'Poverty is probably more dangerous than the side effects of GM seeds'

To GM or not to GM: That is the Big Question?

On 1 May 2009 a Supreme Court bench comprising Chief Justice K G Balakrishnan, Justices P Sathasivam and J M Panchal made a startling observation ***[C.eldoc1/g74a/01may09toi1.html]***. The apex court in the matter of PILs seeking stringent regulatory mechanism and advanced testing for the toxicity of the genetically modified organisms (GMOs) said that' " GM seeds could possibly be a means to eradicate hunger and poverty. Poverty is probably more dangerous than the side effects of GM seeds".

A little earlier, no less a person then the Chairman of the National Biodiversity Authority (NBA) had said that, "…genetically modified crops are the only answer to increase the production and productivity and to solve malnutrition problem in the country", and that "I am surprised to note that many non-governmental organizations are shouting from rooftops against the introduction of GM crops ***[C.eldoc1/g74a/28jan09h1.html]***. They are either ignorant about the ground realities or have some ulterior motive". This from the head of the very office that has a critical role in conservation of biological diversity and protection of people's resources and knowledge under the Biological Diversity Act of 2002.

What is remarkable about the above two quotes is they are saying what agribusiness giants like Monsanto ***[C.eldoc1/g74a/06jul06et1.pdf]*** - who are in the business of marketing GM products- for more that two decades. Does this imply that the supreme judicial institution and the national body charged with the task of monitoring the entry of such organisms are in favour of GMOs?

The principle ***[C.eldoc1/g74a/PIL_October27.pdf]*** concern of the petitioners who filed a PIL before the Supreme Court is that there has been the lack of technical competence, transparency and accountability in the policymaking and regulatory bodies, which could have damaging consequences in a new technology area like GM crops. They were also asking the Court to direct the Union of India not to allow any release of GMOs into the environment by way of import, manufacture, use or any other manner unless the following precautions are taken ***[C.eldoc1/g74a/01jan09gec1.html]***. Thus the issue on GMOs boils down to the fact that until effective mechanisms were in place to assess the harmful effects of GMO, they should not be allowed into the country.

There are two sides to the GM story as it is unfolding today. Critical Concerns takes a look...

What is a GM crop?

Genetically-modified (GM) plants are created by the process of genetic engineering, which allows scientists to move genetic material between organisms with the aim of changing their characteristics. The actual transfer of genes into selected organisms takes place in a laboratory. This is followed by field trials before the plant is grown commercially.

Why are GM crops controversial?

Studies establish that these crops carry certain risks like unintended introduction of allergens into foods, adverse effect on ecological balance, development of resistance in pests against them and likelihood of affecting non-target organisms. They are also not considered safe to eat and associated with toxicity and carcinogenicity Many people have strong ethical, cultural or religious objections to them. For example, vegetarians object to eating food that contains animal or, even worse, human genes. Studies in Europe and the UK have shown that consumers are disgusted at the thought of food containing human genes, like human growth hormone genes.

What is the difference between GM and traditional crossbreeding of plants and animals?

In GM, a specific piece of DNA is taken out and transferred directly into another organism, and is not limited to species boundaries. In traditional breeding, mat*ing* is done sexually and limited to the same species.

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Has the 'gene revolution' entered your kitchen?

Ever complained of your greens being insipid or tomatoes not being tasty enough? All of us have heard of retail outlets that proudly declare that their vegetables stay fresh much longer than the "local" ones. Several people, especially those who like their food products fresh and wholesome, complain that fruits and vegetables available in the market are a "modified" lot. However, with the law not having permitted genetically modified (GM) crops in the country, all speculations can be laid to rest, at least officially .

But that is just one side of the story. It is common knowledge that GM food or food products made of GM crops cannot be imported to India. Now, taste this: recently, a multinational chain released a corn-based snack, which found its way to the shelves of all major retail outlets.

Anti-GM activists got the product tested in a university in the U.K. only to find that the corn which was used is indeed genetically modified.

"The GEAC, when approached, redirected the complainants to the Director-General of Foreign Trade who washed his hands off the matter saying it doesn't come under his purview," explained environmentalist Ashok Ganguly of Greenpeace. Caught in red tape, the product continues to be consumed: unlabeled and unannounced.

Cases like these draw attention to the need for labelling. The "I Am No Lab Rat" *(www.iamnolabrat.com)* campaign, comprising various civil society groups, has been petitioning and speaking to various governments to impose a blanket ban on such products. Also, they have been seeking labelling of products in the market, so there is some level of accountability.

- The Hindu, Wednesday, Feb 04, 2009, **[C.eldoc1/KICS/090204h1B.html]**

Do We Need Genetically Engineered Foods?

Apart from the scientific debates on the merits of genetically engineered food, there are equally, if not more important, debates on the socioeconomic impacts of the way this science is being used.

1. There is a major question about the motives of corporations and countries who are using the food shortages of the developing world as a marketing strategy to gain acceptance for GE food. In addition, they want to create dependency on it via patents and intellectual property rights. The US opposition to labeling of GE products and to other precautionary steps and measures that states may wish to take, is of paramount concern.

2. Despite the current difficulties and problems with GE crops and products. Why are they still being given the go-ahead? The main reason is that there is a lot of money and profit involved in this. For the biotech industry, it is more profitable, for example to produce crops that can be resistant to their own pesticides (so that you can apply more of them). If you are a chemical company that produces herbicides as well as GE crops, then this is a good way to sell both products, as Monsanto does with their Roundup Ready GE soybeans or RoundupReady GE corn.

- Genenews, 01 Jan 2007 **[C.eldoc1/d70b/01jan07gen1.pdf**

Transgenic crops: a questionable option?

To understand the implications of this technology, its numerous facets need to be studied – the situation worldwide, the role of the USA and big transnational companies, the productivity and chemical use of GM crops, food safety issues involved and so on. It cannot be sufficiently stressed that each technology has differential impacts on different communities, differentiated in both a geographical and temporal manner. Agricultural technologies, more than any other technology, leave a large impact for the simple reason that they are likely to be deployed on large areas of land and thus affect millions involved directly in farming.

Besides, as consumers, the safety of food is of general concern. Without a broad and comprehensive impact assessment, no decision-making can be sound with regard to this technology.

Worldwide, more than a decade after the entry of the first GM crop on a commercial basis, only around fourteen countries have introduced GM crop cultivation on any substantial scale, i.e. more than 50,000 hectares. A majority of countries around the world have not allowed GM crops in their territory. Equally, consumers engaged in a debate on GM foods have, more often than not, chosen to reject GM foods, as the experience of Europe shows.

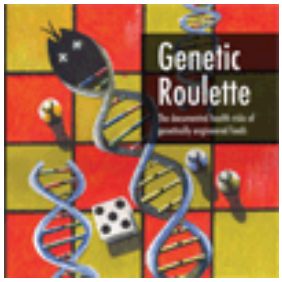
Does the world really need GM crops and foods? There is ample evidence that other options, including organic farming, will address food security and livelihood security imperatives as well, as also be viable options in an era of climate change.

The International Assessment on Agricultural Science and Technology for Development (IAASTD) process has concluded that smallholder ecological farming is the best option for this planet. It is, therefore, obvious that the only conceivable reason for pushing GM crops and foods is the business opportunity it offers to seed corporations and biotech firms.

While it is well-acknowledged in scientific literature that brinjal had originated from this country, an expert committee set up by the GEAC on Bt. brinjal brushed this fact aside and concluded otherwise! No credible evidence was offered for this stand either. It is interesting to note that the Bt. brinjal development was mainly supported by several American agencies in India.

And herein probably lies the crux of the controversy over this technology: a powerful country with the world's largest seed company headquartered there (which to this day sells more than 90% of the GM traits sold in the world), and whose agricultural economy depends on global markets, has rushed in with this technology for reasons of its own, despite evidence of associated hazards. . Now, getting the global markets to accept these products is a crucial battleground for countries like the USA.

- Kavitha Kuruganti, Seminar, March 2009, **[C.eldoc1/g74a/01mar09sem1.html]**



SAGE, distributed by The Other India Bookstore, Next to New Mapusa Clinic, Mapusa-403507, Goa. Rs.475.

GENETIC ROULETTE -
The Documented Health Risks of Genetically Engineered Foods: *Jeffrey M. Smith*

The book provides a good starting point for anyone interested in knowing the darker side of GM food. It shows why GM science is such a contentious issue.

It takes the readers through a journey that will inevitably shock them. Several strategies that companies use to get favourable results are clearly explained. It almost serves as a compendium on the ill-effects of GM food on animals and humans. It very clearly explains how GM food companies resort to surrogate testing of proteins extracted from bacteria instead of testing those taken from GM plants. While it provides a wealth of information, the biggest drawback is that the book is too judgmental.

'GM foods can address India's needs'

I think the main challenge facing the crop biotechnology sector today is the lack of awareness and knowledge about the benefits that this wonderful technology can provide the world with. Biotechnology can advance India's agriculture to address the challenge of feeding its increasing population with its limited economic, land and water resources.

Other than offering quantifiable benefits of increased yields leading to increasing farmer incomes, biotechnology crops are known to offer non-quantifiable benefits like increased management flexibility, reduced health risks due to less use of pesticides, facilitating reduced tillage practices, reduced production risk and improved crop quality.

Research is continuing on developing second-generation products that will directly impact the consumer in terms of health and nutrition and help them to lead a healthier lifestyle. In India, our focus is on research and development of transgenic crops with resistance to economically important viruses, tolerance to drought, and heat and salinity.

Felipe Osorio, MD, Monsanto

- Amitabh Baxi, THE ECONOMIC TIMES, BOMBAY, 06 JUL 2006, **[C.eldoc1/g74a/06jul06et1.pdf]**

Monsanto's Assault on Agriculture

Monsanto is a corporation reviled for its genetic tampering and attempts to seize control of agriculture around the world. While trying to change its public persona into one of benevolence towards the public, the history of Monsanto is littered with continuous efforts to not only seize control of food production, but also supply.

Monsanto's history also includes lives destroyed either financially and/or physically as the result of its activities.

When Monsanto's GM cotton varieties were first introduced in the US, tens of thousands of acres suffered deformed roots and other unexpected problems. Monsanto paid out millions in settlements.

When Bt cotton was tested in Indonesia, widespread pest infestation and drought damage forced withdrawal of the crop, despite the fact that Monsanto had been bribing at least 140 individuals for years, trying to gain approval.

In India, inconsistent performance has resulted in more than $80 million dollars in losses in each of two states.

Thousands of indebted Bt cotton farmers have committed suicide. In Vidarbha, in northeast Maharashtra, from June through August 2006, farmers committed suicide at a rate of about one every eight hours.

- Marti Oakley, Opednews.com,March 11, 2009, **[C.eldoc1/KICS/090311zzz1B.html]**

Made by Monsanto: the Corporate Shaping of GM Crops as a Technology for the Poor

Almost every day articles appear in the world's media claiming we must embrace GM foods if we're to feed the world, with the emphasis of late often on solving the food and climate crises via hardier, cheaper, more sustainable and more abundant GM crops.

Yet after two decades of GM research and 13 years of commercialization, what has the GM miracle actually delivered?

Hunger's still increasing and there are no commercialized GM crops that inherently increase yield, resist drought, or do anything else that might be thought critical to feeding the poor and hungry. That's the question that development specialist, Dominic Glover, has set out to answer. His new paper investigates the "simultaneous production of a technology widely recognised as having limited relevance to poverty alleviation alongside a narrative that strongly implied it was intended and designed to achieve that goal".

One key source of this storyline was Monsanto.

In PR terms this framing of GM crops as a technology for the poor proved a highly alluring one. It also helped Monsanto, once it became clear that European markets were largely closed to GM crops, to target developing-country markets which had been given an unexpected commercial importance for Monsanto. In addition, developing-country farmers became key symbolic stakeholders in debates about GM crops, and in assisting the branding of the technology.

But, as Glover notes, the gap remains between the storyline of GM crops as a pro-poor technology and the types of crops and traits that have actually been commercialized, ie the crops that Monsanto has marketed to developing-world farmers have been those that it developed for its existing customer base - large-scale commercial farmers primarily in the industrialised world.

Glover concludes that "although there was and remains a logical disconnection between the types of GM crops that have actually been commercialized by Monsanto, on one hand, and the company's rhetoric surrounding GM crops as a technology for the poor, on the other, the production of both the technology and the rhetoric can be seen to have been produced in tandem, driven and shaped by the mixture of commercial, institutional and technical considerations that were influencing the development of the company's strategy over many years."

This is how the hyping of GM crops as a solution to hunger and poverty was "Made by Monsanto".

- Dominic Glover, STEP Centre, 01 Jan 2008, **[C.eldoc1/KICS/01jan08step_centre1.pdf]**

Do GM Crops Increase Yield? The Answer Is No

"Do GM crops increase yield?", this is how it begins on Monsanto's web page: "Recently, there have been a number of claims from anti-biotechnology activists that genetically-modified (GM) crops don't increase yields. Some have claimed that GM crops actually have lower yields than non-GM crops. Both claims are simply false."

The increases in crop yields that Monsanto has shown in Mexico, Romania, the Philippines, Hawaii and India are actually not yield increases at all. In scientific terms these are called crop losses, which have been very cleverly masqueraded as yield increases.

Take the case of cotton. We all know that cotton consumes about 50 percent of total pesticides sprayed, and these chemical pesticides are known to reduce crop losses. I am sure that Monsanto would also agree without question that pesticides do not increase crop yields, and I repeat DO NOT increase cotton yields.

Monsanto's Bt cotton, which uses a gene from a soil bacteria to produce a toxin within the plant that kills certain pests, also does the same. It only kills the insect, which means it does the same job that a chemical pesticide is supposed to perform. The crop losses that a farmer minimises after applying chemical pesticide is never (and has never) been measured in terms of yield increases. It has always been computed as savings from crop losses.

If GM crops increase yields, shouldn't we therefore say that chemical pesticides (including herbicides) also increase yields? Will the agricultural scientific community accept that pesticides increases crop yields?

- Devinder Sharma, Countercurrents.org, 21 Mar 2009, **[C.eldoc1/g74a/21mar09cco1.html]**

Background to the WTO GM dispute

In a complaint to the World Trade Organisation (WTO) in 2003, the US, Canada and Argentina are challenging the European Union over its de facto moratorium on the approval of genetically modified (GM) foods and crops (European Communities - Measures Affecting the Approval and Marketing of Biotech Products WT/DS 291, 292 and 293 -see: www.wto.org). The complaining countries are the largest producers of GM crops and argue that the European Union has violated WTO Agreements.

Australia, Brazil, Chile, China, Chinese Taipei, Colombia, El Salvador, Honduras, Mexico, New Zealand, Norway, Paraguay, Peru, Thailand and Uruguay have registered their interest in the disputes as third parties affected by the outcome.

A three person Panel of trade experts has been appointed to adjudicate the three disputes as a single panel (the 'WTO GM dispute'). The parties will have filed their submissions by the end of May 2004, and the first oral hearing is expected in early June. A decision is expected in the latter part of 2004, which may be followed by an appeal on points of law to the Appellate Body of the WTO.

The case against Europe:

- The 'suspension' and 'failure' by the EU to consider applications for approval of GM products (the 'de facto moratorium') and the national bans in Austria, France, Germany, Greece, Italy and Luxembourg on some GM products which had already been approved in European Union before October 1998, have adversely affected imports of agricultural and food products from the US, Argentina and Canada.
- The de facto moratorium and national bans violate the WTO rules because they have not been scientifically justified, they were not published and there has been 'undue delay' in assessing applications for release and marketing.
- The European Union delays have hindered development of GM technology, which is of proven safety and brings great benefits, including in reducing hunger and improving health and crop productivity worldwide.

The significance of the case

At a time when GM food continues to cause controversy worldwide, and the legitimacy of the WTO itself has come under question, the WTO GM dispute looks set to be one of the most challenging in the WTO's history. The outcome of the WTO GM dispute will have major ramifications for the development of on the environmental, social and health aspects of trade policy and is likely to have both substantive and symbolic importance worldwide.

At least two independent groups acting in the public interest are intervening in the dispute settlement process by making submissions to the WTO Panel in the form of amicus curiae (or 'friend of the court') briefs. One is a trans-Atlantic group of expert academics and the other an international coalition of 15 public interest groups spanning Europe, the US, Canada, Argentina, Chile and India.

In different but complementary ways, these groups are arguing that international trade and risk assessment rules should not be interpreted by the WTO so as to thwart the capacity of countries to establish the environmental, social and health standards, and risk assessment processes for GM crops and food, that they judge to be necessary in their particular national circumstances.

America's plan is to force GM food on the world

The WTO court's latest ruling after years of secret deliberation to rule that Europe had imposed a de facto ban on GM food imports between 1999 and 2003, violating WTO rules. Meanwhile, individual countries who dislike being told what to eat or grow by the EC as much as the WTO say they will resist any attempts to make them accept GM. The court also ruled that Austria, France, Germany, Greece, Italy, and Luxembourg had no legal grounds to impose their own unilateral import bans It is now clear that the real reason the U.S. took Europe to the WTO court was to make it easier for its companies to prise open regulatory doors in China, India, south-east Asia, Latin America, and Africa, where most U.S. exports now go. This is where millions of tonnes of U.S. food aid heads, and where U.S. GM companies are desperate to have access. More than two-thirds of exported U.S. corn now goes to Asia and Africa, where once it went to Europe. Like the tobacco industry, GM companies are now focussing almost exclusively on developing countries.

- John Vidal, The Hindu, 15 Feb 2006, **[C.eldoc1/d70b/15feb06h1.pdf]**

Beyond trade

The WTO's interim decision infavour of the US-led challenge of the European Union (EU) moratorium on approvals of genetically modified (GM) foods goes beyond the specific case; it marks the first breach in the wall erected by the EU against GM foods and once again brings to the forefront the larger, controversial debate on the use of biotechnology in agriculture, especially in foodgrains.

The WTO ruling, however, does not resolve the basic issue of food security, ethics, control of agri-systems et al, apart from the 'safety' perception. This goes well beyond the competence of the WTO panel and is something on which the jury is still out. For developing countries where commercial production has been allowed, designing domestic regulation that links local priorities-led safeguards with the wider global proceedings, assumes importance. Especially in the face of public mistrust and the open-ended future of GM crop research, both of which could alter theface of agriculture and of global trade in agriculture.

- The Financial Express, Feb 2006, **[C.eldoc1/d70b/18feb06fe1.pdf]**

UK-based environmental group Friends of the Earth (FoE) , has alleged that a leaked confidential WTO ruling on the recent GM food trade dispute shows that many pro-GM arguments were lost. The 1,000-page report, distributed earlier this month only to the countries involved in the dispute, reveals that despite claims to the latter, the US, Canada and Argentina in fact failed to win most of their arguments.

The WTO GMO Dispute **[C.eldoc1/g74a/wto-despute.pdf]**

The GMO Case in the Supreme Court

A New Delhi based non-profit organization (Gene Campaign) filed a Public Interest Litigation in the Supreme Court of India asking that the rules pertaining to genetically modified organisms be radically amended so that the constitutionally guaranteed rights of every citizen to life, health and a safe environment are ensured. Gene Campaign's PIL also asks for setting up a High Power Committee to formulate a National Policy on Genetically Modified Organisms (GMOs) through a multi-stakeholder consultation process.

Dr. Suman Sahai, President, Gene Campaign, says they took this action since all attempts by Gene Campaign to engage in a dialogue with the policy makers failed to produce any response nor was there any move to listen to stakeholder concerns. Gene Campaign has been asking for greater transparency and participation in the decision-making on GM crops. The NGO's principal concern has been the lack of technical competence, transparency and accountability in the policymaking and regulatory bodies, which could have damaging consequences in a new technology area like GM crops.

That many countries involved with GM crops have been going through a review of their GM policies and systems of regulation and oversight in the light of new evidence is now well-known. "India must do the same", says Sahai.

India's current regulations are based on rules developed in 1989. Since then many international instruments such as Agenda 21 (1992), the UN Convention on Biological Diversity (1992), the Biosafety Protocol (2001), the UNEP Technical Guidelines on Biosafety (1995) and UNIDO Code of Conduct for the Release of Organisms into the Environment (1991) and the International Treaty on Plant Genetic Resources (2001) have been developed, signed or ratified by the international community.

The PIL has asked the Court to direct the government to observe a moratorium on all permissions, approvals and trials concerning GMOs, particularly of crops for which India is a Centre of Origin/ Diversity. The petitioner has also pleaded that until the rules are amended and a regulatory and monitoring system put in place, no commercial cultivation should be allowed.

http://www.indiatogether.org/2004/jan/env-gmsyspil.htm

If ever there was a subject that was more critical to life and living, it is the genetically modified organisms (GMOs). There is a significant degree of opaqueness about what these are and their implications for us, in terms of the food we eat, our health choices, farmers' rights, and our environment. Instead of protecting the national interests, the regulatory authorities comprising the Department of Biotechnology and the Genetic Engineering Approval Committee (GEAC) of the government are brazenly subverting the democratic process and are determined to promote GE technology and the commercial interest of the biotech industry. Exposing the unaware population to serious risks that cannot be undone, the government therefore stands accused of unconscionable offences against the Indian people.

The joint petition before the Supreme Court indicts the Government of India for the declared intentions of the proposed policy which: "Mortgages the public interest, public safety and the environment, to the commercial interests of Biotech Corporations ".

India's policy on GE is deeply flawed both in logic and in science. Furthermore, the Government is under an obligation to look at issues that extend far beyond science and technology. Science should not control us: It should be at our service "on tap, not on top". These issues include vitally, India's agriculture, which will be unravelled by GE, affecting the livelihoods of hundreds of millions of farmers, the food security of our country and our biodiversity. In India, we have some of the few surviving ecological hotspots that exist in the world. The American farming experience now, and more poignantly, Argentina clearly demonstrates the unleashing power of the multi-national biotech industry and the stranglehold it is exercising on agriculture. Anyone who believes, that the biotech industry exists for the public good, is living on another planet. This is sheer nonsense. It would seem that many of our Ministers and government servants have taken up residence on some other planet.

On behalf of the co-petitioners,
Aruna Rodrigues, Devinder Sharma, PV Satheesh
Rajeev Baruah
source: http://www.grain.org/h/?id=71

"GM food most dangerous to the poor than food security"

The Nagpur-based NGO Vidarbha Jan Andolan Samiti, (VJAS), farmers advocacy group opposing the introduction of GM (Genetically Modified) seeds in India after Vidarbha reported more than 5000 cotton farmers' suicides since June 2005 when government allowed commercial trials of Bt. cotton seeds, has been shocked to see media reports about the Supreme Court of India observation that GM seeds could possibly be a means to eradicate hunger and poverty.

In a letter to Chief Justice of Supreme Court VJAS president Kishor Tiwari has urged SC to go into details of all aspects of unsafe GM food as any SC observation may lead to major health and ecological problem before the nation.

"Eradication of poverty and hunger is a must in India but with introduction of GM food, it should not eradicate all poor", Tiwari added in the letter.

Some experts observed that "We will survive without GM food but we will never be able to survive the change unleashed by the tide of modification that is called Genetic Engineering"

http://www.twocircles.net/2009may03

Who controls agricultural science in India?

Take the case of the Genetic Engineering Approval Committee (GEAC). It is loaded with scientists who are actually the cheerleaders for the biotechnology industry. And when Dr Pushpa Bhargava, the Supreme Court nominee to the GEAC, began to ask questions that challenged the unscientific cover the GEAC had very conveniently provided to the companies, the GEAC actually wanted him to be removed from the committee!

I thought any apex committee with good intentions would have drawn from the experience of Dr Pushpa Bhargava and set its own house in order. In fact, Dr Bhargava tells me an interesting story that should tell you for whom is the GEAC actually working for. Although I have been saying for quiet long now that GEAC is basically a rubber stamp for the industry, but still let us listen to what Dr Bhargava says. He only substantiates what I have been saying.

The Bt cotton varieties approved by the GEAC were all hybrids. The Central Cotton Research Institute (CCRI) at Nagpur, has recently developed a non-hybrid Bt cotton which means the gene is now in a variety from which the farmers can save seed and replant the next year. In case of hybrids, farmers have to buy seed for every sowing since the hybrid vigour is lost in the second generation. The CCRI application for approval for this variety had come before the GEAC several times, and yet it was not taken up.

Dr Bhargava says that he finally asked the GEAC chairman as to why it was not being taken up. The chairman replied that this will invite objections from them. Who is them, Dr Bhargava asked, and replied, you mean Monsanto. The chairman is reported to have said yes.

- Posted by Devinder Sharma, Ground Reality, Saturday, May 2, 2009, **[C.eldoc1/KICS/090502zzz3B.html]**

Decision-making on GE crops should be democratized"

Genetic engineering in cultivation is permitted by only 21 countries around the world, despite the introduction of the technology on a commercial basis more than a decade ago in the USA.

Around 70% of the area cultivated with GE crops is in just the USA and Argentina. That speaks volumes about the acceptance and adoption of this so-called "frontier technology".

More and more countries, provinces and communities are declaring themselves GE-Free and several such decisions have been taken after understanding / experiencing the technology and its ramifications.

Unlike other hazardous technologies like chemical pesticides, Genetic Engineering in agriculture is an irreversible process, once released into the open environment, since the technology involves the modification of living organisms which reproduce, contaminate, spread, impact eco-systems and so on.

There is growing evidence of the potential environmental and health hazards associated with this technology from across the world. There are fundamental questions unanswered on the very science of GE and its unpredictability and imprecision.

This is true in India too, where the only commercially cultivated GM crop is Bt Cotton – here, even official reports now indicate that there are changes being witnessed on a large scale in cotton farm ecology.

- GM Free India - Farm News - OFAI, 06 Feb 2007, **[C.eldoc1/d70b/06feb07gmfreeindianews.html]**

Sowing a bitter harvest

One outcome of the Indo-US deal on Agriculture appears to be the deregulation of the GM (genetically modified) foods sector. The Ministry of Environment and Forests has through a notification withdrawn the requirement that importers of GM foods must first take permission from the Genetic Engineering Approval Committee (GEAC), India's premier regulatory body in the sector of genetic engineering.

The government notification is a significant departure from the standing Indian policy in this field.

Until now, in view of the known health risks that are associated with GE (genetically engineered) foods, the government guidelines had required that import of GE foods could take place only after intervention by national agencies and any handling of GM foods was to be done only after these were labeled as such.

The arbitrary withdrawal of the regulatory oversight without any scientific reason and without any consultation with a range of stakeholders that are engaged with GE technology and policies associated with it, is a dangerous development. It will benefit the producers and exporters of GM foods and pose health dangers to the Indian population.

Such a move is inexplicable, especially at a time when scientific evidence is mounting from laboratory tests in various parts of the world, that genetically engineered foods can cause serious damage to health

- Suman Sahai, DNA, Mumbai, 07 Dec 2007, **[C.eldoc1/d70b/07dec07dna1.html]**

India, the GM-trashbin

Interestingly, while the rest of the world is stopping GM research in the tracks lest it destroy farm trade opportunities due to public rejection of genetically engineered food products, the Indian Council for Agricultural Research (ICAR) merrily continues to sow a seeds of thorns for agricultural exports thereby jeopardising the future of domestic farming. But then, who cares for the farmers as long as GM research ensures the livelihood security for a few thousand agricultural scientists.

Such has been the casual approach to regulate this most controversial technology that it has become practically difficult to keep track of the new GEAC chief. They keep on changing at a pace faster than that expected from musical chairs. At the same time, while the UK has set in place a tough regulatory regime making the companies liable for any environmental mishap, India continues to ignore this aspect. The regulations that the GEAC had announced at the time of according approval to Bt cotton in 2002 were only aimed at pacifying the media. The GEAC has not been held accountable for its deliberate attempts to obfuscate public opinion, and it all seems part of an effort to help the seed industry make a fast buck.

- Devinder Sharma, Grassroots, June 01, 2004, **[C.eldoc/d70b/01jun04GRD2.html]**

Dr Pushpa Bhargava Warns PM about GM Food Consequences

My dear Prime Minister,

I am writing to bring to your notice the dangers of virtually unchecked approval of genetically modified crops in the country that is largely serving the interest of multinational companies such as Monsanto. This approval is granted, according to the present procedure, by a Committee of the Department of Biotechnology (DBT) followed by a Committee (Genetic Engineering Approval Committee) of the Ministry of Environment and Forests.

There is a public interest petition pending in the Supreme Court (filed by Aruna Rodrigues) asking for a moratorium of a few years on the sale of genetically modified (GM) seeds and approval of GM crops. In pursuance of this case, the Supreme Court has nominated me to attend the meetings of the GEAC, which has made me acutely aware of our failings in the area.

I have provided to the GEAC a list of tests that must be done before a GM crop is approved. However, only less than 10 percent of these tests are actually being done before approval of GM crops. Not only that, in the absence of a national facility to do these tests or verify the results of tests done by others, the seed companies are either doing the tests themselves or having them done by laboratories in the country (on samples provided by the seed companies). These laboratories do not have a facility to determine whether a seed is a normal seed or a GM seed. Therefore, for all practical purposes, there is no objective way today to ensure safety of a GM crop before it is approved for field trials or commercialization. We already have incontrovertible evidence that a great deal of damage has been done by Bt. cotton (the only GM crop released so far, with many others, including food crops, in the pipeline) to a section of farmers in India, as well as to farm animals.

I, therefore, agree with the contention of Mrs Aruna Rodrigues in the above mentioned petition that is pending in the Supreme Court, that we should have a five to seven year's moratorium on the sale of GM seeds and the planting of any GM crop in the country. During this period, we should set up an appropriate laboratory to carry out all the necessary tests and to verify the results of others that may have been carried out. I have given to the GEAC a blue-print of such a laboratory which would easily take five years to be fully operational. We seek your support to the above proposal.

What is worrying is that as much as 30 percent of our seed production today may be, directly or indirectly, already in the hands of foreign multinational companies. We must prevent this trend. The proposed moratorium would be one important step in that direction.
Yours sincerely,

(P M Bhargava)

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