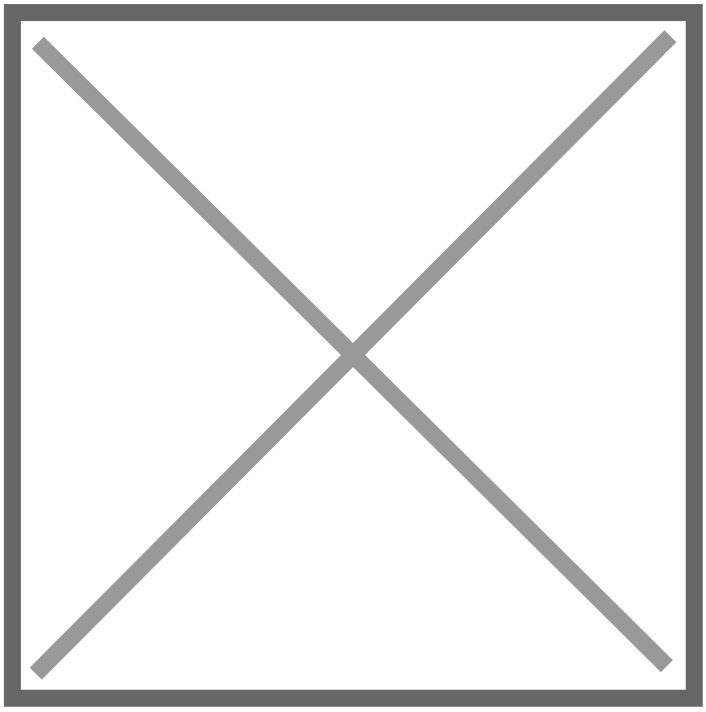
Transgenic supporter

21 July 2003 | News



There are not too many people who know more about Genetically Modified (GM) products than Dr Shivramiah (Shanthu) Shantharam. For, in 1986, as a director at the US Department of Agriculture (USDA), he supervised the field trials of the world's first GM tobacco variety. The tobacco did not have a full-fledged external gene introduced in it but carried a marker gene. And this was considered to be the beginning of the advent of GM crops. The trials were conducted at the North Carolina University, Raleigh, and he wrote the first environment impact assessment of the product. During his 12-year stint at USDA, he had supervised over 5,000 field trials of various GM crops. Some 15 GM food products are now in the US market. Shantharam had played a key role in developing the regulatory policy for transgenic crops and micro-organisms for field testing and commercialization in the US.

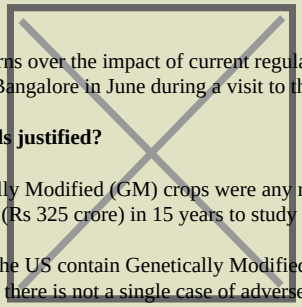
A molecular biologist by training, Shatharam has been handling the external outreach program of one of the world's leading bioagri companies, Syngenta, from Basel, Switzerland. From July, he is pursuing his entrepreneurial dreams by starting a biotech consultancy, Biologistics from Washington DC.

Before joining Syngenta, he was Visiting Research Fellow at the well-known International Food Policy Research Institute (IFPRI), Washington DC. There he estimated the costs of regulation and regulatory policies on biotech product development and technology transfer. He has also conducted extensive research on the impact of crop biotechnology on subsistence and poor farmers in developing countries. Another important work of his relates to biotechnology assessment to identify useful technology for adoption by farmers in developing countries.

A powerful speaker, Shantharam is a regular participant at leading biotechnology conferences around the world. He had lent his expertise to several biotech projects. Notable among these were the inputs as a technical resource person on the steering committee of the Asian Rice Biotech Network and the Agriculture Biotech for Sustainable Productivity (ABSP) for over a decade. Shantharam continues to play an active role in ensuring harmonization of biotech policies and supports several biotech regulatory capacity building activities in developing countries.

N Suresh

"India's GMO policy is shaped by three activists"



Shantharam shared with biotech enthusiasts his concerns over the impact of current regulatory policies on GM products at a meeting of the Foundation for Biotechnology Awareness and Education (FBAE) in Bangalore in June during a visit to the city to see his mother. Excerpts:

Are the apprehensions about the safety of GM foods justified?

There is no shred of evidence to believe that Genetically Modified (GM) crops were any more dangerous than any other crop introduced in the market for centuries. The European Union (EU) has spent over $65 million (Rs 325 crore) in 15 years to study the impact of GM products. And it has given a clean chit to GM products.

Over 70 to 80 percent of the food items consumed in the US contain Genetically Modified Organisms (GMOs). Nearly 350 million Americans are the guinea pigs who have been consuming these products for 15 years. Yet there is not a single case of adverse reaction reported due to GM foods. What more evidence do you need about its safety?

Then why is there a lot of opposition to these products?

It is not the hard core data which is available about these products which people are very critical. Critical assessments based on scientific data are fine. But there are people, especially the die-hard opponents of GMOs among the NGOs who refuse to accept the scientific evidence. If you ignore the data just to stick to your point of view, there is no end to this debate.

You have played a key role in evolving the regulatory framework for GM products in the US. How are the regulators around world responding to GM products?

To satisfy the unscien-tific demands of these opponents, the regu-latory systems all over the world have become rigid and hence very expen-sive. According to a study done by the International Food Policy Research Institute (IFPRI), Washington DC, the average cost for complying with the regulatory requirement for a single GM product is $5-6 million (Rs 25-30 crore) in the US. And because of the unofficial moratorium on GM products practiced by the European regulators in the last seven years, the cost for dealing with the regulator is $9-12 million (Rs 45-60 crore). Imagine how much unnecessary costs are incurred just to satisfy these mindless critics.

There have been several controversies about GM products. What is their status now?

Almost all the controversies related to GMOs have been blown up beyond proportions.

Take for instance, the celebrated case where the Bt corn was found to be a threat to the Monarch butterfly in the US. Cornell University researchers who highlighted it first had actually erred. After three-and-half years of research, spending some $6 million (Rs 30 crore), USDA was able to prove that the Bt corn crop did not affect the butterfly population.

In the StarLink corn case too, similar thing happened. Some researchers while evaluating simulated data found 30 percent of the product had traits similar to some allergy-causing substances. It turned out from actual data that the simulated results were an aberration and it did not occur in real products. Meanwhile, the company suffered losses over $1 billion. The company itself does not exist, as it had to be sold to the Bayer group.

In the recent case involving Pioneer Seeds which is part of DuPont, the $80 million fine was for a minor technical violation.

How can the technology overcome such hurdles?

It is a pity that the silent majority of people who know more about this topic, that is the scientific community, do not speak out. Because, they don't really care about this debate. It is time at least students of agriculture raise the scientific issues and counter the anti-GM lobby. There is no point in worrying about your college seats or jobs. If there has to be jobs in the future in this sector, GM technology has to be accepted. Because, without GM technology, there will not be much progress in agriculture in the future.

What will be the impact of this in the long run?

Politicization has brought this technology to a standstill. If the European Union doesn't change its decision on GM crops, this technology is not going to reach Asian and African countries where it is needed urgently to improve crop productivity.

Even India is going to suffer. India doesn't allow import of GM products. What is the basis for this decision? Critics say it is not tested enough. But look at the conventional plant breeding process. It is a mysterious process. Hundreds of genes from one set of plants are transferred to other plants. The breeders have absolutely no clue about the gene transfer. At least with the GM technology, you are in control of the gene that is transferred to a plant.

Another fear is that genes will escape into the environment. Genes have been escaping into the environment for ages. So do the pollens. How is it any different with GM crops? In fact, it may be actually beneficial if the pest resistance characteristics are transferred to other plants.

The positive effects of GM technologies are well known. Still why is the regulatory authority in India going slow on this issue?

The rules for GM products are now set by the activists. Not by scientists, not by experts, not by policy makers, not by the government. They are always ahead of the other players in this game. The other people are not able to counter these activists. The strength of these activists is the high "trust factor" people have for them. According to a recent study by the World Trade Organization, majority of the people have more faith in NGOs than in their regulators, governments, scientists and companies.

Can agri biotech companies afford to wait for a long time for the disposal of their applications?

Governments across the world are promoting biotechnology in a big way. In India too this is happening. The governments are providing fiscal incentives, building biotechnology parks and several other facilities. But the governments should address the basic issue of acceptance of the GM technology. Otherwise, the investments will not take place. For companies, it is an uphill task to change the negative perceptions about this technology. It is a major public relations task. No other technology in modern times has faced so much opposition. The governments have to make the investments in this technology worthwhile.

Take the case of the Council for Biotechnology Education in the US. It is spending some $60 million to educate the people about GM products. This money should be actually spent on further improving GM products to benefit more people.

In India, the protest is based on issues which are being raised in Europe. There is not a single indigenous issue over which the protest against GM products is