



Monthly Bulletin
on Genetic Engineering
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Contents

National News

1. Brinjal festival celebrated to sensitize consumers
2. Protest against Bt Brinjal, Bt Cotton in Bhubaneswar
3. “Stop GM Trials; Monsanto, QUIT India”: Farmers protest at Monsanto’s GM Corn trial in Kolhapur

GM Crops & Legal issues

4. Updates on PIL filed in Supreme Court on GM crops moratorium
5. Yet another finding on Biosafety faults GM crops

Genetically Modified Food Politics

6. Golden Rice – All that Glitters is not Gold

GE issues around the World

7. Obama’s Family chose not to eat GM Food
8. Federal Office for Nature Conservation in Bonn warns about risks “of green genetic engineering”
9. Germany considers local bans on GM Crops
10. EU Environment Ministers keep Bans on Transgenic Maize
11. GM Cassava Fails in Africa

National News

1. Protests Pickup momentum against the GM crops in India

Brinjal festival celebrated to sensitize consumers

Deccan Development Society, SAGE in collaboration with Centre for Sustainable Agriculture (CSA), Aid India, Chetana Organic, organized a Brinjal festival in Hyderabad today (8th March 2009).

This festival showcased more than 140 indigenous varieties of brinjals collected from Andhra Pradesh, Karnataka, Tamilnadu and Orissa, which turned out to be visual extravaganza for Hyderabaddees. This festival revived the forgotten memories of the elder people who shared with the rest of the visitors about the native brinjals of their own places from different parts of the country, especially Southern India. A cooking competition on Brinjal recipes was organized a day before the festival, has got good response, with more than 40 participants prepared mouth savouring brinjal recipes.

More than 3000 consumers visited the stalls, which were adorned with the posters showing the alternatives to Bt brinjal, more than 140 varieties of brinjals from different states, sources of organic foods, recipes made of brinjals, health implications of GM foods on mammals, besides showing the videos viz., Jeffreery SMith's presentation on the health implications of GM foods, Poison on the Platter (a documentary made by Mahesh Bhatt, on the health implications of GM foods on humans).

Among the dignitaries who visited this festival were, Dr P M Bhargava (Founder Director of Centre for Cellular and Molecular Biology and currently an invitee to GEAC) and Dr M V Rao (Former Vice-Chancellor of Andhra Pradesh Agricultural University, Dr J Venkateswarlu (former Director of CRIDA).

Please find herewith a link to the news article on the brinjal festival below

<http://www.thehindu.com/2009/03/09/stories/2009030957370200.htm>

2. Protest against Bt Brinjal, Bt Cotton in Bhubaneshwar

<http://orissadiary.com/Shownews.asp?id=11452>

The United Coalition against Genetic Engineering (UNCAGE) staged a protest rally with more than 14 organisations & hundreds of farmers who came against Bt Brinjal and Bt Cotton in the city here on 17th March 2009. The rally was organized for creating awareness on the dangers of GM crops and putting pressure to thwart the attempts to irreversibly poison the food chain.

The Protesters demanded State Government, break its silence on the illegal cultivation of Bt cotton and the clandestine move to introduce the controversial food crop Bt Brinjal. Later, a delegation met the governor at the Raj Bhawan and submitted a memorandum. Several grassroots organizations and prominent women leaders working on women's rights have expressed concern on the developments on the GM front and have decided to join the rally. Child rights activists and Human Rights activists are also participating. President of OHDA Dr RN Dutta leading a team of 10 homoeopathic doctors. The Orissa Ayurvedic Physicians Association has also joined the rally.

Well-known trade union leader Souribandhu Kar also joined the rally. The organizations participated in the rally are JKS, CWS, Vasundhara, HRLN, BATNET, NAWO, The Humanity, WSO, Sambhav, Chethna Organic Farmers Association, HRE, NIRMAN, Paschim Orissa Krushak Sangha Sambaya Samiti, Ahinsa Club, Rushikulya Ryot Mahasabha and Child Right India. Besides, CARR, UAA and DULAL (all grassroot organisations working with organic farmers) have also participated. Around 150 farmers and noted farmers' leaders from many parts of Orissa also joined the rally.

3. “Stop GM Trials; Monsanto, Quit India”: Farmers protest at Monsanto’s GM Corn trial in Kolhapur

On “Shaheed Diwas” marked across India in the honour of the martyrdom of revolutionary freedom fighters Bhagat Singh, Sukhdev and Rajguru, hundreds of farmers from all across Maharashtra came to Kolhapur to protest

against the open air experiment of Monsanto’s GM corn being conducted in the B farm of Maharishi Phule Krishi Vidyapeeth (MPKV) here. The peaceful sit-in ended when the university officials here assured the activists that all pending concerns with regard to the trial would be responded to in a special meeting convened on the 2nd of April and if no satisfactory responses can be provided, the field trial will be destroyed by the university.

GM Crops & legal issues

4. Updates on PIL filed in Supreme Court on GM crops moratorium

<http://www.financialexpress.com/news/sc-to-hear-plea-on-gm-crops-moratorium/428093/0>

The Supreme Court is slated to hear next month a petition seeking moratorium on genetically modified (GM) crops as the petitioners have now come up with fresh evidence from some leading scientists with a view to strengthen their argument on the issue.

In a supplementary rejoinder affidavit filed before the apex court last week, the petitioners namely Aruna Rodrigues, PV Satheesh and Rajiv Baruah submitted six letters from eminent scientists like Dave Schubert, Dr Michael Antoniou, Stuart Newman, Andrew Kimbrell, Bill Freese, Jack Heinemann and Lawrence Busch endorsing Pushpa M Bhargava’s regulatory guidelines as essential criteria for safety testing and risk assessment of GMOs. Dr Bhargava is a special invitee to the Genetic Engineering Approval Committee (GEAC) by an order of the Supreme Court in the ongoing writ petition 260 of 2005.

The scientists in their letters have expressed anguish and surprise at the “unprofessional and unscientific attitude” of GEAC. Jack Heinemann of the University of Canterbury criticised GEAC’s “distasteful personal attack of a truly significant figure of Indian science, Pushpa M Bhargava” which according to him is neither relevant to his expertise nor to the dispute.

The petitioners also filed reviews made by Gilles-Eric Seralini, University of Caen, France and president of the Scientific Council of the

Committee for Independent Research and Information on Genetic Engineering, (CRIIGEN) and Judy Carman, director, Institute of Health and Environmental Research Inc. (IHER), Australia exposing the hollowness of the claims of Mahyco’s bio-safety data on Bt brinjal.

In their rejoinder, the petitioners pointed out the genetic contamination of maize by GM crops in Mexico, the centre of origin. They have also submitted five more independent and “peer reviewed” studies that raise serious concerns about the bio-safety hazards of GM crops. These include a new report by the Italian government’s National Institute of Research on Food and Nutrition published in the Journal of Agricultural Food Chemistry and has found significant changes in the immune response of young and old mice that have been fed the GM maize MON 810.

A long-term study on female mice fed on genetically modified soybean: effects on liver ageing’ published by Histochem Cell Biology, 2008 and a three generation study on rats fed with Bt corn - Biochemical and Histopathological Investigation - by Aysun Kilic published by Elsevier in late 2007 have also been submitted before the apex court.

The petitioners also submitted a peer reviewed study on Bt cotton was carried out at the Indian Agricultural Research Institute which suggest that Bt cotton may constrain the availability of N, but enhances P-availability in these soils. The study is entitled – Mineral Deficiency Stress: Transgenic Bt-Cotton Affects Enzyme Activity and Nutrient Availability in a Sub-Tropical Inceptisol. The study - Glyphosate

Formulations Induce Apoptosis and Necrosis in Human Umbilical, Embryonic and Placental Cells – made by Nora Benachour and Seralini in 2009 has also been submitted before the apex court.

5. Yet another finding on Biosafety faults GM crops

A recent study done by Navadanya, which compared long term impact of growing GM crops reveals stunning results, that, by growing Bt cotton continuously for three years in the same soil reduced the population of soil

- **Actinomycetes** (vital for breaking down cellulose to Humus) **by 17%**;
- **bacterial populatin by 14%**
- **microbial biomass by 8.9%**
- **Nitrogenase enzyme** (help fix the nitrogen) **reduced by 22.6%**
- **Acid Phosphatase reduced by 26.6% and**
- **vital soil beneficial enzymes were drastically reduced.**

For full details, please click on the link <http://tiny.cc/nYBHm>

Genetically Modified Food Politics

6. Golden Rice – All that Glitters is not GOLD

Source: GM Watch & Dr. Mae-Wan Ho and Prof. Joe Cummins

<http://www.i-sis.org.uk/goldenRiceScandal.php>

Golden Rice, A Vitamin enriched rice is touted as a great savior of the children suffering from Vitamin A Deficiency. When one reads upto this sentence, it is but natural that, (s)he feels that Golden Rice is beneficial to mankind, but when you dig beneath the surface, you will appreciate the old adage All that Glitters is not GOLD”

“Foodwatch”, a German non-government organisation, raises serious questions about the Golden Rice. The rice is modified to generate carotenoids which the human body synthesizes into vitamin A. They claim that the serious questions which have been raised about the quality and safety of the product have not yet been answered. **Even data about how much carotenoid remains in the rice after it has been cooked or stored have not been made available to the public.** In the absence of such basic data it is difficult to judge whether this product is helpful or harmful to human beings and the environment.

Fortunately, there are many other sources of Vitamin A such as eggs, chicken, meat, milk and butter. Betacarotene, the vitamin A precursors, is also found in green leafy vegetables such as spinach, carrots and pumpkin. It is also available in fruits such as mangos.

In February 2009, more than 20 scientists, including the well-known geneticist David Suzuki, criticised the feeding trials on golden rice which were being carried out at the Tufts University. The letter sent to University statedn that, “we wish to remind you that the variety of Golden Rice used in these experiments (GR2) is inadequately described in terms of biological and biochemical characterisation on the Clinical Trials website and indeed anywhere else in the publicly available literature and has woefully inadequate preclinical evaluation. It is a genetically modified product which has not been shown to be distinctive, uniform and stable over time. It has never been through a regulatory/approval process anywhere in the world.... **More specifically, our greatest concern is that this rice, which is engineered to overproduce beta carotene, has never been tested on animals**

Further, there is an extensive medical literature showing that **retinoids that can be derived from beta carotene are both toxic and cause**

birth defects. In these circumstances the use of human subjects (including children who are already suffering illness as a result of vitamin A deficiency) for GM feeding experiments is completely unacceptable. The three Projects listed breach the Nuremberg Code/medical ethics code on a number of counts, and we urge you to call them to a halt immediately.”

According to a recent report commissioned by FoodWatch in Germany, a sample of the Golden Rice grains was sent to Germany in 2001 for a feeding trial with mice. But when the grains were tested for carotenoid content, the scientists were “surprised to find it contained less than one percent of the amount

expected.” After the rice was cooked, this was reduced by another 50 percent, so the trial was abandoned

Golden rice is being used by corporations as a battering ram to get support for GMOs globally under the cloak of helping the poor. In fact corporate controlled GM crops would lead to a disaster in food production globally.

In India, at least three state owned research institutes are conducting research into Golden Rice: the Indian Agricultural Research Institute in New Delhi, Tamil Nadu Agricultural University, and Hyderabad-based Directorate of Rice Research.

GE issues around the World

7. Obama’s Family chose not to eat GM food

http://www.huffingtonpost.com/jeffrey-smith/will-obamas-food-safety-t_b_178127.html

The Obama family has wisely opted out of exposing themselves to GM foods by requiring organic—and therefore non-GMO—foods served at the White House. They are even planting an organic garden on the south lawn of the White House, to feature 55 types of vegetables. The Bush family also had an organic kitchen policy. Laura Bush was “adamant” about it, but kept it all quiet.

Even at Monsanto, many in-the-know employees won’t consume the company’s own GM creations. Until now, the government has sidestepped the controversy by hiding behind FDA policy, which asserts that genetically modified organisms (GMOs) are “substantially equivalent” to natural foods and therefore don’t require any safety studies. But as Obama acknowledged, “many of the laws and regulations governing food safety in America” are outdated.

8. Federal Office for Nature Conservation in Bonn warns about risks “of green genetic engineering”

http://www.bonn.de/rat_verwaltung_buergerdienste/presseportal/pressemitteilungen/06534/index.html

Bonn - As the “Green Week” in Berlin approaches, The Federal Office for Nature Conservation (BfN) in Bonn has published a position paper “World food, biodiversity and genetic engineering”. BfN President Professor Dr. Beate Jessel pleaded that from an ecological and nature conservation viewpoint, greater restraint was needed.

The position paper of the BfN considers to what extent the use of transgenic plants can contribute and what risks are involved in terms of nature conservation. Furthermore alternative solutions, which are nature friendly, increase long-term yields and security, are considered. According to the president of the BfN, Prof. Dr. Beate Jessel, “The cultivation of transgenic plants is highly controversial and sustainable use has not yet been proven. Alternative acceptable solutions are already widely. Support for them must be promoted in research, education and politics.”

The position paper of the BfN “World food, biodiversity and genetic engineering” is available at www.bfn.de.

9. Germany considers local bans on GM Crops

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

BERLIN, Germany - Germany is considering permitting regional bans on cultivation of crops with genetically modified organisms (GMOs), Agriculture Minister Ilse Aigner said on Friday.

Aigner signalled that Germany might join several other EU member states which have imposed controversial GMO cultivation bans in the face of EU approvals.

"In the long term I do not believe that a national ban on cultivation is the correct route," she told Reuters. "Opinions in the federal republic (of Germany) differ greatly about this. I believe it would be more sensible to transfer the decision about the cultivation of genetically modified organisms to the regions."

France, Greece, Austria and Hungary have bans on growing GM crops. On March 2, EU states voted to stop the EU Commission ordering Austria and Hungary to lift their GMO cultivation restrictions. MON 810 maize, developed and marketed by U.S. biotech company Monsanto, is the only GM crop that may be commercially grown in the EU. Aigner, who is also responsible for consumer protection, said the German public was unconvinced of the need for GM crops.

"Consumers see no benefit from the cultivation of GM maize," she said. "The genetic changes are basically a replacement for plant protection chemicals, about whose use no one is shouting about anyway."

10. EU Environment Ministers Keep Bans on Transgenic Maize

<http://www.ens-newswire.com/ens/mar2009/2009-03-02-01.asp>

Brussels - European Union environment ministers today overwhelmingly rejected a European Commission proposal to force Austria and Hungary to lift their bans on the

controversial cultivation of varieties of genetically modified maize, or corn.

Twenty-two of the EU's 27 member states voted to allow Hungary to maintain a ban on Monsanto's GM maize, MON810, and Austria to keep its ban on MON810 and Bayer's T25. Commenting on the decision, Green MEP Caroline Lucas said, "Today's decision by EU environment ministers is great news for the environment, farmers and consumers - and sets a good precedent for future campaigns against genetically modified crops."

The Green Party Member of the European Parliament representing the South-East of England said, "For the many regions in the EU that have expressed doubts over GM technology, today's vote shows that it is still possible to be GM-free."

"This is the fourth time EU governments have rejected a commission proposal to force member states to act against the will of their citizens and to allow the cultivation of GM crops," said Lucas. "It is deeply disturbing that the commission continues to try and bulldoze through its pro-GM agenda in spite of public opposition."

Hungary is one of Europe's biggest grain producers. In January 2005, it was the first country in eastern Europe to prohibit the genetically modified maize MON 810, following similar bans on EU-approved GM crops in Austria, France, Germany, Greece and Luxembourg during the years 1995 to 2000.

Public opinion does not support the cultivation of transgenic crops in Hungary, Austria, France or Greece. According to a Eurobarometer survey of March 2008, in Hungary 70 percent of respondents were against genetically modified organisms; in Austria, 62 percent were opposed; in France 70 percent were opposed, and in Greece 77 percent of respondents said they were against GMOs.

"We hope environment ministers will again step up to the plate," said Lucas. "However, what we really need is a clearly defined European policy on GMOs. This must start with an overhaul of the risk assessment procedure for

GM crops, as requested unanimously by all 27 member states in December 2008.”

11. GM Cassava Fails in Africa

Source: Mariam Mayet, Director of the African Centre for Biosafety,
<http://www.biosafetyafrica.net>

On May 26 2006, the Donald Danforth Plant Science Center, whose partners include the Monsanto Corporation and the Missouri Botanical Garden [Director: Peter Raven], quietly announced that GM virus-resistant varieties of cassava had lost resistance to the African cassava mosaic virus (CMVD) and that expert consultants had been asked to review why and how the modified cassava had changed and to assess future plans.

The Center, with funding from USAID, had been heavily involved in research on Disease-Resistant Cassava to develop and deliver transgenic, disease-resistant cassava planting materials to farmers in Kenya. The failure of GM cassava however undermined the Center’s claim on its website that “transgenic plants developed at the Danforth Center have demonstrated strong resistance to the disease in greenhouse trials over multiple years.”

The failure of GM cassava, however, does underlie the reason why African governments, save for pro-GM South Africa, have adopted the precautionary principle and not allowed Africa to be turned into a laboratory for an unpredictable technology.

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.