



Monthly Bulletin
on Genetic Engineering
June 2009

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National News

1. Running with the Hare and Hunting with the Hounds!!

<http://economictimes.indiatimes.com/articleshow/4600063.cms>

NEW DELHI: With the new environment minister Jairam Ramesh disfavoured genetically modified (GM) foods such as a variety of brinjal and tomato, the future of such products seems to hang in balance.

“I am not gung ho on GM foods. Should we promote BT brinjal? Jury is still on and I am not sure. I am not great enthusiastic for GM foods,” the minister said. Ramesh’s dislike for GM foods goes back to the time when as the Union Minister of State for Commerce he had asked the Directorate-General of Foreign Trade (DGFT) to explain reports that imported GM food products were entering Indian supermarkets and food chains unchecked

BT brinjal is considered to be in the final stages of approval from the Genetic Engineering Approval Committee (GEAC), under the environment ministry. Besides brinjal, there are over two dozen varieties of rice and an equal number of tomatoes, many types of potato, sugarcane, soy and okra awaiting GEAC approval. Japan, South Korea, New Zealand, all countries in the European Union and many in Africa have either banned the entry of GM foods or have imposed strict restrictions on their commercial use.

The minister also favoured immediate setting up of National Biotechnology Regulatory Authority to tackle GM-related issues. India is one of the six leading countries that are conducting field trials of GM crops and foods

Ramesh, however, said he would ensure promotion of genetically modified cash crops on a large scale on the line of BT cotton which has led to a dramatic increase in the yield, benefiting farmers of the country. “BT cotton has brought about revolution in the country and because of which India is today the second largest producer of the crop in the

world and this has happened in barely last six years,” he said.

The Minister noted that widespread cultivation of BT cotton has been reported in the country particularly in Gujarat, Punjab, Tamil Nadu and Andhra Pradesh, though areas which have water scarcity have not been so lucky.

“Due to remarkable production, the gap between India and China has reduced. Farmers are yielding rich returns. Hence there is need to have more and more GM crops to meet the growing needs of the burgeoning population,” he added.

Ramesh noted that BT Cotton has not led to complete elimination of pesticides, but “it has certainly gone down”.

In fact, I would treat BT Cotton different from BT foods. But GM tea, GM coffee, GM rubber, yes, I am for them. Or for that matter, BT mustard is also important as I believe there is a role for GM crops, Ramesh said while outlining his priorities as he assumed charge of the ministry.

2. No, Says Plan Panel!

<http://timesofindia.indiatimes.com/articleshow/msid-4653953.prtpage-1.cms>

NEW DELHI: After facing stiff opposition from environment ministry, the proposal to introduce genetically modified (GM) food in India has run into trouble with Planning Commission as well. In the first public positioning by the government, the highest planning body has shown the red light to GM technology in food crops.

However, the plan panel has fewer objections on introduction of GM technology in non-edible agro products like cotton. While food safety concerns remain, Planning Commission member Abhijit Sen said India’s crop exports could be severely hit if it allowed GM food crops. He pointed out that several European and other nations preferred to buy food items from India because it was still known as “GM-free”.

3. Netting Bigger Fish!

<http://www.livemint.com/2009/06/24235520/Indian-scientists-dish-up-GM-f.html?h=B>

New Delhi: Even as genetically modified brinjal—the first transgenic food crop to be available in India—has reached the final stage of field trials, scientists at the Centre for Cellular and Molecular Biology (CCMB), a prominent Hyderabad-based research institution, have taken the first steps to steer genetically modified (GM) fish—now confined to their labs—to Indian plates.

They have begun the process of demonstrating the superiority of these fish, chiefly in yield and quality, over regular ones, as well as evolving a blueprint to test their bio-safety.

Though the genetic engineering approval committee has detailed guidelines and protocol for testing the safety of genetically engineered crops, none exists for genetically modified animals.

The fish in question is the popular variety of carp, known as *rohu*—the most farmed, and among the most widely consumed fish in India. With genetic manipulation, the scientists say they can increase production “manifold” and in half the time that it usually takes for these fish to grow to consumable size. “Each pair of fish lays lakhs of eggs. These modified fish can now lay as many eggs in one-and-a-half years, as the normal fish do in three years,” said Lalji Singh, director, CCMB. However, the exact numbers and yield potential would be determined only after the trials were done, he added.

“There’s no protocol defined. So, we’ve asked CCMB itself to design a protocol. We will review it and based on that, we may move ahead with allowing further tests,” said a scientist with the department of biotechnology (DBT), who didn’t want to be identified as he’s not authorized to speak to the media. The CCMB project has been funded by the department, which plays a pivotal role in approving GM organisms.

“An expert said India’s first GM fish are unlikely to face too many regulatory obstacles, but advised caution”.

If and when the trials proceed successfully, CCMB plans to tie up with the Andhra Pradesh fisheries department to scale up production. However, if bio-safety tests need to be carried out, the wait could get longer. Activists as well as industry lobby groups say the long-term effects of genetically engineered crops and organisms are unknown.

“There’s way too much haste to get GM crops and organisms into our fields,” said Pushpa Bhargava, a former CCMB director who’s critical of the biotechnology regulatory process in India. “Not enough tests have been done and we really don’t know what we are getting into.”

4. Bulwark against GM foods!

<http://www.hindu.com/2009/06/06/stories/2009060661000300.htm> <http://www.expressbuzz.com/edition/story.aspx?Title=Farming:+100+village+councils+planned&artid=E9j6lOYS7oQ=&SectionID=IMx/b5mt1kU=&MainSectionID=wlcBMLGbUJI=&SectionName=tm2kh5uDhixGIQvAG42A/07OVZOOEmts&SEO=>

THIRUVANANTHAPURAM: Agriculture Minister Mullaikkara Ratnakaran has stressed the need for the State to create a bulwark against monopoly trends in agriculture that pose a serious threat to food security.

He was delivering the inaugural address at the World Environment Day celebrations organised by the Soil Survey Organisation here on Friday. Mr. Ratnakaran accused multinational corporates of promoting ‘food terror’ through GM (Genetically Modified) crops. “Corporate agenda should not be allowed to dictate agricultural practices and dietary habits,” he said.

Mr. Ratnakaran said sustainable agriculture was a natural defence against greedy corporates. He stressed the need to promote

organic farming and protect natural resources.

He announced that a hundred village councils (Naattukkoottam) will be formed this year to raise awareness on proper farming methods and the threats posed by genetically modified (GM) crops,

This is part of an action plan of the State Government against GM crops, the Minister said. He was delivering an Environment Day message at the district-level distribution of soil health cards organised here by the Agriculture and Soil Survey Departments.

The Kerala Agricultural University (KAU) and the Agriculture Department will provide technical expertise to the village councils, which will be made up of farmers.

Special programmes to strengthen the resolve to protect the ecosystem and fight GM crops will be planned on the birth anniversaries of Mahatma Gandhi, Jawaharlal Nehru and Swami Vivekananda on October 2, November 14 and January 12 respectively.

5. Mahyco Fumbles!

<http://www.expressbuzz.com/edition/story.aspx?Title=Mahyco+fails+to+convince+media+on+safety+aspects&artid=t0gJfJanhl>

THIRUVANANTHAPURAM: The Mahyco (Maharashtra Hybrid Seeds Company Limited), propagators of the controversial Bt Cotton and Bt Brinjal seeds, could not convince the media on the safety aspects of their technology, at a press conference held here on Thursday.

The company officials enumerated at least 25 different biosafety and food/feed safety studies on Bt Brinjal since 2002, but in a significant omission, they failed to mention that all of the studies were financed by Mahyco itself. The conflict of interest in such studies were not mentioned by neither the general manager Mahendra Sharma nor by their biotechnology head Dr. Bharat Char, who attended the press conference.

Even while the so-called safety studies were on, the company officials admitted that there was no way that they could test these products on human beings. "But you see, cotton oil is edible and cotton oil cakes are ingested by cattle. So these genes and their products have been in the ecosystem for quite a while now," justified Sharma.

While the major aim of using Bt Brinjal is to reduce the dependence on pesticides to fight the fruit and shoot borer, Mahyco officials explained that the pesticide dependence could only be reduced by 42 percent, as the crop would be susceptible to other pests too. So ultimately the farmer is left to deal with pesticide residue as well as Bt-toxin residue in the food crop.

Replying to a question whether they would be willing to label their brinjal as genetically modified, so as to enable a choice for the general public, the Mahyco officials were ambiguous stating: "We will do all that the Government requires us to do."

The ambiguity also extended to the question on antibiotics resistance transfer and the jumping of the bt-gene, Cry1AC, from plant to other systems. Admitting the possibility of gene transfer through pollen from Bt Brinjal, Mahyco officials said that Bt Brinjal would have to be planted with a buffer zone of normal brinjal.

The company officials also admitted that the seeds that they sell is of hybrid nature and cannot be used for successive generations, leaving the farmer dependent on the company for his next crop, a case similar to that of the terminator seed.

6. New Corn[y] Stories!

http://greenbio.checkbiotech.org/news/monsanto_india_seeks_approval_sell_geneticallymodified_corn

Mumbai: Seed producer Monsanto India Ltd has sought regulatory approval in India to sell its genetically modified (GM) corn that is tolerant to herbicides and provides protection from pests.

“We have started the regulatory process for approval of this new GM crop in the Indian market,” said Harvey G. Glick, senior director, scientific affairs, Asia, Monsanto Singapore Co. (Pte) Ltd.

The GM corn, currently undergoing field trials in the country, would be the second such product, after Bt cotton, to be marketed by the Indian arm of US-based Monsanto Co. Monsanto India managing director Amitabh Jaipuria said the firm has received approval from India's Genetic Engineering Approval Committee to conduct field trials to evaluate the bio-safety of the genetically modified product against target insects and weeds. “The field trials are being conducted by state agriculture universities across India,” he said in an email.

GM corn is cultivated in 16 countries and has been approved by at least another 10 nations, the company said. Monsanto is focusing on development and launch of new vegetable seed varieties in the Asian markets, especially India and China, Glick said.

Monsanto India, which launched its genetically modified cotton in the domestic market in 2002 in the face of protests from

environmentalists, also sells hybrid corn, fruit and vegetables, and several other agrochemical products in the country.

The US parent—which also operates a wholly owned subsidiary in India called Monsanto Holdings Pvt. Ltd—markets Bt cotton through a joint venture company, Mahyco-Monsanto Biotech Ltd. The GM corn will provide an 8-10% increase in yields, Glick claimed.

Crops tolerant to weed killers are common in developed countries where weed control strategies typically rely on herbicides, which can sometimes be toxic for the targeted crop as well with excessive use. A 2006 report, authored by agricultural scientists S.R. Bhat and V.L. Chopra in *Current Science* magazine, says resistance to herbicides is an important trait of GM crops.

“While the proponents advocate that the new technology is scale neutral and its benefits should be made available to Indian farmers, the other section firmly believes that such crops are not suitable to our conditions and pose serious threat to the employment and livelihood opportunities of the poor and marginal farmers and labourers, and adversely impact environment, ecology and biodiversity,” the report adds.

GE Issues Around the World

7. Flip Side of GM Plants

http://www.russia-ic.com/education_science/science/science_overview/911/

Over 125 million hectares in the world are currently under transgenic or genetically modified plants, and about one-fifth (21-23%) of these plants are resistant to pests. In most plants such resistance is a result of genetic engineering via introduction of a gene of soil bacterium *Bacillus thuringiensis* into plant genome – plants produce bacterial protein (Bt-toxin), which is toxic for insects.

Biologists consider mentioned toxins to be among most environmentally friendly means for plant protection, since plants produce

them in concentrations, which are harmless for homoiothermal animals.

Well, the [coin] has two sides. Recent research showed that plants with Bt-toxins might have negative effect on our environment. Some Bt-plants appear to lose the battle against those pests they were designed to resist. Toxin concentrations in plants drops with time, and leaves always have higher toxin content than fruits. That is why pests, which feed on fruits, do not eat enough toxins to die. In this case, plants should be sprayed with insecticides for additional protection.

That is why, ecologists warn about possible negative effects of Bt-plants on the

environment, and that not all such plants effectively resist pests. Meanwhile, genetic engineers work on creating genetically modified plants and animals for production of biologically active substances, e.g. vaccines, hormones and pharmaceuticals. These substances target not insects, but mammals and human beings; however, no one knows how long these substances stay intact in nature, as well as no one has ever estimated possible damage from these substances.

8. Separating the Wheat from the Chaff!

<http://www.reuters.com/article/GCA-GreenBusiness/idUSTRE54E59X20090515?pageNumber=2&virtualBrandChannel=0>

SASKATOON, Saskatchewan - The Canadian Wheat Board won't support genetically modified wheat until key conditions are in place, including assurances that its overseas markets would accept the crop.

"We know that this is potentially the wave of the future but right now we're just not there," said Maureen Fitzhenry, spokeswoman for the Wheat Board, which holds a government-granted monopoly on sales of Western Canada's wheat and barley.

Some farm groups from the top wheat-exporting nations of the United States, Canada and Australia have agreed to support synchronized commercialization of genetically modified wheat. The agreement, announced on Thursday by the National Association of Wheat Growers (NAWG), is an attempt to align the countries against any international backlash if GM wheat is introduced and to invite seed development companies to press ahead with biotech wheat development.

However, Todd Leake, a wheat farmer and NAWG member, has a different viewpoint (Grist Magazine, May 13, 2009):

Over the last 50 years we have worked diligently to develop and enhance our relationship with international buyers, who are routinely surveyed to determine which specific characteristics and traits they desire. We work with agronomists and plant breeders to develop hybrids that meet our customers' expectations; in doing so, we have developed a mature and stable market for the wheat produced by U.S. farmers.

When Monsanto first petitioned the U.S. Department of Agriculture for deregulation of their Roundup Ready wheat, we feared consumer backlash based on the loss of European and Asian markets that corn growers experienced when genetically engineered (GE) corn varieties were commercialized in 1996. Our fears were substantiated through a Canadian Wheat Board buyer survey conducted in 2003, which determined that 83% of foreign buyers would not accept genetically engineered wheat and would seek alternate sources if either the United States or Canada commercialized a GE wheat variety.

Nothing has changed in the global marketplace for wheat, but a recent National Association of Wheat Growers (NAWG) survey would have the world believe that wheat growers themselves overwhelmingly support adoption of genetically engineered wheat.

The purpose of the National Association of Wheat Growers (NAWG) is to promote our industry and to develop our markets, and it is funded with wheat grower dollars. To conduct and publish a survey that blatantly misrepresents the opinions of the very constituency it was created to serve is unconscionable. The commercialization of GE wheat will have one consequence only: the destruction of a stable, mature wheat producing industry that has taken 50 years to build.

9. Monsanto Goes to Seed!

<http://www.colombiareports.com/colombia-news/economy/4472-colombian-cotton-growers-want-to-sue-monsanto.html>

Colombian cotton growers want to sue U.S. agricultural company Monsanto for selling them a bad genetically engineered seed that caused damage to crops.

According to the cotton growers, the seed caused damage to 13 percent of the cotton crops in the north of Colombia, resulting in a 7 million dollar loss, economic magazine Portfolio reported Wednesday.

Conalgodon, the Colombian federation of the cotton growers, declared that Monsanto gave the seed, stating that it was strong enough to resist plagues and the effects of the glyphosate herbicide. At the same time, Monsanto did not give an appropriate information about the variety that would be planted for the first time in the region.

The seed, known as DP 164, was three times more expensive than the traditional one, but did not resist the plagues as promised.

Monsanto offered to compensate the growers with 640 thousand dollars, but put conditions on the compensation the growers find hard to accept. Moreover, this is not the first time Monsanto has a similar problem in Colombia. In 2008 same situation was in the Tolima department with Monsanto seeds.

10. Father Crosses Out GMOs!

<http://ncronline.org/news/gmos-are-going-create-famine-and-hunger>

[extract only, full interview at the url above]

While the Pontifical Academy for Sciences discussed the pros of genetically modified organisms on Monday, Columban Missionary Fr. Sean McDonagh was across Rome making the case for the “con” point of view. McDonagh organized a small demonstration near the Piazza del Popolo, which was joined by a few left-of-center political movements in Italy.

A large banner read, “No to GMOs, yes to food security,” and a smaller sign addressed the Vatican gathering: “Pontifical Academy of Sciences, do not ally with those who,

promoting GMOs, contribute to hunger in the world. Listen to the words of the Holy Father!”

A well-known writer on environmental themes, McDonagh is a veteran Irish missionary who spent more than 20 years in the Philippines. He’s an outspoken critic of GMOs; in 2003, he published ‘Patenting Life? Stop! Is Corporate Greed Forcing us to Eat Genetically Engineered Food?’

McDonagh spoke to NCR on the margins of the demonstration.

Q: Do you believe the Pontifical Academy for Sciences is being exploited?

McDonagh: It is. This is the Pontifical Academy for Sciences, so let’s start with the ‘pontifical’ part. It’s a Catholic organization. Who are the church’s real experts in this area? I would say people like myself. I would say particularly the aid and development agencies, such as Misereor, Cafod, and Caritas... They thought so little of this expertise in the Catholic Church that they didn’t invite a single person from any one of those agencies.

Further, anyone who ever claims to be a scientist should hear the other side. That goes back to Plato. What are they afraid of? Why didn’t they set up a decent colloquium over there? Also, why don’t they take into account numerous independent studies in the last three years which have concluded that the way to food security is not through GM crops? Why just discard all that? There’s a very recent study from Africa on the yields from organic farming, saying this is the kind of thing we should be promoting. I would consider this gathering grossly incompetent.

Q: Why do you believe they’re doing it this way?

McDonagh: They want to get rid of the very minimal regulations that we have at the moment. They said it in the introduction to the study week, and every one of them says it in his abstract. That’s their goal. Bishop Sanchez Sorondo (chancellor of the Pontifical Academy) has said that the purpose is to

examine whether GM crops are safe, but I'm sorry, that's not it. The purpose is to use the prestige of the Pontifical Academy of Sciences and its good name to beat on governments so that you can reduce regulation.

I would also claim that they want to use something like the Potrykus rice [Golden Rice] as a battering ram against the regulatory process. The strategy is that if you get it through once, you've set the precedent. They say they want it for altruistic reasons, but this language of talking about the poor and about development is grossly misleading. I'm a professional anthropologist who has been working in the area of development economics, I think it's patronizing.

Q: Proponents of GMOs suggest that you're guilty of neo-colonialism, in the sense that you presume to know what's best for the poor in Africa and other places.

Mcdonagh: Let them come to where I was in the Philippines, and ask there. Let's go to the southern part of Brazil, or Argentina, where this is being pushed on people. Let's do a real empirical study, and I think you'd find that the people who are affected by it are very negative towards it. I took up this issue only because I saw the impact it's had on people living there. I believe I have a better take on what's happening in the Philippines, for example, than anyone in the study week... including the only person from the Philippines there, the director of the International Rice Research Center, but he's an American.

I was not against GMOs at first. When I arrived I taught anthropology and linguistics at the University of Mindanao in the Philippines, the biggest agricultural university in the region. At that stage, I thought, if you can plant crops as far as the eye can see, why not? It was only as I began to see the other aspects, including wiping out genetic diversity, that I changed my mind. I looked back at my Irish experience. We used to have these massive potato fields, and then suddenly in 1845, one pathogen wiped them

out. I began to learn a lot about the importance of biodiversity.

The pro-GMO argument is comparable to what we used to hear from the bankers. They used to tell us we need a light touch with the regulations, because we're the entrepreneurs, we're the people who create wealth that sends the boys and girls to school and put the Euro in the collection plate on Sunday. If a banker came to you today and tried to say that there shouldn't be any regulation, we'd all laugh. We wouldn't even engage him intellectually. The same is true with these lads. The tide has gone out on what they want, and rightly so, because we're dealing with very serious issues.

Humankind has a very bad record of moving biodiversity around to the wrong places. It's like the guy who brought rabbits out to Australia with disastrous results. This is biological science, which is different from architecture or engineering. If those guys get something wrong and the building collapses, too bad, but you can fix it. Biology reproduces. The Australian government can't fix the rabbits. The level of regulation should be multiple times more stringent than it is.

Q: The study week invited an African bishop. What's your sense of where African Catholics stand on GMOs?

Mcdonagh: I've had conversations with African people, including religious orders, working in this area. We just had a conference in Assisi on ecology and integrity of creation at the heart of Christian mission. There are all sorts of efforts by religious to build up organic agriculture in Africa. I feel this man shouldn't have come here. If they'd invited me, I wouldn't go. You just give them legitimacy, and it's not properly structured. I'm not a geneticist or a plant biologist, but based on the expertise I have as a missionary, I know this is not the way to go for sustainable agriculture. If it was, they'd have the right people at this meeting.

Q: Are you worried that the Vatican is going to come out with an official pro-GMO statement?

Mcdonagh: Not at all. We were more concerned back in 2003, when Cardinal Renato Martino began to talk about how maybe GMOs could feed the world. We were very worried then, but not so much now. The

Pontifical Council for Justice and Peace, for example, may not yet have assessed the science, but they have begun to see the impact on developing countries. On January 1, there was an article in L'Osservatore Romano, in which Martino was quoted on that side of it.

GE Research

11. Deconstructing Dinner

With DR. E. ANN CLARK

To learn why the lion's share research funding at the universities is directed towards the genetic engineering of lifeforms and the corporate control of seeds instead of towards organic research, visit the following sites:

download/open:<http://media.libsyn.com/media/deconstructingdinner/DD051409.mp3>
stream:<http://www.cjly.net/deconstructingdinner/audio/DD051409.m3u>

This monthly bulletin is brought out by South Against Genetic Engineering (SAGE), a coalition of civil society activists, farmers, scientists, academicians, and consumer groups of four Southern States of India, viz., Andhra Pradesh, Karnataka, Tamil Nadu and Maharashtra. SAGE has been waging a concerted battle against genetic engineering through a series of activities that involve public protests, media actions, seminars, consultations and publication of a series of educational materials.